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Public participation during river development in Southeast Asia

A thesis submitted for the degree of
– Dr.-Ing. –

to the Faculty of Engineering Science,
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Germany

by
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from Panevezys, Lithuania

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Abstract

This interdisciplinary research strives to extend existing knowledge on engineering development processes by researching the interrelation between the success of implementation and stakeholders. The research investigates the opportunities to improve the public's opinion about river management projects in Southeast Asia, by applying public participation measures. The existing literature body discloses the necessity to understand how to organize river development projects in the way, which leads to success and positive outcomes, as well as positive perception of society. There are many techniques how to enhance the urban river quality but rarely do they present the expected result. Such situation requires seeking for a different perspective to the problem. That is why the research about the role of society and people's attitudes about the project and most importantly how it affects the project development is necessary.

In order to capture the human perspective and understanding of the public participation during river development, the qualitative interviews with experts, government officials, community leaders, NGOs representatives, etc. were held. Semi-structured interviews allowed having a freedom to investigate the most important concepts and ideas with the particular person, meanwhile, the core questions are staying the same. In every case studies' country, there were six to fifteen interviews selected. These interviews disclosed the realities of river development in the Southeast Asian cities.

The research disclosed several important issues related to the possibilities to improve public participation, especially during the river development process. The recognition of the vastness of existing and applied definition and concepts is causing confusions, misconceptions, lack of comprehension and possibly even conflicts. It also hinders the development of projects.

Furthermore, the research exposed the existing relation between the success of public participation and the success of river management projects. According to interviewees' opinions and observations, the common comprehension of the concepts is one of the leading features for success in the river development projects. The common understanding significantly improves the communication between experts as well as the information delivery to the society or any other stakeholders. Additionally, several interviewees highlighted the significance of open and encouraging conversation with society, as well as education. Moreover, the literature review as well as the interviews exposed that local communities could contribute immensely to river development. Nonetheless, the existing governmental structure and legal system must be demanding yet supportive for public participation measures and their application during the river development.

The other important outcome of this research is the strong evidence of adaptability of public participation. Local situations are changing because of the diverse processes

and transformations in the society, economics, politics, etc. Such processes must be reflected in the public participation as well. Case study analyses showed that untraditional approaches are employed to organize and proceed public participation measures. It happens before new laws and requirements are settled for such measures. For example, amongst the interviewees, the social media are often regarded as a useful, easily applied and broadly reaching tool to communicate with local communities and society in general.

Last but not least, public participation, as Mekong case study demonstrates, is the multi-layered process. The discussion about this river development happens at different levels and strata. However, some particular organizations seek to mingle all these debates and ideas in order to create one unified development strategy. The diversity of the discussions provides an opportunity to uncover concepts and approaches, as well as solutions for development. However, such decision-making process must contain self-examination and self-correction features.

In short, entire research consists of seven main chapters, which provide the diverse angle to the same research questions. In the introductory part, the existing situation and necessity of this research are argued along with research questions and hypothesis (1 chapter). It leads to the determination of the best-suited methods (2 chapter). In this case, it is case studies and qualitative interviews. Literature review (3 chapter) explores the ideas, concepts and solutions in the existing knowledge body. Here the list of success criteria for public participation process is compiled. Additionally, their application features are outlined. Case study analysis required semi-structured qualitative interviews with local experts, government officials, community leaders, etc. Their opinions were analyzed from the perspective of public participation in the river management. The interviews are examined and debated in the fourth chapter of the manuscript. The interviewees shared their knowledge and personal experiences about measures of public participation, which they implemented and/or were personally engaged in. Although their experiences were versatile, they all acknowledge the crucial importance of public participation in society and its development. However, interviewees displayed different shortcomings and pitfalls of the process. The findings of the literature review (3 chapter) and interview analysis (4 chapter) are compared and exposed in the fifth chapter. The concluding remarks are presented in the sixth chapter, where final outcomes of the research are highlighted. The last seventh chapter is a compilation of the information sources that were cited in this thesis.

Zusammenfassung

Diese interdisziplinäre Forschung versucht einen Ansatz zu finden, der ingenieurwissenschaftlichen Fortschritt mit einer sozialen Perspektive vereint. Dazu wird untersucht, wie Partizipation die öffentliche Meinung über wasserbauliche Maßnahmen in Südostasien verbessert. Eine Auswertung der Fachliteratur zu diesem Thema unterstreicht die Notwendigkeit zu verstehen, wie Flussgebietsmanagement organisiert werden muss um effektiv zu sein und gleichzeitig positiv von der Bevölkerung wahrgenommen zu werden. Es gibt viele Techniken um die Qualität von Flüssen im urbanen Raum zu verbessern, aber nur selten führen sie zum erwarten Ergebnis. Solche Situationen bedürfen einer neuen Sicht auf das Problem. Dies lässt erahnen, wie wichtig die soziale Komponente für den nachhaltigen Erfolg eines Projektes ist.

Um die menschliche Perspektive und Auffassung von Partizipation im Flussgebietsmanagement zu erfassen, wurden qualitative Interviews mit Experten, Behördenvertretern, Vertretern von Nichtregierungsorganisationen und lokalen Multiplikatoren durchgeführt. Durch die Wahl von semi-strukturierten Interviews konnten die wichtigsten Konzepte und Ideen jeder Person individuell untersucht werden, während durch Kernfragen vergleichbare Rahmenbedingungen geschaffen wurden. In jeder Fallstudie wurden zwischen sechs und fünfzehn Interviewpartner ausgewählt. Diese Interviewpartner geben einen Einblick in die Realität des Flussgebietsmanagements in den südost-asiatischen Städten.

Die vorliegende Arbeit zeigt verschiedene Aspekte auf, wie Partizipation im Flussgebietsmanagement verbessert werden kann. Die Breite an bestehenden Definition und Umsetzungen von Partizipation führt zu Verwirrung, Missverständnissen und sehr wahrscheinlich sogar zu Konflikten. Dadurch wird auch die Entwicklung und Umsetzung von Projekten behindert.

Darüber hinaus stellen die Ergebnisse der vorliegenden Arbeit die bestehenden Beziehungen zwischen dem Erfolg von Partizipation und dem Erfolg von Flussgebietsmanagement heraus. Nach Meinung der Interviewpartner und eigenen Beobachtungen ist ein gemeinsames Konzeptverständnis essentiell für den Erfolg von Projekten im Flussgebietsmanagement. Denn ein gemeinsames Verständnis verbessert die Kommunikation sowie den Informationsfluss zwischen Experten und der Bevölkerung oder anderen Akteuren immens. Zusätzliche wurde in mehrere Interviews die Signifikanz eines offenen und aktivierenden Austauschs mit der Bevölkerung betont. Mehr noch, sowohl die Literaturrecherche, als auch die Interviews zeigten, dass die lokale Bevölkerung einen großen Beitrag zum Flussgebietsmanagement leisten konnten. Trotzdem, die bestehenden staatlichen Strukturen und rechtliche Systeme müssen die Umsetzung von Partizipation im Flussgebietsmanagement vorgeben und unterstützen.

Ein anderes wichtiges Ergebnis ist, dass Partizipation hoch flexible und anpassungsfähig ist. Durch diverse Prozesse sowie politische, soziale und ökonomischen Transformationen sind die lokalen Begebenheiten stetig im Wandel. Dies muss in Partizipationsprozessen berücksichtigt werden. Die Analyse der Fallstudien zeigt, dass unkonventionelle Ansätze angewendet werden um Partizipation voranzubringen, noch bevor neue Anforderungen und Gesetze etabliert sind. Soziale Medien zum Beispiel, werden in den Interviews als nützliche, einfach anwendbare und weitreichende Werkzeuge zur Kommunikation in der Bevölkerung angesehen.

Zu guter Letzt, wie in der Mekong-Fallstudie demonstriert, ist Partizipation ein mehrschichtiger Prozess. Auch im Flussgebietsmanagement hat der Diskurs verschiedene Ebenen. Manche Organisationen versuchen die unterschiedlichen Debatten zusammen zu bringen und eine einheitliche Entwicklungsstrategie zu erschaffen. Die Vielfalt der Diskussion bietet die Möglichkeit verschiedene Konzepte und Ansätze aufzudecken und so Lösungen für die Entwicklung hervorzubringen. Aber solche Entscheidungsprozesse müssen selbst Reflexion und Korrektur beinhalten.

Zusammengefasst besteht die vorliegende Arbeit aus sieben Kapiteln. Im einleitenden Teil des Manuskripts werden durch den Status Quo und die Motivation die Forschungsfragen und -hypothesen hergeleitet (Kapitel 1). Darauf schließt sich die Bestimmung der geeignetsten Untersuchungsmethoden an (Kapitel 2). In diesem Fall sind es Fallstudien und qualitative Interviews. Eine Literaturrecherche soll die Forschungsfragen in den Stand der Forschung einordnen (Kapitel 3). In diesem Kapitel werden die Erfolgskriterien für Partizipation und ihre Anwendbarkeitseigenschaften definiert. Die Fallstudienanalyse besteht aus semi-strukturierte, qualitative Interviews mit Experten, Behördenvertretern, Vertreter von Nichtregierungsorganisationen und lokalen Multiplikatoren. Die Auffassungen der Interviewpartner wurden mit Augenmerk auf Partizipation im Flussgebietsmanagement untersucht (Kapitel 4). In den Interviews wurden das Wissen und die persönliche Erfahrung der Teilnehmer ausgewertet. Obwohl diese sehr verschiedenen waren, bestätigten sie alle die essentielle Bedeutung von Partizipation der Bevölkerung. Im fünften Kapitel werden die Ergebnisse der Literaturanalyse (Kapitel 3) und der Interviews (Kapitel 4) diskutiert. Die Schlussfolgerungen werden im sechsten Kapitel präsentiert, wo die Endergebnisse der vorliegenden Arbeit hervorgehoben werden. Das siebte und letzte Kapitel ist eine Zusammenstellung der Informationsquellen, die in der Arbeit zitiert werden.

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List Abbreviations

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
BT	Ben Tre
CT	Can Tho
DBKL	Kuala Lumpur City Hall
DID	Department of Irrigation and Drainage
DOE	Department of Environment
DSDAN	National Water Resources Council
EIA	Environmental Impact Assessment
EU	European Union
GEC	Global Environment Center
GNKPA	National Movement for Water Resources Management Partnership
GWP	Global Water Partnership
HCM	Ho Chi Minh
ID	Indonesia
ISO	International Organization for Standardization
IWRM	Integrated Water Resource Management
Jabodetabek	Jakarta, Bogor, Depok, Tangerang, Benkasi
Jabotabek	Jakarta, Bogor, Tangerang, Benkasi
JK	Jakarta
KHB	Cambodia
KL	Kuala Lumpur
KLSP	Kuala Lumpur Structure Plan 2020
Lao PDR	Lao People's Democratic Republic
MD	Mekong delta
Mekong Plan	Mekong River Development Plan 2016-2020
Mekong Strategy	IWRM-based Basin Development Strategy 2016-2020
MK	Mekong mainstream
MONRE	Ministry of Natural Resources and Environment
MRC	Mekong River Commission
NARBO	Network of Asian River Basin Organizations
NGO	Non-Governmental Organization
NMC	National Mekong Committee
normalisasi Ciliwung	Ciliwung River Normalisation Programme
POP	Public Outreach Programme
PP	Phnom Penh
PROKASIH	Clean Rivers Program (Program Kali Bersih)

RoL	River of Life
UN	United Nations
UNESCO	The United Nations Educational, Scientific and Cultural Organization
VNT	Vientiane
VT	Viet Nam
WB	World Bank
WFD	Water Framework Directive
WWF	World Wide Fund
WWII	The Second World War

1   Introduction

On the 20 March 2017, the statement "*I am the river and the river is me*"[1] officially gain the legitimate value. The Whanganui iwi (people) in New Zealand demanded and obtain the legal rights for the Whanganui river even though it was one of the longest juridical procedure in the history of New Zealand's government (Charpleix, 2017; Hsiao, 2012; Hutchison, 2014). It means that the river has all the rights, duties and liabilities that come with personhood ("Te Awa Tupua (Whanganui River Claims Settlement) Act 2017," 2017). Promptly this example was followed by India, which granted similar rights to the Ganges and Yamuna rivers (as well as the Gangotri and Yamunotri glaciers and few other natural objects in the state of Uttarakhand) (O'Donnell, 2017). Nevertheless, all three of these rivers are traditionally perceived as an entity of god/goddess. Yet, the Whanganui river is an image of a natural beauty and allure while Indian rivers are polluted and disturbed.

Someone may argue that it is the satirical situation, however, changes like these stimulate shifts in the mindset of humankind, which leans towards more eco-centric approach (Kothari & Bajpai, 2017). Furthermore, adding findings from social science, which proved that people' appreciation and responsibility for the place around has a relation with emotional state and attitudes of the person. If people feel sentimentally connected to the place, if they feel secure, if they recognize value and importance of that place (Buijs, 2009), could contribute to implement holistic and sustainable principles in society significantly. Inglehart & Welzel (2010) once observed: "*socio-cultural change is path dependent. Although economic development tends to bring predictable changes in people's worldviews, a society's religious and historic heritage leaves a lasting imprint.*"

The evolution of perception of nature pursued a winding path from being perceived as a goddess to be a servant of greed. It was influenced by various processes and developments in society, historical events, shifts of consciousness in mankind and even technological inventions. The opinion about rivers passed the similar journey. Rivers, which were symbols of beauty, fertility and prosperity just a few centuries ago, now are so polluted that there is nothing alive left in their waters. Dudgeon et al. (2006) exposed, that biodiversity loss in aquatic ecosystems is happening faster than in terrestrial ones. That is why losses in rivers, lakes and other water bodies are less noticeable by the majority of laypersons. Furthermore, water is essential for landscape formation and no infrastructure will be able to contribute for health, fight pollution, provide the same satisfaction (esthetic, spiritual), inspire communities (Barnes, 2012; Hastrup, 2013). Rivers are still passing natural and human habitats,

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[1] From Whanganui Chronicles: "*Ko au te awa. Ko te awa ko au*" [eng. I am the river. The river is me] (Charpleix, 2017; Hutchison, 2014; Kothari & Bajpai, 2017).

so they could serve as a joining bridge between these two habitats and contribute to bringing natural inclusions into the urban pattern.

Moreover, anthropologists early recognised that water possesses social and cultural forms (Hastrup, 2013; Mauss, 1990; Orlove & Caton, 2010). Opinion about water affects and modifies how water will be used and what kind of reaction water will provoke (Hastrup, 2013). Values of water influence hydrological changes (Andaya, 2016; Lansing, 2009; Orlove & Caton, 2010; Paredes, 2016). Some academics call it hydro-social cycle, which depicts the reciprocal relationship between water and society (Andaya, 2016; Linton & Budds, 2014; Paredes, 2016). In same cultures this knowledge has been always present (like *Orang Suku Laut*[2]) (Benjamin & Chou, 2002; Chou, 2016; Chou, 2013), where conception of water world is not just an idea of place but includes dependencies between society and water (Barnard, 2014; Benjamin & Chou, 2002; Chou, 2016; O'Dempsey et al., 2014). As Carse (2012) noted boundary between nature and infrastructure is quite blurry. Moreover, economics could add one more dimension in this complex matrix. From an economic point of view, water is a resource, which could generate profit, but in a form of disaster, it could create a real financial collapse. The future of water and human relationship could be sustainable, but it requires solving today's tensions in the water sector (Hastrup, 2013).

However, granting the legal rights for the rivers is not just an acknowledgement of their importance. It stems from the very active communities and local traditions of the inclusion of a river. These processes would never happen without the endless active pursuance of local people. For a long time, Maori communities are apprehended as an active and fiercely preserving their culture and customs. The ability for communities to form strong inner dependencies and relationship is one of the leading features to achieve such success in granting legal rights for the Whanganui river. In general, various forms of civic participation are stemming from deep historical past. For example, it is a versatile form of community gathering tradition in order to generate something for the mutual community benefit. Such community's works are/were usually present amongst the communities located in less-favourable geographical conditions (extreme weather conditions like cold or heat, brief laborious harvesting period, etc.). In Indonesia the *gotong royong* tradition is still alive and used in those communities nowadays (Beard, 2005; Bowen, 1986; Dasgupta & Beard, 2007; Sullivan, 1992). This principle is supposed to increase social inclusion and establish robust and substantial relationships between the members of community. Beard (2005) has summarized "*generalized reciprocity', remains a strong social norm in Indonesia as well as a powerful determinant of social capital.*"

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[2] "*Orang Suku Laut* or "Sea Tribe People" of the Riau Archipelago, located at the northwestern border of the Republic of Indonesia, are one of several ethnic groups found scattered throughout Southeast Asia, popularly known as "sea nomads" or "sea gypsies"." (Lenhart, 2002)

However, its value could be questionable because of nepotism (Dasgupta & Beard, 2007). Similar traditions, to gather together and complete some implementations usually beneficial for everyone, have been presented all around the World – Ireland with *meitheal* (Keane & Cinnéide, 1986; Shubin, 2010; Teague, 2007), Baltic sea region (Finland, Estonia, Latvia, Lithuania) with *talkoot/talkot/talka* (Hyyppä, 2010; Matthies et al., 2011; Nefas, 2007), Norway with *dugnad* (Brox, 2006), South American Andes (Chile, Ecuador, Bolivia, Peru) with *Mink'a*, *Quechua* or *Kichwa* (Andolina et al., 2009; Boelens & Gelles, 2005; Gelles, 2000; Radcliffe & Laurie, 2006), Arabic tradition (Sudan) with *naffir* (Bello, 2014; Casciarri, 2009; Kevlihan, 2005; Manger, 1987). Additionally, traditions to communal work seek to make the community a better place to live in. It was a simple form of decision-making process, because community needed to agree upon what action they would take and when as well as who would be involved. Further, a tradition to engage in the decision-making process evolved. In the modern days, that tradition was transformed and named as a public or civic participation.

Public participation as it is defined in today's legal documents started in close proximity to the democratization processes and was strongly influenced by industrialization and both World Wars. At the end of XIX century, several inventions started extraordinary changes in society and in all human existence (Zuidema, 2016). After inventions of medicine, enhanced concern about hygiene caused longer life expectancy, less child mortality rate, population boomed exponentially. Additionally, versatile inventions in the industry helped to consume natural resources with unsatisfied greed, manufacture various items and products faster and cheaper, better suited for mass consumption. Villagers flooded cities in order to seek for the better-paid jobs (Scott, 1998, 2014). This situation brought new tensions. That was a strong powerful push in the equilibrium between political power and economic wealth. Their roles changed, some say that they merged together, some state that economic took over politics (Robinson & Acemoglu, 2012; Sachs, 2008). In the beginning of XX century, the turmoil in society, economics and political arena brought up two World Wars in just a few decades. Here again, the idea of democracy was forced to evolve, and it took root in governments. Decision-making power was bit by bit delegated to society, at least to some extent (Zuidema, 2016). After WWII participation was delegated to all men, later women, after that to minorities. Governmental institutions formed always-growing bureaucratic apparatus. By the same token, bureaucracies provided the opportunities to involve communities not just electing the country leaders, but also to take part in smaller day-to-day decisions (Bandura, 2002; Winnubst, 2011).

As democratic ideas came forward in governance agendas, the new shift started. Democracy enabled more people to share decision-making power (Hannigan, 1995; Inglehart & Welzel, 2005, 2009; Trigger, 1998). In a political arena, it brought awareness of human rights, women rights, minority rights, nature rights, etc. (Inglehart & Welzel, 2009). These considerations are still on international and national political schedules today. However, the discussion about human–nature

relationship, formed two separate anthropocentric and ecocentric concepts (Amérigo, 2007; Jenerette et al., 2006; Thompson & Barton, 1994). Debates in academia about these concepts continue being lively and argumentative. There are strong pros and cons on both sides of the board (Amérigo, 2007; Milton, 2003, 2013; Thompson & Barton, 1994). In simplified way, anthropocentric approach sees human as a separate entity from the nature and the most significant one (Amérigo, 2007; Mirumachi & Chan, 2014; Momtaz & Kabir, 2013; Thompson & Barton, 1994; Wackernagel et al., 2006). It is a contradictory idea to ecocentrism, which argues that humans are part of nature and is "*life-centred*" (Leopold, 1949). Ecocentrism inflamed idea, that humans must be considerate of other living creatures (Eckersley, 1992). It is more inclusive perception of the Earth, and that lead to the rise of holistic, sustainable, resilient concepts to appear in policies and management (Hopwood et al., 2005; Jenerette et al., 2006; Leopold, 1949; Thompson & Barton, 1994; Wackernagel et al., 2006).

Additionally, industrialisation together with a shift in the political system towards democracy opened the doors for economic power. Financial incentives became as important at the global scale as politics, some argue that economic power overtook political will (Inglehart & Welzel, 2009; Sachs, 2008). It is expected that countries' leaders will be considerate about others, because they got ruling power through the election process, however, corruption disturbs this process. This development affected human – nature relationship as well. People with power (political or/and economic) often override choices of majority (valid or illegal way), nature and its resources are an asset, that is overexploited in order to keep economies running. So even with eco-centric ideas freely floating around, nature is still "*an orphan sister*".

In humanities, the discussion about the societal construct never ends. It is crucial to understand linkages between society and human behaviour. Human beings always and inevitably were communal beings; humans do exist just because they work together, keep close to each other and communicate (Dennett, 2017; Fiske, 1991; Harari, 2014). Nowadays participation is expanded from the expression of political will and ideas till ability to make own choices and decisions and even impose them on others (Bouleau, 2014; Brosius, 1997; Fiske, 1991; Newman et al., 2004; Putnam et al., 1994; Strøm, 2000). Nevertheless, the involvement of society highly depends on the constellation of society itself (Migdal, 1988). Till now there has been exclusions based on gender, age, sexual preferences, body complexion, etc. However, Magnusson (2011) in his own words argued, "*disorder brings people out of their home into the realm of their community*" (Brunet-Jailly et al., 2013).

In 1969 Arnstein presented the concept of public participation in a scientific journal and that could be marked as the first official discussion on this topic in academia. Previous ideas of public involvement could be found in philosophical and political

works[3], but they never were dedicated to this idea so fully and explicitly. Arnstein (1969) public participation described very wide political and social interaction. She presented public participation as continuous process and there are different steps to identify the achieved level of public participation. Later that idea was taken and developed by various other authors and international institutions (UN, OECD, World Bank). The UNECE Convention on Access to information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, shorty called Aarhus Convention (1998) is most known international document, extensively applied in the national and international laws, and ratified by 46 countries and all European Union. In the document public participation is a focus point. Aarhus Convention seeks that public would be granted all information about relevant environmental projects, and would have time to formulate and voice their opinion, which must be resound in the final outcomes of a project (Aarhus Convention, 1998).

Public participation is a decision-making tool, which is consigned to all society. In comparison, the stakeholder participation includes only involved in the process governmental institutions, the private sector and affected people. As Mega (2010) wrote, "*sustainability requires a high level political commitment*" in addition if political agendas concerning climate change and other environmental issues must be followed, societies must be involved strongly. Debates about public participation also intensify discussion about development, because that is there public participation comes to its extensive power completely (Bandura, 2002). Ferguson (1990) stressed out that development became highly politicized, and countries government usually seen "*as knower, arbiter, and provider for 'the people'*" (Ferguson, 1990; Gupta, 1995; Li, 1999). As Li (1999) summarized development additionally "*provides a discursive framework for conceptualizing and managing the relationship between 'the state' and citizens. [It] authorizes state agencies to engage directly and openly in projects aimed at transformation and 'improvement' and provides the immediate context and occasion for many encounters between bureaucrats and those they would constitute as clients*" (Li, 1999). The success of such a process lies in the hands of citizens themselves to initiate cooperative relationships and channel their knowledge, time and economic resources (Beard, 2005; Narayan & Pritchett, 1999; Ostrom, 1990; Putnam et al., 1994; Uphoff & Wijayaratna, 2000).

The river management is a entanglement of decisions, which is happening in extremely complicated setting (Darby & Sear, 2008; Gibbs, 2010). Due to magnitude of the river basins and interrelation between everyone in the area, public participation could contribute immensely to improve development as well as attitudes concerning it

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[3] For example, the ancient Greece philosophers such as Cleisthenes, Plato, Aristotle wrote about voting rights for citizens, various cultures around the World had their own version of democracy and different level of engagement, modern political sciences had developed various schools, political philosophies, etc.

(Åberg & Tapsell, 2013; Benages-Albert et al., 2015; Bernhardt et al., 2007; Buijs, 2009; de Groot, 2012; Le Lay et al., 2013; Lee & Choi, 2011; Polizzi et al., 2015; Randy et al., 2015; Rohde et al., 2006; Schaich, 2009; Xu et al., 2016). However, public participation is quite complicated process as it is, duration of projects, and effects in the future, vastness of the area, economies involved and amount of people living in the river basin do complicate that process even more (Bruch et al., 2005; Carnes et al., 1998; Chaffin et al., 2016; Chess & Purcell, 1999; Diduck et al., 2013; Drazkiewicz et al., 2015; Fleeger & Becker, 2008; Glucker et al., 2013; Innes & Booher, 2000; Messner et al., 2006; Sang, 2008; Sarzynski, 2015). Furthermore, the involvement of lay people in the decision-making process in the river management does not have a extensive history (Darby & Sear, 2008). There are no long-term historical references or models to represent this process. Nonetheless, there are plenty of outstanding examples of powerful political or economic entities had made decisions of river development and brought debacle of the entire river basin, its ecosystem and social fabric of the area (Diamond, 2005; Mithen, 2012). Those negative lessons from the past do not prove that application of public participation would have helped, but dramatic changes would have been observed earlier and compensating actions would have had time to stop negative changes or minimized consequences.

Nowadays society is well educated and informed in comparison with society the century ago. That means society could shape decisions and be accountable for the resulting outcomes (Bandura, 2002; Sachs, 2008). As Welzel & Inglehart (2008) noticed education of citizens permits them to be more critical towards decisions made by elected or delegated government. Several researchers articulated expectation that the river management projects in the future could be more beneficial for everyone if several preconditions (like availability of education to society, openness of government and its institutions, decentralization, social and political awareness, etc.) must be actualized and invoked (Beard, 2005; Dasgupta & Beard, 2007; Ferguson, 1990). Bottom-up development ideas came to the political arena, after trenchant critiques about top-down development (Dasgupta & Beard, 2007; Escobar, 2011; Holston, 1989; Kabeer, 1994; Migdal, 1988; Mitchell, 2002; Scott, 1998).

Furthermore, the clash of top-down and bottom-up development causes some considerations. One of them is, if it is manageable to activate communities that they turn their behaviour patterns towards more ecocentric approach instead of just exploiting and polluting. In democratic countries, the concept of public participation is set in the primary laws. It is supposed to empower communities to take actions, which improve their surroundings. However, that is rarely the case. Dangerously, laypeople tend to be ignorant and avoid such opportunity to express their wishes about their future and give a shape to their surroundings (Easterly, 2014).

In the midway between earlier mentioned Whanganui and Ganges rivers, there are the Mekong, Ciliwung and Klang rivers. All of them are based in Southeast Asia and

undergoing some draconian transformations. In his books Scott (1998, 2008, 2014; 1986) was constantly discussing governance issues, quite often his focus landed on Southeast Asia. He stressed how important it is to collect enough data on the formation of legacies of state and class and meticulously analyse colonization period, since it shaped how countries look like today, modified their governance and remodel their economies (Hedman, 2001; Sidel, 2015). However, changes in society are reflected also in development ideas. The Mekong river, which passes through six countries (five of them belong to Southeast Asia), is one of the extraordinary research objects. Southeast Asia as a region is rich in culture, traditions, which surpassed the time (Boomgaard, 2007; Camilleri & Schottmann, 2013; Schottmann & Camilleri, 2013; Sidel, 2015; Siu et al., 2015; Waibel et al., 2013). It is also the region, which is changing fast and developing at enormous speed economically and socially. New ways of life are mingled with thousand-years old traditions (Boomgaard, 2007; Hastrup, 2013; Mithen, 2012; Rigg, 2004). Those old traditions shape today's lifestyle. Southeast Asia elapsed very diverse historical events, from invasions of the kingdoms from India to colonisation by the most aggressive European colonizers (Great Britain, France, Spain), to the economic development, which trampled fast and fierce, to crushing westernization (Boomgaard, 2007; Rigg, 2004). That forms a very diverse, distinct and comprehensive context to delve into the research, however, that also has a promise of exceptional, enthral and unexpected outcomes. Analysis of one river development can uncover how cultural nuances influencing decisions of applied the development measures. Additionally, the Mekong river cross Phnom Penh, capital of Cambodia, on its bank Vientiane, capital of Lao PDR, is situated and its delta stretchers through almost entire South Viet Nam. The Mekong river is not just an immense provider of natural resources. It is also a trigger for conflict.

Additional case studies of the Ciliwung and Klang rivers represent two other rivers that have capitals situated on their riverbanks. The Ciliwung river basin is almost entirely urbanized by Jakarta city agglomeration. Both rivers are highly polluted, channelized, rearranged by humans, just short stretches are still natural. Recently, for the Ciliwung and Klang rivers were started new projects, which aim to restore those water bodies. The development projects have some similarities and some differences, however from the perspective of public involvement are same. The public was not actively involved in any decision-making part, nonetheless, final project was available for the public to access and familiarize with.

The Mekong, Ciliwung and Klang rivers managers claim that they implement Integrated Water Resource Management (IWRM) principles (Chan, 2012; Hansson et al., 2012; Keskinen et al., 2011; Ministry of Environmental in Indonesia, 2012; Satriastanti, 2012). One of the principles is focusing on full stakeholder involvement (Varis et al., 2014). Nevertheless, customarily new ideas compete with existing traditions. In Southeast Asia, the traditional society communities always played a strong role in the development (Hedman, 2001; Rigg, 2004). So to freshen established customs (like *gotong royong*) could bring strong positive stimulus for

public participation (Mardiasmo & Barnes, 2015). Nonetheless, considerations, if democracies and traditions work towards the same goal or if they mitigate each other's influence, are valued and investigated fiercely (Waibel et al., 2013).

Yet the economic development and accumulation of scientific knowledge forced to reconsider old belief system and changed close, often very organic, connection with the environment (Goldman & Schurman, 2000; Ingold, 2000). A new concept of the control of nature appeared. Attitude towards nature was changed. It slowly became a servant to fulfil endless needs and wishes of humans (Ingold, 2000). A dense network of rivers turned into transport routes, drinking water supply source and waste and wastewater discharge channels. People put more and more effort to control rivers, their natural flow and constant changes (Molle, 2009; Mukerji, 2009). Somewhere along a way, humans lost their ability to appreciate the natural beauty of the rivers as well (Le Lay et al., 2013). Many urban planners and architects in city councils tirelessly ignored them and never gave an opportunity for the river to brace in its natural state. There are many explanations why it was, like safety, economic reasons, transportation requirements, etc. (Molle, 2009). Nevertheless, the development of any river requires the strong holistic approach. Additionally, it is very complex due to diversity of the issues and their intertwined connections with other problems and challenges in urban settlements (Barrow, 1998; Darby & Sear, 2008; Dinar & Albiac, 2012; Molle, 2009; Ollier & Winter, 2006; Stanturf et al., 2014). In many cities all around the World, rivers were left to deteriorate until they reach such a bad shape that it is impossible to ignore them anymore (Molle, 2009). Afterwards, the second part of river rearrangement began. It is called restoration, normalization, revitalization, rehabilitation, etc. However, in many cases restoration proposals includes ideas, which contradict the initial concept of restoration, such as paving the riverbanks, build an embankment or quay, relocate local people and erect yet another quarter of office buildings and/or upper class living neighbourhood (Benages-Albert et al., 2015; Bernhardt et al., 2007; Darby & Sear, 2008; Palmer et al., 2014; Rowe & Frewer, 2000). In this process, the public needs and opinions are trampled by "*big money*" (Wright, 1982) or famous names (Beunderman, 2017), usually both.

All things considered, the perception of the river is coming to the complete circle: from the goddess (Andaya, 2016) to the servant and now to the equal entity (Delli Priscoli, 2000; Keil & Wetterau, 2013; Krause & Strang, 2016). However, the past traditions and attitudes still reflect in today's decisions and choices. These decisions include the engineering and development preferences. As several example disclosed, through the civic engagement, rivers are gaining escape from the concrete embankments and try to braid through the landscape in the natural winding manner. The Mekong, Klang and Ciliwung rivers are the culturally and historically extraordinary examples of river management. They show the accumulation of traditions stemming from the ancient past mixing the advanced technologies and innovations in the versatile social background. This situation embraces immense possibilities as well as pitfalls.

1.1 Goal of this research

In this research the focus is directed to one particular object (river), place (Southeast Asia) and time (last decade), but historical, political context, social background, and a cultural essence are considered as well. This research observes existing situation, generate knowledge and help to predict the up-coming changes and conjointly to create measures to influence the future changes.

1.2 Research questions

After an introductory presentation several research questions derived. Research focuses on the interaction between the river development and the local people.

- What is the relation between public participation and river management projects?
  - o Will non-active or non-existing public participation in the river development projects lead to failure of the projects themselves?
  - o Will active public participation guarantee successful river development project?
  - o Alternative 1: Does success of river development depend on a public participation?
  - o Alternative 2: How are various public participation forms applied in the river restoration projects?
- How has been river management improving after implementing public participation?
  - o Alternative 3: How did public participation develop during the last decades of river management?

1.3 Hypothesis

Research questions formed possible answers – hypothesis:

- Outcomes of the river development project are strongly affected by public participation process.
  - o Poor public participation leads towards failure in the river development.
- If the higher step of Arnstein's ladder principle is applied for a public participation process, then the river development is more holistic.
  - o Public participation in the river development project ensures sustainability of the project.

1.4   Outline of the research

This manuscript consists of seven chapters. Every one of them has their purpose and function in order to answer the research questions and support or reject the hypotheses of this research.

The first chapter introduces the basis of the existing situation and the overall context of the research area. It highlights the origins of this research. Additionally, it presents the goal of research, research questions and hypothesis.

The second chapter discloses the methods that are used to answer research questions and hypothesis. According to the theory, the most-suited method to tackle research questions is the qualitative interviews. Additionally, there were three case studies chosen. In this chapter case studies and the interview partners are presented. Moreover, the procedure of qualitative interviews is described as well.

The third chapter is analysing the theories and discussions about the public participation and river development held in the academy. Literature review discloses the existing knowledge body about the public participation, its process and participants. Moreover, this chapter seeks to determine and group the success criteria for the public participation process, as well as different measures of public participation.

The fourth chapter consists of two esential parts. The first one focuses on the discussion about the case study background situation – characteristics of the river and the area, legal system concerning the river development and decision-making process, and other important characteristics affecting public participation. The second part of the chapter presents the results of the empirical part of the research, i.e. results of qualitative interviews. These results are presented in the same discourse as it was discussed in the literature review – starting this understanding and definitions of public participation and river development, followed by success criteria for these processes and ending with the future expectations.

The fifth part is the discussion part where the theoretical concepts, discussed in the third chapter, are merged with empirical results from the qualitative interviews. This chapter highlights the most significant outcomes from the interviews.

The sixth part is the concluding chapter of the entire research. At this point the short reflection on the answers to the research questions is presented.

The last seventh chapter holds the list of all cited sources in the research.

2 Methods

2.1 Research design

The research design is compiled from several research methods. In this research the man focus is directed on the social issues during the river management. Additionally, the research methods gather information and provide the tools for analysis. It is important for qualitative researches, where nuances are playing a significant role in gaining understanding and/or creating knowledge. This type of research allows researcher to delve in situation at the hand from local people perspective, because cultural background is highly important how people perceive the river development and how they are willing to participate in the development project.

The strength of qualitative research lies in data thickness, context orientation, exploratory concept, theoretical ambition, individual cases and reflexivity (Bergmann, 2006; Friedhoff et al., 2013a, 2013b). In the empirical part of this research the qualitative interviews held with experts, governmental officials and community representatives guarantee the list of characteristics will be achieved.

This research is based on two important data pools. The first one is the existing scholar literature, legal documents, and various publications. It is called as a literature review in the content of the manuscript. Literature review uses deductive reasoning. The scientific publications provide the understanding of concepts. There are no limitations to use only the recent literature. However, the situation analysis and background analysis of case studies is arranged mainly on current information.

Literature review provides a solid background for later case study analysis, qualitative interviews and discussion, but it could also be as stand alone analysis. Literature review share features of epistemic discussion on definitions of public participation, river development, additionally, it examines how public participation is reflected and discussed in academia, lastly, it investigates features of public participation, which leads towards successful process and fruitful outcomes.

A part of literature analysis, which is presented in case study chapter, is based on legal documents. The selection of legal documents for this analysis consists only on the recent and applicable documents[4]. The analysis of legal documents provides highly valuable understanding of preconditions for public participation and river development in the area of all case studies. Notwithstanding, the consideration of existing political constellation for these processes to happen is presented.

The second source of data is qualitative interviews.

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[4] Due to political and economic decisions, majority of the documents do have official English translations.

2.1.1 Qualitative interviews

Qualitative interviews are inductive due to often discussed individual experiences, comparisons, and observations (Kvale, 1996; Flick et al., 2004). Such method is good for explaining relations and causality of events, situations, circumstances, etc. Additionally, qualitative interviews have the advantage of the openness (Kvale, 1996). There are no standardized techniques for conducting interviews, however, there are features and characteristics, which must be accomplished. Such requirements depend on the type of interview (Flick et al. 2004). However, flexibility of the method allows interviewer to make decisions while conducting interview to which direction to stir the conversation (Kvale, 1996). Yet that requires a very good preparation and high competence of the interviewer. Moreover, in this research qualitative interviews are explorative and focussed. Analysis of such interviews provides opportunities to delve in depth about one specific topic and are meant for exploration of "*an object-related explanation of meanings*" (Flick et al., 2004).

2.1.2 Case study analysis

Case study as a scientific method is used to find specifics and to have meticulously analysed example, which could contribute in creation of new knowledge or expanding existing one. Case study analysis uses not just deductive but additionally inductive reasoning (Gerring, 2006). There are three main case studies in this research. It is Mekong, Klang and Ciliwung rivers. In every river basin, there were located several very important urban agglomerations and cities of all Southeast Asia. For every defined case study, qualitative interviews were conducted. Additionally, to guarantee scientific reliability, interview data were compared with findings from legal document analysis and literature review.

The different case study choices seeks to highlight slightly diverse contextual needs for public participation and the nuances of the culture in influencing the manner, approach, direction and/or etc. in which public participation takes place. The Mekong river case study is international law-led case study, which illustrates the role of multilateral organizations. Here the multilayeredness of public participation is very significant and influential in the entire process of river management. On the contrarily, the Klang and Ciliwung river management is structured upon the project-led approach. Project like this highlights the role of bureaucracy role and need of inner communication between diverse institutions and academia.

2.1.2.1 Description of case studies

This research focuses on cases, which are located in urban territories and has strong connection with rivers. Rivers have been chosen in the Southeast Asia. This region is well known for diverse culture, quite long history of river development, strong connection between human and nature (imbedded in various indigenous religions and beliefs). Moreover, almost all capitals and big agglomerations in Southeast Asia are crossed by a river or is situated in rivers' deltas. From all possible rivers, three –

Mekong, Klang and Ciliwung – were chosen (Table 2-1). Those rivers pass capital cities – Vientiane, Phnom Penh, Kuala Lumpur, Jakarta, and densely populated South Viet Nam.

Table 2-1. Case studies.

Case study	River	Country	Cities
1	Mekong	Cambodia	Phnom Pen
2	Mekong	Lao PDR	Vientiane
3	Mekong	Viet Nam	Can Tho
4	Mekong	Viet Nam	Ben Tre
5	Ciliwung	Indonesia	Jakarta
6	Klang	Malaysia	Kuala Lumpur

Basic statistical data:

- Mekong river is 4350 km long and its basin occupies 795000 km^2. Ciliwung river is 119 km long, its basin is 375 km^2. Klang river's length is 120 km and basin area is 1288 km^2.
- Vientiane is the capital city of Lao PDR, has 760000 population, stretches 3920 km^2 area, Phnom Penh is capital of Cambodia with population of 1502000 people and territory of 679 km^2. Vietnamese cities – Can Tho (population 1237000 area 1409 km^2), Ben Tre (population 232000, area 71 km^2) – are located in the southern part of the country.

2.1.2.2 Qualitative interviews

As Chong wrote interviews are especially useful if research object is a process or "*underlying mental process*" (Gerring, 2006) that is exactly what is needed to evaluate public participation and relationships between local people and river.

Interviewees were selected regarding their representative institution, organization or stakeholder group by using theoretical sampling and snowball sampling (Merkens, 2004). In theoretical sampling the list of institutions and organizations were set up. Later, the representatives of institutions were invited for interviews. For selecting additional interviewees a snowball sampling was used, i.e. interviewees were asked to advice, who else could be invited for interview. That snowball sampling helped to reach out wider and more diverse audience of interview partners as well as saturation of information.

Prepared in advance semi-structured questionnaire were used for all interviews. It had two main objectives: (1) understanding of concepts used in the research (public participation, river development, river restoration, etc.) and (2) interviewee's willingness to participate in the river development and in general urban development process. The interviews were held in the place, which is familiar to interviewee (their

working place, living quarters or public space). Four interviewees spoke in mother tongue (Bahasa, Laotian), then interpreter helped to communicate. However, majority of interviews (93 % of all interviews) were held in the English language. All interviews were audio recorded. Interviews were conducted between 2015 November and 2016 May. The length of one interview varies between 30 minutes to 2 hour 20 minutes.

Out of all 74 interviews, 56 the most representative, diverse and informative interviews were selected. The relative for research information about selected interviewees is given in the table below (Table 2-2). Due to sensitivity of the topic the anonymity of interviewees was required. Interviewees' names were converted to codes.

Table 2-2. Information about interviewees.

Code	Organization/Institution	Case study	Project
1512-JK-1	Private company, consulting on wastewater management	Ciliwung river	No direct involvement, consultant on wastewater mangement
1512-JK-2	Community leader	Ciliwung river	Ciliwung Normalisasi and community relocation
1512-JK-3	Local person	Ciliwung river	No direct involvement, active community representator, leader of the local NGO
1512-JK-4	Water and wastewater engineer	Ciliwung river	Design wastewater treatment facilities and water purification plants
1512-JK-5	Government official	Ciliwung river	Flood control, community information, Ciliwung Normalisasi
1512-JK-6	Professor at university	Ciliwung river	Teach water management, environmental science
1512-JK-7	Government official	Ciliwung river	Flood control, Ciliwung Normalisasi
1512-JK-8	Local person	Ciliwung river	No direct involvement
1512-JK-9	Community leader	Ciliwung river	Community representation, Ciliwung Normalisasi, relocation
1512-JK-10	Engineer	Ciliwung river	Consultant in river management
1512-JK-11	Local person	Ciliwung river	No direct involvement
1512-JK-12	Local person	Ciliwung river	No direct involvement, journalist
1601-MD-HCM-1	Expert (leader of science research institution)	Mekong river	Measurements of water quality, flood areas, salinity intrusion
1601-MD-HCM-2	Government official, urbanist	Mekong river	No direct involvement, GIS analyst, urban planner
1601-MD-HCM-3	Local person	Mekong river	Water quality, biodiversity. Live history of the area source
1601-MD-HCM-4	Private company, urbanist	Mekong river	Active person involved in many projects and negotiations with government

Code	Organization/Institution	Case study	Project
1601-MD-HCM-5	Local person	Mekong river	No direct involvement, ex-fisherman
1601-MD-HCM-6	Young scientist	Mekong river	Water quality measurements and analysis
1601-MD-CT-7	Scientist	Mekong river	Mainly focus on water treatment technologies, analysis of water quality
1601-MD-CT-8	Scientist, consultant	Mekong river	Water management, consults in development projects in Mekong delta, conducts social impact assessment.
1601-MD-CT-9	Government official	Mekong river	Monitoring of water quality, pollution
1601-MD-HCM-10	Government official	Mekong river	Consults on climate change and livelihood improvement in Mekong delta
1601-MD-CT-11	Local person	Mekong river	Working in university as researcher on climate change issues in Mekong delta
1601-MD-CT-12	Government official	Mekong river	Water quality, development projects, irrigation
1601-MD-CT-13	Scientist	Mekong river	Water quality, environmental issues
1601-MD-CT-14	Young scientist	Mekong river	Researcher and lecturer in local university. Person is active in community life
1601-MD-HCM-15	Scientist, urbanist	Mekong river	Consulting on river management
1601-MD-BT-16	Local person	Mekong river	Tourism consultation, costal management
1602-MR-VNT-17	Government official	Mekong river	Irrigation and drainage in the Mekong river basin, water quality
1602-MR-VNT-18	Lecturer in the university	Mekong river	River damming, engineering
1602-MR-VNT-19	Local person	Mekong river	Not very active observer of political changes in the country or river development
1602-MR-VNT-20	Government official	Mekong river	Ex-MRC employee, works on river modelling in NMC
1602-MR-VNT-21	MRC	Mekong river	MRC planning division
1602-MR-VNT-22	MRC	Mekong river	MRC secretary
1604-MR-PP-23	Local person	Mekong river	Water quality, active member of community, observer of river changes, consults of water quality, waste management, work with local communities
1604-MR-PP-24	Scientist	Mekong river	River management, monitoring water quality in Tonle Sap Lake,

Code	Organization/Institution	Case study	Project
			fluid modelling, risk assessment, social implications on local communities
1604-MR-PP-25	Government official	Mekong river	Water management, water quality
1604-MR-PP-26	Local person	Mekong river	No direct involvement. Underwater archaeology, lecturer in local university, consults in economic development and culture.
1604-MR-PP-27	NGO	Mekong river	No direct involvement. Supporting young professionals, especially engineers
1604-MR-PP-28	International NGO	Mekong river	No direct involvement. Supporting young women seek high education in "*hard-core*" sciences
1604-MR-PP-29	World Bank	Mekong river	Business and water management
1604-MR-PP-30	ADB	Mekong river	Flood mitigation
1604-MR-PP-31	Private company	Mekong river	Alliance of water supply organizations
1604-MR-PP-32	Local person	Mekong river	No direct involvement. Local journalist
1604-MR-PP-33	Private company	Mekong river	Water supply and sanitation, rain water management
1604-MR-PP-34	Private company	Mekong river	Exchange expert in water management, rain management, sustainability, support local project managers
1603-KL-1	Scientist	Klang river	Biodiversity, aquatic organisms
1603-KL-2	Young scientist	Klang river	River management, partnerships between university, governmental institutions and local communities
1603-KL-3	NGO	Klang river	River management, activist, working and consulting local communities and government
1603-KL-4	Government official	Klang river	Working in the city hall, significantly involved in River of Life project
1603-KL-5	Government official	Klang river	Significantly involved in River of Life project
1603-KL-6	Local person	Klang river	River management
1604-KL-7	Private company	Klang river	River of Life (beautification)
1604-KL-8	Scientist	Klang river	Researcher in environmental law
1604-KL-9	Government official, community leader	Klang river	Working with communities on various development issues,

Code	Organization/Institution	Case study	Project
			actively involved in activities for youngsters
1604-KL-10	Local person	Klang river	Civil engineering

Afterwards selected interviews were analysed with MAXQDA1[5] software.

2.2 Research design biases

This research as well as any other research has several biases, which must be taken into the consideration. The first of all, qualitative interview as a scientific research method is regarded as lacking objectivity. As Kvale (1996) stated, this concern arises from dichotomy of understanding of objectivity itself. However, some investigation highly depends on situation and social factors or people's attitudes. That is exactly why qualitative interviews occupy big part of this research. Public participation in the river development is contingent on existing political situation and democracy level, human behaviour and opinions. So analysis on qualitative interviews could explain why people act in one or another way.

Secondly, this research focuses only on urban territories; rural areas of river basins were excluded. Even though all three river basins stretch in wide rural areas and nature, but the most affected population is based in the cities.

The third important consideration lies in the interview material. The English language was not a mother tongue for neither of participants nor researcher herself. So linguistic analysis was not done for any of the interview material. Despite, that linguistic analysis could bring interesting dimension in this research, the results of the interviews were not analyzed through such angle. Frequently insufficient English language knowledge of some interviewees would make linguistic analysis into an analysis of knowledge of foreign language instead of analysis of understanding and opinion about the subject of the discussion during interview.

Yet another bias could be found in the selection of the interview participants. In this research there is a strong focus on the experts and educated people. Despite that several important interviews were held in native language (with the help of interpreter) with local people, majority of interviews were conducted with scientists, governmental officials, engineers, etc. in the English language.

2.3 Motivation to choose such research design

Literature review, case studies with legal document analysis and qualitative interviews brings together different perspectives on the same topic. All methods are

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[5] Program was used under the license of the University Duisburg-Essen for students.

used to answer research question from different angle and bring various information and data sources together. Literature review forms understanding dominant knowledge in academia about the river development and public participation. Later on this understanding is narrowed down to the recent understanding in the area of case studies. Knowledge is shaped according to local conditions and actual situation.

Legal document analysis brings to this research the concrete explanation of current preconditions for the river development and public participation to start and evolve. That additionally provides the frame for interpretation of qualitative interviews.

Qualitative interviews bring opinions and ideas that are actually used by people who are implementing public participation measures and/or are involved in the river development process and/or are educated observers of an existing situation. Aggregation of this information could be used for future actions and could be profitable for guidance of successful public participation.

3   Literature review

This chapter serves the purpose of highlighting the complexity of the research question by analysing the conceptual, theoretical and practical changes in the water management and its related subjects. In order to draw a precise image about the subject, there is a need to delve deep through different layers of theoretical and practical issues and concepts. However, the key notions, analysed here, are river management, river restoration and public participation. All these concepts go through scrutinised discussion while bringing the main authors and their ideas into a complex net. Additionally, these concepts analysed from theoretical angle that enables to form a comprehensive approach while analysing the case study later on. The practical aspect has highlighted through the study of the actual management of river basin in the selected case studies by the river basin managers in these different jurisdictions, which was the focus of your empirical research. The most importantly, this chapter reveals the patterns in the process of public participation in the river management project and criteria for the successful river management and criteria public participation. These findings are of the key objectives of all research. Literature review discloses that despite the vastness of existing knowledge about the river development the miscommunication between the experts, government officials and scientists still exist. In this chapter the important concepts are presented as they are discussed in the academia. That sets a framework for following discussion about the empirical part of this research.

3.1 Concept of water governance

Governance usually means set of rules that coordinate management and development processes (Pahl-Wostl, 2015). In 2002 United Nations formulated the definition of water governance:

> *"the governance of water in particular can be said to be made up of the range of political, social, economic and administrative systems that are in place, which directly or indirectly affect the use, development and management of water resources and the delivery of water services at different levels of society." (UN, 2002) (pg. 47)*

Water governance contains politics, organisational and administrative framework (SDC, 2005), which additionally requires strong participatory processes to enable communities to express their share in the process and keep all actors of the process accountable to find the best decision (Pahl-Wostl et al., 2013a; SDC, 2005; Tortajada, 2008). Gerlak & Grant (2009) add yet another dimension by stating "*[auth. water governance] is a gradual and eventually an incomplete process.*" These authors highlighted that water governance is not a final destination; it is a continuum, which expectedly improves with time and steadily grows its knowledge body and practices (Gerlak & Grant, 2009).

Water governance necessitates an interdisciplinary team of experts from various fields of the expertise, governmental officials and local people to solve water issues in the region (Gupta et al., 2013; Pahl-Wostl, 2009, 2015; Pahl-Wostl et al., 2008a). Detailed knowledge of problems must be gathered and shared among all actors (Niemela et al., 2011). However, most importantly, a discussion between different actors will contribute finding the common goal to work forward (Dellapenna et al., 2013). Each part brings different incentives to such discussion. Experts have in-depth scientific knowledge about processes and actors, governmental officials know overall bureaucratic situation and requirements, lastly, civil society presents values and generally specific knowledge about situation (Edelenbos et al., 2011; Jepsen & Eskerod, 2009; Koontz et al., 2004; Pahl-Wostl, 2015; Rosenlund et al., 2017; Spruijt et al., 2014). Excluding any part of this discussion occur imbalance and today's wicked problems are left unsolved (Checkland et al., 2006; Conklin, 2001).

Water governance has its negative sides as well. Despite how promising water governance measures are, regrettably, it is not being actually fully implemented in global, national or local politics anywhere. There are necessary actions that are obliged to fulfil in order to effectively establish water governance (Dellapenna et al., 2013). As Dellapenna et al. (2013) noticed global water governance is not influential enough to solve existing water resource problems. Even though, many academics had pointed out that global water problem must be solved by applying global water governance approach (Dellapenna et al., 2013; Hoekstra, 2006; Hoekstra & Chapagain, 2006; Hoff, 2009; Rockström et al., 2009a; Rockström et al., 2009b). But firstly, water governance must have "*inclusive and integrative institutional arrangements supporting negotiations, and transparent and evidence-based decisions, about trade-offs*" (Pahl-Wostl et al., 2013a). But nowadays there are contradictions in the administrative framework of water governance.

Inclusive water governance approach always rises considerations about power distribution and complications in the decision-making process (Krause & Strang, 2016; Krause et al., 2016; Obertreis et al., 2016; Warmink et al., 2017). Several scholars proposed idea of ecosystem services as a tool to seek for the best long-term all-inclusive solution (Costanza et al., 1997; Daily, 1997; De Groot et al., 2002; Jorda-Capdevila & Rodriguez-Labajos, 2017; Montgomery et al., 1995). In principle, it is based on the theory that everything has monetary value. In this case, every outcome – positive or negative – could be evaluated and afterwards compared to each other (Hitzhusen, 2006; Jorda-Capdevila & Rodriguez-Labajos, 2017; Postel & Carpenter, 1997). This approach includes losses and gains of an ecosystem. However, it is very difficult to measure accurately the monetary value of the ecosystem (how much river flow costs?) (Dyson et al., 2008; Jorda-Capdevila & Rodriguez-Labajos, 2017; Naiman et al., 2002; Postel & Carpenter, 1997). Moreover, there are ethical considerations about trade-offs (Acreman et al., 2014; Jorda-Capdevila & Rodriguez-Labajos, 2017; Kanwar et al., 2016). Additionally, all these evaluations depend on perception, which is heterogeneous, contextual and dynamic

(Ahlers et al., 2014; Binimelis et al., 2008; Cradock-Henry et al., 2017; Jorda-Capdevila & Rodriguez-Labajos, 2017).

Water governance is usually described as multilevel and multi-dimensional (Dellapenna et al., 2013; Pahl-Wostl et al., 2008b). It covers a wide range of possible actions and ideas (Gerlak & Grant, 2009), employs versatile approaches (Huitema et al., 2009; Meijerink & Huitema, 2017). For a long time, the water management was organized by experts and governmental officials. However, global water governance brings new actors to the scene – public and nature. Furthermore, it combines diverse disciplines – social science (Anand, 2012; Gopalakrishnan et al., 2005; Jorda-Capdevila & Rodriguez-Labajos, 2017; Kujinga, 2002; Lienert et al., 2013; Poff et al., 2010; Schaffer Boudet et al., 2011), economics (Hensher et al., 2005; Lienert et al., 2013; MacDonald et al., 2011; Willis et al., 2005), medicine (Isunju et al., 2011; Lienert et al., 2013; van Vliet et al., 2011), nature science, territory planning (Montgomery et al., 1995), engineering and many more. As Lienert et al. (2013) identify the future water infrastructure projects must overcome a history of being dominated by experts and the failure to create benefits for the local population. Newig & Fritsch (2009) summarise, that there were only two strategies pursued to solve wicked environmental, including water, problems to assimilate awareness and discussion of the problem in local governance framework, and to enhance a public role. For this reason, water governance must embody the ample share of knowledge and experience from social sciences. Sustainable water governance will be reached then "*all relevant actors and their water related activities*" are coordinated so that "*social and economic welfare*" is guaranteed "*without compromising ecosystems in the long-term*" (Renner et al., 2013; Wiek & Larson, 2012).

3.1.1 River management

River management is one of the most widely applied water governance tools to solve freshwater issues. Naiman (2013), based on Naiman et al. (1995) and Turner et al. (1993) earlier works, states that "*aquatic ecosystems are the ultimate recipients of materials from human action on the land and atmosphere*". Nature of the river strongly influences the concept to apprehend approaches applied in the river management. Rivers are vulnerable and widely used for various purposes (Darby & Sear, 2008; de Groot & Warner, 2011; Junker & Buchecker, 2006b; Naiman et al., 2002). That imposes a demand on the river management to be multi-sectoral (Nilsson et al., 2007). It is preposterous to solve one particular issue regarding river without affecting other hydro-related sector and/or causing some new consideration to appear and/or generate unexpected problems to arrive and/or render new unpredicted changes (Maldonado, 2014; Mirumachi & Chan, 2014; Norman, 2014; Varis et al., 2008b). Conklin (2001) expanded a concept of a wicked problem based on previous works of Rittel (1969, 1972, 1982); Rittel & Webber (1973). Later Hlavinek et al. (2007); Wiek & Larson (2012) argued that river-related issuances usually are such type of problems. Scholars also hinted that the exclusive way to solve these problems is by using social process (de Groot, 2012; de Groot et al.,

2013; de Groot & Warner, 2011; Maldonado, 2014). Furthermore, Fritz & Menocal (2007) stated that the primary challenge of this millennium is to fulfil social expectations. These two ideas are going hand in hand with core ideas in global water governance and particular with the river management and IWRM (Pahl-Wostl, 2015).

The river management constantly is compelled with a continuum of the river(s). In their course rivers have passed through different administrative regions, ecosystems and biomes, urban and rural territories, wilderness, etc., which requires diverse management schemes, approaches, structures (APFM, 2012; Maldonado, 2014). Nonetheless, that also could contribute to the search of the right river development choice. Various international water-concerned organizations were established and seeking how to make such interconnectedness smooth and engaging for all actors with regard to water-related issues and effects (Molle, 2009; Mukhtarov & Gerlak, 2013; Schmeier et al., 2016). The beginning of establishing the cooperations or one overseeing organization responsible for river issuances had been risen in the middle of the last century (Schmeier, 2013b; Schmeier & Schulze, 2010) due to necessity appeared around that time. Nevertheless, the first international river basin organization was established between Belgium, France, Germany, the Netherlands and Switzerland in 1816 for the Rhine river (Central Commission for the Navigation of the Rhine) (Schmeier et al., 2016). But the majority of river basin organizations was established or at least the foundation for such institutions were laid during a few decades after the WWII (Molle, 2009; Mukhtarov & Gerlak, 2013; Priscoli & Wolf, 2009). From the beginning river basin organizations focus on solving complex river management problems, like conflicts of interests, organise accurater navigation, etc. (Delli Priscoli, n.d.; Delli Priscoli & Wolf, 2009; Mukhtarov & Gerlak, 2013; Schmeier, 2013a; Schmeier et al., 2016). However, with increasing awareness towards nature deprivation, the attention to rivers obtained a new unique perspective. River managers and/or institutions responsible for the river management started applying various measures to increase natural qualities of the rivers (Mukhtarov & Gerlak, 2013). Various grassroots initiatives took place too (Mukhtarov & Gerlak, 2013). Their influence grew with the time immensely (Schmeier, 2013a; Schmeier & Schulze, 2010).

The river management like any other resource management consists of a tandem of actions – analyses and monitoring, development and implementation (Hooper, 2008; Molle et al., 2010; Mukhtarov & Gerlak, 2013). Scientists repeatedly pointed out that it is needed to have an overview not just about today's ambience, but also provisions for the future. Some of the river basin organizations were established solely for the purpose of monitoring and collecting data about river basin and drawing up predictions for the future (for example, Mekong river commission (Boer et al., 2015)). Other river basin organizations mainly focused on navigation (for example, Central Commission for the Navigation of the Rhine (Schmeier et al., 2016)). According to SDC (2005), river basin management consists of the "*coherent framework to tackle the complexity and competitive interests regarding water resource uses*". To implement this framework, multi-level discussions between various actors must take

place (Hedelin, 2008; Newig & Fritsch, 2009). The holistic approach to the river management actions is one of the crucial necessity (APFM, 2012; Molle, 2009). It could reinforce the voice of the neglected ones (poor, women, people with disabilities, etc.) and distribute power more evenly (Borch & Kornberger, 2015; Collier & Scott, 2010; Newig & Fritsch, 2009). This management circle is closing with evaluation of implemented measures. Yet evaluation of outcomes and monitoring during all management process was and is necessary no matter how challenging or arduous or laborious it is (Hedelin, 2008; Schwilch et al., 2012). Criteria for such evaluation must be representative and include criteria from various scientific fields, but still stay manageable and comprehensive and reasonable (Hedelin, 2008). The evaluation must reflect present and future effects on all stakeholder groups, to incorporated perspectives towards the project from the standpoint of national and local government, investor(s), all stakeholder groups, and lastly recognize the role of public and nature (Hedelin, 2008; Woolsey et al., 2007). The lessons from history of various rivers showed that transformations of the river, which started as small weir or grade to help fishing (Harari, 2014), end up being majestic and irretrievable (Mithen, 2012) (like dike systems in The Netherlands; irrigation and water exploitation system in the Colorado river, which dried out the river completely; huge dams all around the World). Now it is just a rhetoric question if knowledge of the holistic and participatory approach would have helped to avoid these negative outcomes.

Some scholars go as far as stating that "*river basin management is a powerful instrument for conflict resolution between competing groups or neighbouring states*" (SDC, 2005). Even there are several negating arguments, for example, unique values of the river including a sentimental and sacral value of the river could cause new conflicts or the contrasting perceptions on the trade-off could elicit to heat up existing situation even more (Hedelin, 2008). Notwithstanding, the river management always calls for cooperation (Gerlak & Grant, 2009; UN-Water, 2013). In its core river management stands for the partnership, not a rivalry. Interestingly, Lienert et al. (2013) discovered that decoupling local politics from the planning of water infrastructure could contribute to avoiding conflicts even more.

Lastly, according to Zedler, Doherty, and Miller's (2012) meta-analysis on restoration showed that 10 % of articles, which mentioned any policy issues, rarely they presented outstanding recommendations for the policy to improve itself (Aronson et al., 2010b; Zedler et al., 2012). Additionally, scholars often advise the monitoring of the implemented measures and follow-up management necessities (Tischew et al., 2010; Zedler et al., 2012). Åberg and Tapsell's (2013) research affirms the importance of communication with the public in the river management projects. In the study, based in the UK, the public appreciation of implemented river restoration measures grew with time. The last conducted survey showed that after 13 years since the official end of the project, people have appreciated restored river more then they did right after the implementation of the measures (Åberg & Tapsell, 2013). Other researchers have noticed the shift public appreciation towards the naturalness

of the recreated or restored river in developed countries (Åberg & Tapsell, 2012, 2013; Buijs, 2009; Junker & Buchecker, 2006a; Morandi et al., 2014).

Generally, an ultimate goal of river management is laid to improve the life quality for human beings as well as to enhance biodiversity (Bullock et al., 2011; Day Jr et al., 2009; Ehrlich & Pringle, 2008; Nellemann & Corcoran, 2009; Secretariat, 2010). River management could be organized in various ways, but they inevitably have their roots in the holistic approach, participatory approach, cross-sectoral cooperation, multi-sectoral approach, etc. (Gerlak & Grant, 2009; UN-Water, 2013). Above all, rules, structure and boundaries, in which river management operates, are set by the water governance (Pahl-Wostl, 2015).

3.1.1.1 River management – concepts and definitions

The river management is a part of natural resource (including water) management. It is a wide and diverse water resources organizing tool. The river management concepts could differ depending on the perspective towards measures, which are applied. Some river management projects could imply more homocentric approaches and manage water resources to serve the needs of humans and neglect the importance of nature preservation. Other river management projects are more reserved and spotlight the keeping river in its natural state, or reverse it as it was before development (Zedler et al., 2012). In the case study chapter, it is revealed that the river management and development projects could vary between those two poles. The proximity of each pole depends a lot on the actual context and culture.

The river management as well as many other applied management shifted from hard engineering and/or scientific solutions to more holistic or so-called "*soft solutions*" (Palmer et al., 2005), since experts "*discover*", that communities are "*tightly organized systems*", which members lack coherence (Davis & Slobodkin, 2004). The concern of how changes in the river will affect local communities coming into the discussion since the end of XX century. Many researchers argue that an inclusion of social concern into the river management domain enriches the projects (Bruch et al., 2005; Jorda-Capdevila & Rodriguez-Labajos, 2017; Naiman et al., 1995; Newig et al., 2005; Pahl-Wostl, 2009, 2015; Poff & Matthews, 2013; Raven et al., 2012; Wheaton, 2005). As Bradshaw (1996); Burger (2008); Girard et al. (2015) stated the ecological restoration caused the "*added value*" (Baker et al., 2014). Such projects create a healthier environment, new economic opportunities, and rises up awareness about the environment (Baker et al., 2014; Hall, 2010; Lewis, 2005; Raven et al., 2012; Wheaton, 2005).

During the river management process it is necessary to define how water is shared between human needs and ecosystem necessitates (Falkenmark & Rockström, 2004; Nilsson et al., 2007). A collision between local farmers and environmental conservationist can be harsh (Gross, 2008; Keulartz, 2009), especially in developing countries with scarce water resources. Stakeholders' opinions how to manage the water bodies could be far apart. As Nilsson et al. (2007) notice such situation is very

inviting to researchers and scientist to investigate, despite that many research were already conducted there are still many grey areas in the river management.

River restoration – river management practice

One of the river management concepts is a restoration of water resources. As Palmer et al. (2005) wrote "*river restoration aim to maintain or increase ecosystem goods and services while protecting downstream and coastal ecosystems*". There are various approaches such as river rehabilitation, river restoration, river renaturalization, river revitalization, river (re)conversion, river restructuring, etc. (Muhar et al., 1995). All these actions in one or the other way seek to convert a river from the current altered stage to the more natural-looking stage. Keulartz & Van der Weele (2008) tried to explain such situation by stating "*[t]hese different understanding of restoration can be seen as linked to different 'metaphorical frames' containing different terms or metaphors about restoration which, in turn, call for different management practices*" (Baker et al., 2014). Muhar et al. (1995) notice that some concepts of river restoration projects give importance to river patterns. Hobbs & Norton (1996) argue that river restoration "*includes a return of a riverine ecosystem to a more natural working order that is not only sustainable over long-term, but is more productive, aesthetically appealing, and valuable from a conservation perspective*".

However, river restoration started as a tool for fish habitat improvement, but with time it expanded and included various measures to enhance river environment and performance. River restoration is conducted on longer or shorter river stretches in the upstream or at the deltas, as well as entire river basins (Forman, 2014; Wohl et al., 2015). According to Morandi et al. (2014) the most frequent river restoration measures are bio-engineering techniques and implementation of instream structures (both of them were implemented 32 % of all river restoration measures), channel or bank remodelling (27%), dam or valve removal (27 %), remeandering, channel creation (23 %), former channel restoration (18 %), wetland restoration (14 %), joined measures (14 %), bank stabilisation, personal and property protection (11 %), riparian restoration and invasive treatment (11 %), etc. The measures orientated towards social needs were not the most popular ones. Forman (2014) after observing Chin's (2006) and Brooks's (1998) worldwide surveys assumed that urban rivers in humid and tempered areas became more channelized by an average of two- or three-folds, however tropical urban rivers have shrunk, straightened, flown faster and become less homogenous (more high-peak flows and lower low-flows). In an urban settlement, tropical flood, caused by extreme weather events, is one of the most important reasons for the river modifications, implementation of special measures to avoid or minimize floods and prevent from diverse losses (Mount, 1995; Wheaton, 2005).

River restoration could employ quite a traditional concept, which has the main focus set on the river as a part of nature and any river development projects try to divert the

river as it was earlier in its pre-developed stage. This conservative approach requires reintroducing (if needed) just original local species of plants and animals (Zedler et al., 2012). Additionally, the traditional concept neglects the significant role of social topics. This concept could be used for projects in the natural or semi-natural environment, or rural territories as well as vast industrial areas. However, it is close to impossible to implement a project with such concepts in the urban areas. Here usually not as traditional concepts are used. Project developers tend to use more integrative and versatile approaches in the urban territories. These concepts allow creating a new ecosystem with non-local, exotic species if a new ecosystem is stable and providing ecosystem services (Zedler et al., 2012). However, Zedler et al. (2012) raise concern that new river restoration projects introduce more exotic species compared with native ones, especially then according to Baker et al. (2014) city architects are not bothered or agitated about preserving or reintroducing local ecosystem. The experts, who support this type of projects often point out that such project create extra value and "*a novel ecosystem might be more sustainable*" (Zedler et al., 2012). Muhar et al. (1995) argued that due to a wide range of goals river restoration concepts could differ very significantly. The researcher added that concepts change because of different levels of planning (Muhar et al., 1995). Various concepts of river restoration are presented in Table 3-1.

Table 3-1. River restoration concepts, definitions and references.

River restoration concepts and definitions	Reference
Full restoration – "*the complete structural and functional return to pre-disturbed phase*" Rehabilitation – "*the partial structural and functional return to a pre-disturbed state*" Enhancement – "*any improvement of a structural or functional attribute*" Creation – "*the birth of a new ecosystem that previously did not exist at the site*"	Perrow & Wightman (1993)
River restoration is "*the totality of measures which change man-induced alterations to rivers (primarily flood control measures, but also diversions, hydro peaking, etc.) in such a manner that the ecological functioning of the new state resembles a more natural river.*"	Muhar et al. (1995)
Naturalisation (as a component of the creation) – morphological and ecological configuration with contemporary magnitudes and rates of fluvial processes.	Brookes & Shields Jr (1996)
"*Watershed restoration – a comprehensive, long-term program to restore watershed health, riparian ecosystems, and fish habitats.*"	Ziemer (1997)
"*Eco-societal restoration is defined herein as ecological restoration with the human component of the ecosystem actively participating in the process, which usually requires a willingness to alter social behaviours to enhance*	Cairns Jr (1997)

River restoration concepts and definitions	Reference
the integrity of natural systems. The concept is based on the assumption that successful ecological restoration is most likely to occur at the landscape level (a scale large enough to include the heterogeneity in ecosystems) and both large temporal and spatial scales are routinely to be involved."	
"*Watershed rehabilitation – used primarily to indicate improvement of watershed condition or certain habitats within the watershed*"	Williams et al. (1997)
Ecological restoration is "*the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed*". Ecological restoration "*is intended to repair ecosystems with respect to their health, integrity, and self-sustainability*".	SERIS (2004)
"'[R]estoration' [are] activities ranging from 'quick fixes' involving bank stabilization, fencing, or engineering fish habitat at the reach scale, to river-basin-scale manipulations of ecosystem processes and biota over decades." "*River restoration [is defined] as assisting the establishment of improved hydrologic, geomorphic, and ecological processes in a degraded watershed system and replacing lost, damaged, or compromised elements of the natural system. This definition is broad in that there is room for subjectivity and societal values in the definition of what constitutes 'improved'. Improved may include protection of property, enhanced aesthetic values, facilitating recreation and so on.*" "[E]*cological river restoration as assisting the recovery of ecological integrity in a degraded watershed system by re-establishing the processes necessary to support the natural ecosystem within a watershed. Because both technical and social constraints often preclude 'full' restoration of ecosystem structure and function, rehabilitation is sometimes distinguished from restoration.*"	Wohl et al. (2005)
"*River restoration as a measure to improve both flood protection and ecological quality has become a common practice in river management. This new practice, however, has also become a source of conflicts arising from a neglect of the social aspects in river restoration projects.*"	Junker et al. (2007)
"*River restoration is defined as the return of degraded ecosystem to a close approximation of its remaining natural potential (US EPA, 2000).*"	Miller & Miller (2007)
"*The restoration of natural capital is any activity that integrates investment in and replenishment of natural capital stocks to improve the flows of ecosystem goods and services, while enhancing all aspects of human well-being. In common with ecological restoration, natural capital restoration is intended to improve the health, integrity, and self-sustainability of*"	Raven et al. (2012)

River restoration concepts and definitions	Reference
ecosystems for all living organisms. However, natural capital restoration focuses on defining and maximizing the value and effort of ecological restoration for the benefit of humans, thereby mainstreaming it into daily thought and action and promoting ecosystem health and integrity."	
"*Enhancement works on degraded river channels were initiated partly through campaigns and international agreements on biodiversity conservation (Nienhuis et al., 1998) and a globally increased pressure to acknowledged environmental issues forced governments to take further action.*"	Åberg & Tapsell (2013)
"*Ecological planning is the process of understanding, evaluating and providing landscape use options to both improve the balance between and address the separation of ecological systems and human habitation. <…> Ecological planning considers social, political, economic and governance factors that exist within a wider environmental sustainability framework.*"	Zeunert (2017)

The understanding of river restoration through the last two decades slipped from the strong sophisticated engineering approach to the holistic inclusive concept. Its boundaries became more blur and evolve more measures to reach the same or similar targets. Baker et al. (2014) discuss why river restoration receives so much attention from academia recently. In authors opinion "*it is seen as indicative of a more positive relationship with our natural surroundings, heralding a move from earlier 'hard' engineering*" as well as research area for social and political researchers to investigate questions, which concern measures and applications of these measures in the planning system to gain sufficient public consultation (Baker et al., 2014; Buijs, 2009; Eden & Tunstall, 2006; Jorda-Capdevila & Rodriguez-Labajos, 2017; van der Heijden, 2005).

Wheaton (2005) classified nine types of the motives to do river restoration. They include (1) ecosystem restoration, (2) habitat restoration, (3) flood control, (4) floodplain reconnection, (5) river bank protection, (6) sediment management, (7) water quality, (8) aesthetics and (9) recreation (Wheaton, 2005). In various river restoration projects they could have an individual arrangement of these motives, they overlap, combine few of them together, have a different hierarchy or one motive could be more expressed, while other motives barely present. Aradóttir et al. (2013) have completed an extensive research on drivers of restoration in Iceland since the beginning of XX century. The prime motivation for the restoration of the water bodies was nature conservation and restoration, infrastructure and energy, waste disposal, erosion (soil protection), tourism and recreation (Aradóttir et al., 2013). The scientists argued that restoration could replace natural systems (Baker et al., 2014; Katz, 2000).

Various scientists and experts analysed dependencies between ecosystem function and structure with processes of ecosystem creation (including restoration) (Carr et

al., 2012; Montgomery et al., 1995; NAP, 2002; Wheaton, 2005). From the degraded state to improved quality river could evolve in three distinct ways: (1) leave existing stable river structure, but change its function, (2) create the new dynamic ecosystem which development heading towards historic watershed conditions, or (3) create a new heterogeneous ecosystem, which has river function, but structure is different (Wheaton, 2005). However, in such model, local communities and people' influences are not reflected or put into consideration directly. Even though, diverse rivers restoration measures could be applied for rivers in the cities or urban areas as well as in the rural territories or even woodlands. However, such improvements in the urban environment receive more public attention and discussions (Åberg & Tapsell, 2013), however, Huddart-Kennedy et al. (2009) demonstrate that rural people have stronger environmental consciousness.

In restoration projects, fallacious applications could cause "*rapid degradation of the site and a loss of both ecosystem services and cultural values*" (Niemela et al., 2011). Moreover, in the water governance several discourses could be present and usually one of them get a prevalence, their other discourses will oppose and question leading ideas (Gerlak & Grant, 2009; Koremenos et al., 2001). It could happen that main project idea will not align with current water governance approach.

Fierce critics of the restoration have been expressed by Elliot (1982). The researcher wrote that restoration projects lacks the authenticity, interrupt with the historical continuity, and change the origin of the area (Baker et al., 2014). Other scientists stated that restoration activities "*increased humanization of the natural world*" (Attfield, 1994; Baker et al., 2014; Katz, 2000).

River restoration is a long-term process strongly mingled with political, economic and social changes (Huitema & Meijerink, 2017; Zedler et al., 2012). In order to proceed with such a complex process for years, sufficient budget is required, it also must be stable and reliable (Wheaton, 2005). That is one of the reasons why so many river restoration projects are entirely or significantly financed by public funds (Aronson et al., 2010a; Benayas et al., 2009; Zedler et al., 2012). Such situations put a halter on the project to produce benefits to society (Zedler et al., 2012). Longevity of the projects stems from engineering achievements, today some complications do not obtain existing solution, but they will have in the future (Baker et al., 2014; Westphal et al., 2010), similar conditions were in the past – river management solutions and ideas were not present, but today experts are quite familiar with (Nilsson et al., 2007).

3.1.1.2 Actors and relations amongst them in the river management

Additionally to the comprehension of the process of river management, the significant role is played by the actors in the process itself. Especially, then their contributions could influence the entire process and could divert the course of development

immensely. This chapter exposes the complexity of the actors and the network between versatile actors in the river development.

In the river management process, the actors could vary from people, who are living on the riverbanks, to international financial institutions, and to nature itself (Nilsson & Aradóttir, 2013). Customarily, the river management is organized by the governmental institution or a joint body of several of them. Since rivers have so wide range of functions, the responsibilities of river management end up scattered and divided between governmental institutions (Pahl-Wostl, 2015; Rauschmayer et al., 2009; Schmeier, 2013a, 2015). Nonetheless, principal players in the river management are government with diverse institutions, experts, companies, international organisations and public, which at the moment are rising voice to express its interest in the river development (Kramer & Pahl-Wostl, 2014; Lubell et al., 2014; Pahl-Wostl, 2015; Rauschmayer et al., 2009). In the text below main actors in the river management are discussed along with their conventional role and customary attitudes.

Governmental institutions

Governmental institutions usually play the role of "*watch dog*" (Norman, 2014; Schmeier, 2015), however, if water recourses are privatized often "*watch dog*" role is taken by NGOs (Page & Bakker, 2005). Governmental institutions form the policies, frameworks, strategies, etc. and set the rules for water governance along with the river management and river restoration. They require for participants in the river management be flexible in order to proceed with the complex situation (Norman, 2014; Pahl-Wostl, 2015). However, a demand for governments to express a clear prioritization is increasing in the policy of environmental management and protection around the World (Lebel et al., 2006; Norman, 2014).

The government usually establishes a designated institution to have an overview of the development of particular river basin. In the case of transboundary river basin, such institution often is established by the international treaty or agreement between several governments (Delli Priscoli, n.d.; Huitema & Meijerink, 2017; Schmeier, 2013a, 2013b, 2015; Schmeier et al., 2016). These institutions have their roots in the concept of river basin organisation or water board. Millington (1999) described three categories of river basin organizations: (1) monitoring, investigating and coordinating committees; (2) planning and management commissions; (3) development and regulation authorities (Hooper, 2008). Huitema & Meijerink (2017) after extensive research formed four river basin organization categories according to their design; they are autonomous, agency, coordinating and partnership. Later, Norman (2014) by observing International Joint Commission (IJC) report formulated general roles of such institutions: (1) coordinate; (2) communicate; (3) gather local knowledge and depict and portray local actors; (4) solve conflicts and disputes; (5) facilitate fruitful discussion among various actors.

Additionally, governmental institutions, which coordinate related to or interfere with the river management issues (like agriculture, forestry, territory planning, etc.), sustain contradicting interests in water governance. That is why holistic approach with established participatory principles, according to a vast extent of literature, should be the answer (Bherer & Breux, 2012; Blackstock et al., 2007; Blackstock et al., 2012; Dasgupta & Beard, 2007; Palmer et al., 2005; Palmer et al., 2014). Furthermore, the governmental institutions usually have clear functions and missions, which are described in legal documents and oftentimes include ambitions towards participation and society engagement. Often one leading institution coordinates some special management issue and is responsible for fulfilling requirements of participatory principles. Notwithstanding, the human factor could compel an immense influence and is hardly predictable (Friberg et al., 2011; Sinaulan et al., 2013). Governmental officials with an active interest in their job along with engaging stakeholders and the public in the river management process are expected to reach better accepted results with more positive public perception and acceptance (Åberg & Tapsell, 2012).

Experts

The other influential group of actors are experts. van Ast & Gerrits (2017) stated, that "*experts are […] called the sixth power*". Experts are influencing the river management directly or indirectly (Spruijt et al., 2014). Direct influence occurs then to the expert, designs a project and actively participates in a decision-making process. Furthermore, another group of experts usually from academia are investigating and consider for new innovations, formulating most exemplary practice, etc. (Bäckstrand, 2003; Huitema & Meijerink, 2010; Kellon & Arvai, 2011). In other words, they are creating and organizing theoretical knowledge about the river management. Indirectly experts influence the river management by spreading or withholding information, conducting an action in public participation processes and/or measures as an active member of society (Kellon & Arvai, 2011; Pahl-Wostl et al., 2008b). Additionally, none of the experts works in the vacuum. They do have their beliefs, prejudices, preconceptions, experiences and that stronger or weaker influence the ideas presented in their work (Kellon & Arvai, 2011). Most of the ideas and measures of river management often surpass the real author(s) (Beunderman, 2017; Bhushan, 2015; Sinaulan et al., 2013).

Economies/industries

Companies are using river water for various technological processes, rivers serve as a transportation means, they also are a food source or fishing grounds for companies, etc. (Yao et al., 2016). Companies are invited to participate as stakeholders in formulating concepts of river management. Sometimes influential economies employ techniques of the lobbying to promote a favourable decision (Kaika, 2003; Törnquist, 2013).

Private companies are contributing in the designing stage and/or act as an advisory body for governmental institutions (van Ast & Gerrits, 2017). Such consultations promote the products and knowledge of that company. Although everything must comply with existing regulations established by the government, companies have a certain degree of freedom (Pahl-Wostl et al., 2008b). Furthermore, usually, the river management projects are implemented by private companies (van Ast & Gerrits, 2017). In this stage, the degree of freedom is smaller, and company have the necessity to follow the project design, however, the company nevertheless holds some range of choices (Pahl-Wostl et al., 2008b; Sutter & Parreño, 2007).

NGOs

NGOs often are perceived as one of the key supporters for the community development, especially in the Global South countries. Usually, mission of NGOs fall in one of these three categories: (1) service delivery, (2) education provision and (3) policy advocacy (Stromquist, 1998). As Sok (2013) observed these organizations pursue their goals by capacity building (Korten, 1990), enhancing participation (Rappaport, 1987) and empowering local communities (Baccaro, 2001; Huitema & Meijerink, 2010). As the researcher discovered the middle part of Mekong (mainly Thailand and Cambodia) will have more adaptive and resilient rural society, because in the area there are more NGOs working to buffer the negative outcomes due to changes in the river caused by climate change or human rearrangements of nature (Sok, 2013). Moreover, some river basin organizations are organized as NGOs (Delli Priscoli, n.d.; Houdret et al., 2014; Schmeier et al., 2016; Schmeier & Schulze, 2010). Initially, that should guarantee unbiased and equitable principles used in such organization.

Public

The public is the most affected and so far the least influential actor in the river management (Bason, 2013; Coenen, 2009). Nevertheless, the public may consider and pursue a variety of roles. One of the most expected one is associated with NIMBY (Not In My Back Yard) syndrome (Renn et al., 1995; Schively, 2007; Sun et al., 2016). Society often neglects popular solutions in their close premises. On the other hand, at times public is regarded as a silent referee that is witnessing everything, but not truly influencing the process or its results. Society for a far-reaching time had no voice, which would be heard and respected in the decision-making process. From the middle of XX century, public participation became present in academia and policy. From that time onward communities and lay people gain some opportunities to acquire a part in the decision-making process. Nowadays, the part of the population, who "*have an interest in a particular decision*" is called the stakeholder (SDC, 2005).

The public could be active during the river management, although its quite rarely the case (Moellenkamp et al., 2010; Renn et al., 1995). Cuppen & Winnubst (2008) analysed how public participation influences the legitimacy of the policy process in

the water management and concluded that despite being little aware of the policy process, people "*were not indifferent to the policy outcome*". The same study showed that people's abandonment and extrication often is caused by "*the distrust of governmental institutions*", which stems from "*previous negative experiences*" (Cuppen & Winnubst, 2008). Renn et al. (1995) acknowledged that for public's negative opinion the experts are partly responsible. People doubt that experts are able to evaluate the related issues (Renn et al., 1995).

To sum up, actors in the river management could be very varied and portray a distinct role. Some of them are referred as stakeholders, which according to definition involve people who influence or can influence the process of river management or end results of river development project (Lienert et al., 2013; Reed et al., 2009; SDC, 2005). More about the stakeholder analysis is presented in 3.2.1.1 chapter.

3.1.1.3 Process of river management and restoration

The river management is a continuous long-term process, which has various implementation reasons that stem from the political agenda, economic and/or social development or environmental necessity. Despite the reasons why the project is implemented, project development usually follows the same or very similar path. Everything starts with identifications of the problem or problems, which ignite the idea and mission of the project (Wohl et al., 2005). Later existing situation analysis and project design will follow. After that, the project is implemented and if needed monitoring measures are established and, lastly, the final evaluation of the project is set (Wohl et al., 2005).

The problem identification and the project idea generation stage could be complicated. Any new project starts with an idea, or with unfulfilled satisfaction or eagerness for the change (Carr et al., 2012; Liu et al., 2016; Wheaton, 2005). McGurrin & Forsgren (1997) examined the crucial fundamental principles for the watershed restoration. The principles varied from biophysical watershed protection, sustainability and creation of dynamic equilibrium in the watershed to socioeconomic principles, which range from establishing legal and regulatory systems that contribute to the social framework for the river management till the invention of the most suitable and effective communication strategies (McGurrin & Forsgren, 1997). Later Ehrenfeld (2000) formulate four practices, which fortify the environmental improvement. The author named them as "*conservation of endangered species or communities; ecosystem management; ecosystem services and the restoration of ecological function*" (Wyborn et al., 2012). Nevertheless, Bernhardt et al. (2005); Downs & Kondolf (2002) reveal that "*most restoration projects have been implemented without the study design, baseline data, and post-project appraisal needed to learn from them*" (Wohl et al., 2005).

The project design stage demands a profound understanding of the local situation, which concerns everything about the river management project, including culture, traditions, other local conditions (Cradock-Henry et al., 2017; Wheaton, 2005; Wohl

et al., 2005). One way of collecting such information is through public participation measures, like public involvement, forums, charrettes, etc. (Grigg, 2014; Jenerette et al., 2006; Renn et al., 1995). In many countries according to their laws, there is a requirement to inform society, however, the option how it must be carried out could be profoundly different (Palmer & Allan, 2006; Palmer et al., 2005; Rowe & Frewer, 2005).

The project implementation is actual actions, which cause changes in the physical appearance of the river and its environment (Naiman, 2013). During this period local communities experience the construction works, which could be noisy, cause dust and other short-term pollution and disturbances. Additionally, implementation strongly affects the dominant public opinion about the project, institutions involved and river management itself (Baker & Eckerberg, 2013; Cradock-Henry et al., 2017). If prior the project implementation, public participation was not happening successfully, then in this project stage dissonances becomes highlighted even more (Carr et al., 2012; Cornwall, 2003).

The stage of project evaluation and monitoring is the last project development stage. However, according to Palmer et al. (2005), the monitoring is rarely conducted for the river restoration projects. The monitoring of the outcomes is a tedious task and drags an extensive time into the future after the end of the project (Carr et al., 2012). Nonetheless, it is crucial and could provide significant and consequential knowledge for the future river management activities and decisions (Gross, 2002, 2006). Wohl et al. (2005) summarized that there are five restoration objectives, which science could contribute to. Science could serve to unmingle the complexities and uncertainties around river restoration and help to formulate a theoretical framework that could aid to find the suitable development path (Pahl-Wostl et al., 2012; Wohl et al., 2005). Academia by using monitoring results could seek out the best variables, according to which river developer could choose suitable practices and measures (Bhushan, 2015). Linking science with the implementation and development could lead to an invention of new methods of restoration or the improvement of existing ones (Bhushan, 2015; Wohl et al., 2005).

Through all project development stages the river restoration is interwined with politics, bureaucracies, economies and science meet with nature requirements, public needs and expectations (Baker & Eckerberg, 2013; Baker et al., 2014; Carr et al., 2012; Pahl-Wostl et al., 2008a; Pahl-Wostl et al., 2012). Hedelin (2008) noted that the planning process must consider various uncertainties and learn from previous projects along with passing gained knowledge to the future projects. In every stage, public could contribute to the project development as well as have negative impact on it.

3.1.1.3.1 Integrated water resource management

Integrated Water Resource Management (IWRM) is a world-wide known concept to organize the natural resources (SDC, 2005). It is a remarkably important

management tool for the river development. The first time IWRM has been strongly promoted at the UNESCO International Conference on Water in 1977 (Hlavinek et al., 2007). This concept has been significantly developed by Global Water Partnership (GWP) using hands-on experiences of practitioners and experts (Gerlak & Mukhtarov, 2015). The organization defines IWRM as:

> *"process, which promotes the coordinated development and management of water, land and related resources in order to maximise the resultant economic and social welfare in an equitable manner, without compromising the sustainability of vital ecosystems. Integrated management has to be applied through a complete rethinking of water management institutions – putting people at the centre."*

GWP suggests that the finite water resources are interconnected and interlinked with each other, that is why, it entails a holistic approach to pursue for the best-suited solutions. The process of IWRM is presented in Figure 3-1. It is, as well as water governance, a constantly on-going process.
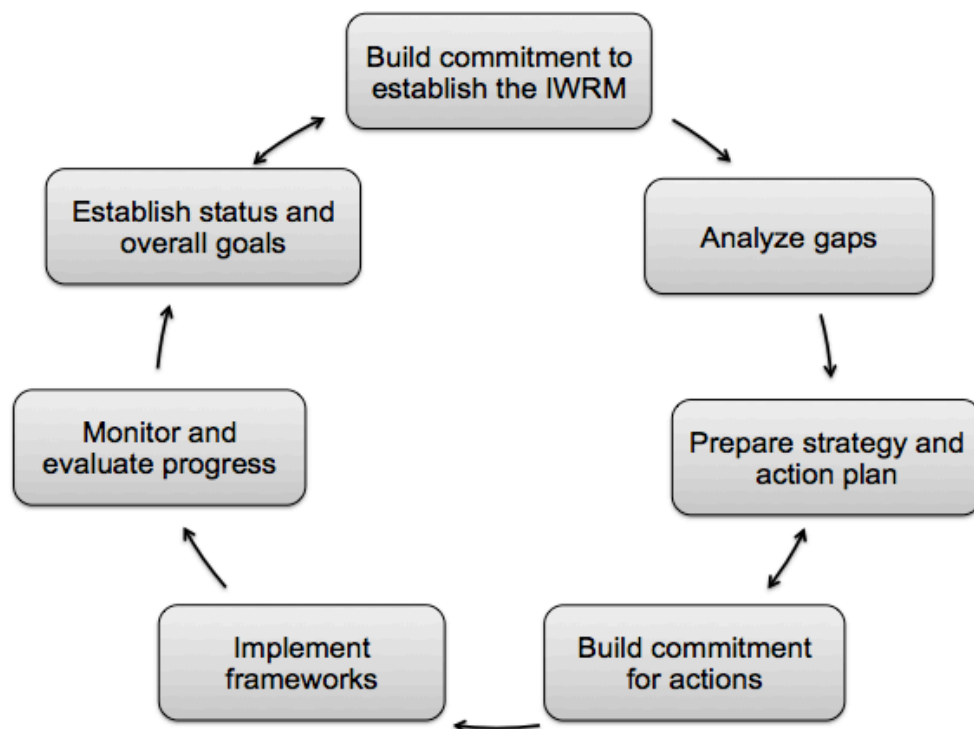
Figure 3-1. On-going, reflective and changing the IWRM process (GWP, 2004).

The IWRM approach should follow 3E principle – water must be used to provide economic well-being without compromising social equity and environmental sustainability (Varis et al., 2008b). There is also another list of principles, which IWRM seek to achieve (Kramer & Pahl-Wostl, 2014). They are so-called Dublin principles (ICWE Secretariat, 1992). They are as follows: (1) fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment; (2) water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels; (3) women play a

principal part in the provision, management and safeguarding of water; (4) water acquires an economic value in all its competing uses and should be recognized as an economic good (ICWE Secretariat, 1992). These principles seek for equality and equity for all stakeholders in the water sector. The participatory approach is perceived as the key answer to solve the existing complex situation in the water management around the World.

IWRM idea is mostly promoted by engineers and scientists, who tend to use system approach or comprehensive and holistic water management (Gerlak & Mukhtarov, 2015). IWRM seeks to de-politicizing difficulties for water allocation by advancing optimization models (Gerlak & Mukhtarov, 2015). Furthermore, Lubell & Edelenbos (2013) suggested that in the recent years IWRM became the topic of power and politics (Gerlak & Mukhtarov, 2015).

The scientists and organizations, which are promoting IWRM, list many positive features of this concept. IWRM assists to coordinate, develop and manage water resources along with complementary and/or related issues (McDonnell, 2005; SDC, 2005). Other keywords about IWRM strength is integrated and trans-sectoral approach organized by applying sustainable management measures combined with the participatory approach (Grigg, 2014; Hirsch, 2012; Hooper, 2003; SDC, 2005; UN, 2002). Such constellation should guarantee diversity and flexibility of the process (Hooper, 2003; UN, 2002) that is why it often ends up being specific for every case and/or site, which could vary significantly between projects, countries and/or occasions (Hering & Ingold, 2012; Lienert et al., 2013; Molle, 2009). Additionally, it is expected that IWRM implementation will lead to equality of water resource allocation between all stakeholders (SDC, 2005). Water resources must be used efficiently with perspective for the future generations (SDC, 2005).

IWRM focus on the natural resource management with included and fiercely advocated participatory and adaptive management procedures (Dehnhardt & Petschow, 2008; Hooper, 2008). From theoretical perspective IWRM is a very developed concept, however in the implementation stage that turns out to be generally too complicated to be established successfully (Biswas, 2004; Lienert et al., 2013; van der Brugge & Rotmans, 2006; Varis et al., 2008b). So even though the preparation of IWRM schemes or development strategies and plans is truly beneficial (Lienert et al., 2013), the lack of the implementation capabilities is negatively affecting water governance or management per se (Gerlak & Mukhtarov, 2015). Moreover, IWRM concept tries to organize all water-related activities at once from governmental to financial to education to other relevant issues (Varis et al., 2008b). It appeared to be too ambitious, especially, if limited financial resources are considered. Furthermore, the special Tool-box for IWRM implementation was arranged (Gerlak & Mukhtarov, 2015). However, because of the lack of the coordination and supporting policies, there are too many obstacles to the successful implementation of IWRM. Giordano & Shah (2014) argued that IWRM brought an end

to itself due to the "*monopoly on potential solutions*" that "*has shut out alternative thinking*" (Gerlak & Mukhtarov, 2015).

The considerable challenge for IWRM implementation lies in the requirements and adjustments for the existing institutional framework (Varis et al., 2008b). At the moment existing management and governmental framework construct implementation of IWRM harder (UN, 2002), often researchers and scientists argue that there is the lack of the successful measures in the management and not sufficient participation and involvement (UN, 2002). Hooper (2003) pointed out that the confusion between terms of "*bottom-up consultation*" and "*community participation*" as well as "*top-down policy*" and "*government investment*" is still present and is negatively transforming and manipulating the current situation. These and similar problems become highlighted in the implementation of IWRM process for transboundary river basins (Varis et al., 2008b). In such situation clash of ideas, understandings and even work customs is all the more eminent. Additionally, as United Nations (2002) in the report "Water. A shared responsibility" wrote that IWRM must be "*tailored*" according to the situation at the hand. However, here hides the almost universal obstacle for the implementation of the IWRM that is the lack of governmental capacities to support entire process. Frequently governmental institutions are fragmented, responsibilities are scattered among several institutions, the institutional ignorance and competitiveness are overwhelming (Hooper, 2008; Hooper, 2003; UN, 2002). Nonetheless, this challenge is widely discussed in the academia, there is close to none improvements on the ground. As Varis et al. (2008b) summarized up IWRM is "*more an ideological and philosophical framework than an operational concept, and more an approach than a goal*".

Customarily other shortcomings of implementation of the IWRM concept are financial aid generation, involvement, education and motivation of all stakeholders, the participatory approach implementation and application, the capacity building in the entire water sector (government, the private sector, public) (SDC, 2005; UN, 2002). These topics are widely reflected in the political debate and in the discussion in the academia, however, that rarely reach lower level governmental institutions or the general public (Gerlak & Mukhtarov, 2015). These discussions are held in the pretentious language, which is extensively invigorated with scientific jargon and special peculiar expressions. That is one of the reasons why this knowledge is often incomprehensible for grassroots or interested public.

Gerlak & Mukhtarov (2015) analyzed various IWRM concepts and features. They pointed out that this concept is pushed by new ideas of water security and water governance as it was proved in Bakker & Morinville (2013); Cook & Bakker (2012). The water management is part of the framework of nexus water-food-energy (Pahl-Wostl et al., 2013b; Smajgl & Ward, 2013a; Smajgl et al., 2016). This shift from the IWRM concept towards other ideas appeared because of the implementation problems, however, that not always lead to tangible improvement on the ground level (Gerlak & Mukhtarov, 2015). New concepts are facing the same challenges as IWRM

did. Nevertheless, IWRM is still very popular and is applied to many river basins around the World.

3.1.1.3.2 Specifics of urban water (river) management

In general, the water sector is divided into three types: rural, urban and basin water (ADB, 2009), according to the type the river management measures are selected and applied (Smajgl & Ward, 2013a). Rural and urban water refers to engineering infrastructure in rural or urban areas. Basin water is "*the state of river health, planning, infrastructure including hydropower impoundments, natural hazard management, climate change, water catchment and wetland conservation.*" (Smajgl & Ward, 2013b).

Since the early days rivers were the beneficial spot to established and built settlements and they serve various purposes (Harari, 2014; Scott, 1998, 2008). According to the needs and requirements of the communities living on the river-banks, rivers and their surroundings were changed, additionally, they were adapted to receive various wastes and leftovers from human life (Forman, 2014; Jia et al., 2011; Naiman et al., 1995; Nilsson et al., 2007; Pickett et al., 2011; Stevenson & Sabater, 2010). Bell et al. (2016) summarize "*for much of the XX century, urban water and sanitation seemed to follow a universal, engineering-led linear trajectory towards and ever-improved provision using centralised, publically owned infrastructure*". In the recent years one of the cardinal focus is set on ecological river rehabilitation (Jia et al., 2011). Moreover, Norman & Bakker (2009) after extensive analysis of the development of Canada's water management, concluded that there were possible to discern four development stages during the history of water management. After WWII it was corporative development[6], later it was taken over by comprehensive management[7], which was overgrown by the sustainable development[8] with keen awareness about nature and environment. The last stage that is still going on is participatory governance[9] (Norman, 2014; Norman & Bakker, 2009). Similar history of water management is all around the World just lagging a decade or two[10], as it was noticed by Shrestha & Shrestha (2008).

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[6] 1945-1965

[7] 1965-1985

[8] 1985-2005

[9] 2000-till present

[10] Shrestha & Shrestha (2008) wrote „*planning and development strategies of waterfront revitalization in the USA during early 1960s has greatly influenced European cities in the 1970s and 1980s and Asian cities in the late 1980s and 1990s.*"

Habitually, urban rivers are highly modified (DeWeerdt, 2017; McManamay & al., 2017; van Dijk, 2012). Regularly, that was/is done for the economic purposes (SDC, 2005). Furthermore, according to various researchers the river management strongly contributes to the creation of recreational spots in the cities (Åberg & Tapsell, 2013; Asakawa et al., 2004; Nassauer et al., 2001; Petts, 2007; Steinwender et al., 2008). However, previously established improvements usually brought other quite unexpected and unpredicted environmental effects. For example, paved areas, which provide better commuting possibilities and safer environment, become a cause of harsher flash floods and severer pollution (Berke et al., 2009; Frazer, 2005).

Urbanization in the settlements and architectural design of the cities influence rivers in the urban territories prominently (Åberg & Tapsell, 2013; Bell et al., 2016; Jia et al., 2011). Sometimes the lack of design and planning causes pollution and degradation of the environment and living quality, because changes are happening sporadic, insufficient, disorganized and not merging to one evenly developed settlement (Anand, 2012; Barraqué, 2012; Tortajada, 2008; Yang et al., 2016). That is a very conventional picture in the developing countries, where water-related infrastructure is fragmented and/or deteriorated (Bell et al., 2016; Stevenson & Sabater, 2010).

In the urban settlements, the means to organize inclusive development process is widely available. It is easier to reach out for communities and community centers are more conveniently established in the area. Nevertheless, people tend to have fatigue and commonly lack of interest to participate (Beunderman, 2017). Furthermore, usually they ignore invitations for the debates and presentation about urban development in the close premises (Beunderman, 2017). On the contrarily, local communities in rural areas are more willing to participate in the decision-making process, although, they face harsher circumstances to do so (Huddart-Kennedy et al., 2009; Keller, 2003).

Additionally, urban water security is a diverse but crucial topic in all water governance (Gerlak & Mukhtarov, 2015; Gómez-Baggethun & Barton, 2013). It covers drinking water quality and guarantees safe drinkable water, floods and successful functioning of the stormwater collection system, regulations of urban river flows as well as safe environment in the river and its premises (Moran et al., 2017). Urban territories by default have higher population level and density (Scott, 1998). So flash floods often cause more financial loss (destroyed infrastructure, property) than in rural areas, however, in densely populated areas it is easier to organize risk preparedness, prevention and relief measures (Berke et al., 2009).

In a few recent decades the process of rearranging rivers become famous and influential once again. That is so-called river restoration then developers try to bring the river as it was before development. In the cities, it is highly improbable to recreate the historical river (land use is changed, a corridor for the river cannot be widened, curves cannot be recreated, previously existed habitats are lost, etc.) (Chin, 2006; Forman, 2014; Niemela et al., 2011). That is why, in the urban territories many

developers try to establish more natural or environmental friendly river (Niemela et al., 2011). Baker et al. (2014) called such places as "*islands of nature*". Nevertheless, Vining et al. (2000) demonstrate that relationship between such "*island*" and "*real*" nature is not yet fully discovered (Baker et al., 2014).

In the urban water management, the need to address the social questions is very evident (Baker et al., 2014). It starts with more complicated public participation and goes till social consequences of the project. There are examples then outcomes of river development projects caused very negative outcomes on neighbourhoods and communities, increasing crime levels, gentrification, etc. (Baker et al., 2014; Eden & Tunstall, 2006). Nevertheless, it could direct to positive changes, such as increased awareness of changes in the close premises, heighten environmental consciousness (Jordan III, 1994), development of beneficial relationships between local communities and nature (Asakawa et al., 2004; Eden & Tunstall, 2006; Light & Higgs, 1996; Nassauer, 1995b; Newson & Chalk, 2004), neighbourhood inclusion, etc. (Baker et al., 2014). Combining social and environmental issues in river restoration, the projects become essential to the area and in general they are successful (Åberg & Tapsell, 2013). Additionally, that forms a positive perspective about the project in the society (Åberg & Tapsell, 2012, 2013).

3.1.2 Criteria of successful river management

River restoration repeatedly becomes the answer to solve environmental problems (Jia et al., 2011; Stevenson & Sabater, 2010), yet Palmer et al. (2005) noted that "*little agreement exists on what constitutes a successful river restoration effort*". Nonetheless, that did not stop researchers to seek for an answer. They differ from the idea that "*restoration is not simply the opposite of degradation*" (Feld et al., 2011b) to very elaborated lists of success criteria (look at Hedelin (2008); Morandi et al. (2014); Ruiz‑Jaen & Mitchell Aide (2005); Woolsey et al. (2007)). Most of such researches are based on extended analysis of existing river restoration projects. In most scientific articles presented criteria are based on one or several specific case studies (e.g. Feld et al. (2011a); Grolleau & McCann (2012); Hladyz et al. (2011); Huang & Xia (2001); Kail et al. (2007); Muhar et al. (2016); Woolsey et al. (2007), etc.).

An evaluation of river management actions is very complicated (Carr et al., 2012; Rowe & Frewer, 2004; Sewell & Phillips, 1979). Every scientist in the field has his/her own opinion how it should be done. Some researchers presented very precise criteria, e.g. Turner (1997) formulated ten fundamental principles for successful watershed project, Bowden et al. (2004) suggested eight "*critical success factors for effective dialogue to resolve environmental issues satisfactorily*", Kareiva & Marvier (2012) propose five "*practical statements or observations of what conservation and restoration efforts need to do to be successful*" (Naiman, 2013), Morandi et al. (2014) compiled an elaborated conceptual framework for the evaluation of strategy of river restoration, etc.

In Figure 3-2 there are 25 researches on river restoration success used. Through all research observation timeframe, which extends till 1997, academics advice some environmental criteria, but political and social criteria tend to appear at the end of all list if that happens at all. In recent years, the discussion focuses on monitoring and evaluation criteria (Muhar et al., 2016; Nilsson et al., 2016; Rubin et al., 2017; Zhao et al., 2016). Academia acknowledged that without reliable data any intention to evaluate is not precise or reliable or even possible. However, as Morandi et al. (2014) reminded, it is essential to know that effects are created or provoked by the river changes and just after identification of the project outcomes, it is plausible to delve into the evaluation of river management success. Some researchers compiled a list of criteria combining various science disciplines, e.g. Nikolic & Koontz (2008) included conservation, watershed protection, river clean-up, estuary restoration, forest management, and farmland preservation projects.

There are two major categories of criteria according to their application period (Figure 3-2). The first group of criteria is criteria, which could be used through all project duration; another group specifies criteria, which could be applied just for one particular project stage (Nilsson et al., 2016). So they could be used to evaluate planning, design, implementation or monitoring and evaluation processes of river restoration. These criteria do have specific description and application. The criteria, which are used for the entire project duration, oftentimes are more reflective of the situation at the hand. They do represent the political, social, organizational, technical and environmental situation of the project area. Such criteria also could evaluate context outside the project, and influence project development directly or indirectly. Here an example could be criteria evaluating political support for environmental protection and rehabilitation, cultural values towards nature preservation, traditions to work together for the collective goal voluntarily, etc.

application	category	criteria	reference	category	criteria	reference
during all project period	political			political	"grow" grassroots leaders	4
					not fringe on human rights and must embrace the principles of fairness and gender equity	9, 10
	social	identification of local expectation and needs	2, 10, 12, 15, 16, 22, 24		authority role	5, 6, 9, 10, 17, 21, 23
		scientific contribution	3, 22		transparency of bureaucracies involved	5, 21, 22
		satisfaction of project	3, 5, 12, 13, 16, 22		clear responsibilities	6, 10
		public involvement	8, 12, 16, 18, 22, 25		supporting legal framework	5, 6, 11, 17, 21, 22
		public opinion	5, 16, 22, 24		ownership	4, 25
		public support	9, 19, 23		backbone support organizations	10, 11, 21
		public engagement	12, 15		mutually reinforcing activities	10, 11
		visual, aesthetic value	13, 16, 23		knowledge production	10, 12
		stakeholder involvement	18, 22, 24		governmental framework	1, 17, 21
		education	5, 23		restoration policies	11, 21, 25
					degrees of participation	12, 15, 19, 25
					co-decision making	12, 22, 23, 25
					inclusion of private sector	14, 16
					political science engagement	21
					openness of the political system	21, 22
	technical			organizational	collaborative/holistic/adaptive/inclusive management	1, 3, 4, 10, 12, 15, 18
					clearly define purpose and goals	4, 5, 6, 8, 19
		no lasting harm after and during installation	3, 18, 24		follow cardinal rules of environmental restoration	4, 6, 9
		use and integrate the best available science	4, 7, 8, 10, 22, 23		involvement of key stakeholders	5, 6, 16, 19
		in depth prior analysis of river and/or its basin	5		clear and transparent communication	5, 6, 8, 15, 18, 22
		strong scientific basis for the project	5, 22		self-correcting process	5, 10
		projects must be user-friendly	5		leadership and accountability	6, 8
		extensive relevant information	6, 23		vision	6, 15
		include local knowledge	6, 8, 12, 10, 22		dialogue	6, 15, 16
		long-term assessment	7, 18		awareness of requirements set in legal documents	6
		communicate achievements and failures for future projects	8, 12, 18, 24, 25		equal rights to participate for all interested parties	6, 15
		create recreational value	16, 24		maximize acceptance	6, 18
		science and practice joined together	18, 21		awareness of the context	6, 15, 18, 22, 24, 25
		sufficient budget	18		long-term planning	6, 10, 18, 19
	environmental	vision	3, 16, 20		holistic vs. discipline-focused solutions	6
		reversing environmental degradation	6, 20, 21		transparent budget	8
		actions focus on environmentally deprived, human altered river catchments	9		cooperation with corporations	9
		awareness of the context	10, 22		maximize restoration and economic objectives	9
		focus on environment	13, 16, 20, 22, 23, 24		focus on sustainable goals	19
		discussion	15		common agenda	10
		conservation management	15, 23		clear management system	10
		river's condition improve measurably	18, 21, 22, 23, 24		mutually reinforcing activities	10, 11, 18
		river system more self-sustaining and resilient	18, 21, 24		clear evaluation criteria	11, 18, 25
		concern of cause-effect relationship in ecosystem services	20, 21		consultation and information provision	12
		biological integrity indexes	23		inclusion of social concerns	14, 15, 22
					consultation and information provision	12
					inclusive management	10, 15
					pre- and post- assessment	18, 19, 23
					community-based natural resource management	19
					awareness of uncertainties	20
separate project stage	designing			planning	maintain long-term perspective	4, 18, 19
					strategic planning	6, 18, 23, 24
		design a bussiness plan to implement individual projects	4		planning evaluation	6, 8, 23, 24, 25
		communication between planners and practitioners	8		plan consultation process	6, 8
		design ecological river restoration project	18		cost-benefit analysis	20, 22
		cost-effective measures	20			
	monitoring			implementing	adjustments made according to evaluation and monitoring data	4, 5
		monitor and evaluate results of restoration efforts	4, 23, 24, 25		no lasting harm	18
		communicate results and reward accomplishment	4		communication between practitioners and monitoring experts	8
		on-going, continuous	5			
		communication between monitoring experts and planners	8			
		clearly present outcomes of the project to society	8, 15			
		passing leant lessons	8, 11, 22			
		clear monitoring framework	8, 11, 23, 24			
		stress indicators	25			

Figure 3-2. Criteria to evaluate success of the project (1 - Nikolic & Koontz (2008), 2 - Ziemer (1997); 3 - Miller & Miller (2007); 4 - McGurrin & Forsgren (1997); 5 - Turner (1997); 6 - Bowden et al. (2004); 7 - Zedler et al. (2012); 8 - Nilsson et al. (2016); 9 - Kareiva & Marvier (2012); 10 -

Naiman (2013); 11 - Morandi et al. (2014); 12 - (Maynard, 2013); 13 - Åberg & Tapsell (2013); 14 - Dellapenna et al. (2013); 15 - Wyborn et al. (2012); 16 - Wohl et al. (2005); 17 - Dehnhardt & Petschow (2008); 18 - Palmer et al. (2005); 19 - Mountjoy et al. (2016); 20 - Bullock et al. (2011); 21 - Baker et al. (2014); 22 - Jorda-Capdevila & Rodriguez-Labajos (2017); 23 - Rubin et al. (2017); 24 - Muhar et al. (2016); 25 - Zhao et al. (2016)).

As Morandi et al. (2014) noticed some scientists arranged special evaluation techniques for some particular restoration measures (Kail et al., 2007; Roni et al., 2002), others created frameworks of evaluation (Kondolf & Micheli, 1995; Roni & Quimby, 2005). Kondolf (1995) introduced five elements, which must be evaluated. These elements, which are clear objectives, extensive baseline data, good study design, commitment to the long-term and willingness to acknowledge failures (Kondolf, 1995), could be noticed in various later presented evaluation models, frameworks and criteria (e.g. Zedler et al. (2012), McGurrin & Forsgren (1997), Morandi et al. (2014), Nilsson et al. (2016); Nilsson et al. (2015), etc.). Some evaluation frameworks are highly particularized, others are more like guidance. There is a massive cluster of very precise criteria to evaluate environmental improvements (diversity of species, the occurrence of some index species, etc.). In order to evaluate these criteria methods already exist. However, how to measure criteria, which measure features of society, political framework, is a lot more complicated. At times these criteria sound as vague and immeasurable (e.g. public involvement, leadership strength, political will, etc.). Till now a debate about such criteria has persevered.

As Nilsson et al. (2016); Woolsey et al. (2007) stated it is crucial that different evaluation measures would be selected for every step of the project with a specific focus. Moreover, overall evaluation framework must be arranged at the beginning of the project (Woolsey et al., 2007). The criteria, which are applied for all duration of the project, are implemented together with the criteria, which are selected just at for a particular project stage. Recently, a lot of attention was delegated to a social aspect of development. Together with that more and more authors highlighted the importance of criteria to evaluate a public opinion, involvement and/or participation (Bernauer, 2002; Naiman, 2013; Nilsson et al., 2016; Polizzi et al., 2015). Nevertheless, Ziemer (1997) stated: "*the success of any restoration depends upon being able to identify a local concern, to objectively analyse the information, and then to design projects that effectively address concerns*". Miller & Miller (2007) acknowledged that ecological success depends on existing guiding imagine. It involves cultural background along with human and society attitudes towards nature. Same researchers wrote about criteria to evaluate the human satisfaction of the project. These criteria depict results of improved aesthetics, provided economic benefits, created recreational and educational opportunities (Miller & Miller, 2007).

Furthermore, the criteria could provide the possibility to improve project during its development (Ehrenfeld, 2000; Turner et al., 2016; Turner, 1997). Project evaluation framework and project itself must coexist as one living-breathing item. Long-term approach and on-going approach is one of the success criteria (Bullock et al., 2011;

Mountjoy et al., 2016; Palmer et al., 2005; Turner et al., 2016; Turner, 1997). Nilsson et al. (2016) pointed out that possibility to pass learnt lessons is also one of the proofs of project success. Similar opinion were reached by Maynard (2013), Palmer et al. (2005), Muhar et al. (2016) and Zhao et al. (2016). Sharing knowledge goes hand in hand with criteria of awareness of uncertainty (Bullock et al., 2011; Byrne & Callaghan, 2013), in political agenda that required transparency of the information and development system (Jorda-Capdevila & Rodriguez-Labajos, 2017). Then Miller & Miller (2007) discussed about project success, they formulated the concept of learning success consists of scientific contribution, management experiences and produced results in improved methods. Communication with public, with stakeholders, between project planners, managers, practitioners and evaluation experts leads towards successful project (Nilsson et al., 2016; Palmer et al., 2005; Turner, 1997; Wood et al., 1997; Wyborn et al., 2012; Zhao et al., 2016) as well as clear leadership (Bowden et al., 2004; McGurrin & Forsgren, 1997).

Wood et al. (1997) after explicit research and observation of various river restorations projects in the USA extract several features, which are common for successful projects. Authors stated that education and communication play key role in the project success. Communication closely related to collaborative stewardship, which is the second key element contributing to the river restoration success (Wood et al., 1997). Stewardship means that diverse groups of people are working for the common goal (DiEnno & Thompson, 2013; Hansen, 2014; Kellert, 1997; Wahl, 2007). Stewardship could be a replacement for downsizing state government ruling (Tilt & Williams, 1997) because it could organize financial support, promote and keep project sustained efficiently (Hansen, 2014). For blooming of river restoration deep understanding of the context and river itself is crucial. Without knowledge, it is ludicrous precisely define problems as well as find the best-suited solutions. As researchers argued knowledge of historical conditions can provide a benchmark to determine the desired future status of the watershed's physical and biological elements (Flotemersch et al., 2016; Hawkins et al., 2010; Wood et al., 1997). Authors also rise up awareness that practitioners in river restoration must consider that ecological systems are interconnected and dynamic. The last two features to influence the success of restoration are land management and adaptive management. Nonetheless, the adaptive management is not valid without monitoring. Monitoring could help to estimate "*if restoration project had been designed and implemented correctly, if goals were achieved, and if modification for the future is needed*" (Wood et al., 1997).

Moreover, there are river development projects, which are carried out not by government or private investor, but by the community itself. Rondinelli (1991) identified as later Ananga et al. (2016) named "the six crucial factors for success of community-managed water-related projects": (1) adequate incentives, (2) sufficient skills and resources, (3) appropriate processes for water systems operations and maintenance, (4) effective inter-organizational relationships, (5) appropriate technology, and (6) effective systems of monitoring, evaluation and feedback. Njoh

(2006) observed the importance of community awareness and participation, external connection, internal political influence, community cohesion and unity, good timing, competent leadership, the stock of human asset, sense of ownership and minimum of uncertainty (Ananga et al., 2016).

In the river management success is tremendous to achieve, however, planning beforehand and constant monitoring along with established relation and familiarity with project stakeholders and understanding of local conditions can help to reach this goal (Bhushan, 2015; Morandi et al., 2014; Woolsey et al., 2007).

The first part of the literature review focused on water governance, in particular on the river management and restoration, definitions, concepts, approaches applied, etc. Chapters here seek to find out the criteria that reveal the success of the river management project. The second part of the literature review glance at the public participation and topics around it. Additionally, there is the analysis of criteria to evaluate the success of public participation. These two separate discussions on the river management and public participation are needed for final comparison of success criteria and finding the intersecting ones.

3.2 Concept of public participation

The second part of the literature review focus on theoretical questions, which are important to understand public participation and define and specify criteria for a successful process. This research is based on almost endless literature pool in scientific journals and books. Public participation is present in almost every countries' legislative system; it is embedded in the international policy as well (Reed et al., 2009; Renn et al., 1995). Nevertheless, the form and understanding along with the implementation of this concept varied significantly (Rowe & Frewer, 2005). Public participation often is seen as one of the features of democracy (Bherer & Breux, 2012; Martínez, 2011), yet discussions about the application of public participation are not defined and are very frantic (Reed, 2008). According to Bherer & Breux (2012) proliferation of public participation could be explained by democratic or fragmentation approaches. It is as well proved in Reed (2008) research. The democratic approach highlights the importance of a possibility to acquire the most applicable form of public participation in any given condition (Törnquist, 2013). "*There is no canonical form of direct participation in modern democratic governance; modes of contemporary participation are, and should be, legion*" (Fung, 2006). In this opinion, numerous forms of public participation compliment each other instead of competing (Bherer & Breux, 2012). However, that raises up awareness of too much of the fragmentation of public participation. This situation astonishes and overwhelms practitioners, governmental officials, and brings chaos and confusions (Bherer & Breux, 2012; Bishop & Davis, 2002; Rowe & Frewer, 2005). Other paramount consideration in the discussion about public participation it is "*a fundamental tension between the instrumental and ethical approaches to public participation*" (Bherer & Breux, 2012). This clash is caused due to two reasons. On the one hand, public

participation is a decision-making tool (Wesselink et al., 2011), on the other, it is an opportunity to express opinions (Martin, 2009; van de Kerkhof, 2006). Moreover, public participation is the process that additionally producing, inseminating and creating knowledge (Voinov et al., 2016). That permits people to become more than simple "*passive sensors*" (Voinov et al., 2016).

Public participation is a feature and sign of democracy (Rydin & Pennington, 2000). As Hu et al. (2017) argue, it is a core of the development, especially in the developing countries. Public participation is a principle for the sustainable development and ecosystem management (Luyet et al., 2006). Because it is a "*process, where individuals, groups and organizations choose to take an active role in decision-making*" (Reed, 2008) and share joint responsibility (Feyen et al., 2008). However, at the times it is perceived too generic (Martínez, 2011). Oftentimes an understanding, what public participation accurately is, leads to unfulfilled assumptions. As Glucker et al. (2013) wrote, that different understanding of public participation forms different expectations of the public participation process and its outcomes. Wesselink et al. (2011) looked deeper into human behaviour and identify that the importance of intentionality plays a significant role in the process.

Rowe & Frewer (2005) research proves that there are close to one hundred different definitions of public participation. Smith (2005) find out 44 public participation mechanisms (Bherer & Breux, 2012). Yet, the most known is Arnstein's (1969) theory. According to it, public participation is as a ladder where every higher rung represents more elaborated public participation level, which in practice should lend the more significant decision-making power to the public. Notwithstanding, there are other understandings of public participation. As Arnstein (1969) demonstrated public participation is changes of the power orientation (similarly argued Mitchell (2005)). Wiedemann & Femers (1993) showed that public participation deals with the overall administration in the existing bureaucracy. Dorcey et al. (1994) wrote that public participation is one of the elements of the planning process. Other scientists stopped perceiving public participation as some sort of ladder, and split it and created a double loop ladder (Hurlbert & Gupta, 2015), Davidson (1998) public participation portrayed as a wheel of participation, to endorse the idea of the continuum and co-learning. With new technologies used in governance, need for e-participation raised up. Carver (2001) arranged a ladder for e-participation (Arnstein's (1969) principle was used as an example), in such approach rungs depict the availability of public services. Furthermore, Glucker et al. (2013) pointed out that it is important to see ladder principle more as continuity from one rung to another, instead of viewing it as separate not interacting with each other item. The definition of public participation has been upon discussion till now. As Renn et al. (1995) noted, rarely somebody presents the definition of public participation before analysing some issues. Public participation definition applied for further review is this: "*public participation as forums for exchange that are organized for the purpose of facilitating communication between government, citizens, stakeholders and interest groups, and businesses regarding a specific decision or problem*" (Renn et al., 1995).

Some authors perceived public participation as a tool for decision-making (Reed, 2008; Wesselink et al., 2011). Hurlbert & Gupta (2015) insisted, that "*the ladder is an evaluation tool as it can be used to study policy problems with a history and where participatory mechanisms have been applied*". Public participation determines an arena for sharing information, communication, discussion and agreement or acceptance (Macnaghten & Jacobs, 1997; Newig & Fritsch, 2009; Schenk et al., 2007). Other researchers focus more on public participation as conflict solving tool (Wiedemann & Femers, 1993). Overall, public participation always highlights a communication. Researchers argued that it is a two-way communication route (Affeltranger, 2001; Hordijk et al., 2015; Newig & Fritsch, 2009), furthermore, it works as a catalyst for the information flow (Rowe & Frewer, 2005). In some literature public participation is regarded as stewardship (DiEnno & Thompson, 2013; Kellert, 1997; Ryan et al., 2000; Ryan et al., 2001; Wahl, 2007). In this way, the participatory governance promotes decisions, which contributes to the improvement of the environment (Dietz & Stern, 2008; Newig, 2007; Newig & Fritsch, 2009).

Reed (2008) proposed the typologies of participation. According to the researcher, they could be four types of typologies. The first is based on "*different degrees of participation on a continuum*", the best-known example here is Arnstein (1969) ladder principle, it is accompanied with various versions of other authors to seek the same result. The second typology is based on the "*direction of communication flows*". The third typology is "*based on theoretical basis, essentially distinguishing between normative and/pragmatic participation*". The fourth typology is "*based on the objectives for which participation is used*" (Reed, 2008).

Public participation has its negative side as well. At the same time as Arnstein presented her concept of public participation, Broady (1969) stated that public participation is "*a mere palliative for the ills of the planning profession*". Cooke & Kothari (2001); Luyet et al. (2012) proved that clash of opinions could be harmful. Furthermore, it could build mistrust in the community or scepticism and wariness among stakeholders. That strongly contributes to the difficulty to reach an agreement, which additionally leads to a confusion and dissatisfaction (Luyet et al., 2012). At times confusion rises up due to similarly used concepts such as public participation and stakeholder participation as well as citizen involvement and so on. The primary difference between public and stakeholders is that one term refers to an unorganized group of people, then the other is an organized group of people with shared common interest or share (Luyet et al., 2012).

Public participation often is described as a time-consuming process (Cooke & Kothari, 2001; Luyet et al., 2012). This complains especially often appear in the discussion among practitioners (Luyet et al., 2012). Extended communication form between water board and society is called as public relations. Cooke & Kothari (2001) highlighted "*the conversation with practitioners and participants were often characterized by mildly humorous cynicism, with which stories and tales were told of participatory processes undertaken ritualistically, which had turned out to be*

manipulative, or which had in fact harmed those who were supposed to be empowered".

A concept of public participation is a question analyzed in diverse scientific disciplines, however, it is important how public participation is understood and applied at the grassroots level because it is an area where it actually happens. That is why, despite negative sides of the process, it is at the core of every democratic country (Renn et al., 1995; Törnquist, 2013).

3.2.1 Application and process of public participation

Public participation as a concept of the political system appeared in the 1960s and 1970s (Hansen & Mäenpää, 2008; Lynam et al., 2007). At that time public participation was organized as information campaigns (Hansen & Mäenpää, 2008; Wesselink et al., 2011). It was a top-down process, which often ended up being a distribution of brochures created by the government and its institutions. At that time all focus was directed on dissemination of essential information. Such situation continued till the 1990s. At that time an awareness of environmental problems became evident (Hansen & Mäenpää, 2008; Lynam et al., 2007). The public started asking questions and required underhand information. Additionally, in 1992 United Nations conference took place in Rio de Janeiro, where the Agenda 21 was formed (Hansen & Mäenpää, 2008; Lynam et al., 2007). These documents included an extensive focus on inclusion of local people via political processes like public participation, community engagement and stakeholder participation, etc. (Agenda 21, 1992; Hansen & Mäenpää, 2008). That emitted a spark to develop various techniques to organize these processes and elaborate the ways of an application that seeks for the public attention and supports public participation.

Now many techniques of public participation exist (Gupta et al., 2015). There are an almost countless number of them. In Figure 3-3 there is the list of public participation techniques used in practice and widely discussed in the academia. According to Morandi et al. (2014); Nilsson et al. (2016) particular techniques have their own range of public participation degrees where they are applied. So in this figure, every technique is presented together with its application range according to the Arnstein's (1969) participation ladder principle.

public participation technique	information	consultation	involvement	collaboration	empowerment	reference list
ballot					X	1, 5, 11
charrette				X		12, 13, 14
citizen/public advisory committee			X	X		1, 6, 10, 15
citizen jury				X	X	1, 8, 16
citizen panel				X	X	3, 4, 11, 12, 14
cognitive map	X	X				8
conference		X	X	X		1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 20
creative sessions		X	X			9
delegated decisions					X	1
deliberate polling			X			1
dialogue		X	X			1, 2, 3, 4, 5, 6, 7, 9, 10, 12, 13, 14, 16, 17, 18, 20
fact sheets	X					1, 9, 20
field visit and interactions		X	X			8
flyers	X					2, 6, 9, 19
focus groups		X	X	X		1, 2, 8, 9, 16, 17, 20
foresight			X			3, 4
forums		X	X	X		1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20
interactive web pages	X	X	X			2, 8, 9, 13, 20
interviews		X	X	X		3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20
mapping		X	X	X	X	2, 4, 5, 6, 8, 9, 10, 11, 12, 13, 16, 20
multicriteria analysis			X			8
municipal council	X	X	X			2, 4, 5, 14, 16
negotiation session				X	X	1, 2, 4, 5, 6, 9, 10, 14, 16, 17, 20
neighbourhood council			X	X		5
newsletter	X					6, 8, 9, 10, 12, 20
open houses	X	X				1, 6, 9, 20
opinion polls		X				1, 2, 20
participatory budgeting				X	X	2, 4, 10, 11, 12, 20
participatory decision making					X	1, 20
(peer review) panel			X	X	X	1, 3, 4, 6, 9, 10, 11, 12, 14, 16, 17, 20
presentations	X	X				1, 2, 4, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20
print media	X					2, 4
problem framing			X	X		7
(public) assembly			X	X	X	2, 4, 5, 9, 10, 13, 14, 16, 18, 20
public comment		X				1, 17, 20
public hearings	X	X	X			1, 2, 5, 9, 10, 17, 20
public meetings	X	X	X			1, 5, 6, 9, 20
(public) referendum					X	5, 10, 12, 14, 16, 17,18
radio and tv campaigns	X					2, 6
referenda	X	X	X			1, 10, 12, 14, 16, 17
reports	X					1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20
role-playing games			X	X		2, 3, 4, 6, 8, 13, 14, 16, 20
round tables				X		2, 4, 9, 16
scenario analysis		X				8
scenario-building			X			3
seminars	X	X				4, 6, 9, 10, 14, 16, 20
social learning			X	X	X	7, 8, 9
survey	X	X	X			1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
training (programmes)	X	X	X			2, 4, 6, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 20
questionnaires	X	X	X	X		3, 6, 7, 8, 9, 10, 14, 15, 16, 18, 20
visioning			X	X	X	3, 4, 12, 15, 16
voting			X	X	X	2, 4, 9, 10, 11, 12, 14, 16, 17, 18, 20
websites	X					1, 2, 4, 5, 7, 9, 11, 12, 13, 16, 20

Figure 3-3. Public participation techniques and application in various degrees of public participation (1 – Jami & Walsh (2014); 2 –Hordijk et al. (2015); 3 – Hassenforder et al. (2015); 4 – Gupta et al. (2015); 5 – Bherer & Breux (2012); 6 – Affeltranger (2001); 7 – Blackstock et al. (2012); 8 – Luyet et al. (2012); 9 – European Commission (2003); 10 – Renn et al. (1995); 11 –

Nabatchi (2012); 12 – Svara & Denhardt (2010); 13 – Lydon & Garcia (2015); 14 – Fagence (2014); 15 – Berke et al. (2009); 16 – Coenen (2009); 17 – Beierle (1998); 18 – Abelson & Gauvin (2006); 19 – Halvorsen (2001); 20 – Bruch et al. (2005)).

Wesselink et al. (2011) proposed the idea of public participation design. Authors formulated three distinctive rationales – normative rationale, substantive rationale and instrumental rationale. They are identified by the answers to three questions: who, what and how is included? (Wesselink et al., 2011). The similar idea is presented by Speer (2012), later Hordijk et al. (2015) adapted it. Public participation, despite its various techniques utilized in different situations and project stages, has its positive and negative side (Figure 3-4).

-	+
time consuming	increasing trust of decision
expensive	increasing acceptance
may reinforce existing power structures	fostering and developing social learning
may sharpen conflicts of interest	increasing collective knowledge
constantly changing participants	better understanding projects and issues
very little systematic measurement of the outcomes of participation	integration of various interests and opinions
decline in trust after participation	roots of cooperation
potential stakeholder frustration	encourages gender equality
identification of new conflicts	increases perceptions of fairness
involvement of stakeholders who are not representative	optimizing implementation of plans and projects
empowerment of an already important stakeholders	establishes institutional framework needed for the process
could put some limitations to the access and use of area	improving project design using local knowledge
	creates practices of engagement in society
	integration of local knowledge
	promotes democratic values

Figure 3-4. Positive and negative sides of public participation (based on Berman (2016); Hordijk et al. (2015); Luyet et al. (2012); Metcalf et al. (2015); Renn et al. (1995)).

The most affected by the project development could meet in one or several of criteria: (1) proximity (living close to project area), (2) economic (experiencing financial gain or loss or devaluation), (3) use (limit or restrict use of resources), (4) social (threaten a tradition or culture and/or alter demography of the area), and (5) values (influence existing values) (Hansen & Mäenpää, 2008). Public participation, if applied with caution, could rearrange the existing power structure in the more democratic way and provide equity in society (Ahmed & Palermo, 2010; UN-Habitat, 2016). Every public participation technique could enable society to achieve the better living conditions within the frame of existing cultural values and traditions (Ahmed & Palermo, 2010; UN-Habitat, 2016) as well as natural restrictions and concerns (Muga & Mihelcic, 2008). Additionally, public participation could help to comprehend better water-energy-food nexus (Bonn 2011, 2011; Smajgl & Ward, 2013b).

3.2.1.1 Stakeholder analysis

In order to better evaluate the river management project along with public participation stakeholder analysis is one of the most applied tools. But to begin with, it is crucial to understand what stakeholder is. A stakeholder is an organized group of people who share a common interest(s) (Luyet et al., 2012). Regularly this definition is the antipode of general understanding of the term "*public*", which is the unorganized group of people (Luyet et al., 2012). According to Reed et al. (2009), stakeholders are the ones "*who affect or are affected by a decision or action*". Varvasovszky & Brugha (2000) mixed both of these definitions and argues that stakeholder is an "*actors who have an interest in the issue under consideration, who are affected by the issue, or who – because of their position – have or could have an active or passive influence on the decision-making and implementation processes*". This term is commonly used in the organization management, but recently it is widely used in the environmental project development. In the decision-making process the main actors fall in the four categories (1) decision maker; (2) user; (3) implementer or executive and (4) expert according to WFD CIS Guidance Document No. 8 (European Communities, 2003). Nevertheless, there are other typologies according to attitudes towards a project, interest in the project, potential conflicts and coalitions between stakeholders and objectives, access to resources, political influence over the project, degree of implication, power, stakeholder urgency, proximity and legitimacy, and scale of influence (Luyet et al. (2012) in regards to researches of Banville et al. (1998); Crozier & Friedberg (1977); Elliott & Schlaepfer (2001); FAO (2000); Fottler et al. (1989); Habermas (1984); Laumann & Knoke (1987); Mitchell et al. (1997); Rist et al. (2007); Stenseke (2009); Varvasovszky & Brugha (2000).

Stakeholder analysis is a management tool to predict and prepare managers for any possible outcomes of the projects, which concerns various social issues (Figure 3-5). During stakeholder analysis, repeatedly, given questions regard on: (1) who and how much will be affected and then; (2) how could negative impacts be minimized or compensated (Blackstock et al., 2012; Glucker et al., 2013). Usually, reasoning for arranging stakeholder analysis is descriptive, normative and instrumental (Reed et al., 2009). Researchers by using stakeholder analysis want to determine stakeholders, differentiating and categorizing various stakeholders and analyze relationships between stakeholders (Junker et al., 2007; Prell et al., 2009; Reed et al., 2009; Varvasovszky & Brugha, 2000). As Varvasovszky & Brugha (2000) demonstrated it could help to predict and expand alliances between stakeholders.
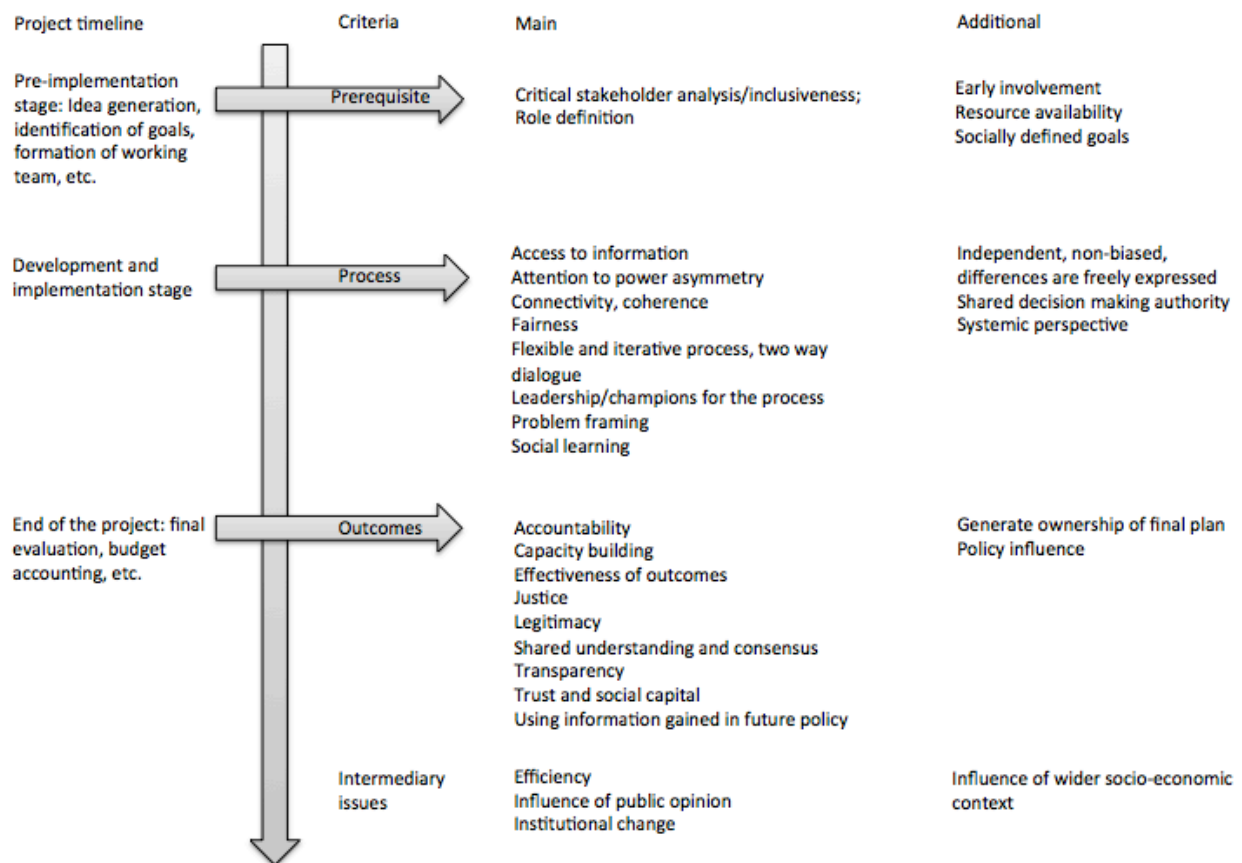
Figure 3-5. Criteria identified from a review of evaluating stakeholder involvement in Natural Resource Management process (according to Blackstock et al. (2012)).

Stakeholder analysis could identify and classify stakeholders, also assess their relationships. The simplified example of the stakeholder analysis for the river management project is given in Figure 3-6. The most affected and most influential stakeholders' example could be educated, informed and curious people with property by the river or on the edge of the project border (upper right corner). The opposite stakeholders are the ones who do not experience significant effects and do not have means to influence the decision, so the example in the river management project that could be people who are not active in society and not motivated to take any action or participate in any actions, they also do not have any property, which will be affected by the river development (lower left corner). However, that does not point out for the most active stakeholder group during public participation process (Junker et al., 2007; Kantor, 2012; Varvasovszky & Brugha, 2000).
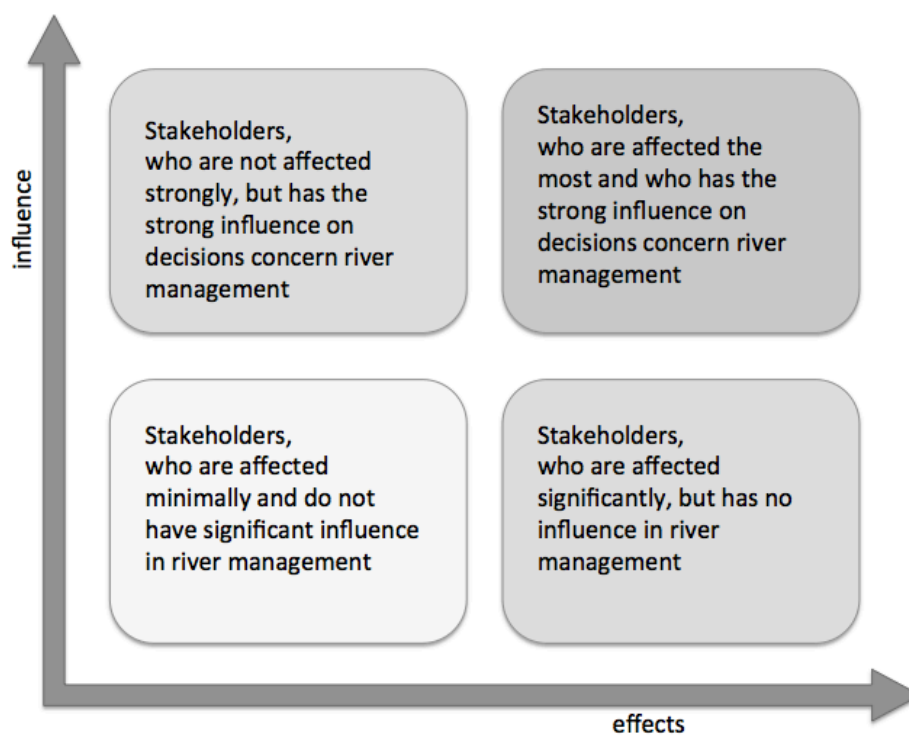
Figure 3-6. General example of stakeholder analysis.

Stakeholder analysis often points out conflicting stakeholders, uncovers the weight of an impact that stakeholder has in the decision-making process (Junker et al., 2007; Nilsson & Aradóttir, 2013; Varvasovszky & Brugha, 2000). It is a useful tool for the project developers to predict the future of the projects and its development. Also, it points out where the ground for the conflicts lays (Luyet et al., 2012; Varvasovszky & Brugha, 2000). And help to apply the prevention measures that the project development will be smoother.

There are several negative points in the discussion about stakeholder analysis. Like a high variety of different approaches, which lead to a confusion among experts, practitioners, government officials and lay people (Donaldson & Preston, 1995; Lienert et al., 2013; Reed et al., 2009; Stoney & Winstanley, 2001; Weyer, 1996). However, one of the key arguments why stakeholder analysis is organized in the river management projects is that stakeholder analysis empowers marginal groups (women, underprivileged, poor, etc.) and those who are not easily accessible (Cornwall, 2003; Johnson et al., 2004; Prell et al., 2009; Reed et al., 2009). Additionally, stakeholder analysis can contribute to the success of a project (Jepsen & Eskerod, 2009; Prell et al., 2009), because this holistic approach helps to identified effects and impact weight (theirs strength) as well as affected ones (Grimble & Wellard, 1997; Lienert et al., 2013).

After analysis of the case studies in the water infrastructure planning, Lienert et al. (2013) concluded that stakeholder analysis is a useful tool, which provides profound penetrating insights into the situation and assists in detecting ephemeral changes in

the opinions, expectations and needs. Nevertheless, the result could be strongly influenced by the method used to evaluate stakeholder attitudes. Researchers proved that combination of quantitative and qualitative methods produce the most explicit results (Lienert et al., 2013).

The river management projects are long-term, occupy comparatively vast territories and can strongly influence areas down the river and/or major river (Junker et al., 2007). So stakeholder analysis is an extensive and highly complicated and complex process (Prell et al., 2009; Varvasovszky & Brugha, 2000). Bullock et al. (2011) stressed the importance of correct accurate identifications of effects on stakeholders and evaluation of their reaction towards the river management measures. Additionally, Nilsson & Aradóttir (2013) pointed out due to climate change and environmental degradation this process becomes even more knotty and arduous.

3.2.2 Criteria for successful public participation

Public participation as any other process has a hand full of criteria, which lead to the success. According to Jami & Walsh (2014), there are eight criteria to seek for the best-suited public participation method (Figure 3-7). Participants should consist of a broad sample of the population; the affected ones must be represented effectively. People' attitudes and issues should be concerned in the decision-making seeking process (Blackstock et al., 2012; Gibbons et al., 1994; Orr et al., 2006). Besides society must have enough time to discover and apprehend project ideas and proposed implementations, and as consequence compile their contra arguments along with support for all or some of the proposed ideas (Campbell, 2016; Keller, 2003; Rojas, 2010; Varis et al., 2008b). Transparency in such situations is a crucial element otherwise public participation will do more harm than good (Milich & Varady, 1999; Popa et al., 2015). Transparency could not exist without communication. It could happen in various forms, which could vary from a roundtable discussion or forum to an interactive web page. Transparency requires a coherent framework with clearly defined responsibilities between various actors (Jami & Walsh, 2014; Milich & Varady, 1999). In every discussion the hostile and antagonistic situations are inevitable. Nonetheless, it could contribute to the generation of new ideas, if it is organized correctly and with respect to all participants (Edelenbos et al., 2011; Gibbons et al., 1994; Hegger et al., 2012; Jami & Walsh, 2014; Mauser et al., 2013; Muñoz-Erickson, 2014; Renner et al., 2013; Stange et al., 2015; Stoker, 2013). Lastly, Jami & Walsh (2014) pointed out the need for adequate resources in order support entire public participation process and guarantee transparency and availability.
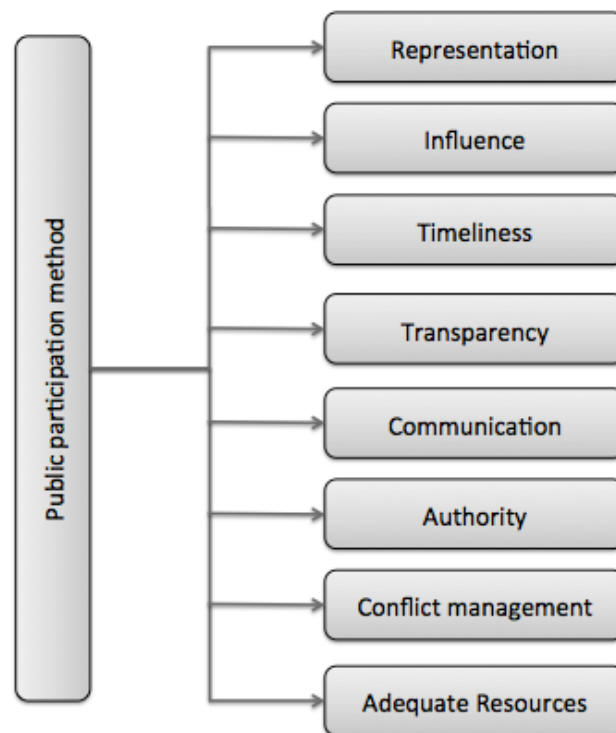
Figure 3-7. Criteria for effective public participation (according to Jami & Walsh (2014)).

One of the most influential elements in the selection of public participation measures for the project is the scale of the project. After extensive research Maynard (2013) pointed out that smaller scale projects enable to develop the more intimate and personal relationship with the area and people and have a keener understanding of existing circumstances. River management projects, which occupy an area as vast as sub-catchment or catchment, oftentimes regard civic society as a nuisance, besides such projects usually are focused on technical improvements, "*hard engineering*" (Maynard, 2013). Smaller scale projects could apply public participation measures, which are more interactive or organize meetings with society and/or stakeholders more often, which could form more personal relationship amongst stakeholders and project developers, governmental officials. In this way lay people evolve the sense of an ownership (Reed et al., 2009; Wesselink et al., 2011; Wolf, 1972), people are more willing to participate in volunteering actions (DiEnno & Thompson, 2013; Ryan et al., 2001; Welzel et al., 2005). According to Maynard (2013) research, smaller scale projects tend to concentrate and direct attention on rehabilitation, replenishing, preservation goals and do favour "*soft measures*" instead of engineering enhancements and the newest achievements in technics.

Preister & Kent (1997) argued how important cultural context is for success. In order to support that idea researchers analysed "*informal networks, word-of-mouth communication, local knowledge, mutual respect, sensitivity to emerging issues and boundaries of human geography*", where people bond to their land and their community and found out that "*cultural restoration is often the key to ecological restoration, and is embodied in the concept of productive harmony*" (Preister & Kent,

1997). These ideas are strongly supported by Enserink et al. (2007); Lewis et al. (2013); Radcliffe & Laurie (2006) researches.

Outcomes of successful public participation could improve project itself or the living conditions and life quality of people. Oftentimes, the most beneficial outcome is a discovery of more prudent quality decisions (Hansen & Mäenpää, 2008; Kellon & Arvai, 2011; Lewis, 2005; Reed et al., 2009). Public participation could contribute to anticipate some negative or destructive events and prevent from happening (Reed et al., 2009). Furthermore, Reed et al. (2009) demonstrated that successful public participation could shrink project overall costs significantly.

3.2.3 Constraints of public participation

Recently the popularity of the public participation leads to romanticizing of the process and push away challenges and issues or discussion about them (Hurlbert & Gupta, 2015). Kidney (2002) in his extensive research recounted factors, which confounds public participation process. These factors range from ineffective local government (Arnstein, 1969; Fagence, 2014; Schmeier, 2013a) and efficiency of participation (Arnstein, 1969; Simmons, 1994; Trench & O'Donnell, 1997), to technical issues like lack of tools and availability of existing ones (Gill & Gittings, 1998; Smith, 1996; Trench & O'Donnell, 1997), to more connectional problems, like rigidness of existing system, paternalization of citizens, equity of participation (Arnstein, 1969; Fagence, 2014; Moote et al., 1997; Simmons, 1994) and lastly to concerns within project itself for instance efficacy or perceived futility of the project (Arnstein, 1969; Moote et al., 1997). Bherer & Breux (2012) pointed out that confusion amongst experts, practitioners and society raise up due to the diversity of public participation tools. Even though, many believe public participation induces constructive changes, awareness of its deficiencies and shortcomings must be discussed.

One of the common miscomprehensions is the hope that more advanced degree of public participation leads to more concordant agreement. Nonetheless, Martínez (2011) demonstrated it is the opposite. The project with a more advanced degree of public participation had more conflicts that rise more extensive discussions (Martínez, 2011). Additionally, researchers, who participate as a jury and/or information support, start to advocate for one or another idea and become an actor (Lynam et al., 2007). Furthermore, such situation could lead to the credibility loss for the researcher, along with governmental institutions and their representatives (Jami & Walsh, 2014).

The next and also widely discussed concern in the academia is political power or its imbalances or shifts (Jami & Walsh, 2014; Reed, 2008; Wesselink et al., 2011). The underrepresentation of some part of society or neglecting critical opinions along with valuable concerns takes away the ability to influence an outcome of the decision-making (Jami & Walsh, 2014). The imbalance raises up then already strong and well-heard groups of the stakeholder are provided with even more power to shape

decisions (Keller, 2003; Renn et al., 1995). Moreover, that leads to the tensions between the government and local people or general society (Jami & Walsh, 2014; Keller, 2003). Power imbalances occur due to the discrepancies in the legislative system, consequently, laws are not supporting each other (Petts, 2004; Wesselink et al., 2011). These circumstances cause the participation fatigue (Wesselink et al., 2011).

Furthermore, it has been pointed out that public engagement and participation could be tedious process (DeCaro & Stokes, 2013; Gupta et al., 2015; Jones et al., 2005) and do not inevitably create expected aspired outcomes (Bijlsma et al., 2011; Bruch et al., 2005; DeCaro & Stokes, 2013; Jones et al., 2005).

Reed (2008) presented Blackstock et al. (2007) argument that "*the evaluation of participatory process should itself be participatory, with stakeholders selecting and applying the evaluation criteria*". However, in this case, it is essential to be aware of additional issues, which stem out contextual and motivational characteristics (Wesselink et al., 2011). In the book "Participation: New tyranny?" authors quote Bell (1994) that participation "*are only as untyrannical as the context and the scientist [i.e. practitioner] are prepared to be, and perhaps more meaningfully are able to be, given the limitations of their own culturally based view of their own methods*" (Cooke & Kothari, 2001). To sum up, public participation could be overwhelming complicated and the final result will not always be as expected (Bishop & Davis, 2002; Renn et al., 1995).

3.3 Public participation in urban river management projects

As it is discussed in the previous chapters public participation has a variety of tools and applications to organize the process (Blackstock et al., 2012; Orr et al., 2006). Every one of them could yield beneficial outcomes if it is used in the favourable circumstances. In the urban setting public participation incorporates numerous measures than in the rural areas generating the most desirable outcomes. A selection of choices for the urban river projects is a limiting factor as well. Urban rivers are usually developed in the limited area and must fit into existing urban fabric (Pickett et al., 2011). Habitually, they seek the aesthetic portrayal and vibrant expression. While in rural areas they are more nature orientated and seek to restore the function of natural river flow. In the tropic zone urban rivers will occupy a role of flood channels every time then monsoon hit. Additionally, in this zone rivers are frequently perceived as a dangerous place (on the one hand that concern raises up due to pollution, on the other hand such river as a nature scarp in urban fabric attracts animals, which could be dangerous). Urban rivers must follow safety requirements, so it have more flood protection measures then rivers in the rural areas (Chin, 2006).

In general, the river management projects are long-term projects, so public participation process must be very inclusive because effects will drag for a long time

and many people will be affected. People in the cities tend to have higher education level, however, they are less neighbourly, and therefore, the information on the personal level is not so easily spread in the society. People from cities often evoke less interest and tend to be more ignorant (Huddart-Kennedy et al., 2009; Keller, 2003). Thus to inspire involvement is harder than in the rural areas, where local people tend to communicate among themselves more dynamic and frequent.

3.3.1 Multi –level, –dimension, –function of public participation in the urban river management

Public participation has a wide range of various understandings. On one hand, such diversity of definition is a complication and a negative feature for implementation of this idea in law and application in governance and civil society. On the other hand, public participation is used in various levels of law, ruling, creation and implication of various projects and such situation compels the flexibility of the term and application measures (Newig & Fritsch, 2009; Orr et al., 2006; Riley, 2016). For example, Hurlbert & Gupta (2015) argued that public participation is not always needed, additionally, it does not always positively contribute to the project development.

The river management along with entire good water governance is not a magic, which just materializes or eventuates one day, it is carefully planned processes (Feyen et al., 2008), which adhere to cultural values of the area (Naiman, 2013), and take time to compose and is always developing itself process (Pahl-Wostl, 2015; Pahl-Wostl et al., 2012; Tortajada, 2008; Von Korff et al., 2012). So public participation as a part of water governance is elaborated within a time in order to achieve the better-suited mode and practice (Pahl-Wostl, 2015; Pahl-Wostl et al., 2008b).

Public participation measures changes depending on the project period. In the beginning, public participation focuses on the community involvement and information spreading as well as local knowledge collection. Focus group discussions could follow afterwards. Moreover, they could be like litmus paper to evaluate did information campaigns were successful and reach out even to the most vulnerable and/or segregated people. In order to narrow down possible solutions for the river development public could contribute significantly, and by expressing preferences could guide experts or project developers towards favoured result (Muñoz-Erickson, 2014; Pohl et al., 2010; Renn et al., 1995; Stange et al., 2015). Measures like these, increase ownership feeling and sense of personal responsibility (Campbell, 2016; Stange et al., 2015; Wesselink et al., 2011). Additionally, people stay more obstinate and tolerant during the construction period, if they are adequately informed about the actions and had a say at the beginning of the project. At the last stage of the project development, public participation should focus on the measures, which increase and continue ownership of the changes in the society. The river management possesses features of long-term as well as visual representation and potent effects on the communities, which live close by directly, or influence indirectly significantly larger

area (Stange et al., 2015; Tortajada, 2008). Nevertheless, that would not necessarily work out in the river management of the basin or catchment or sub-catchment. In these projects, public participation is more bureaucratic and not always extends to every affected one. Here stakeholder analysis becomes a very handy tool to predict the most vulnerable groups and reach out to them (Varvasovszky & Brugha, 2000). In such a complex project, vulnerable members of society are often represented by NGOs or governmental institutions or organizations (Jepsen & Eskerod, 2009; Lienert et al., 2013; Prell et al., 2009; Varvasovszky & Brugha, 2000).

According to Benz (2006) multi-level of governance is defined as "*political structures and processes that transgress the borders of administrative jurisdictions, aiming to cope with interdependencies in societal development and political decision-making which exist among territorial units*" (Newig & Fritsch, 2009). Public participation is just one thread in the entire assemblage of the processes, which are happening during multi-level governance (Orr et al., 2006). Public participation as it was discussed in 3.2 chapter has a variety of typologies. Public participation as a multi-function process could produce a different outcome and have a variety of goals (Beierle, 1998; Bherer & Breux, 2012; Bruch et al., 2005; Jami & Walsh, 2014; Junker et al., 2007; Weidemann & Femers, 1993). It could be an information-gathering tool, or knowledge co-production arena, or empowerment tool. At times, public participation could carry out just one function or an entire multitude of them (Renn et al., 1995). In the urban river management, public participation almost always is multi-functional – spread information, collects information, creates circumstances for local communities to develop their own small projects (empower) and many more. Multilayeredness of public participation forms out from the mix of diverse layers of government meet up in decision-making.

3.3.2 Public participation forms applied in different stages of urban river management

River development projects tend to have some stages, like formulating a project idea, developing of conception, designing the best concept, implementation of the designed concept and final evaluation along with monitoring of the outcomes (not in every project). In the ideal situation, the public involvement is the highest and most intense at the beginning of the project, during the concept developing and designing stage. As it was discussed in the previous chapter public participation measures could be applied for some stage of the project or through all timeframe of the project. It could be the river development or any other type of project. Nonetheless, the measures suited for the long-term process are the most suited for the river development project.

Public participation could step in into the project development at various stages. It could be very useful then public participation is started as early as the beginning of the project itself (Hansen & Mäenpää, 2008). At this stage, public participation could help to determine a creating of a project, which greatly emulate the existing local

social conditions (Junker et al., 2007; Spink et al., 2010). It also could help to collect information that is not presented in statistics and official databases (Hansen & Mäenpää, 2008).

Well-organized and results-producing public participation contribute in establishing better communities, closer inner relationships among community members, trust in the project. Such process creates the ownership of the outcomes of the project (Blackstock et al., 2012; Orr et al., 2006; Pahl-Wostl et al., 2008b; Pickett et al., 2011). So people continue to appreciate the results and care for them. Nevertheless, public participation could provoke and escalate conflicts among community members, inflict questioning of existing leadership, and/or instigate mistrust of project developers as well as other community members. Public participation, if it is not organized correctly, could end up representing and reflective the most influential people instead of not affected.

Public participation is a complex process in the river management. Nonetheless, it could bring the best out of the project in the perspective of the society. Notwithstanding, to achieve this goal, it is necessary to guarantee the immense support from management and governmental officials for the encouraging society to acquire their part. Experts do need to able to let society express their needs and wishes and then assist them out to determine the most adequate solution (Pasternack, 2013; Pohl et al., 2010; Spruijt et al., 2014; Wesselink et al., 2011; Wolsink, 2006). Additionally, society has to be prepared – educated and active – to be able to follow the discussion and can form their own opinion.

To sum up entire literature review the key arguments, which are significant for the research, are as follows:

- Water governance is an overarching concept that merges various disciplines to organize, manage and preserve water resources around the globe. It focuses on political, organizational and administrative framework. Furthermore, the establishment and implementation part is carried by versatile management approaches.
- The diversity of definitions and concepts, which describe the river management, contributes for miscommunication between the academia, which propose new approaches how to develop rivers, and experts, who are the ones to establish new measures of river management.
- The process of public participation in the river management is complicated due to the diversity of the actors involved and their contribution, expectation and influence to the process. The complexity and extension of the network and relationships between the actors creates challenges as well as opportunities for the improvement of the process along with more sustainable outcomes.

- The multilayeredness of public participation exposes the necessity of well-arranged guidance, communication, and openness. The stakeholder analysis is an approach to evaluate the influences and effects, which actors hold. Consequently, the outcomes of stakeholder analysis contribute for the creation of the framework and outline of the measures and practices that will be applied.
- The diversity and complexity of the criteria needed to achieve a success in the river management as well as public participation is strongly missing more comprehensive analysis. Even though there are several attempts to synthesize this knowledge the overarching reflection is missing, especially, with the focus on practices applied on the ground. The literature review provides a several layers of categorization of the success criteria.

In the later chapters these arguments are compared with the findings from the empirical part of the research. During the qualitative interviews, the interview partners have presented their own understandings and applications about the river management and the public participation process during the river management. The literature review provides the baseline for the further research.

4 Case study analysis

This chapter exhibits the realities of the public participation during the river management projects in Southeast Asia. Here the combination of literature analysis, in order to understand the background situation and preconditions for civic involvement and public participation, and semi-structured interviews with experts, government officials, and community representatives are used to extract the criteria for successful public participation. The outline of the theoretical part examines the timelines in the case studies, administrative framework for the river management and public participation. Furthermore, the most influential actors are identified along with means for successful process of river management and public participation. In the chapter, three case studies are arranged according to the case studies of Mekong, Klang and Ciliwung rivers. The Mekong river study case occupies more extensive part of all research, due to its grandness[11]. It consists of three sub-case studies: Vientiane (Lao PDR), Phnom Penh (Cambodia) and the Mekong delta (Can Tho city, Ben Tre town). The research highlights the traditional civic engagement and community partnership forms, which regularly are neglected by the mainstream political agendas and are excluded from the guidance documents and frameworks.

4.1 Mekong river

The Mekong river is one of the longest and the richest biodiversity rivers in the World (Smajgl & Ward, 2013b; Sokhem, 2004; Varis et al., 2008b). Geographically, this is a tropical river with rare endemic species, yet many of them, according to Dore & Yu (2004), are facing extinction due to numerous actions imposed by people and human activities. As Smajgl & Ward (2013b) pointed out conservative estimates shown that mainstream dams will cause the decrease in fisheries as extreme as total livestock production in Cambodia and Lao PDR. As Budryte et al. (2017) with regards to Chomchai (2005) emphasized the importance of the predominant religion Buddhism for experiencing conservation and preservation of nature in the region for long period in the past. Even in the title of the river people put honour and respect for the Mekong river (the Mekong in Thai is *Mae Nam* or "*mother of waters*", in Vietnamese *Cuu Long* or "*nine dragons*") (Diokno & Chinh, 2006). Nonetheless, the changes came together with the growing population, booming industries, transportation, etc. Furthermore, nowadays the Mekong is tremendously exploited river directly and indirectly. Essentially, the Mekong river development is always shared between particular countries, distinctive cultures, contrasting traditions. Everyone has their own picture of the Mekong and apply a variety of measures to implement their ideas

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[11] The Mekong river basin is more then 450 times larger then the Ciliwung and Klang river basins together, population in this four times bigger then other two rivers put collectively. By the Mekong river there two capitals are located as well as extremely populated delta, yet the Klang and Ciliwung passes Kuala Lumpur and Jakarta accordingly.

and intentions (Sokhem, 2004). Additionally, the intersected interests between diverse stakeholder groups created the urge to look for solutions how to organize and manage limited river resources. Critically, as Varis et al. (2008b) and Makkonen (2005) emphasized that for a very long time there were no environmental or social impacts assessments covering the whole the Mekong river basin made before the implementation of the cascade in Yunnan Province (China) and China did not put any effort to negotiate with the other riparian countries. Smajgl & Ward (2013b) wrote that "*extracting kinetic energy for power generation will reduce energy flow within the river which powers hydro-ecological and geo-morphological dynamics of river's ecosystems and severely curtail biologically-important transition seasons (ICEM, 2010)*". Miller et al. (1999) with reference to Mac Duong et al. (1991) stressed that the Mekong delta is extremely prone to social and ecological problems due to "*uneven distribution of natural resources*" after the last war and "*displaying social inequalities and disparities in living standards*".

4.1.1 Historical timeline of the institutional arrangement established in governing the Mekong

The recent development of the Mekong river was greatly altered by historical events, which followed World War II (WWII). Southeast Asia was involved in military conflicts, shifts in the political system (regimes) of the countries, creation and re-creation of countries (Boer et al., 2015; Diokno & Chinh, 2006; Sidel, 2015). These changes divided the region and dictated what course of development they took. Some countries end up under the communist regime, others choose more market-orientated approach (Sidel, 2015). So, to lead a fruitful discussion and arrange a unified development strategy was very hard. Despite all political dilemmas, the new movement, which followed after the WWII and encouraged to establish river basin organisations, especially if river basin is stretching through distinct administration units (countries, counties, etc.), was reflected in the Mekong river history (Schmeier, 2013a; Verbiest, 2013). The attempt to coordinate the Mekong river management started in 1949 then the United Nations Economic Commission for Asia and the Far East formed the Bureau of Flood Control for the Mekong Basin (Diokno & Chinh, 2006; Varis et al., 2008b). In the 1952 Lower Mekong countries acknowledged river as "*international waterway*" and created a "*conceptual framework for future cooperation*" (Dinar et al., 2013). In 1957 the Committee for Coordination on the Lower Mekong Basin, for shorter called as the Mekong Committee, was established (Diokno & Chinh, 2006; Varis et al., 2008b; Verbiest, 2013). It had a fixed aegis from the United Nations (UN). It was expected to make the Mekong Committee as an exemplary case. The organization united Laos, Cambodia, Thailand and former Southern Authorities of Vietnam for flood control and management (Diokno & Chinh, 2006). The creation of such organization was a major turning point in the history of the Mekong river development (Diokno & Chinh, 2006). The Mekong Committee collected data about the Mekong river and its tributaries (Diokno & Chinh, 2006; Sokhem et al., 2007). Later the Mekong Committee was transformed to Interim

Mekong Committee, which in 1970 produced an Indicative Basin Plan, which tried to shift focus on implementation rather than planning (Lebel et al., 2007; Lebel et al., 2005; Nakayama, n.d.). It was one of the first attempts to put social aspects (such as people relocation) in consideration as well as negative consequences on environment. The organization had a turbulent history – alternate of member countries, wars, and versatile political events – until in 1995 it became the Mekong River Commission (Budryte et al., 2017; Varis et al., 2008b; Verbiest, 2013). The goals of the organization changed as well. From almost purely a science hub and data collection and analysis (Boer et al., 2015) to an institution, which tries to insert itself in the international negotiations if they concern any river management issues (Mirumachi, 2015; Schmeier, 2013a).

In 1975 four lower Mekong countries signed up the Joint Declaration of Principles for Utilization of the Waters of the Mekong River Basin. This declaration brought the concept of "*reasonable and equitable use*" from 1966 Helsinki Rules (Boer et al., 2015). It means that countries were not allowed to execute any unilateral basin diversions without prior consultation with other countries (Boer et al., 2015; Budryte et al., 2017). Precariously, this statement was not binding (Boer et al., 2015). In 1992 initiative of the Asian Development Bank (ADB) to establish cooperation between all six Mekong river basin countries was successful and, consequently, The Greater Mekong River Subregion has been established (Boer et al., 2015; Verbiest, 2013). The roots of integrated economic development stem from 1967 the creation of the Association of Southeast Asian Nations (ASEAN). In the beginning, the ASEAN joined just Philippines, Thailand, Singapore, Indonesia and Malaysia. Later other countries – Brunei, Myanmar, Cambodia, Laos and Viet Nam joined in. The principal mission of the ASEAN is to boost economic growth, support social progress and sociocultural evolution as well as strengthen regional stability and the provision of the ways for member countries to resolve issues peacefully (Verbiest, 2013). Additionally, in the ASEAN Declaration, there are aims to promote Southeast Asian studies and to have various forms of collaboration with and assistance to each other (Sisowath, 2006; Verbiest, 2013). Yet, the organisation is repeatedly criticized for its too soft approach in promoting human rights and democratic principles around member countries (Boer et al., 2015). Even though, the ASEAN has some concerns about environmental issues in the region, but do not have a special position about the Mekong basin development (Sisowath, 2006; Verbiest, 2013). Furthermore, in 1997 the ASEAN announced the Vision 2020, there is declared to establish the "*community of caring societies*" (ASEAN, 1997; Sisowath, 2006). Nevertheless, the organization failed in promoting a "*regional identity through successive community building endeavours*" (Li, 2016). Additionally, in 2003 the ADB has established the Network of Asian River Basin Organizations (NARBO). Its primary task is to support river basin organizations (such as the MRC) to implement IWRM principles (ADB, 2004; Boer et al., 2015; Budryte et al., 2017). Notwithstanding, the implementation of the economic cooperation and partnerships are shadowed by an economic pragmatism and political agenda (Boer et al., 2015; Li, 2016).

So, the Mekong river has been the cause of conflicts, but also it is the reason for various multilateral cooperation and partnerships between Southeast Asian countries. The river development is a process, there is no final destination, although, as it is shown in the Mekong river history, this process could be fruitful or frustrating. Recently, the MRC displayed the IWRM-based Basin Development Strategy 2016-2020 complemented with the Strategic Plan 2016-2020 (MRC, 2015a, 2015b). These documents invincibly promote IWRM principles. Thus they are mandatory to consider just for Lower Mekong countries, yet, China and Myanmar are not obliged to communicate and/or negotiate their Mekong river development ideas (Boer et al., 2015; Hirsch, 2017). Fortunately, IWRM concept, being so adept to handle diversity, will enable positive changes in the river management and provide much-needed stability (Cooper, 2012; Hirsch, 2012, 2017).

4.1.2 Institutional framework in the Mekong basin area

The institutional framework is meant to guarantee the stability and minimize uncertainty due to the human behaviour factor (Bandaragoda, 2000). Santasombat (2011) accentuated that at the institutional level negotiations around water issues appear in diverse levels and miscellaneous topics – *"negotiation over water itself, negotiation over water rights and negotiation over the most appropriate model of river basin development"*. In the Mekong river case, every debate is complicated due to the differences amongst the Mekong basin countries. Some of the countries are focusing on the direction of free trade and open market and an adoption of typical western world values, others are rigidly staying very traditional or firmly demonstrate the sole political regime (Varis et al., 2008a). Moreover, every Mekong basin country has its own institutional framework, legislative system, laws and ideas of development. Consequently, due to one shared property of the Mekong river, countries are forced to have such negotiations. Furthermore, there are several independent organizations and institutions that are or could be the mediator in the discussion between the Mekong region countries and/or influence development of the river itself (Boer et al., 2015; de Boer & Bressers, 2012). Varis et al. (2008b), after extensive analysis of the development of the Mekong region, wrote that there are four international organizations, which have the immense impact. These organizations are (1) the MRC, responsible for the water resource management and involve four Lower Mekong countries, (2) the Greater Mekong Subregion (GSM) Programme, which encourage economic development, (3) the Association of Southeast Asian Nations (ASEAN), which pursues for a regional integration and (4) mass of financial institutions, such as World Bank, Asian Development Bank, International Monetary Fund, donor countries (Varis et al., 2008b). Every one of these institutions has their intentions and visions for the course of the Mekong development as well as diverse measures to accomplish their visions. This diversity of interested bodies with their concepts does not contribute to simplifying the dialogue about the Mekong river development. As Diokno & Chinh (2006) emphasized these discussions do not always go according to the primary intention.

The central governments and their institutions, with regard to international agreements and strategies, establish strategies and plans for the countries development, although the implementation is constantly delegated to regional and local institutions and organizations (Boer et al., 2015; Dinar, 2007; Keskinen et al., 2011; Mirumachi, 2015; Öjendal et al., 2012; Schmeier, 2013b; Sneddon & Fox, 2006; Wolf, 2006). The decision-making machinery in the Mekong region gets even more complicated if local level institutions, which coordinate the river development related issues, are getting involved (Sneddon & Fox, 2007). Nevertheless, such scaling of the international agreements and extensive strategies rarely provides implementable ideas (Houba et al., 2013; Santasombat, 2011). In the cities, the entire river planning completely merged with the overall urban planning of the area. Consequently, city halls are playing a colossal role. The close dialogue between legislative and executive authorities is crucial, yet, it is solidly missing in the Mekong region (Öjendal et al., 2002).

4.1.2.1 Legal system

Constitutions as the fundamental overarching legal documents in every Lower Mekong country denominate the frames and basic background for public participation as well as the water (regularly as a part of all natural resources) management (The Constitutional Assembly, 1993; The National Assembly, 2013; The People's Supreme Assembly, 1991). Although the responsibilities delegated to people along with possibilities are varied. In the constitution of Viet Nam, it is said: "*The State shall create the conditions for everyone to participate in, and to enjoy the benefits from, scientific and technological activities*" (Constitution, 53 article, 3) (The National Assembly, 2013). Similarly, in the Cambodian constitution "*Khmer citizens of either sex shall be given the right to participated actively in the political, economic, social and cultural life of the nation. Any suggestions from the people shall be given full consideration by the organs of the State*" (Constitution, 35 article) (The Constitutional Assembly, 1993). Additionally, the provision of natural resources is delegated to the State (Constitution, 59 article[12]) (The Constitutional Assembly, 1993). Yet, Lao PDR situation is vaguer. The direct statement about participation or citizen involvement is not existing at all. Every single decision is left in the hands of the State and people are included only in the defence and security of State (Constitution, article 11), yet, Laotians "*must protect the environment and natural resources: land, underground, forests, fauna, water sources and atmosphere*" (Constitution, article 17) (The People's Supreme Assembly, 1991). Therefore, in such delicate situation, the experts do not have any tools to proceed with civic engagement and participation according to the primary law of Lao PDR. Although,

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[12] „*The State shall protect the environment and balance of abundant natural resources and establish a precise plan of management of land, water, air, wind, geology, ecological system, mines, energy, petrol and gas, rocks and sand, gems, forests and forestry products, wildlife, fish and aquatic resources*" (Constitution, 59 article)

Viet Nam, Cambodia and Lao PDR are the neighbouring countries, the concept of the role of society in the decision-making process is miscellaneous.

Unexceptionally and adequately, the sector laws, regulations, and policies are following ideas declared in the countries' constitutions. Viet Nam's the laws, which are playing a vital role in this research, are Law on Water Resources (2012) and Law on Urban Planning (2009). Both documents highlight the importance of publicizing and involvement of society in the urban development as well as the river management (The National Assembly, 2009, 2012). For example, in Law on Urban Planning, one of the conditions on an adjustment of urban planning is the need to serve national and community interests (The National Assembly, 2009). The same law clearly defines and in detail designates the process of public participation, the responsibilities of actors, and other related issues (The National Assembly, 2009). In the Law on Water Resources the consultation along with communication and education on the water-related development is implied and determined (The National Assembly, 2012). Similarly, in Cambodia, there are Law on Water Resources (2007) and Law on Land Use Planning, Urbanization, and Construction (1994). In Law on Water Resources, the framework for integrated water resource management (IWRM) is chosen as a leading concept for the water resource management (The National Assembly, 2007). According to IWRM concept, the role of society along with spokespersons from government and intermediary from economies, including the private sector, is accurately defined, yet, the implementation could be complicated (Budryte et al., 2017). The Law on Land Use Planning, Urbanization and Construction principally focus on the practicalities of the construction process and procedures (The National Assembly, 1994). There is not much attention dedicated to the involvement of society (The National Assembly, 1994). For a long time in Lao PDR society, there was not included in any conjoint decision-making process. Although in the recent years some attempts to change this situation is happening. The first law dedicated to water issues was Water and Water Resources Law (1996). There was no article dedicated to any form of public participation. The closest idea to the concern about society is the ownership of water resources, the rights to the water and its resources, and human resettlement, yet, all decisions are left in the hands of the government and there are no defined procedures how society could express their opinion or could be included in the decision-making process. Nevertheless, the situation has changed in the new version of the Law on Water Resources (2014). There are several amendments regarding society involvement. The Article 4 has such statement: "*The government promotes and stimulate individuals, […] to see the importance of water resources, encourage them to participate in the management, protection, maintenance, rehabilitation of water resources by publicity, disseminate regulations, data/information, raise awareness, educate and others regarding water resources*". The endorsed provisions are declared in the article 5, article 43 and article 45. The new version of the law has many other improvements, which support more holistic water management approach. The other important document is the Law on Urban Plans (1999), where one of the urban planning principles states:

"*urban planning shall be planned systematically and shall be conducted in collaboration and harmony among concerned sectors, local administrations and the people*". Meanwhile, in the document, there is any elaboration of how it should be done or how and what should do it or what tools are delegated to the communities (National Assembly, 1999). Wherefore, again people are left outside the decision-making process, society is just a recipient of governmental decisions. To sum up, the legal documents do not overstep the core ideas determined in the constitutions and promote public participation just if it was set in the primary legal document of the country.

In every country, the water resources are considered as any other natural resource. In Viet Nam, the central responsible institution is the Ministry of Natural Resources and Environment (MONRE) (the institutions, related to the water resource management, are illustrated in Figure 4-1). Consequently, MONRE is responsible for the river management and lead the negotiation on the multilateral river basin development (Linh, 2015; Loan, 2010). In Cambodia similar role is played by the Ministry of Water Resources and Meteorology and in Lao PDR the river development is held in the hands of the Ministry of Natural Resources and Environment.
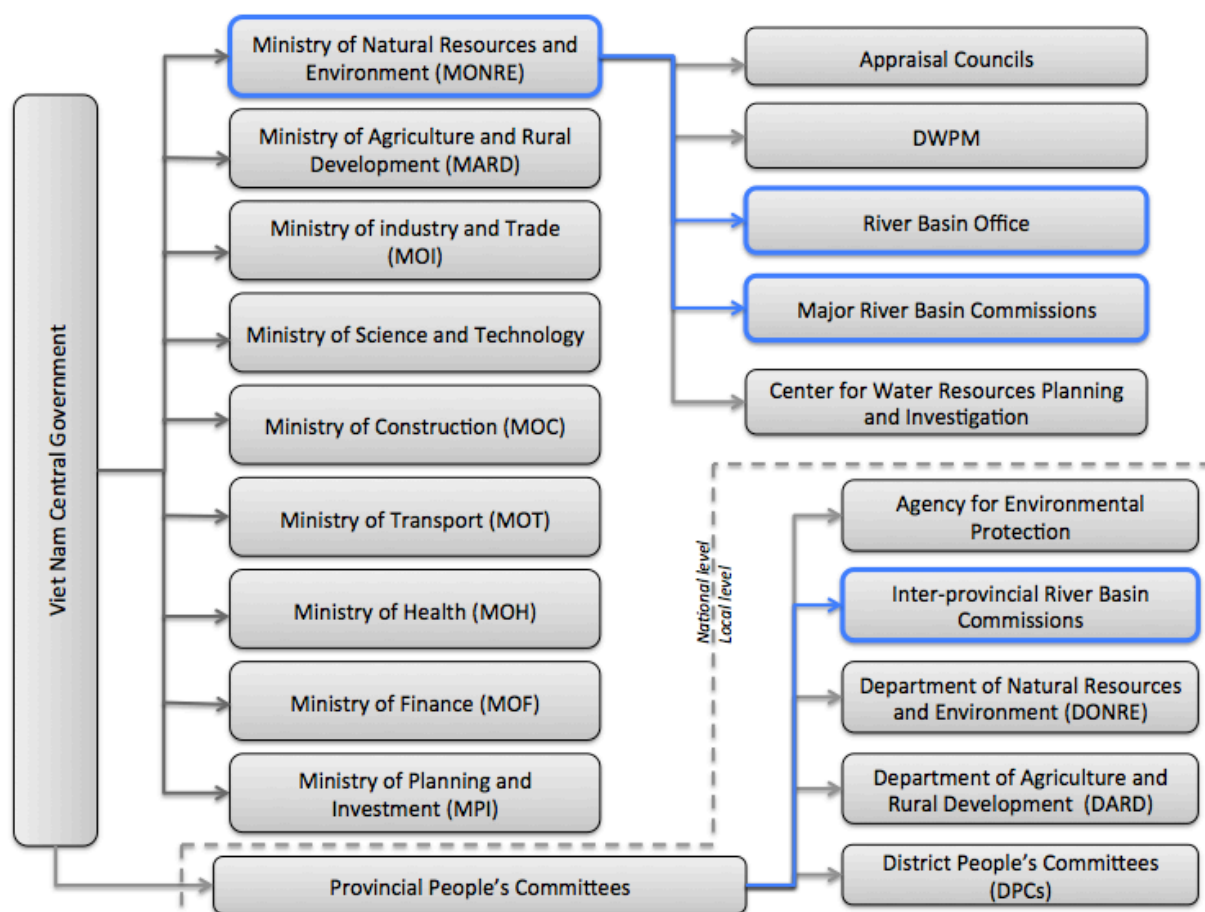

Figure 4-1. The institutional framework for the river basin management in Viet Nam.

The implementation of river management is recurrently distorted by the corruption, lack of capacities in bureaucracy, and the lack of will to apply the regulations to full

extent (Adger et al., 2012; Ingalls, 2017; Orchard et al., 2015; Törnquist, 2013). Together with practically non-existing grassroots habit, customs, inclination, and determination to raise issues and require an open discussion about the progress of development with decision makers, it creates a situation, where the participatory governance has no place (Lebel et al., 2007). For example, in Lao PDR, where the predominant political leadership is captured by the communist ideas, the most popular development idea is the hydropower expansion and amplification (Bakker, 1999; Schmeier, 2013a; Varis et al., 2008a; Varis et al., 2008b), despite the negative effects and consequences, local communities did not actively express their discouragement and dissatisfaction of the process. In Lao PDR there are several decrees and guidance for community involvement, relocation, and compensation, as well as livelihood restoration, but they are vaguely applied (ADB, 2006; Schmeier, 2013a). Although Cambodia is another poor country in the region, it pursues to rise in the regional political and economic leadership of the region (Kingdom of Cambodia, 2012). Nevertheless, this country is notorious for the colossal level of corruption (Niazi, 2011; Sok, 2013). Additionally, till now country's development heavily depends on an international support (Sokhem, 2004; Sokhem et al., 2007). Even though there are national laws, which define participation and involvement and development of a community, their application and implementation are decrepit, hesitant and impuissant. Such situation causes frustration in the society. Regardless, Viet Nam is the richest amongst these three Lower Mekong countries. Its economy completely depends on the agriculture, similarly, to Lao PDR and Cambodia (Schmeier, 2013a). 1990s new program *doi moi* [eng. renovation] was implemented, but it "*failed to match economic liberalizations with political freedom*" (Diokno & Chinh, 2006; Gillespie, 2008). Internationally, the country inquires to increase its power in the negotiations with other Mekong countries about integrated development (Miller et al., 1999). Yet, a forceful push toward hydropower in the upper stream countries might cause a shift of power. As Bakker (1999) underlined dams are "*important nodes of control (Bryant, 1997) in the interrelated processes*". Furthermore, state-wise Viet Nam has a fixed top-down political system based on the communistic ideas (London, 2014; Wells-Dang, 2014). In the country, the community involvement and the organizational structure is well defined and quite applied, despite dominant traditions of *phue due* [eng. family loyalty] and *uy tin* [eng. trustworthy authority] (Hanh, 2016; Linh, 2015; Pye & Pye, 2009; Wells-Dang, 2014). Thus, Viet Nam still embodies a central planning system.

One of the most mainstream routine water management concepts around the World is IWRM. It was briefly mentioned in the discussion of Cambodian laws concerning water management. IWRM is apprised in various water development documents and agreements among Southeast Asian countries (MRC, 2015a, 2015b). Here the achievement of IWRM implementation is regularly on a political agenda (Cooper, 2012). Nevertheless, the fragmentation due to scattered responsibilities, administration borders, etc. is one of the critical points of the implementation of the concept (Dore, 2007; Lebel et al., 2007; Öjendal et al., 2002; Pahl-Wostl et al.,

2012). As Biswas (2004) criticized IWRM concept due to its incongruity, triviality, impracticality and poor applicability. That is a correct statement about the Mekong river management. Furthermore, in the Mekong river basin management the Lower Mekong countries occasionally have dynamic politic structures, yet, reserved socio-cultural and political participation habits (Boer et al., 2015; Budryte et al., 2017; Cooper, 2012; Hirsch, 2017; Hirsch & Warren, 1998; Suhardiman et al., 2015). The coordination of this monstrous system that constitutes of the multi-level and multi-stakeholder groups is quite a strenuous task (Boer et al., 2015; Budryte et al., 2017; Hansson et al., 2012; Öjendal et al., 2002; Rault & Jeffrey, 2008).

4.1.2.2 Mekong River Commission (MRC)

As it was discussed in the previous chapter (look 4.1.1), history of the Mekong river development is a long and winding road. It started in 1957 when with the support of United Nations the Mekong Committee was established (Boer et al., 2015; Varis et al., 2008b). From 1978 till 1993 it was the successor by Interim Mekong Committee (Verbiest, 2013). Lastly, in 1995 by the Mekong Agreement, the Mekong River Commission (MRC) was established (Diokno & Chinh, 2006; Mixap, 2015; MRC, 1995; Varis et al., 2008b; Verbiest, 2013). The core idea of this document was to have cooperation between Lower Mekong countries in order coordinate the Mekong river basin development (MRC, 1995). Nevertheless, experts argue that the Mekong Agreement is hard to implement due to the lack of the puissance of institutional framework, and rudimental governmental will to follow details signed in the document (Barlow, 2016; Dinar, 2007; Keskinen et al., 2011; Paisley et al., 2016; Suhardiman et al., 2015). In its own words the MRC, as a leading institution responsible for implementation of the Mekong Agreement, describes its mission as "*serving its member states with technical know-how and basin-wide perspectives, [auth. <…> and] plays a key role in regional decision-making and the execution of policies in a way that promotes sustainable development and poverty alleviation*" (Boer et al., 2015; MRC, 1995). This document is also short of any provision for public participation, yet, there are several additional documents that define activities important for public engagement, such as information collection and dissemination, consultation, etc. (GIZ, 2014a, 2014b; MRC, 2001, 2009a, 2009b, 2010a, 2010b; Razzaque, 2009). From 1996 onwards China and Myanmar are dialogue partners that means that Upper Mekong countries circumferential are involved in the transboundary Mekong development (Verbiest, 2013). The MRC for a long time primarily were considered as an institution that is collecting data, monitoring and providing science-based future predictions (Boer et al., 2015; Schmeier, 2013a). Recently, the MRC became as an active facilitator of negotiations between Lower Mekong countries for the Mekong river development (Boer et al., 2015; Diokno & Chinh, 2006; Suhardiman et al., 2015).

The structure of the MRC is compiled from the MRC Secretariat, Council and Joint Committee (Figure 4-2) (Caponera & Nanni, 2007; MRC, 1995). According to the Mekong Agreement, member countries must notify the Joint Committee (JC) of any project development on the mainstream and tributaries that is likely to have

transboundary impacts on the environment and people downstream (MRC, 1995). Every five years new development strategy and plan is prepared for the Mekong river. The newest collection of documents became valid at 2016. Among other issues, these documents define the stakeholder engagement (MRC, 2015a).
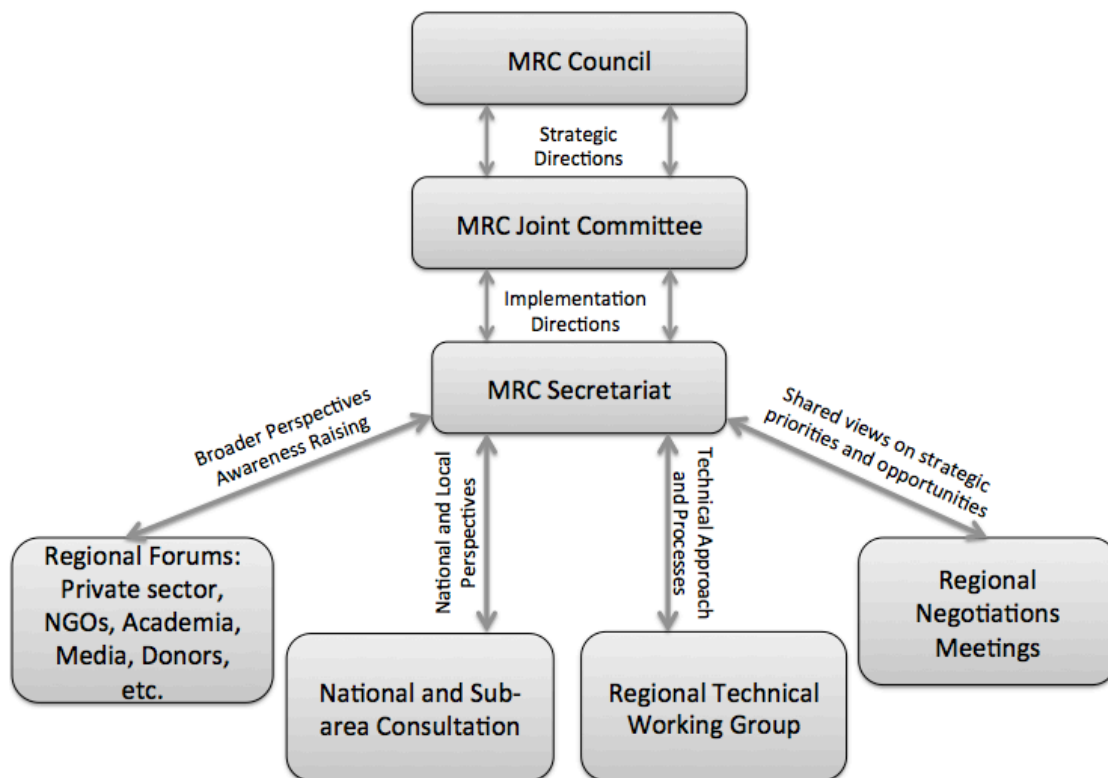
Figure 4-2. Stakeholder engagement by the MRC in IWRM-based strategy (MRC, 2015a).

The MRC stakeholder engagement, as it is shown in Figure 4-2, will be enhanced with the experiences and practices in the future. Yet, the functioning river basin organization even with the scheme of public participation process, is not a guarantee of a smooth transboundary multilateral communication and cooperation (Varis et al., 2008b). Moreover, the MRC acknowledges that one of the current tasks is to strengthen water diplomacy in the region (MRC, 2016). This will be reached by enhancing existing partnerships and cooperation in the water management amongst Lower Mekong countries. The MRC by actively participating in the multilateral debates and negotiations helps (or aims to help) to solve conflicts (MRC, 2016). It also creates a platform for data collection and analysis; the MRC has developed an immense database on the information about the Mekong basin. Such knowledge about the Mekong region contributes to the risk reduction, the MRC assists countries to predict and be prepared for the future changes (MRC, 2016; Schmeier, 2013a). Furthermore, Caponera & Nanni (2007), with regards to the previous history of MRC predecessors, claimed that the institution has flexible structure fitted to lead the political debates. Additionally, water diplomacy requires extensive participation procedures as well. So, the MRC is obligated to elaborate existing participation measures in order to improve water diplomacy amongst the Mekong basin countries.

Since the beginning, the MRC formulated their mission to be the unbiased information source of water quality for society. Yearly reports are available on the internet or in the offices of MRC and the National Mekong Committees (NMC) (Bruch et al., 2005). Additionally, various civil society organizations are integral in the process of producing and later in the dissemination of knowledge on transboundary issues amongst the communities in the Lower Mekong region (Bruch et al., 2005). Furthermore, it is necessary to acknowledge that public participation, as information dissemination, is one of the simplest and basic measures in the entire range of public participation measures.

4.1.3 Public participation process around Lower Mekong basin countries

Public participation is in the intersection between the diverse layers of the legal framework, cultural practices, customs and beliefs. The Mekong river development projects demonstrate the possible divergence to happen and their various outcomes. Some academics underline beneficial outcomes and provide examples of projects, which were organized with an active community involvement or produced some positive outcomes (Antunes et al., 2009; Schoeman et al., 2014). Yet, others argued that the general formal and informal regulations and customary habits on participatory practices as well as the rigidness and rigour of political structures are limiting the possibilities to which extend participation can be realized in a country (Cooper, 2012; Walk et al., 2012). Furthermore, Cooper (2012) indicated that it is quite a universal problem for the management of large transboundary river basins, where the equal chances for participation have to be provided covering resembling country context.

The special overarching documents, which are applied for all Lower Mekong basin territory, are the Mekong River Agreement (1995), the Strategy 2016-2020 and the Strategic Plan 2016-2020 (MRC, 1995, 2015a, 2015b). Three of them are referring to the implementation of IWRM principles for the Mekong river management (Budryte et al., 2017). So this means that Dublin principles must be achieved (ICWE Secretariat, 1992). Nonetheless, the decision-making as Badenoch (2002) wrote: "*remain firmly rooted in the black box of high-level inter-governmental negotiation*". Although, these documents could outbreak the existing structure and procedures for more inclusive public participation practices, yet, it does not hold any political power and there are no consequences if the country does not follow requirements set in them (Biswas, 2008, 2011; Mehtonen et al., 2008).

Public participation in the region is complicated by the diversity of stakeholders and the different power they hold. The mixture of stakeholders consists of the international bodies, national governments, regional and local institutions, various organizations, NGOs and society with members of very diverse social, economic and cultural features (Davidsen, 2006). In order to have a fruitful public participation, it is necessary to create an inviting environment for everyone to participate (Sokhem, 2004; Varis et al., 2008a), although many experts regard public participation as an

obstacle for a fast and successful any project implementation (Rault & Jeffrey, 2008). In every Lower Mekong country, it is a peculiar set up of rules and regulations to implement public participation. From the chapters above it is observed that the most welcoming and supporting system exists in Viet Nam and Cambodia while Lao PDR does not have a lot of measures to strengthen public participation.

More than a decade ago Bruch et al. (2005) wrote that "*public […] needs to learn about proposed and on-going activities that could affect transboundary watercourses. These activities could be developments such as water diversion programmes that affect the quantity of water or industrial facilities that affect water quality*", notably, that is still valid nowadays. However, the question arises how much local people could obtain and comprehend information exposed in the scholarly journals or books drenched with scientific jargon and special expressions. For example, various reports prepared by the MRC are written in English. Customarily, they focus on one particular theme or conundrum. These documents are full of scientific jargon and require higher than a secondary school education along with advanced skills in foreign language to comprehend them (Budryte et al., 2017). Although in the region public participation has various forms even between similar river development projects. The most of public participation measures differentiate between the scheme of information dissemination and/or local knowledge collection. Consequently, they are very far away from citizen empowerment or delegation measures by the Arnstein's (1969) ladder. Even public participation is perceived as a necessity in the Mekong river basin, like in many other transboundary river basins, it is impossible to develop a project with extensive and elaborated public participation measures (Davidsen, 2006; Hassenforder et al., 2015; Suhardiman et al., 2015).

To sum up, the Mekong river of development exposes that the river management was and is immensely influenced by the political process and international communication. However, ten years ago Öjendal et al. (2002) exposed the paradox in the Mekong development. It means that till now Lower Mekong countries still continuing the same pattern and try to merge power politics with participation and straightforward economic development with sustainability (Hansson et al., 2012; Öjendal et al., 2002). Even though countries have signed the major agreement to have coordinated environmental and social framework, every country is focused on the environmental concern individually (Öjendal et al., 2002). The collision of these two contrasting policy lines has not happened yet. This dichotomy is displayed in public participation process and resolutely influencing the process itself. Furthermore, the society is quite weak in order to pursue for more sustainable future (Öjendal et al., 2002).

4.2 Klang river

The Klang river crosses Kuala Lumpur, the capital of Malaysia, straight through its centre, where it merges with Gombak river (Shamsuddin et al., 2008; Shamsuddin et al., 2013). Symbolically, in this place, the main mosque – Masjid Jamek – is situated

(Chan, 2012). The origins of the Klang river comprise in the mountainous region covered in the tropical jungle (Abdullah et al., 2015). It stretches nearly 120 km and drains about 1290 km^2 area catchment. Kuala Lumpur is a fast growing city of fast developing country. A lot of attention from the government is dedicated to the economic development. Notwithstanding, in 2011 the new type of development emerged in the city. It was a Klang river restoration project – called as River of Life (RoL). This project brought an attention to environmental issues and helped to rise of awareness about the quality of living quarters and open public spaces. The project will end in 2020. This project is urban river development project. It focuses on the problems related with urban settlement, such as a rain drainage, aesthetic picture, river bank use for the open urban spaces, illegal wastewater and waste distribution in the river or very close premises to the river, as well as (flash) floods (Hadi et al., 2017; Othman & Majid, 2016). The development of the river before the project started is similar to many other urban river developments, so understanding of this case study contributes to the prediction of outcomes in other projects of urban river restoration. This chapter exposes the river development tendencies in Kuala Lumpur, primarily, in the zone around the Klang river.

4.2.1 Historical timeline of the urban development around the Klang river

Malaysia is one of the countries with the exceptional biodiversity, nevertheless, the economic growth overtakes the nature (Hezri & Nordin Hasan, 2006). The history of Kuala Lumpur closely related with the Klang river. The city even got its name due to swaps around the conflux of two rivers [*kuala* in Malay means confluence of the rivers; *lumpur* means swamp or mud]. During the WWII Malaysia was occupied by Japan. After WWII populace started to form an independent country, in 1952 held the first election and in 1957 Malaysia declared the independence (Hadi et al., 2017). Since then several major historical and political events took place – the institutional framework was established, laws and regulations were implemented, etc. (Mokhtar & Tan, 2004). However, the tremendous event in the water sector was a water reform. It focused on two issues "*the privatization of water services and the public outcry over interrupted water supply*" (Hezri & Nordin Hasan, 2006; Othman et al., 2012). As an outcome of that in 1998 the National Water Resource Council was established (Hezri & Nordin Hasan, 2006). The reform caused amendments in constitution "*jurisdiction over the distribution of water and setting of tariffs were transferred from states to the federal Government*" (Hezri & Nordin Hasan, 2006). As it was exhibited in the UN Habitat conference Malaysia in the last few decades transformed from an underdeveloped to a middle-income country with thriving economies (Hadi et al., 2017; Urbanice Malaysia, 2016). The Klang river, due to the necessity of wastewater distribution, had been channelized and straightened to serve as a wastewater channel. Afterwards, the river became unnavigable. Water quality deteriorated immensely. The river itself lost any appeal or aesthetic value along with biodiversity.

The key feature of the Klang river is its tendency to inundate. The river always was prone to floods, especially flash floods. Notwithstanding, the situation slowly gets

worse, the mean of annual floods of the Klang river increased three times since the beginning of last century (Abdullah et al., 2015; Othman et al., 2012). Afroz et al. (2014) implied that increased urbanization unequivocally impinged and modified water quality and contributed to more extreme floods. At first, experts applied the control principle for floods by installing various structural measures, yet after the 1970s, the capacities of these engineering structures reached their limits (Abdullah et al., 2015; Othman & Majid, 2016; Zakaria et al., 2004). That opened the doors for the new innovative solutions, like the Stormwater Management and Road Tunnel (SMART) project (Abdullah et al., 2015). Yet, the changes of dominant lifestyle are rarely tackled. In the future scientists predict the increasing floods due to the continuing urbanization and the loss of green spaces in the catchment area (Abdullah et al., 2015). Such situation requires the new kind of solutions. As Afroz et al. (2014) summarized there are eleven major issues and challenges for Water Resource Management in Malaysia. They differ from the legislation and institutional issues to privatization of water sector, to changing weather patterns and destruction and degradation of water catchments, and many more. Some of them, like high rates of water wastage, are quite easy to manage, yet, others, like water pollution, requires a resilient and holistic approach.

The first signs for the Klang river development started then Department of Irrigation and Drainage of Malaysia (DID) launched the programme "One State, One River" in 2005 (Chan, 2012). The core idea of this project was to rehabilitate one river in each state in Malaysia (Afroz et al., 2014). Although, the predecessor of this programme, "Love our river" campaign (started in 1992), had been declared a failure in 2007 despite whole effort (Shamsuddin et al., 2013). The programme "One State, One River" opened the doors for the River of Life project in Kuala Lumpur.

4.2.1.1 River of Life

The River of Life (RoL) project is a major overarching and demanding project of the Klang river restoration in Kuala Lumpur. Its utter focus is to develop the Greater Kuala Lumpur area by applying diverse measures. Additionally, there is an expectation that the RoL will be as a catalyst for similar projects (Othman & Majid, 2016). The city government emphasises on the major four directions of development. Firstly, the city instigates the creation of the places that are attractive for the new job opportunities. The second direction instigates the development of well-connected public transport system. Thirdly, Kuala Lumpur aims to create new open spaces to increase a life quality of local people and to attract tourists. The last target is a high standard infrastructure service (Othman & Majid, 2016; Zainal Abidin, 2017). Conjointly, RoL has three aims, which reflect the overall city development goals. The stages of the project development are pictured in Figure 4-3. The major objectives are: (1) enhancing, rehabilitating and preserving the river and its environment compatible with the envisaged Greater Kuala Lumpur City status for the project area, including improving and sustaining the class IIB (suitable for the body-contact recreational usage) water quality in the Klang river and its tributaries within the

project area by the year 2020; (2) providing an adequate level of flood mitigation protection to the project area.
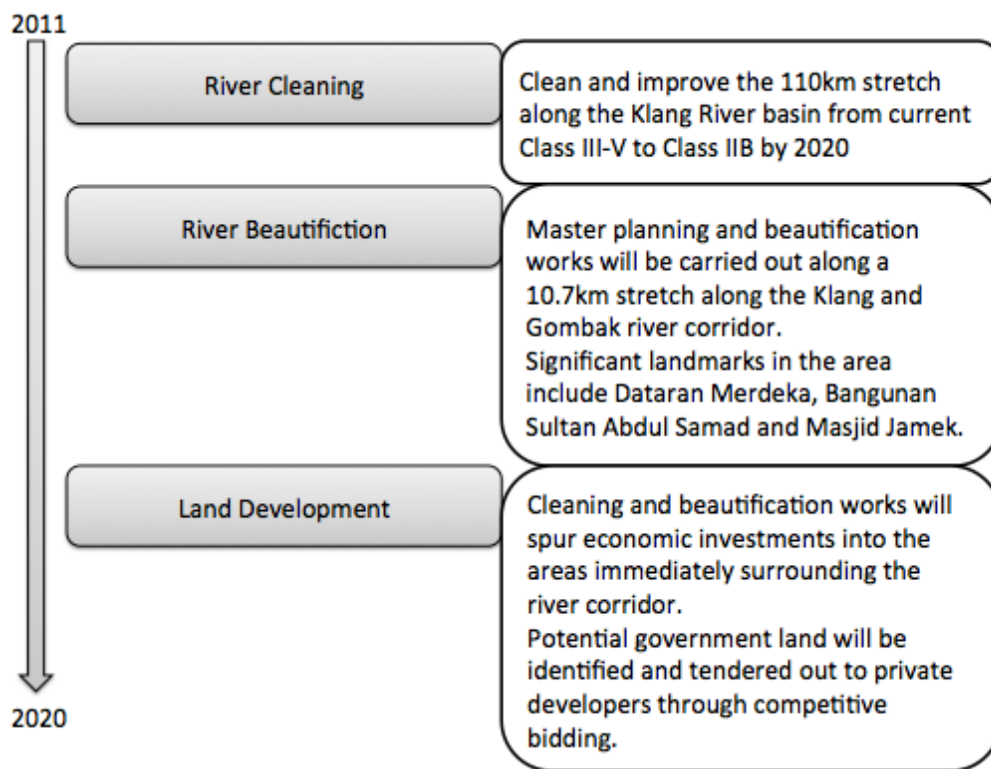
Figure 4-3. The RoL project[13].

The RoL project is important for the Klang river because of its holistic view of water issues (Othman & Majid, 2016). As Zainal Abidin (2017) emphasized: "*the redevelopment and river beautification […] is an example of socio-cultural regeneration*". RoL also includes some public participation measures. During project implementation state, local communities are receivers of new information and have to learn new practices. Yet, society has never been involved in the decision-making process. Some concerns of RoL project was expressed by Zainal Abidin (2017). The primary one is that a city centre is losing its original traditional face (frequently by

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[13] The water quality status is indicated by classes bassed on the water quality index (WQI) and interim National Water Standard for Malaysia (INWQS). Class I – clean, used for water supply practically no treatment necessary, in fishery – very sensitive aquatic species; Class IIA – slightly polluted, used for water supply conventional treatment required, in fishery – sensitive aquatic species; Class IIB - slightly polluted, used for recreational use with body contact; Class III – polluted, in water supply an extensive treatment is requared, in fishery – common, of economic value and torerant species, used for livestock drinking; Class IV – polluted, used for irrigation; Class V – non of the above (*Environmental Impact Assessment (EIA). Instructional Guide.*, 2007; Foo, 2015).

neglecting its traditional urban patterns[14]) and becoming more commercialized (Zainal Abidin, 2017). Yet, these changes lead to increase the safety of the area that, consequently, attracts a lot of Kuala Lumpur citizens as well as tourists (Bradley, 2010; Hadi et al., 2017). Shamsuddin et al. (2013) with reference to Marshall (2001) states that regeneration of the waterfront "*provide opportunities for the cities to be reconnected with their waters in the future, changing their old function to the new*" and add that such projects help to adapt for the future needs. Similar conclusions were reached in the research about the RoL value to heritage objects; the RoL could have an enormous input in creating an aesthetic image and preserving the historical value of the city (Othman & Majid, 2016). Other places, like Kampong Baru, sharing a concern that "*the redevelopment would cause loss of the Malay cultural and architectural heritage*" (Zainal Abidin, 2017), even though, the poor development strategies led this neighbourhood to become overcrowded with an insufficient infrastructure and conflicting communities as well as a negative overall image (Shamsuddin et al., 2013; Zainal Abidin, 2017).

4.2.2 Institutional and legal framework in the Klang basin area

The river development is usually related to the urban planning, environmental and health issues. The essential institution responsible for the river is the city hall (the architects). Additionally, there are institutions that are responsible for environmental protection as well as authorities for the health and human safety (Foo, 2015; Mokhtar & Tan, 2004). The complications of the Klang river development arise due to diverse governmental levels: Kuala Lumpur is a federal territory (central government institutions are in charge), the rest of the Klang river basin is in the Selangor state (the Selangor state's institutions are responsible). The differences between the dominant political parties in the federal and state level hinder the holistic development of the Klang river.

The first legal document regarding the river, or water in general, was the Water Act in 1920, which focus to control river pollution, even though, the limitation in the concept and inadequate "*tools*" hinder the implementation of the primary idea (Afroz et al., 2014). Malaysia experienced two waves of institutionalization of environmental policies. The first one was between the late 1960s and the beginning of 1970s. The second one occurred following the worldview shift after Rio Conference 1992 (Hezri & Nordin Hasan, 2006). Additionally, Hezri & Nordin Hasan (2006) specified four states of the development of Malaysian environmental policies. During the first one (1971-1976) the rivers became significantly polluted due to the economic activities, in general, the biodiversity loss, deforestation, soil degradation become noticeable.

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[14] Traditionally, the key element for open public space is street, however, by following "Western fashion" more squares appear in the urban pattern. Although, squares are foreign in the traditional urban planning, so local people do not know how to use them (in (Zainal Abidin, 2017)

These negative environmental changes pushed forward various environmental agendas in the political arena. The federal government started to play the key role in the environmental policies. During this period the Environmental Quality Act (1974) was passed, this document brought the enormous changes in the perception of environmental issues (Afroz et al., 2014). This Act was followed by the Street, Drainage and Building Act in 1974 and the Local Government Act in 1976. According to Hezri & Nordin Hasan (2006), the second stage (1977-1988) is, then due to even harsher degradation of the environment, the policies that focus on the environmental impact assessment, various environmental fees were established. During that time the great role was played by the active public campaigns and extensive NGOs work. During that period, the Environmental Quality Act (1974) was amended several times in order to accommodate new realities (noise pollution, toxic waste, and marine pollution). The third stage (1989-2000) is about increasing the consciousness and awareness on the important environmental issues in society, yet, the government did not follow up the changes in society. Nevertheless, the country signed several international and intergovernmental agreements. During that period, the international community decisively influenced the environmental policies in Malaysia. Therefore, the paradigm shifted from "*project-by-project*" to "*comprehensive country-driven*" concept. During the fourth stage (2001-2005) the sectorial environment plans were established and more attention was given to strengthen a sustainable development planning. As academics observed, the environmental principles were included even in the policies and institutions, which are not directly related to the environmental protection (Hezri & Nordin Hasan, 2006). After 2005 the implementation of the environmental protection and preservation is continuing. As Shamsuddin et al. (2013) summarized since the 1990s a sustainable development agenda appeared in the Malaysian legal system and is still evident now. The country tries to combine the economic development with preservation of nature and provide a safe and healthy environment for society.

The Malaysian constitution has strong influence from the British influence. The legal system is secular even though the Islamic law *Shari'a* has immense influence in the daily life. Further, Islam is the official religion of Malaysia. *Shari'a* declares that water must be available for every person for his/her religious purposes and other needs (Caponera & Nanni, 2007; Naff, 2009). Nevertheless, the only article in the Constitution, which is concerned about the river, is Article 78 and Schedule 9. Article 78 restricts the rights to use the river for navigation or irrigation without the approval of the Legislative Assembly in that state. This decision must be supported by a majority of the total number of members of the Assembly (Delegates of the Reid Commission and later of the Cobbold Commission, 1957). According to the Malaysian Constitution, the rivers are under the state authority responsibility (Constitution, Schedule 9, List II (6)). Furthermore, the first attempts to incorporate public participation, how it is understood in the western culture, has manifested in Malaysian legal documents in the Environmental Quality Act (1974) and the Town and Country Planning Act (1976) ("Environmental Quality Act," 1974; "Town and Country Planning Act," 1976). These documents require the availability of

information for public and inclusion of the interested parties, which could express their interest (Environmental Quality Act, Section 3, Article 1(l); Town and Country Planning Act, Article 9 and 12). However, in Hezri & Nordin Hasan (2006) opinion "*the subsidiarity, community empowerment, and policy integration*" as key elements of sustainable development are too alien to be incorporated in Malaysian laws.

The National Policy on the Environment 2002 is based on eight principles, which are interlinked with one another. The ones regarding water issues are the sustainable use of water resources, conservation of a river's vitality and diversity and the continuous enhancement of its water quality (Afroz et al., 2014). The National Policy acknowledges the importance of a holistic approach (Afroz et al., 2014). Nevertheless, the urban river management in Malaysia are framed by Water Services and Industry Act (2006), Drainage Works Act (1954) Street, Drainage and Building Act (1974), Federal Land Coservation Act (1960), Environmental Quality Act (1974), National Water Services Industry Commission Act (2006), Water Services Industry Act (2006) and National Land Code (1965) are dissonant and hardly compatible (Foo, 2015; Mokhtar & Tan, 2004; Tan & Mokhtar, 2009). Additionally, the official urban planning started with the Town and Country Planning Act (1976). This document included the provision of the prevention of environmental pollution (Afroz et al., 2014). It also incorporates the idea of "*the social implication and public view of development*" (Afroz et al., 2014). Additionally, it fortifies the private sector, NGOs to participate in the decision-making process in the water sector during preliminary water resource planning (Mokhtar & Tan, 2004). The most influential laws for civic engagement are the Local Government Act (1976). Yet, Chan (2012) displayed that one of the obstacles why rivers are so deteriorated is outdated laws and regulations. Researcher pointed out that river-related legislative is scattered amongst diverse laws and regulations, which focuses more on "*resource utilization rather than conservation*" and protection. Additionally, researcher argues that existing regulations "*do not support IWRM and IRBM*" (Chan, 2012). Furthermore, states do not rush to adopt federal regulations (Chan, 2012).

The most recent and still valid national policy for the Kuala Lumpur development is the Economic Transformation Programme (2010-2020). In regards to leading national policies the Kuala Lumpur Structure Plan 2020 (KLSP) has been established (KLCH, 2004) although this document is not gazetted. This plan tends more focus on social, economic, physical and environmental issues (Omar & Leh, 2009; Zainal Abidin, 2017). The KLSP will stay a guiding document for the Kuala Lumpur development until 2020 (Chan, 2012).

The leading institution for the river management is the Department of Drainage and Irrigation Malaysia (DID). It is a federal agency and author of the programme "One State, One River". The programme aims to create positive examples, which would be replicated in other rivers (Chan, 2012). The DID have on a regular basis to coordinate their work with the Department of Environment (DOE), which is responsible for water quality in the rivers as well as identification of pollution sources

(Foo, 2015). Since 1978 the water quality in river basins is monitored by the DOE (Foo, 2015). Additionally, the institutions involved in water and river protection are Water Forum and Water Industry Fund (as it is required under Water Services and Industry Act (2006)), Forestry Department (partly, as it is related to forest) ("National Forestry Act," 1984), Town and Country Planning Department and Local Authority (Foo, 2015; Pourebrahim et al., 2011; Tan & Mokhtar, 2009). Additionally, Chan (2012) displayed the importance of the local governments and some constructive applicable examples, which encourage community involvement, exist around Malaysia. The institutions for the safeguarding of water resources (National Water Resources Council and National Water Services Commission) are established at the national level, but there is no institution to monitor of water resources at the local level (Mokhtar & Tan, 2004).

Furthermore, as several researchers acknowledged the improvement of the environment or strengthening nature protection is habitually hindered by the complexity of the institutional system (Hadi et al., 2017; Yakob et al., 2016). There is not a singular responsible institution (federal ministry or agency) for the river management. This is reflected in the overlapping responsibilities amongst several institutions, their departments or agencies. Additionally, the miscommunication occurs due to the diverse governmental level of these institutions (Chan, 2012; Elfithri et al., 2011; Hadi et al., 2017; Mokhtar & Tan, 2004; Tan & Mokhtar, 2009). The institutions to coordinate any transboundary river basins do not exist at all, although, it requires joint management (Foo, 2015).

4.2.3 Public participation process according to the law in the Klang basin

In the Malaysian Constitution, the ideas, like public engagement, participatory governance and similar, do not appear. Dola & Mijan (2006) listed the factors to advance the existing decision-making process, they are the "*failure to attract more public to participate and gain quality feedback, public lack of knowledge and awareness on the importance of participation and lack of authority's effort to communicate at the field's level thus reducing bureaucracy*". Additionally, authors pinpoint the importance of previous experiences; regrettably, the lay people share the negative impression from various development projects (Dola & Mijan, 2006). Usually, it was caused by lack of transparency and ineffective communication (Dola & Mijan, 2006).

The leading Kuala Lumpur development document is the Kuala Lumpur Structure Plan 2020. During its preparation, some public participation measures were implemented (Chan, 2012). The society had an opportunity to know about the decisions in the document (Chan, 2012; Dola & Mijan, 2006; KLCH, 2004). However, it received some critics. Although society was involved in a public exhibition or invited in a public hearing after the draft of the KLSP was completed (Abdullah et al., 2016). Although, the exhibition of the KLSP was one and a half month long, later it even was extended for two more months (Abdullah et al., 2016). The public could

have visited several places, like City Hall and some shopping malls, community halls and public transport terminals. In doing so authors of the KLSP wanted to inform society as well as provide opportunities to express their own wishes and ideas (Abdullah et al., 2016). Town and Country Planning Act (1976) provided that society has a right to be involved in the preparation of Structure Plan and Local Plan (Dola & Mijan, 2006). This process is called SERANTA. Local authorities are encouraged to an applied wide range of public participation measures during the planning process (Dola & Mijan, 2006). The concept of public involvement in the decision-making process is significantly promoted by international policies such as AGENDA 21, which occupies a substantial place in the Malaysian law (Dola & Mijan, 2006; Dola & Noor, 2012). In the Town and Country Planning Act (2003), there is a requirement that "*public participation is mandatory during the formulation stage and after the draft plan is approved*" (Town and Country Planning Act, Article 9 and 13), additionally, the Malaysian National Urbanisation Policy, the Safe City Programme, Sustainable City indicators and many other development programmes incorporate ideas of AGENDA 21 (Dola & Mijan, 2006; Dola & Noor, 2012). Yet, researches revealed that general public is rarely aware of the options provided for them to participate (Dola & Mijan, 2006; Gartland, 2016; Ismail et al., 2015).

The programme "One State, One River" tried to engage society in the river development (Chan, 2012). Yet, the declarative version of the document does not always find its form in the reality. As it was mentioned above, this programme triggered the RoL project in Kuala Lumpur. By observing the RoL project documentation it is easy to spot the effort to include local people and communities in the process. Yet, their participation is circumscribed to several information campaigns and education activities or simply volunteering to do some physical work (collect waste on the river bank, plant trees, etc.). Furthermore, governmental leaders and project developers recognized the importance of society for the project development. So the Public Outreach Programme (POP) was incorporated into the entire project. The POP primarily working with various stakeholder groups about pollution prevention, environmental awareness and education as well as other related topics. Zainal Abidin (2017) after observing the public participation actions in Kampong Baru, revealed that the existing framework is actively criticized by the participants. People rise issues pertaining to the fatigue involvement, questioned the transparency of the entire process along with experts and government officials. It is plausible that "*lack of concern for the community sensitivity, poor dealing in conflict situations, too ambitious and too complex land matters have caused suspicion and delusion about the redevelopment plan*" (Zainal Abidin, 2017).

Good water governance is supported by the rule of law, transparency, clear decision-making and policy-making processes, and tenacious public participation (Bello & Dola, 2014; Foo, 2015; Santiago, 2005). Yet, in Malaysia, the dominant governing approach is a top-down (Foo, 2015) and it could hinder the good water governance. Further, it could be expected that with the encouragement of active public participation, the water governance will be boosted. Foo (2015) revealed that ISO

certification could contribute to promoting and enhancing public participation and embolden the private sector to arrange and incorporate public participation measures in the project development. International examples disclose that companies, which have adopted ISO-14001, improved their "*self-reported environmental compliance*" (Dasgupta et al., 2000; Potoski & Prakash, 2005; Rivera, 2010).

4.3 Ciliwung river

The Ciliwung river is 119 km length tropical river in Java island. There are several versions of the origins of the Ciliwung name. Some argue, that it derives from two words in Sundanese language – *Ci* means river and *Haliwung* means murky (Nikmah, n.d.). Others provide a contrastive explanation that the Ciliwung means "*the whirlpool*", because in Sundanese *Liwung* means "*distressed*" or "*upset*", and in Javanese, it stands for "*madly turning around*", "*tormented*". The third version suggests that the Ciliwung is "*the meandering one*" stems from Malay *Liuk, Liut* means "*to twist*" (Grijns & Nas, 2000; Nayati et al., 2002). The main city in the Ciliwung river basin is Jakarta, which grew up and gained more power, despite changes of name, at first it was small port Kalapa, later it became Jayakarta, Jacatra and Batavia (Caljouw et al., 2005; Nayati et al., 2002; Silver, 2007).

The majority of the Ciliwung river basin is densely urbanized, a significant part of the basin is in Jakarta agglomeration (or so-called Jabodetabek[15]). Only 2 % of the original riverbank remains intact (Satriastanti, 2012). In Jakarta green areas shrieked from 40 % to 9 % in the period of 1985 – 2002 (Kusumawijaya, 2014; Padawangi & Douglass, 2015; Steinberg, 2007). Silver (2007) with reference to the City Population and Environmental Agency states that from 421 public parks 246 were converted to other function. The increase of paved territories negatively influenced rainwater retention (Caljouw et al., 2005). Examples from satellite cities around Jakarta provide similar facts, for example in Bogor 2 000 ha of paddy fields were converted to industrial or residential land (Firman, 1997; Rakodi & Firman, 2009; Silver, 2007), Tanggerang district build-up area increased from 11 % (1980) to 34 % (1994) (Silver, 2007). Jakarta city was and still is a symbolic and compelling attraction spot for many immigrants from rural areas of Indonesia (Steinberg, 2007). According to Leaf (1994) research, at the beginning of 1990, about 70 % of residential land in Jakarta was unregistered. Changes in land use are depicted in Figure 4-4. The riverbanks officially belong to the government, precisely, to the Ministry of Public Works. Nevertheless, the confusion in law requirements regarding the land ownership and tenure allowed many informal settlements to appear close by the rivers (Padawangi, 2016; Purnomohadi, 2000).

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[15] Jabodetabek agglomeration of Jakarta, Bogor, Depok, Tangerang and Bekasi.
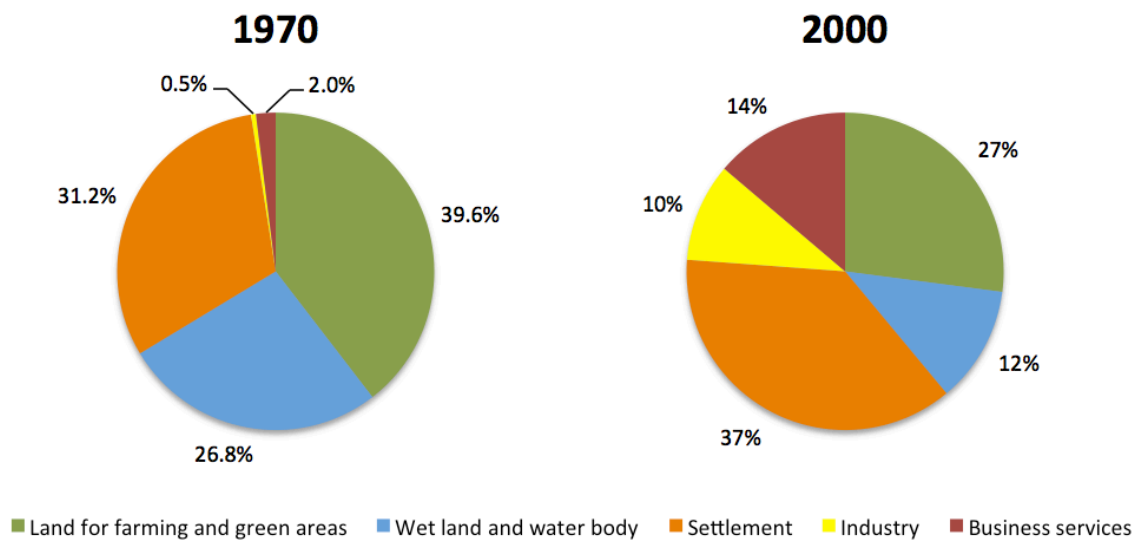
Figure 4-4. Land use changes in Jakarta (according to Fachrul et al. (2007)).

Additionally, the Ciliwung river is extremely polluted. The pollution is caused by various human activities. The Ciliwung was pronounced as the most polluted river in the World in 2012 (Satriastanti, 2012). Since 1970 water quality in the river has dropped 33 % (Fachrul et al., 2007), an entire river is polluted from average in the middle stream to extremely contaminated in the downstream part (according to data from the Ministry of Environment, 2012). That is immensely influenced by the lack of collective sewage system, so far just 4% of Jakarta city has such infrastructure and using some kind of wastewater treatment facilities (Anonymous-JK-2, 2015).

Moreover, floods are another issue that perturbs life in Jakarta. Recently, several extreme floods devastated Jakarta (in 2002, 2007, 2013, 2014) despite that 14% of Jakarta has flood protection or prevention measures installed (van Voorst, 2016). The essential reasons of increased floods are the loss of water-retention capacity, upstream deforestation, gradual land subsidence, lack of capacity to maintain existing drainage system along with socio-cultural factors, such as poor policy implementation, customary dumping of solid waste directly in the river and ill management system (Caljouw et al., 2005). Padawangi & Douglass (2015), combining Cohen & Werker (2008); Thone (1935); Wolf (1972) ideas, argues that current Jakarta's flood disasters exceedingly depend on the political decisions, which already took place years and years ago, as well as recent resolutions. Additionally, van Alphen et al. (2006) research revealed that "*it is possible to reduce flood impacts in 80 % of the current flood-prone areas of Jakarta (80 % of 10000 ha = 8000 ha or 80 km^2), through short and medium-term structural and non-structural measures*".

Last but not the least, the considerable problem in Jakarta is land-subsidence and seawater intrusion, which influences the natural flow of the river (Rakodi & Firman, 2009). The over-extraction of groundwater fundamentally influences the land subsidence, although the load of constructions, natural consolidation of alluvial soil, and tectonic processes contribute to land subsidence as well (Bucx et al., 2010).

ADB evaluated that Jakarta is sinking about 10 cm/year, Bandung about 7 cm/year (ADB, 2016). Bucx et al. (2010) shared contradicting statistics and stated that Jakarta is sinking by 1-15 cm/year on average, but in the Northern part of the city, it could be as high as 25 cm/year. According to Padawangi & Douglass (2015); Steinberg (2007) 40 % of Jakarta is below sea level. Yet, the government are indomitably promoting land reclamation from the sea and building a sea wall (Nikmah, n.d.; President of Indonesia, 1995; Silver, 2007).

4.3.1 Historical timeline of the Ciliwung case study

The quality of river in urban settlements profoundly depends on the existing waste and wastewater collection and treatment systems. As Jakarta grew denser in population and wider in an urbanized area, there were more and more waste and wastewater produced, however, necessary infrastructure to support such growth was not and still is not exist (ADB, 2016; Silver, 2007; Winarso, 2011). Even though, the first modern water infrastructure in the Indonesian cities appeared around the second half of the XIX century in European suburbs. It was both sewage collection and clean water supply systems (Taylor, 2003). At the end of XX century, the Indonesian government took several influential steps. Firstly, in 1988 the water resources were privatized (ADB, 2016). Secondly, the decentralization was legally acknowledged by the Law 22/1999 and Law 25/1999 (ADB, 2016). Nevertheless, the lack of structures for supervision, self-mending and quality control, lead to a chaotic reality (Caljouw et al., 2005; Silver, 2007).

The Clean Rivers Program (Program Kali Bersih) (PROKASIH) started in the 1990s by the initiative of economist and the Minister of Environment Emil Salim (Boomgaard, 2007; Silver, 2007). This program has attempted to preserve rivers by "*enforcing regulations on pollution control*" to the industries, yet, the dispersed pollution sources (like agriculture) were left out (Boomgaard, 2007; Kemper et al., 2007). Even though the PROKASIH was a national level program, it was scaled down to basins of rivers. Every PROKASIH for various rivers were carried out separately (Boomgaard, 2007). Amongst experts, the PROKASIH of the Ciliwung river was evaluated as weak in both quality and accessibility of water quality information (Krchnak, 2005; Resosudarmo, 1995).

As it was mentioned earlier, the floods held a key role in the Jakarta's development. The Ciliwung river management is not an exception (Li et al., 2015; van Voorst, 2016). After 2002 flood disaster the central government allocated 15 quintillions Indonesian rupiah to solve the flood problem in Jakarta during the next ten years (1512-JK-4, 2015; Caljouw et al., 2005). Additionally, the Ciliwung-Cisadane River Basin Development Project was established. This project was an initiative from the President administration (ADB, 2016). After 2002 extreme flood people openly expressed their displeasure and hostility about an existing political situation and responsibilities of the institutions as well as their involvement (Caljouw et al., 2005). The majority of governmental institutions got activated once more after extreme

floods in 2013 (15 % of Jabotabek area was flooded (Caljouw et al., 2005)), afterwards, the *normalisasi* Ciliwung (Ciliwung River Normalisation Programme) started (Arslanian, 2015). According to this programme, the proposed works included (1) widening of the river by 20 – 50 meters, (2) building roads on both sides of the river with the green area in between and (3) relocation of people who are currently living on the riverbank (Arslanian, 2015). During this programme, the riverbed is cleaned because for several decades in Jakarta rivers was used as garbage dump site due to the non-existing municipal waste collection system. Additionally, to make thing worse the rivers in Jakarta are acting as wastewater collectors as well. Furthermore, the recent records show that Jakarta's administration is not the best in maintaining existing infrastructure and does poor coordination of *normalisasi* Ciliwung actions, which are scattered all over the city and are not joint together (Sihite, 2013). As Sihite (2013) described them as "*a little bit here, and a little bit there*". Moreover, Padawangi & Douglass (2015) revealed that *normalisasi* Ciliwung is the plan of the river concrete embankment (*betonisasi sungai*), which was resolutely rejected by the environmentalists and humanitarians. The negative reaction was from people and organizations that concern about social issues in Jakarta as well. As van Voorst (2016) displayed there will be more than 70000 houses in the slum areas will be demolished, and their dwellers will be evicted. The majority of them are so-called illegal citizens. They will not receive any compensations or new housing. The fishermen are very site related, so they will the most influenced people group, during relocation they lose their living place as well as an income source (new relocation place is far away from port or sea) (Anonymous-JK-2, 2015). Additionally, this project will "*uproot residents from local economies*" (Padawangi & Douglass, 2015).

The development of the Ciliwung river heavily depends on historical past and today's development ideas. As Colven (2017) articulated the changes will be influenced by "*techno-political network*" of "*political and economic interests, world-class city aspirations, engineering expertise, capital flows, colonial histories, and postcolonial relations between Jakarta and the Netherlands*". The current examples prove, the political will and promotion of big infrastructure, lead by influential international consultancy, trumps the need to tackle the existing root cause(s) of the problem at the hand (Colven, 2017).

4.3.2 Institutional and legal framework in Jakarta

In Indonesia, several ministries are involved in the water management affairs. Their responsibilities are shared in unpredictable and puzzling ways (Anonymous-JK-2, 2015). The Ministry of Health is responsible for all issues regarding the water quality, but the Ministry of Industry and Trade are responsible for bottled water. The Ministry of Home Affairs and the Ministry of Public Works are taking care of water in the urban sector. The institutions like the National Water Supply and Environmental Sanitation Working Group (it has a role of coordinator between diverse departments, the private sector and stakeholders), the National Development Planning Agency

(mostly, it plans investments), the National Program for Community Empowerment (it provides grants for high priority local projects) have a notable influence on the water management sector (ADB, 2016; Teeuwen, 2011). The River Basin Management Agency under the Ministry of Environment and Forestry coordinates questions related with the development of rivers (ADB, 2016). Additionally, there are a lot of international institutions, which are involved in the water-related issues in Jakarta, and, in general, in entire Indonesia (Padawangi, 2016). They range from the humongous organizations, like the World Bank and UN, to a grassroots level NGOs helping people to cope with the relocation process.

According to Law 7/2004, the water councils must be formed. The National Water Resource Council was created in 2009. Later, it was followed by establishment of the 28 provincial water resource councils and in Jakarta, agglomeration was established 12 River Basin Water Councils (ADB, 2016; Fulazzaky, 2014). Overall, there are 73 such councils in Indonesia (ADB, 2016). The National Water Resources Council (DSDAN) consist of equal parts of the representatives from the governmental agencies and NGOs (Fulazzaky, 2014). The key role of the DSDAN is to instigate and strengthen the implementation of IWRM in the Indonesian regulations that as well includes an active public participation in the decision-making process at national and local level (Fulazzaky, 2014; Palme, 2010). Furthermore, Fulazzaky & Sutardi (2009) compiled the list[16] of limitations of such process. These shortcomings primarily indicate the human (behaviour) related issues, like ego, lack of interest, knowledge and motivation, lack of inclusion amongst colleagues and/or other stakeholders, etc.

Additionally, there are 133 river basins in Indonesia, they were established by the ministerial regulation No. 11a/PRT/M/2006 issued by the Minister of Public Works (Fulazzaky, 2014). In order to coordinate them, there are 13 Provincial Water councils and 12 River Basin Councils. Nevertheless, the management of water resources still is full of flaws as well as substantial knowledge gaps about rivers themselves (Fulazzaky, 2014).

In 2005 the National Movement for Water Resources Management Partnership (GNKPA) has been launched (Fulazzaky, 2014). The project was meant to

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[16] The limitations goes as following: "*(1) regulatory functions and service provision functions of water resources may still intermingle; (2) law enforcement is not functional as well the frameworks for water management have not yet been legalized; (3) most human resources in the water resources sector, especially those in the fields are not professionals; (4) conflicts of interest among stakeholders, sectors, administration authority and geographical area (i.e., downstream versus upstream); (5) strong sectoral and local ego in water resources and other sector related to water; and (6) process of formulation of framework for water management is considered by some participants as lacking adequate participation and inputs from stakeholders*" (in (Fulazzaky & Sutardi, 2009))

encourage the coordination between distinct governmental institutions and departments as well as capacity building within the institutions. It was expected this would lead to the sustainable development (Fulazzaky, 2014; Fulazzaky & Sutardi, 2009). Additionally, the GNKPA aims to integrate various programmes that are apropos of water resources, land and forests. Nonetheless, the integration of various local institutions at times a blocked or impede by the powerful coalitions in the central government, which attempts to influence the local decisions and authorities as well as to control the local taxes, investments, etc., despite, the struggle of local elites to obtain a direct economic leadership (Hadiz, 2004).

In order to strengthen the environmental management system, several programmes were launched. PROKASIH focuses on the compliance improvement and emission load reduction from small and medium scale enterprises and domestic sources. The principal goal of the program is "*to enhance river water quality until it meets the specified standard set for the river, according to the specific category as established by the government*" (Resosudarmo et al., 1997). PROKASIH emphasises on the creation of the integrated control mechanism of water pollution. The program pursues to reduce emissions. Furthermore, it also strengthens the capacities of local government institutions. PROKASIH acknowledges the importance of stakeholders and their participation in the water management, especially, pollution control. Yet, as Resosudarmo et al. (1997) revealed local people rarely found this program making any difference on the ground level by enhancing water quality or involving local stakeholders in the discussion.

The Constitution of Indonesia was established in 1945, but it was amended several times due to various political and historical changes. The last amendments were done in 2002. This document guarantees the water availability for Muslim community for their religious purposes. Similarly, to the prior discussed Malaysian Constitution the Indonesian Constitution follows Islam Law as well. Krchnak (2005) acknowledged that Indonesian constitution does not guarantee public participation in the decision-making process, the environmental assessment requires public notice just at the final stage of the project. Further, gender equality is not guaranteed (Anonymous-JK-2, 2015).

The first legal regulation regarding the environment protection was the Law 23/1997 on Environmental Management. Later, it was followed by the Governmental Regulation 82/2001 on Water Quality Management and Water Pollution Control, which was the keystone for the prevention, protection and recovery of water resources, and the control of water pollution. The most important law on water issues is the Law 7/2004 on Water Resources. According to the Law 7/2004, "*water resource management should be carried out through coordination by integrating the interests of various sectors, regions, and stakeholders to maintain sustainable water resources functions and benefits*" (ADB, 2016). The document established the new paradigm for the water resources management, e.g. IWRM. Yet, Fulazzaky (2014)

implied that government faced/faces the difficulties to overcome technical and managerial shortcomings and demands of the IWRM implementation.

One of the most recent documents is the Law 32/2009 on Environmental Protection and Management. It estimates several ways to recover environmental function: (1) immediate discontinuation of pollution and cleaning of pollutant, (2) remediation, (3) rehabilitation, (4) restoration or (5) other measures provided by the development of science and technologies (54 article). Moreover, the crucial role is played by a permit system. It identifies the concentration, maximum load of pollutant, taxes, etc. Moreover, Jaspers (2003) described water policy as a constant struggle for "*effective water allocation, stakeholder harmonisation and fee collection*". On the contrary, the lack of transparency in the water regulations leads to distorted reality (Teeuwen, 2011), where hopes of society are not met, the power of governmental leaders is steadfast and not accounted.

There are quite a variety of plans and strategies prepared for the Jakarta's development. Meanwhile, just a few of them are up to date or changed by the new editions. The first tries to arrange the Master Plan for Jakarta started in the 1950s (Silver, 2007). In 1973 NEDECO prepared a "Master Plan for Drainage and Flood Control" (NEDECO, 1973). This document is still a leading deed in the river management in Jakarta. In the 1990s the JICA prepared two important documents, which are valid till now. These are "The Study on Urban Drainage and Wastewater Disposal Project in the City of Jakarta – Master Plan Study" and "Study on Comprehensive Water Management Plan in Jabotabek" (JICA, 1991, 1997). Later, even more diverse documents and programs were created[17]. Yet, they concentrated on a flood control and mitigation (Padawangi & Douglass, 2015). Nonetheless, the prime focus in these documents always remains on the structural improvements and engineering innovations.

As van Voorst (2016) wrote that the government system tends to focus on one particular problem. In Jakarta case, the key issue is flooding, so basically, the most of effort is directed to solve that. Unfortunately, other problems are pushed away and did not receive adequate attention. The current situation is a complex and requires a holistic approach to be solved. Nevertheless, the institutional framework, as well as capacity, is not sufficient (Padawangi, 2016). To sum up, WWF did an extensive research on water regulation in Indonesian law, the result showed up that there are 15 water-related laws and regulations, yet, they have deviating perspectives and are not integrated with one to another (Bucx et al., 2010). The lack of coordination

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[17] These documents are „Jakarta Urgent Flood Mitigation Project/Jakarta Emergency Dredging Initiative" supported by the World Bank and, constantly, updated till now (WB, 2008), „Jakarta Comprehensive Flood Management" aided by Japan International Cooperation Agency (JICA, 2013) and „The Coastal Defence Management Plan" funded by the Government of the Netherlands (Brinkman, 2012))

between diverse institutions and departments is the core feature of the entire system. That leads to the insufficient river management around entire Indonesia, including Jakarta (Bucx et al., 2010). The missing involvement of society is consistently highlighted amongst academia (Fulazzaky, 2014; Padawangi, 2016).

4.3.3 Public participation process according to law in the case study area

According to Silver (2007), the first time a participatory approach has been introduced in urban planning were in the Urban Development Area Programme (Program Dasar Pembangunan Perkotaan). This programme stated that local stakeholders must be involved "*in the plan-making process*" (Silver, 2007).

The most noteworthy programme for the Ciliwung river development is PROKASIH, which identified the importance of stakeholder involvement. Nonetheless, after the first seven years, scientists revealed that program did not produce any indicative changes or compelling results and society was not engaged enough (Resosudarmo et al., 1997; Resosudarmo, 1995).

The key point in almost every discussion about the Jakarta's development is floods, which as Padawangi & Douglass (2015) affirmed are "*largely generated by unregulated and deregulated uneven development*". Floods are consistently and habitually used as a cover and justification for the eviction of marginalized communities, who are unequivocally disturbed by the disaster (Padawangi & Douglass, 2015). The *nornalisasi* Ciliwung plan has triggered local communities to raise their voice against governmental plans. Many argued that it would destroy natural environment, others stated that residents would lose their income source, etc. These experiences became a catalyst for other discussions about the future of the Ciliwung river and other big developments in Jakarta (Padawangi & Douglass, 2015). Yet, the *normalisasi* Ciliwung is hindered by the relocation and evictions of the dwellers from the premises of the Ciliwung river. These processes could support forming a tenacious, well-defined community as to oppose for the conjoint enemy "*the state*" (Li, 1999). In 1960 Master Plan One, the first time in Jakarta city the evictions were incorporated in the legal documents (Silver, 2007). Furthermore, the recent relocation during *normalisasi* Ciliwung is peculiar because new social housing follows the requirements for the architectural design of the Jakarta city (Anonymous-JK-1, 2015). The decision was based on the vision of foreign architects to adopt the western concept of decentralization. Overall, plan "*did not give a coherent spatial vision for the capital city*" (Sagala et al., 2013; Silver, 2007; Winarso, 2011). Now history is repeating again in the *normalisasi* project.

Aptly and beneficially, local communities in the Ciliwung basin in Jakarta are active ones and there are NGOs that help people to express their wishes and needs. In some communities people arranged the early warning system for the floods (Padawangi & Douglass, 2015), others significantly assisted in creating local maps, or environmental research or even policy advocacy, etc. (Padawangi, 2016;

Padawangi & Douglass, 2015; Padawangi et al., 2016) Notwithstanding, at times society opinion is ignored by the political and economic powers (Colven, 2017; Dasgupta & Beard, 2007; Hadiz, 2004). Especially, if communities are advocating for pro-environmental agenda, which conflict with the promoted structural actions (Padawangi, 2016) as well as big infrastructure projects (Colven, 2017). The new decentralization laws were intended to transfer some power to the local level (Antlöv, 2003), yet again, the real outcome ended up being the opposite. Essentially, Dasgupta & Beard (2007) put it, that "*has created unprecedented opportunities for predatory political actors*".

The summary of the theoretical part of the case study analysis:

- The Mekong river development has an extensive and versatile history. However, currently the prominent leaders in the Mekong river development are MRC, national governments of Mekong basin countries, ASEAN, ADB, WB. The rising voice of local communities is becoming more and more present in the intergovernmental discussions and negotiations.
- The development of Klang and Ciliwung rivers are the project-led development. These projects are focusing on the particular problem and have precise the expiration date, while the Mekong river development is led by international agreement. Such development does not have an expiration date, it holds several overarching goals, which covers many issues and use versatile approaches during its entire process. Such development is based upon the concordance that communication and negotiation amongst participating countries will remain the always-available tool to solve issues and establish near future objectives.
- In most of the actual projects along the Mekong, Klang and Ciliwung rivers, public participation is more declarative than implementable. However, the legal background and knowledge are present meanwhile the lack of motivation hinders the entire process.

The information collected and analysed in the 4.1, 4.2, 4.3 chapters were used as background information for the qualitative interviews. In the following chapter, the empirical results from the interviews are presented.

4.4 Findings of qualitative interviews (empirical results)

The socio-ecological system of Southeastern Asian rivers and river management are driven by various policies, controlled by law, regulations or direct political decisions and supported or managed by the governmental institutions. By interviewing local and international experts as well as governmental officials the information about their perceptions on the river development and their opinions about the role of public in such projects, including a possibility to gather ideas for the future development, were collected and analysed. These interviews expose the complexity of public

involvement in the river management. They also expose the clash of contrasting perceptions among experts. Such situation could complicate an implementation of public engagement, regardless, the constructive discussion could uncover new better-suited measures for public participation.

4.4.1 Mekong river

4.4.1.1 Definition or description of public participation in interviewees' own words

The experts from the Lower Mekong region working in the bureaucratic apparatus, talk about public participation as it is defined in existing laws and regulations, which are familiar for them. Thus, they describe public participation the same way as they experience and/or apply it (1601-MD-BT-16, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-6, 2016; 1601-MD-HCM-7, 2016; 1601-MD-HCM-8, 2016; 1601-MD-HCM-10, 2016; 1602-MR-VNT-18, 2016). The interviewees, who are from the lower authority level (such as commune, community level) and/or who are directly involved in data gathering and the project development along with implementation, tend to describe public participation as double edge tool, meaning that public participation for them stands as a data source or as an obstacle for simple and direct project implementation (1601-MD-HCM-1, 2015; 1601-MD-HCM-2, 2015; 1601-MD-HCM-10, 2016; 1602-MR-VNT-20, 2016; 1602-MR-VNT-21, 2016; 1602-MR-VNT-22, 2016; 1604-MR-PP-23, 2016; 1604-MR-PP-26, 2016). For instance, 1601-MD-HCM-4 (2016) shared his occasionally used method to communicate the development ideas to society. It consists of six steps: (1) investigation about social features of the area, (2) meetings with people, (3) gather ideas of local people, local governmental institutions, (4) follow-up meeting with people, (5) design the project idea, (6) implementation of it. Experts from Cambodia suggested that there is no one unified sufficient regulation how to organize public participation. Accordingly, it is a confusing situation, since all actions depend on the project and the special permit issued by the responsible ministry (1604-MR-PP-23, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-25, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-29, 2016).

> *"Local people do not get involved and get to know just before change happen. From authorities, it is hard to hear about new projects." (1601-MD-HCM-7, 2016)*

> *"Law or legislative could be as an anecdote, but how it is practised and applied is a different story. It is questionable. Because laws maybe are very comprehensive and in place, but they are not always practised in the best way. 30% applied." (1604-MR-PP-29, 2016)*

The next currently widespread characteristic concept among interviewees is their understanding of the multi-level structure of public participation. The experts from all three countries expressed that public participation differs depending on the level of governance involved (1601-MD-HCM-2, 2015; 1604-MR-PP-24, 2016; 1604-MR-PP-25, 2016; 1604-MR-PP-29, 2016). At the international level, diplomats of every

country negotiate what is the future of the Mekong, the MRC plays a facilitator role, while NMCs are information router (1602-MR-VNT-20, 2016; 1602-MR-VNT-21, 2016; 1602-MR-VNT-22, 2016).

> *"we [auth. the MRC] provide our technical recommendation to the countries and country to set up national stakeholder forum. And they [auth. country(ies)] bring that information. They also invite us to give a talk, to explain that to the audience. That is one part. There is also other way. We set up regional stakeholder forum, where we invite stakeholders, but via national committee. We cannot invite stakeholders directly, except to the national stakeholder forum. In that forum, we are ones who are providing all information. So I think that we still have some connection with the people, just not a direct one."* (1602-MR-VNT-21, 2016)

1604-MR-PP-29 (2016) suggested that ASEAN should get more involved in water-related debates among high-level diplomats. Afterwards, the ideas are converted to policies and delegated for ministries, where they together with their institutions start organizing the implementation process (1602-MR-VNT-20, 2016). Thereafter, these policies are metamorphosed in various programs and projects and are drained till the lowest governmental level – communes, communities, etc. Regrettably, some information is held up or not fully accustomed or shared amongst the institutions (1601-MD-CT-12, 2016; 1601-MD-HCM-1, 2015). At this point, local people are able to voice their opinion; sometimes this process is considerably constrained and diminished. However, in Viet Nam (the country with rigid autocratic governmental structure) exist "*soft resistance*", which means that people, who are directly influenced, look for auxiliary support from friends/relatives in top governmental positions and depending on how far person reach out proportionately the project will be altered. That is an exemplar of the *phue due* tradition. Additionally, there is an institution called People Committee, which is signified to play a role as local people representative (1601-MD-CT-12, 2016; 1601-MD-CT-13, 2016). In Cambodia, people are heartily overwhelmed by endless corruption scandals, so even project developers acknowledge the lack of interest and practically non-existing motivation to raise any issues (1604-MR-PP-29, 2016). In all three Lower Mekong countries, local people doubt that they would be heard by authorities (1601-MD-CT-12, 2016; 1601-MD-HCM-5, 2016).

> *"People are just involved in the end. They are informed about the project."* (1601-MD-HCM-2, 2015)

> *"Participation is not always happening"* (1601-MD-CT-14, 2016).

1601-MD-HCM-15 (2016) shared an example, that sociologists exposed their concerns about negative relocation denouements on communities and encourage looking for other solutions. Despite that, government maintained the focus on GDP growth (for which urbanization and development are needed and unavoidably the environment is sacrificed (1601-MD-HCM-7, 2016; 1601-MD-HCM-15, 2016).

Additionally to the customs and traditions how decisions were made, new forms are rising and becoming more and more influential. Media and social media occasionally play the role of community spokesman, as well as the translator of debates between politicians, diplomats and governmental officers (1601-MD-CT-12, 2016; 1601-MD-HCM-6, 2016; 1604-MR-PP-23, 2016). Notwithstanding, some political groups are broadcasting information adapted to their interests (1602-MR-VNT-19, 2016; 1604-MR-PP-27, 2016). Habitually, experts point out the power, which is in media hands.

"Media often is public information and participation tool" (1601-MD-CT-14, 2016)

furthermore, the younger generation is using social media to spread the news, to debate them and form their own opinion (1604-MR-PP-23, 2016). Social media is a tool to reach out to society. Strangely, ordinary experts do not have much apprehension about social media and/or media (1604-MR-PP-23, 2016). In Viet Nam, media is customarily used for "*soft resistance*" (1601-MD-CT-12, 2016). Moreover, local newspapers regularly escalate the versatile local issues, which get attention from local people or communities.

In Cambodia, several experts indicated the importance of international financial donors. According to the interviewees, they vigorously influence the process of public participation, since proper regulation does not exist (1604-MR-PP-25, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-30, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016).

"Implementation of law could lead to positive changes. At the moment, the situation is not good in Cambodia. But maybe in the future, it will change" (1604-MR-PP-29, 2016).

Customarily, donors bring their own guidance to fill this void. There are many circulating advisory documents prepared by various international organizations but applied and used at national and local level governmental institutions.

Additionally, NGOs are pursuing a similar role as international financial donors and often bringing their own agenda. Meanwhile, the experts neither from Viet Nam nor from Lao PDR uncover such issues. Nonetheless, 1604-MR-PP-27 (2016), who works in the NGO, appreciated public participation as an opportunity to think outside the box. Furthermore, the interviewee said:

"massive public campaigns are useful, but discussion one by one is more touching and reaching out for people who you won't reach otherwise" (1604-MR-PP-27, 2016).

During recent years the predominant application for public participation was focused on the relocation or resettlement due to the river development (primarily because of the dam constructions). Here public participation, in the form of information dissemination and meetings with the community, is used to inform local people about their options (usually, the choices are two: move to a new place or receive a compensation), to apprehend their expectations and to reach a final agreement

(1601-MD-CT-14, 2016). Public participation could extend for a long time and be tedious in order to reach an agreement (1601-MD-CT-14, 2016). During relocation projects public participation is unavoidable – relocation substantially and directly perturb people. However, from discussions with local people in Viet Nam the development project meets so many obstacles, that they had been informed about relocation five or more years ago, but till now are living in the same place and resettlement did not begin yet and there are no signs of that (1601-MD-HCM-5, 2016; Anonymous-VT-3, 2016; Anonymous-VT-4, 2016).

Additionally, experts share some doubts in which area rural or urban public participation is easier to organize. According to several interviewees, the rural population is more willing to embrace and undergo various changes and, in a way, is easier to work with.

> *"As we visit a place we look what could be improved. Our observations combined with the local people ideas are mixt and reflected in the final proposal. The consultant often works as a checking the reality and truth tool (revision by the institution as well). Visits to the field help with revision. Workshops are organized later too. Every program has a separate budget. The workshop is 80% success from personal experience. The consultant must be local – because of language. University sometimes is involved as well, their role depends on the project. […] sometimes our project end up with some laws prepared by our experience."* (1601-MD-BT-16, 2016)

Contrarily, 1604-MR-PP-27 (2016) identified that urban is more convenient setting because facilities needed are close, but people tend to claim to be very busy. Nevertheless, 1604-MR-PP-23 (2016) contradicts that focus group discussions will not succeed in Phnom Penh, but it is applicable for rural areas. From the diverse personal experiences during study, work and volunteering, 1604-MR-PP-27 (2016) concludes that understanding of water issues is still very narrow, especially in the urban areas. People start caring about the environment just then income level rise up to the sufficient living quality. Moreover, rural people have been caring about nature but only to the limited extent. People are barely accustomed with the water issues in the long-term perspective. Consequently, many experts are struggling to translate their knowledge into simple language (without scientific jargon) that knowledge could be accustom for the general populace. However, it is a Herculean task (1604-MR-PP-27, 2016). Additionally, the expert from Viet Nam weighed that in the rural areas people do not have so much money devoted and/or invested, that is why, the discussions are more mellow, though in the cities money steer the negotiations fiercer (1601-MD-CT-13, 2016).

To sum up, in the Mekong basin, the discussions and negotiations about the river development happen at the related governmental level of institutions and people. It means that countries' diplomats negotiate issues between themselves as well as national government's leaders debate together and local people chat with their neighbours, nevertheless, these discussions do not mix. Customarily, some

information is passed to the lower level by official channels (policies, obligations, strategies, programs, etc.). Rarely, the ideas and arguments are transferred to the upper-level institutions (1601-MD-CT-12, 2016). Scientists and researchers admitted that they had been asked to "*adjust*" and "*sweeten*" results in their reports by governmental officials (1601-MD-CT-12, 2016; 1601-MD-HCM-1, 2015). However, disappointments and frustrations are reflected in the media, younger generation openly express their concerns in social media (1601-MD-CT-12, 2016). Nonetheless, from the personal experience of 1601-MD-BT-16 (2016) around 50 % of all ideas gathered from local communities were reflected in the projects or programs, which were related to the Mekong delta and coastal region environmental issues. Besides, from 1601-MD-HCM-15 (2016) observation the experts and government officials become more eager to learn about public participation in the recent years. Additionally, workshops about community involvement demonstrate higher and higher attendance (1601-MD-BT-16, 2016; 1601-MD-HCM-15, 2016).

4.4.1.2 Understanding of the river development process

The Mekong river basin covers more than one-tenth of Southeast Asia. This river is vital for the entire mainland of Southeast Asia. The Mekong river and its environment are unique. Additionally, it is a very complex system and there are still a lot of undiscovered treasures. All interviewees (experts and non-experts) admitted that the Mekong river development needs to consider the big picture of the river and cannot focus on one particular feature. Nevertheless, several experts acknowledged that typically the river is a pawn in the international political arena (1601-MD-BT-16, 2016; 1601-MD-HCM-1, 2015; 1601-MD-HCM-7, 2016; 1602-MR-VNT-17, 2016; 1602-MR-VNT-20, 2016; 1602-MR-VNT-22, 2016; 1604-MR-PP-23, 2016; 1604-MR-PP-29, 2016). Although every Mekong region country acquires its own agenda and ideas how to develop the Mekong river, regrettably, these ideas are vastly deviating between each other. Consequently, the political systems in every country hinder the creation of an open and constructive dialogue (1604-MR-PP-29, 2016). 1602-MR-VNT-17 (2016) acknowledged that Viet Nam and Thailand obtain equipment and human resources to take care of the river while Lao PDR and Cambodia still struggle due to the lack of capacities. As a rule, the role of mediator in the debates between Lower Mekong countries has been played by the MRC, this organization was and still is the very vital player in the Mekong river development (1602-MR-VNT-21, 2016; 1602-MR-VNT-22, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-30, 2016).

> "*The MRC stands just for interconnected governance among countries. But every country, district, communities have their own staff and capacities to actually implement and establish ideas. The MRC does not lay their arm straight to the grassroots level. They seek to connect with government, working just at the national level. The policy of the MRC defines they are focus on the sectorial level. [...] the MRC accepts experts from regional level to stay and learn how to do things in the MRC, but they do not accept lay people. [...] the MRC focuses on data collection and analysis. [...] the MRC does not*

skip levels: they provide information for national level and they disseminate information to the provincial level and then to the local level. Their idea is training for the trainers."
(1604-MR-PP-30, 2016)

Nonetheless, recently some shift was started and the MRC is heading towards less donor-dependent future and pursuing to become more independent technical advisor (1604-MR-PP-29, 2016; 1604-MR-PP-30, 2016).

Furthermore, the deterioration of the Mekong river is mentioned by all interviewees and in the discussions with local people. Nevertheless, people admit that the naturalness of the river is a little sacrifice to make for the development of the country,

"Poor people started to live on the riverbank, part house on land and part on water. These people discharged a lot of waste into the river. Now government took a decision to clean the river and channels in the city. They clean channels and stabilized the banks. They used concrete because it is fast. Grass or flowers will take years to form strong root system to support river banks, concrete is fast. Such decisions also depend on the city government. 'I do have different ideas, but I am not able to change it'." (1601-MD-HCM-1, 2015)

Additionally, 1601-MD-HCM-15 (2016) noted the necessity to tame the river in the cities and have a concrete river embankment is fundamental for safety and regulation purposes. Nevertheless, the same person 1601-MD-HCM-15 (2016) shared the idea to harmonize the development with examination about the environment and social issues.

Furthermore, the members of governmental institutions share diverse multifaceted measures for the river development.

"China see two rivers, but actually it is just one – the Mekong" (1602-MR-VNT-22, 2016)

"The Mekong river development is organized by national governments. That could significantly affect other countries. However, that also provides opportunities to optimise development and financial investments, and have cooperation" (1602-MR-VNT-22, 2016)

1602-MR-VNT-20 (2016) exposed the existing separation in Lao PDR between the provincial government, which focus on finding financial support for project implementation, and the NMC, which bestow technical solutions. Experts from Cambodia (1604-MR-PP-27, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-33, 2016) have expounded issues implicating corruption more than interviewees from other Lower Mekong countries. They argued that it truly crippled the development of the country, including the Mekong river and analogous matter (1604-MR-PP-27, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-33, 2016).

Despite what is going on in the international political arena or secretly in the corridors of national governments, local communities, especially in the rural areas, are

continuing using rivers as they are accustomed to. 1602-MR-VNT-17 (2016) explained that helplessness and ignorance in local communities have appeared and was shaped because of lack of finances for their own independent projects and forceful government power. Therefore, during the discussions with local people they all shared examples from their life that prove immense degradation of biodiversity of the river and worsening of the water quality, yet, the living conditions advanced (Anonymous-VT-1, 2016; Anonymous-VT-2, 2016; Anonymous-VT-3, 2016; Anonymous-VT-4, 2016).

> *"[auth. there is] not so many activities along the river bank. Before people sail to fish, bathed in the river, did laundry, now not anymore. They [auth. local people] have piped water, laundry machines, etc. no so much to use the river. Wastewater is discharged into the river directly. Water price depends on supplier: governmental supplier is cheaper, private more expensive." (1601-MD-HCM-5, 2016)*

Nevertheless, during the interviews with the experts, these considerations are put in numbers and juxtapose with the need of economic development (1604-MR-PP-29, 2016). Other experts share their position that without respectable living standard local people and communities will never be able to appreciate and care for their surroundings (1604-MR-PP-23, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-27, 2016). Furthermore, 1604-MR-PP-32 (2016) identified that despite steady media attention towards various on-going issues, rarely media spotlights their attention up front to prevent or educate society about environmental problems.

To sum up, the river development is seen contrastingly by experts depending on their "*distance*" from local communities and active involvement in project implementation. Moreover, their knowledge is not always shared and demonstrated or discussed with local communities and at times with colleagues. At the moment, the prime interest and concern in the minds of experts are the economic development (1601-MD-HCM-4, 2016; 1601-MD-HCM-15, 2016; 1602-MR-VNT-17, 2016; 1602-MR-VNT-20, 2016; 1602-MR-VNT-21, 2016; 1604-MR-PP-29, 2016). Resolutely, just a few extended their consideration that the environment is just as important as GDP growth. Therefore, they are inclined to explore for more sustainable approaches for the river development (1601-MD-CT-11, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-34, 2016).

4.4.1.3 Criteria for successful public participation process

The Mekong river passes six countries with the colourful cultural and historical background. Notwithstanding, in every country, where interviews were conducted, experts exhibited how compelling it is to acknowledge and understand the cultural background if success of public participation is put as a goal (1601-MD-CT-12, 2016; 1602-MR-VNT-18, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-30, 2016; 1604-MR-PP-34, 2016). Local traditions must be included in project preparation.

"Experts need to adapt to local traditions and give time for the idea to settle down in society" (1602-MR-VNT-18, 2016)

"It is important to understand history and why people are as they are in order to organize the successful participation" (1601-MD-CT-12, 2016)

"Understanding of local social and cultural background helps to communicate the idea to local people" (1604-MR-PP-24, 2016)

"Consider how the project will distort local people culture and religious practices and etc." (1604-MR-PP-29, 2016)

"Necessary to consider the background of the people you try to involve" (1604-MR-PP-30, 2016)

"Every place has their own unwritten rules." (1601-MD-BT-16, 2016)

Public participation starts by sharing information and collecting data. Experts shared several considerations about that process:

"In the cities, there are TV, radio, the internet, so the situation is better. That lets communication be smoother" (1601-MD-HCM-6, 2016)

"Active activities to involve people, the festival could help spread information. […] Media is very important" (1601-MD-CT-14, 2016)

"Evidence and examples help to change the mindset" (1601-MD-BT-16, 2016)

"Information spread through TV is the most effective way, simple but eye-catching newspaper page also could be very effective, especially in urban areas. Radio could be as effective as TV. But at the moment people are very bored and disappointed from constant meaningless debates between politicians [auth. in the radio]." (1604-MR-PP-30, 2016)

Experts tend to separate dissemination of generic information about project and data collection from stakeholders or other important parties. Experts from the Lower Mekong region do advise that for the simple dissemination of information TV, radio, news articles in newspapers or the internet is enough (1601-MD-BT-16, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-6, 2016; 1604-MR-PP-30, 2016). Nevertheless, for data collection or even informing important stakeholders about future changes must be held in more personal setting (1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-13, 2016; 1601-MD-HCM-6, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-27, 2016). 1602-MR-VNT-22 (2016) alleged that clear hierarchy with the responsibilities and communication routes contributes to entire public participation process. According to Arnstein (1969), active participation starts with information, experts in the Mekong region implied the significance of it. Additionally, they demonstrated numerous ways of information dissemination for intended outcomes.

Regrettably, none of other Arnstein's (1969) ladder rugs received plentiful attention during interviews. Usually experts tend to share their opinion on practical side of the public participation. They debated about features of the participants (developers, NGOs, local people, etc.) that could lead towards positive public participation outcomes. Additionally, interviewees exposed the idea that projects developers must be competent leaders (1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-34, 2016):

> *"Active project leader or manager, who is able to ask community members for their opinion, helps project implementation and a better understanding of the project idea."* (1604-MR-PP-34, 2016)

and be able to push (1601-MD-HCM-4, 2016; 1604-MR-PP-27, 2016) if needed and persuade local communities to speak up and share their wishes and opinions (1601-MD-CT-11, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016), but have social accountability (1604-MR-PP-28, 2016). Additionally, leading organizations must designate the right partners as well. They must share same values in order to develop the project in the best way (1604-MR-PP-28, 2016). The personal relationship between project managers and local people helps to improve project development (1601-MD-CT-12, 2016; 1601-MD-CT-13, 2016; 1601-MD-HCM-6, 2016). Nonetheless, people must be competent to resolve things and expand ideas by themselves (1604-MR-PP-32, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016).

> *"People must do as they must do, foreigners [auth. NGOs, international funding institutions, etc.] can't do for them"* (1604-MR-PP-32, 2016)

Furthermore, that should lead to better cooperation (1601-MD-CT-11, 2016; 1602-MR-VNT-22, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016) and ownership of the project (1604-MR-PP-24, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016). Both of these criteria significantly reinforce public participation. NGOs are in a Janus-faced situation. On the one hand, they regularly are representatives of communities in the prominent political arena (1604-MR-PP-28, 2016; 1604-MR-PP-31, 2016). On the other hand, they must unveil the needs and wishes of the community (1604-MR-PP-28, 2016). Neither NGOs nor donors should come with the special agenda and try to impose that. That would end up being as a waste of time and resources (1604-MR-PP-28, 2016). At the same time, some experts evinced that incentives (monetary or otherwise) will contribute to more active participation (1604-MR-PP-29, 2016; Anonymous-VT-1, 2016).

The inclusion of various opinions and considering cultural background leads to the critical features of public participation success. These features are trust (1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016) and transparency (1601-MD-BT-16, 2016; 1601-MD-CT-11, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016).

> *"Trust of the community strongly contributes to the open and deep discussion with communities." (1604-MR-PP-33, 2016)*

That topic is especially popular among the Mekong delta experts. In order to reach transparency, it is necessary to have trustworthy leadership (1604-MR-PP-28, 2016; 1604-MR-PP-34, 2016), partners with similar values (1604-MR-PP-28, 2016), open and respectful agora to share wishes and ideas (1601-MD-BT-16, 2016; 1602-MR-VNT-22, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-30, 2016). Clear political agenda and project plan is a helpful feature to develop the trustworthy and open partnerships with local communities (1602-MR-VNT-22, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-28, 2016). One of the interview partners argued that forethought about process and denouements of the project must be considered outside the particular area. Consequently, it should help building more transparent river management in the countries (1602-MR-VNT-20, 2016). Visibility of the project, according to the experts, strengthens transparency and motivates society to gain a better understanding of the project as well as emboldens people to express their stance (1601-MD-BT-16, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-15, 2016; 1604-MR-PP-27, 2016).

Other criteria that are frequently mentioned by interviewees were the importance of time management (1601-MD-BT-16, 2016; 1601-MD-CT-11, 2016; 1604-MR-PP-27, 2016; Anonymous-VT-1, 2016) and well-accepted united agenda (1602-MR-VNT-22, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-28, 2016).

> *"Long-term projects help to involve more people." (1601-MD-BT-16, 2016)*

> *"A lot of invested time and energy and work with communities often are rewarded with success." (1604-MR-PP-27, 2016)*

> *"Need the common agenda. Always." (1602-MR-VNT-22, 2016).*

Additionally, sufficient amount of time on the hands of the project developer indulges project developer to be more persistent and accredits to "*waste*" some time for organizing yet another one meeting with communities (1604-MR-PP-27, 2016). That leads towards transparency and building more personal relationships with community members (1601-MD-HCM-6, 2016). Additionally, while talking about ideal public participation, 1604-MR-PP-24 (2016) mentioned that extensive training for communities, in order to understand what is happening, would inspire people to be more active participants.

To sum up, criteria for successful public participation are very versatile and depend on the project[18]. Nevertheless, it is plausible to extract several the most characteristic ones. Information dissemination and awareness rise in the communities are the first most important stepping point for whole project development. Activeness of every participant (robust and persistent leadership, communication, building of the personal relationships, motivation, etc.) spurs discussion and strengthens the successful public participation. The last but not least, the criteria of transparency and trust past almost every interviewees' lips by hook or crook. Transparency closely relates to the inclusion of local communities and listening to their voice, openly sharing relevant information through various channels (from TV to newspaper, to public meetings). Furthermore, everything must be put into perspective of the local cultural and historical background. Each of these criteria combined according to the Mekong region experts should guarantee that public participation is fruitful.

4.4.1.4 Constraints of public participation

Public participation is already relatively insufficient process due to the political situation in the Lower Mekong countries. However, one issue, which appeared in all countries, is discrepancies in laws and regulations along with the poor application of existing guidance (1601-MD-CT-12, 2016; 1601-MD-HCM-2, 2015; 1602-MR-VNT-18, 2016).

> *"Policies do not always support public participation […] or partnership. Bureaucracy is huge in Viet Nam. […] There a lot of unwritten rules in government institution" (1601-MD-HCM-2, 2015)*

> *"There is a big gap between policy and implementation. Politicians create laws and regulations, which do not correspond with local traditions and are out of space. The overview is missing. Implementation becomes very difficult." (1601-MD-CT-12, 2016)*

The interviewees disclose the overabundance of legal regulations, which not always serve as supporting measure for public participation. Additionally, local customs are not incorporated in the documents and process itself. Such framework cripple entire inclusive decision-making process.

Moreover, experts identified that empirical knowledge and experiences of decision-making process is shared and in academic community (1601-MD-CT-11, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-1, 2015; 1601-MD-HCM-3, 2015; 1601-MD-HCM-7, 2016; 1601-MD-HCM-8, 2016; 1601-MD-HCM-10, 2016; 1602-MR-VNT-17, 2016; 1602-MR-VNT-20, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-27, 2016),

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[18] "Success of public participation positively correlates with the growth of economy, education and development of the country." (1604-MR-PP-24, 2016)

> *"lack of knowledge and education constrains possibilities of local community ideas for positive environmental development decisions." (1601-MD-CT-11, 2016)*

However, the debate between experts and society is rarely present. Public always considered as a receiver of all end-products from the debates in the academia or amongst government officials. Nevertheless, how to organize the successful public participation is still vague idea amongst experts and is not a subject in the curriculum of any universities (1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-1, 2015; 1601-MD-HCM-8, 2016; 1601-MD-HCM-15, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016).

The other crippling public participation pattern is a loss of motivation. According to the interviewees lack of motivation is indicated among experts (to invest their time and energy to arrange public participation) as well as local communities (to come and act or at least dedicate few moments to understand what is this project about) (1601-MD-HCM-2, 2015; 1601-MD-HCM-5, 2016; 1601-MD-HCM-6, 2016; 1601-MD-HCM-7, 2016; 1601-MD-HCM-9, 2016; 1602-MR-VNT-18, 2016; 1604-MR-PP-27, 2016).

> *"People are interested in profit, but not a discussion about development." (1601-MD-HCM-6, 2016)*

> *"If I must participate or I am asked, I'll do that, but I don't want to. Who needs my voice? Nobody is listening." (1601-MD-HCM-2, 2015)*

Several Vietnamese interviewees revealed that forceful government without supportive manner towards public participation impedes the process even more (1601-MD-CT-12, 2016; 1601-MD-HCM-4, 2016; 1601-MD-HCM-15, 2016; Anonymous-VT-1, 2016; Anonymous-VT-5, 2016).

Public participation is solely about a dialogue – open, equal and reciprocal or ordering and forceful. No matter what kind of dialogue it is, it inevitably requires a mediator. At times public participation rise quite harsh debates or tedious polemics, nonetheless, the facilitator (in the Mekong river case, it is the MRC) should stay focus, sharp and neutral (1602-MR-VNT-21, 2016).

> *"[…] sometimes it is frustrating, but you must stay neutral and provide technical support" (1602-MR-VNT-21, 2016)*

It is not an easy task (1601-MD-HCM-8, 2016; 1604-MR-PP-24, 2016). Nonetheless, a mediator with clearly expressed preferences hinders on-going discussion, as well as weaken the communication (1601-MD-CT-11, 2016).

Experts suggest that the lack of traditions to be proactive in society inhibit public participation (1602-MR-VNT-22, 2016; 1604-MR-PP-32, 2016; 1604-MR-PP-34, 2016).

> *"People cannot adapt to recent extreme changes. They barely able to survive"* (1602-MR-VNT-18, 2016)

Additionally, 1602-MR-VNT-18 (2016) share an opinion, that the mentality of people does not change as fast as the world around them. The time is needed for new traditions of active involvement to settle down.

> *"In general, people have the momentum of new idea dissemination. We do not tend to question our behaviour choices or traditions, which are stemming from generations and generations before us."* (1601-MD-CT-12, 2016)

Dejectedly, at the moment people regularly experience the censorship (1601-MD-HCM-1, 2015; 1601-MD-HCM-4, 2016; Anonymous-VT-5, 2016),

> *"Journalism or active expression of opinion could get you to the prison."* (1604-MR-PP-32, 2016)

corruption (1602-MR-VNT-19, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-30, 2016; 1604-MR-PP-31, 2016)

> *"[…] often local contractors do to not follow the loan [auth. requirements], they follow the money"* (1602-MR-VNT-19, 2016)

and lack of available data (1601-MD-HCM-1, 2015; 1601-MD-HCM-8, 2016; 1604-MR-PP-25, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-30, 2016; Anonymous-VT-5, 2016). Moreover, donors with very tight timeframe put halter for the inclusion of community ideas (1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016). If timeframe would be inclusive and versatile, project development would be drastically novel and more adapted for local conditions. It would be a possibility to include society opinions and ideas, society would have time to adjust for massive changes (and not just in the water sector, but education, transportation, etc.), which are just rolling through the communities. People would be more engaged (1604-MR-PP-34, 2016).

There are many things, which could hinder and obstruct public participation. They could stem from outside, such as struggle to follow and copy other countries practices (1601-MD-HCM-3, 2015; 1602-MR-VNT-18, 2016) and political dependencies (1602-MR-VNT-22, 2016) or be caused by situations within country such as inadequate legislative system with unwilling executive government and its institutions (1601-MD-CT-12, 2016; 1601-MD-HCM-2, 2015; 1601-MD-HCM-7, 2016; 1601-MD-HCM-8, 2016; 1602-MR-VNT-18, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-30, 2016; 1604-MR-PP-31, 2016). Furthermore, sometimes the answer of grim and lousy participation is deriving from typical local traditions, dominant attitudes and mindset (1601-MD-CT-11, 2016; 1601-MD-HCM-1, 2015; 1601-MD-HCM-7, 2016; 1601-MD-HCM-8, 2016; 1602-MR-VNT-22, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-30, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016). Additionally, topping everything with non-existing motivation (1601-

MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1601-MD-HCM-2, 2015; 1602-MR-VNT-18, 2016; 1604-MR-PP-27, 2016) creates the desolate background to conduct public participation.

4.4.1.5 Influence of public participation on the river development

Public participation is the equipment of raising awareness and education for society, scientists and governmental officials. In every Lower Mekong country, interviewees identified how important role public participation plays in gaining and spreading knowledge (1601-MD-BT-16, 2016; 1601-MD-CT-12, 2016; 1601-MD-HCM-3, 2015; 1601-MD-HCM-7, 2016; 1601-MD-HCM-15, 2016; 1602-MR-VNT-18, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-30, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016). Despite, that sometimes scientists look offhand about sharing information with local communities, they admit how much meaningful and essential information they collect from local communities and/or the lowest level governmental institutions that primarily are established to represent the local communities (1601-MD-HCM-10, 2016; 1602-MR-VNT-17, 2016; 1604-MR-PP-25, 2016; 1604-MR-PP-33, 2016). Additionally, scientists hope that with time public participation will rectify this situation (1601-MD-CT-11, 2016; 1601-MD-HCM-7, 2016; 1601-MD-HCM-10, 2016; 1604-MR-PP-24, 2016). In Viet Nam, interviewees alluded that there is no tradition among government officials to include scientists in the discussion about the development or ask for guidance and research to understand existing circumstances (1601-MD-CT-12, 2016; 1601-MD-HCM-1, 2015; 1601-MD-HCM-7, 2016; 1601-MD-HCM-8, 2016; 1601-MD-HCM-10, 2016).

Public participation educates project team as well. The beneficial outcomes encourage applying same or similar measures in other projects in the future. Public participation essentially depends on the project leader (1601-MD-HCM-2, 2015; 1604-MR-PP-33, 2016). Therefore, the most influential donor in the region – the World Bank (WB) – pushed that their concept for public participation was implemented in various projects around entire Southeast Asia. Nevertheless, WB representative admitted that he/she did not notice that these concepts would have been reflected in the national regulations (1604-MR-PP-29, 2016).

Optimistically, 1604-MR-PP-27 (2016) stated that public participation is an opportunity to think outside the box. Moreover, 1604-MR-PP-27 (2016) elaborate public participation could lead to better understanding of the situation at the ground or as 1601-MD-CT-12 (2016); 1604-MR-PP-25 (2016); 1604-MR-PP-32 (2016) acknowledged create a relationship with the area and people around. Consequently, in the region, where an abundance of interests is clashing and the disturbance of natural processes are remarkably significant, the alternative thinking could be the answer how to achieve a sustainable future.

Nevertheless, there are several concerns shared among interviewees. The first one is negative influence of corruption – it could disrupt the project development now, but it also could create a long-lasting impact in the society (scepticism towards

government and development itself) (1604-MR-PP-27, 2016; 1604-MR-PP-29, 2016). 1601-MD-HCM-8 (2016) admitted that public participation could be used to apply the principle of *manus manum lavat*. It could be the case in the Mekong delta, where "*soft resistance*" is the most substantial compared with another region. Furthermore, in Viet Nam People Committees, which collect complains from local people, are responsible to transfer information from local communities to upper governmental institutions (1601-MD-CT-12, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-10, 2016), but how this process is happening none of the interviewees was able to explain.

> *"[…] we [auth. Vietnamese] have something wrong… we have something not so good in the process of implementation of laws and regulations. The capacity building in local and regional level is still not enough. […] we [auth. Vietnamese] have a lot of law in principle, but in the lower local level, they are not implemented. […] " (1601-MD-HCM-8, 2016)*

Furthermore, 1602-MR-VNT-18 (2016) indicated that sometimes projects' developers use public participation as a tool to silence the critical opinions coming from society. 1602-MR-VNT-21 (2016) endorsed that with the example from Xayaburi dam, where high-level diplomats' discussions[19] led to implement additional measures to minimize negative impacts on the environment.

Public participation is typically applied during the projects with resettlement/eviction action, such projects happening all around Southeast Asia. The massive relocation happened due to dam construction in Lao PDR (1602-MR-VNT-17, 2016; 1602-MR-VNT-18, 2016; 1602-MR-VNT-19, 2016; 1602-MR-VNT-20, 2016; 1602-MR-VNT-21, 2016; 1602-MR-VNT-22, 2016; 1604-MR-PP-29, 2016), additionally, a lot of people were relocated or waiting in line to be relocated in Viet Nam (1601-MD-HCM-5, 2016; Anonymous-VT-2, 2016; Anonymous-VT-3, 2016; Anonymous-VT-4, 2016; Anonymous-VT-5, 2016). In Viet Nam the resettlement regularly happens in urban territories because of the urban development projects, therefore some of them include the straightening of existing creaks and channels (1601-MD-CT-13, 2016; 1601-MD-HCM-5, 2016).

> *"Usually relocation is for safety and view of the city." (1601-MD-CT-11, 2016)*

Local people admitted that they have two options: relocation or compensation, negotiation usually happens about the conditions of new place (1601-MD-HCM-5, 2016; 1604-MR-PP-26, 2016; Anonymous-VT-2, 2016; Anonymous-VT-3, 2016; Anonymous-VT-4, 2016; Anonymous-VT-5, 2016).

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[19] According to the interviewee, the high-level multilateral diplomats' negotiation is public participation

> *"People usually consider compensations for changes, but not project itself. That will change in the future hopefully." (1601-MD-CT-14, 2016)*

Sometimes relocated people chose to be resettled in specific villages due to their shared cultural background (1602-MR-VNT-18, 2016). And sometimes people are relocated to the same place (1602-MR-VNT-18, 2016). And sometimes people chose to receive monetary compensation. Nevertheless, from 1602-MR-VNT-18 (2016) personal observation, several years later after receiving compensation persons living conditions deteriorate severely compared with the ones who chose to be resettled in the new area. New households have the water supply, electricity, school, marketplace, sometimes land for agriculture (1602-MR-VNT-18, 2016). In the relocation areas marketplace, school and health centre are built for newcomers, if there are not many numbers of people are moved they share the existing ones, however, facilities are always improved. Moreover, wastewater centralized system never is built. Wastewater always is collected in septic tanks.

Therefore, public participation in the Lower Mekong countries is used to implement ideas of national governments or donors (1602-MR-VNT-21, 2016). Rarely grassroots acumens are reflected or even heard (1601-MD-CT-14, 2016; 1602-MR-VNT-19, 2016). Interviewees identified, that public participation as a political process is not well defined and that leads towards discrepancies in the implementation. Nevertheless, several interviewees shared more hope-promising insights about the future of public participation in the river management (1601-MD-HCM-3, 2015).

4.4.1.6 Future expectations by interviewees

The future is hard to predict, however, most of the experts from the Lower Mekong countries shared their positive expectations, which could be described as a wish for the sustainable development. Some of the interviewees articulated their apprehensions as well as. Additionally, there were other future scenarios, which could not be classified as negative or positive. Nevertheless, all expectations could be divided into the physical and legislative and social or mindset changes.

The physical changes are generally about enhancing water quality (1601-MD-HCM-1, 2015; 1601-MD-HCM-10, 2016; 1604-MR-PP-27, 2016)

> *"In the future water quality will improve […] history of river development if we follow the same trend it will improve. [auth. history of water quality improvement goes like that:] 20 years ago factory polluted river heavily, 10 years government took the decision to take to solve the pollution problem. […] factory paid compensation for the government. The river was cleaned. But fish didn't come back, [auth. because] sediment is still toxic." (1601-MD-HCM-1, 2015)*

or deterioration of it (1601-MD-CT-12, 2016; 1601-MD-HCM-10, 2016; 1602-MR-VNT-17, 2016; 1602-MR-VNT-18, 2016).

"In the next twenty years, the Mekong river water quality will get worse. Because now they [auth. Lao PDR, Cambodia] try to develop the economy, so the environment will suffer." (1601-MD-HCM-7, 2016)

Usually, discussions about changes in the river were rounding about dams.

"[…] measures [auth. dams] are controversial and they will require a lot of practical will […] Other controversial measures in the future will be building other big dams. At the moment most of the dams are run off dams, they do not have much storage place. In the future, this situation could change. Smaller impact seeking will be traded out. It will be a lot of discussions." (1602-MR-VNT-22, 2016)

The expert form Cambodia thinks that the Mekong river quality will be contaminated by trace elements from various industries, along with pathogens from agriculture activities, so changes will not be easily noticeable (1604-MR-PP-25, 2016). According to the same expert, deforestation, overfishing, drastic urbanization and soil erosion is and will taint Tonle Sap lake. Additionally, every local person, who shared their visions about upcoming years, emphasized on unfavourable physical changes, like already mentioned water quality, hydrological changes, degradation or loss of fisheries, concerns about dams (1601-MD-HCM-5, 2016; Anonymous-VT-1, 2016; Anonymous-VT-2, 2016; Anonymous-VT-3, 2016; Anonymous-VT-4, 2016; Anonymous-VT-5, 2016). Moreover, they seldom anticipated any positive physical predictions.

Many interviewees expect some boost in legislative system – better regulations, established procedures, etc. (1601-MD-BT-16, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-15, 2016; 1602-MR-VNT-18, 2016; 1602-MR-VNT-22, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-32, 2016). People yearned that such changes will help to fight corruption, political processes become more inclusive and fair for everyone (1602-MR-VNT-21, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-32, 2016). These expectations are closely related to the often-voiced wish for better communication (1602-MR-VNT-22, 2016; 1604-MR-PP-25, 2016; 1604-MR-PP-33, 2016).

"I wish better communication between the chief and deputies as well as project developers, […] more motivation is also would be a useful feature, […] and less conflict between different political parties." (1604-MR-PP-33, 2016)

Many interviewees shared their hope for advanced conversation between experts and politicians, local communities and experts (1602-MR-VNT-21, 2016; 1602-MR-VNT-22, 2016; 1604-MR-PP-25, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-33, 2016).

"I hope to have more communication and faster development […] I hope other countries will understand the path of Laos." (1602-MR-VNT-20, 2016)

"It will be interesting times, debates and to seek for sustainable development. The MRC does not have a mandate to stop development, we [auth. the MRC] have a mandate to support the best form of development. There is no blueprint for such development. Some of the interests will win other. But since all voices are heard it should lead to sustainable development. Decision-makers will be decision-makers. And transparency should help." *(1602-MR-VNT-22, 2016)*

Some experts forecast changes in the power delegated to donors. Adequately, few expected that their influence would be restrained (1602-MR-VNT-22, 2016), though others perceive that more donors will help to amplify the economic growth of the region (1601-MD-BT-16, 2016). Moreover, 1602-MR-VNT-22 (2016) anticipated that after upcoming changes in the MRC, there would be a boost of small independent projects. 1601-MD-BT-16 (2016) hopes for resourceful support from foreign donors for local projects, which employs climate change mitigation measures. A similar idea was expressed by 1601-MD-CT-11 (2016). These progressive changes in legislative will lead towards more coordinated the development (1601-MD-HCM-15, 2016).

The Mekong river development greatly depends on the multilateral partnerships and polemics (1602-MR-VNT-22, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016). Political changes could strengthen sustainability ideas in the region (1604-MR-PP-29, 2016; 1604-MR-PP-32, 2016), as well as encourage implementation public participation (1604-MR-PP-31, 2016). The role of the MRC will shift as well (1602-MR-VNT-22, 2016). As few interviewees stated the NGOs will shape the future (1602-MR-VNT-22, 2016; 1604-MR-PP-28, 2016). Political debates in the international arena could assist in finding the best acceptable fate for the region, however, several experts support this 1601-MD-HCM-10 (2016) note:

"The future political decisions are more unpredictable than nature" *(1601-MD-HCM-10, 2016)*

The last group of expectations is the social or mindset changes, which are not as fast as infrastructural changes (1604-MR-PP-26, 2016). Nevertheless, they are the most important to promote more sustainable future. The equity of human and women rights must be a reality in daily and professional life, the tools that exist today are not enough (1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016). 1601-MD-CT-14 (2016) believes that life quality will be enhanced in the future. Notwithstanding, for the better debate and dissemination of information, the knowledge from the advertisement and PIAR fields reinforce the process exceedingly (1604-MR-PP-27, 2016). That would create a friendlier, more attractive environment for local people to join discussions (1604-MR-PP-27, 2016). 1604-MR-PP-27 (2016) revealed a wish that experts will start working with their hearts; maybe then they will make decisions, which are more suitable for the local people. This idea is supported by 1601-MD-HCM-6 (2016):

"the future will be better. […] NGOs will educate society. The learning curve will rise […] people will learn to negotiate." *(1601-MD-HCM-6, 2016)*

1604-MR-PP-28 (2016) affirmed that social accountability would contribute to the sustainable future.

The last but not least, 1601-MD-CT-14 (2016) stated, "*if you have money you scared of death*", that means that people will become immerse on healthy living style and preservation of their environment in order to sustain such lifestyle. According to the interviewee, social media could assist to root this idea solidly along with other development concepts (1601-MD-CT-14, 2016; 1604-MR-PP-25, 2016; 1604-MR-PP-34, 2016). 1604-MR-PP-28 (2016) shared an experience that if local people are asked what do they wish for the future, their answers will be about jobs, economic opportunities, rarely, they would be captivated by nature issues. According to the interviewee, that concept must shift, but this transformation requires hard work of all involved parties (1604-MR-PP-28, 2016). Anonymous-VT-2 (2016) shared concerns based on personal experience, the person was worried that changes in his/her close by surroundings is forcing people to adjust their living style and move from a long time cultivated aquaculture to unknown agriculture.

To sum up, the future of the Mekong river lies in the hands of national governments and choices of local people. As interviewees alluded, the status of the river could be better than now or worse. The majority of experts wished for the sustainable development, but rarely they admitted to be interested in being an active participant of the changes. Even though they are directly involved in various projects related to various aspects of river development. They delegate the leading position to national governments and/or international donors and choose the role of non-active observer. 1602-MR-VNT-17 (2016) and 1601-MD-HCM-7 (2016) admitted that there is a perceptive potent fear of speaking and discussing hard issues among scholars and experts. The local people from the Mekong delta shared eminently practical considerations, which include water quality, fisheries or crops, seldom they talk about legislative or political changes.

4.4.2 Klang river

The Klang river is important due to its location and changes its surpass. The Klang river is the most developed and economically advanced case to compare with the Ciliwung and Mekong rivers. Kuala Lumpur is a modern megapolis with advanced infrastructure. The respondents in the interviews of the Klang river case differ from the members of governmental institutions to local leaders. They shared their views on public involvement and changing the picture of the river.

4.4.2.1 Definition or description of public participation in interviewees' own words

Experts do understand the public participation in several ways. They also acknowledge that public participation depends on the project and its features (1603-KL-1, 2016). Activeness of public is induced by personal priorities amongst individuals. In big urban settlements, people tend to focus more on economic

activities (jobs) (1603-KL-1, 2016) and do not strive to generate intimate relations with neighbours (1603-KL-1, 2016; 1603-KL-10, 2016). As 1603-KL-1 (2016) stated people do not react until something extraordinary approaches their comfort zone.

In the River of Life (RoL) project public participation depends on the project stage and phase. In River beautification part, managed by AECOM, public participation is controversially understood in two distinct ways. One is, as AECOM representative, told is their work with governmental agencies, city council (1603-KL-7, 2016). Nevertheless, it is more some stakeholder groups' involvement. The second way is what is apprised and emerged in the Public Outreach Programme. According to 1603-KL-7 (2016) twice a year there is a meeting were everyone could voice their agreement or disagreement. AECOM experience some struggles (1603-KL-7, 2016). Town Hall tends to organize the stakeholders' forums during the RoL (1603-KL-4, 2016).

The application of public participation amongst the experts differs quite a lot.

> *"Sometimes we contribute to mosque construction. […] People could express their wishes how it should look like. But I just let them say what they want to say. I am not getting involved". (1603-KL-1, 2016)*

Subsequently, public engagement is paramount, the town council is the key institution.

> *"we are going to the town council. They will notify the public. They send flyers or something. I'm not sure. They sign the special letter for associations. They will say this is the venue and this is the time for public engagement. […] we prepare the presentations what we want to show. This is where they use the consultant and this is where they disagree. They say cannot be done." (1603-KL-7, 2016)*

The forceful impact of NGOs is characteristic for the development projects in Kuala Lumpur, and partly, in entire Malaysia (1603-KL-3, 2016). Some of the NGOs are very passionate towards nature preservation and community inclusion in the decision-making process (1603-KL-3, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016).

> *"the first two years I struggle to attract the public. To come and support the project. Later, I decided to change my strategy. Rather than try to involve them in the project, I'm started to connect them with nature and let them realised that nature is part of them. Nature is their responsibility rather then what they are doing for the government or private sectors" (1603-KL-3, 2016).*

For the public participation, education is a key element. As 1603-KL-3 (2016) exhibited society must be ready for the measures implied through public participation process. Moreover, people also must be aware what it means to be pro-active (1603-KL-3, 2016).

> *"Civil society in Malaysia doesn't know that they should be pro-active. We are very obedient. We listen to the politician; we strongly believe that the politician is the right person to represent the public interest." (1603-KL-3, 2016)*

Governmental agencies and departments, as well as local authorities, are hanging on the concepts of AGENDA 21 (1603-KL-3, 2016; 1603-KL-4, 2016). As 1603-KL-4 (2016) acknowledged that town hall sees AGENDA 21 as a pre-made template how to manage and organize the stakeholder and/or public involvement and participation.

Political power, governmental structures and processes play a significant role in public participant. NGOs advocate for public participation as well as set the example how it could be in their projects. 1603-KL-3 (2016) and 1603-KL-10 (2016) shared examples from their work experiences even though they are varied in the perspective (one appoints NGO and another the private sector). Nevertheless, their examples underline the importance of human relation (between project developers and "*end users*" or local people), which could advance easier and smoother process of entire project development.

The understanding of public participation is scattered between several concepts. Firstly, participation is regarded as a dialogue between versatile institutions and organizations (1603-KL-4, 2016; 1603-KL-5, 2016; 1603-KL-7, 2016). Such concept is constant and stereotypical amongst the members of governmental institutions. They also signified the importance of the institutions.

> *"How to do the public participation is up to us [auth. Town Council]. We prepared vigorous exercise what we will do." (1603-KL-4, 2016)*

The second type of answers is about the public participation as a simple information dissemination measures, such as public gatherings or exhibitions of the information (1603-KL-4, 2016; 1603-KL-5, 2016), or a bit more elaborated version, such as seminars at schools (1603-KL-4, 2016; 1603-KL-6, 2016). The last public participation concept discussed in the interviews is public involvement and consultation (1603-KL-1, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-8, 2016; 1603-KL-10, 2016). This opinion is dominant amongst representatives of NGOs and academia. Additionally, some mentioned forums with separate stakeholder groups (1603-KL-4, 2016; 1603-KL-6, 2016; 1603-KL-7, 2016). Nevertheless, 1603-KL-9 (2016) argued that experts and government are taking the role of the "*big brother*". It is supported by:

> *"We [auth. government] have a political power… sorry, the political will to ensure that city is a liveable city." (1603-KL-5, 2016)*

As 1603-KL-8 (2016) emphasized in the monthly meetings held by the States' governments general public and even NGOs are rarely allowed to attend.

1603-KL-10 (2016) indicated, how important it is to initiate and establish a relationship between local people and project object or future outcomes. Respondent called this process of romanticizing. This process incorporates information sharing, collecting cultural heritage about the object and traditions, educating general public (1603-KL-10, 2016). 1603-KL-1 (2016); 1603-KL-3 (2016); 1603-KL-9 (2016); 1603-KL-10 (2016) insinuated importance the religion in the Malaysians lives. All these respondents emphasized the significance of the position of religious leaders, teachings and dogmas.

Additionally, 1603-KL-5 (2016) claimed that "*engagement is important*" because that lead to the situation than people start coming up with their own ideas and propose them. At that point, the ownership comes into sight and extra stimulus is not obediently required (1603-KL-5, 2016). The future is coercively influenced by the economic development (1603-KL-9, 2016). Yet, a valid forethought was shared by 1603-KL-8 (2016) that after society raise some issues the reactions from governmental institutions will be crucial. Resultantly, such situations form the future expectations. Or as interviewee verbalized it: "*bad lessons sticks*" (1603-KL-8, 2016).

Meanwhile, 1603-KL-9 (2016) argued that younger generation is underrepresented in the public participation process. Interviewee believes that "*we [auth. elder people] will die out soon; the future belongs to the young wishes*". Adequately, he/she stress out that public participation should focus on younger generation. This opinion is emphatically supported by 1603-KL-6 (2016)'s inspiration to open education centres in or close to the schools, as well as 1603-KL-3 (2016)'s recommendation for political education at schools to persuade students to be active citizens.

1603-KL-5 (2016), who is the member of the town council representative, exposed a list of diverse miscellaneous tools used to inform society about the new project. These measures include articles in local media, TV and radio shows. For some projects, town council conduct a social survey to benchmark the willingness to active engagement in public participation process and actions. For the RoL project results showed that public was positive and wanted to be included in the process (1603-KL-5, 2016). For the territory planning documents, the draft of the document for the public is available for about two weeks, during the revision period utter consideration must be asserted in written form (1603-KL-8, 2016). As the project develops, representatives from town council and developers of the project organize workshops, discussions and information campaigns (1603-KL-5, 2016). It the best illustrated with:

> "*Then we all come together and talk. And do something. So then they [auth. local people] know that there is a big program, which finally benefited them, they will support. But at the beginning is not easy. […] we [auth. government] have to be patient.*" (1603-KL-5, 2016)

Nevertheless, 1603-KL-6 (2016) accentuated that in legal system regarding environmental issues, government involves the private sector, and barely some of

the communities. That is due to the government's ambition to tackle and eradicate the point pollution sources. Yet, the non-point pollution sources are not incorporated in the political agenda (1603-KL-6, 2016).

Meanwhile, the governmental structure, which is based on the top-down approach and coordinating environmental affairs, is complex (1603-KL-8, 2016). Consequently, society usually exploits one of two options. The first one is to find the NGO, which could testify and support their opinions and acumens (1603-KL-3, 2016; 1603-KL-6, 2016). Or, secondly, it is an involvement of media. Typically, that is regarded as the last resort (1603-KL-8, 2016). Yet, in Malaysia media is not keen to analyse social issues (1603-KL-9, 2016).

Furthermore, public participation is apprehended as a positive and necessary "*way forward*" (1603-KL-10, 2016). Yet:

> *"We do not develop the models, how do we do that [auth. public participation]. It is more than putting the posters. It is a lot more than that. It is a lot of strategies, a lot of mechanics of changing people's perception." (1603-KL-10, 2016)*

Moreover, the process of negotiations could be very complex and complicated (1603-KL-9, 2016), however, if ownership is final gain, that should motivate society to be more active (1603-KL-3, 2016; 1603-KL-6, 2016; 1603-KL-10, 2016).

4.4.2.2 Understanding of the river development process

As one of the interviewee 1603-KL-10 (2016) recounted the changes of the Klang river started after the major flood in the 1970s. People, who at that time was in the leading governmental positions, got (scared, offended) that in the capital such a disaster could happen and that it constitutes a very negative image of the city and whole country. Therefore, in order to achieve the exceptional impression and safety, they looked for the option what could be done in short time and leave the tenacious impression (1603-KL-10, 2016). That triggered the avalanche of structural development in and around the river. A decision was provided by the federal government. This decision was to modify the river that it will pass city as fast as possible, it meant that the Klang river got straightened and converted into the channel like a river (1603-KL-2, 2016; 1603-KL-7, 2016). It was a decision, which in the long-term brought unpredicted outcomes – the image of the river became distorted. Resultantly, it became a landfill site and sewage channel that distort the natural flow of the water and fill the riverbed with waste and shallow it. Meanwhile, an existing infrastructure cannot satisfy the new need due to climate changes the yearly floods became more violent, rains are more unpredicted and heavier, paved surfaces have shortened the time of rainwater to reach river (therefore, the flash floods are more frequent) (1603-KL-10, 2016). Now the essential urban development in Kuala Lumpur is arranged by DBKL (1603-KL-1, 2016).

In Malaysia, the history of river restoration is quite extensive. The first attempt at the national level to embolden changes in the rivers arrive with "Love Our River" (1603-KL-2, 2016). Nevertheless, the program "Love Our River" has been for so long with flashy TV programmes (1603-KL-1, 2016), but no visible results (1603-KL-8, 2016). Furthermore, 1603-KL-1 (2016) believes that effort to promote campaigns like Love Our Rivers "*should go on, because in many places we are still using the river as our main drinking water supply*". In the rural areas, river has fiercer, severer and more acknowledged influence to the daily life of the local people (1603-KL-3, 2016). In the dense urban settlements relation between nature and human is weak and not exhilarated (1603-KL-3, 2016). Later the programme "One State, One River" arrived (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-8, 2016; 1603-KL-10, 2016). Some NGOs issued their own programmes to support the river development. For example, the GEC (Global Environment Center – NGO) created the National River Care Fund. In the meanwhile, they are supporting (financially and with other capacities) nine projects (1603-KL-2, 2016).

Nevertheless, the RoL project is outstanding significantly from other river restoration projects due to its complexity, development strategies and funding scheme (1603-KL-7, 2016). It is a top-down project (1603-KL-6, 2016). The RoL is one of the most regarded river restoration projects around Malaysia. 1603-KL-3 (2016) admitted that, at the beginning of the RoL, the GEC hinted at the missing public participation measures in the project. Nevertheless, "*with or without the public project will go on*" (1603-KL-6, 2016). The dominant tendency is to ignore and overlook rivers (1603-KL-2, 2016). As 1603-KL-2 (2016) shared that then people from divergent communities went to visit other stretches of the same river, at times people very surprised by the quality of the river, sometimes people hardly believe that it is the same river. For example, the Klang river upstream in Selangor State looks natural with lash biodiversity, but as it passes Kuala Lumpur it degrades to sewage channel (1603-KL-2, 2016). Additionally, 1603-KL-2 (2016) observes that people downstream the Klang river "*are immune to the smelly, polluted river*", they don't complain much and "*lastly, they even do not care anymore*" (1603-KL-2, 2016). "*River is natural, but natural by the garbage. The river is dumping area*" (1603-KL-2, 2016). Furthermore, "*people are not taking the river seriously*" (1603-KL-1, 2016).

The interviewees, who are working (consulting, coordinating or implementing), the RoL project, described it as a very beneficial constructive change in the urban fabric of Kuala Lumpur. They list several reasons why the RoL is a positive. It increases an aesthetic picture of the river and its premises (1603-KL-4, 2016; 1603-KL-5, 2016; 1603-KL-6, 2016; 1603-KL-7, 2016). It develops infrastructure (1603-KL-5, 2016; 1603-KL-6, 2016). It is expected that in the future during the river development phase RoL contribute to economic growth (1603-KL-4, 2016; 1603-KL-7, 2016). It strengthens awareness creation in the society and has some educating element (1603-KL-3, 2016; 1603-KL-4, 2016; 1603-KL-6, 2016; 1603-KL-10, 2016). 1603-KL-7 (2016) described the project designing and implementation so far:

> *"In our project [auth. the RoL] we did not have such problems [big negative]. We always manage to get an agreement. […] We never reach such level that we needed to change what we are doing." (1603-KL-7, 2016)*

Further, people, who are not directly engaged in the RoL, expounded the educational and social part of the project, even though they frequently admitted that was not satisfying enough (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016). 1603-KL-7 (2016) acknowledged, that "*it is inevitable*" that project is constantly changing with regards to the outcomes from the meetings with stakeholders. Later the lack of public involvement let to the public outreach programme (1603-KL-10, 2016).

Although some developers support the widening of the river, there is no space left to establish such idea (1603-KL-7, 2016). Despite, that river so far "*is not used by any means by people*" (1603-KL-1, 2016), local people do not wish to give away land to use for the river development (1603-KL-7, 2016). Nevertheless, river corridor must be guaranteed (1603-KL-4, 2016), but it is not clear how it will be reached.

The coordination of projects of river restoration could be complicated if the river crosses or borders with other States or federal land (1603-KL-3, 2016). The Klang river restoration project focuses just only on Kuala Lumpur area. Hereinafter, there is no conflict with Selangor state. Nevertheless, the RoL excludes immense part of the river basin and long part of the Klang river is left not restored (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-8, 2016). The land and water, according to existing laws, belongs to the states, however, the funds for the development (including restoration, rehabilitation, etc.) come from federal government (1603-KL-3, 2016; 1603-KL-8, 2016). Suitably, the federal government advertised and vigorously promote their agenda (1603-KL-3, 2016).

Hence 1603-KL-4 (2016) admitted that AECOM proposal was chosen due to its core ideas of continuity, accessibility, connectivity, guiding lights that connects all the stretch, other proposals were more fragmented (1603-KL-4, 2016). Nevertheless, a lot of tasks are changed during time compared with the first proposal (1603-KL-4, 2016).

1603-KL-3 (2016) acknowledged that he is against the idea that water is a commodity, although he comprehends why people aspire to presume that. Then the water would have value and people would care adequately about it (1603-KL-3, 2016). The governmental institutions firstly focus on mitigating and stopping pollution that is why there are plenty structural changes, as 1603-KL-5 (2016) explained it:

> *"we are doing structural changes in 150 km of tributaries." (1603-KL-5, 2016)*

Respondent elaborated that after structural changes next step is to review people behaviour standards, it is compulsory to change life style (1603-KL-5, 2016).

> *"Hard structures attractiveness over the soft approach. It is overwhelming. The soft approach is very difficult to monitor and evaluate effectiveness. Takes a lot of time and effort" (1603-KL-10, 2016)*

The economic side of the RoL is very prominent because there was applied self-financing scheme. As well it is an economic transformation plan – it should cause new job opportunities and level up income level (1603-KL-4, 2016).

> *"We boost economics of the city to attract investors to come. […] Our aim is to be amongst 20 the most liveable cities in the world." (1603-KL-5, 2016)*

One of the outcomes of the RoL to achieve the "*water touching effect*" (1603-KL-4, 2016). People are waiting for a final result of the project (1603-KL-4, 2016). This project causes the dialogue between various government departments and agencies, as 1603-KL-5 (2016) referred there are 27 agencies involved.

As government official admitted that, if the necessity of relocation emerges, local people receive compensation from the government, additionally, investors usually donate some extra funds for the relocated people. The interviewee said that government institutions help to find new living quarters (1603-KL-4, 2016).

Public outreach programme was acknowledged by majority respondents. However, interviewees exposed that it started later than project itself (1603-KL-6, 2016) and is used for an educational purpose and information dissemination (1603-KL-5, 2016). People could get acquainted with the RoL project and get know the importance (1603-KL-4, 2016; 1603-KL-6, 2016). Yet 1603-KL-6 (2016) shared the hope that government agency, which even after two years from the beginning of the POP still not ready, will be able to facilitate the programme. 1603-KL-10 (2016) explained by two major origins. The first reason is the lack of the knowledge and human capacities to utilize the "*soft approach*"; "*hard-core engineers*" are not prepared to work with society. Secondly, "*our understanding of development is very project-orientated*" (1603-KL-10, 2016). 1603-KL-6 (2016) added that the private sector is coming o board and support government works.

Although changes in the cities are mandatory, 1603-KL-9 (2016) elaborated that sometimes society must sacrifice old ideas for future benefits. Moreover, the interviewee admitted that sometimes people be deprived of valuable exemplary things, like the connection with the place and ancestors and sense of belonging to that particular place.

> *"We shut up the river. So people are losing any connection with the river as well as the cemetery on the other side of the river." (1603-KL-9, 2016)*

As 1603-KL-10 (2016) summarized, the RoL is a huge project and it will become even more elaborated because more people will displayed and promote some creative ideas how clean the river by tomorrow. Nevertheless, there is "*no need to*

rush, because it must follow of absorption of people" (1603-KL-10, 2016). Yet, this rationality is hard to argue and rarely wins against impressive structural changes.

4.4.2.3 Criteria for successful public participation process

During the interviews, several ideas crystallized, which according to the respondents should be the key elements for success in public participation process. The experts indicated the significance of emotional part to be involved in the motivation and education of society (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-6, 2016; 1603-KL-10, 2016). Others added the proposal of "*champion idea*", which is a valuable excellent example that people could visit and learn from it (1603-KL-2, 2016; 1603-KL-3, 2016). The pilot examples from far away rarely work, people cannot relate to such project. Additionally, long-term planning, clear visions were important for public participation (1603-KL-3, 2016; 1603-KL-8, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016). The success of the public participation depends on the society and the processes in society as well as an understanding of processes in society (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-7, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016).

As 1603-KL-3 (2016) stated, the success of the project is in the people' hands and this tendency will become more tenacious in the future. Additionally, the interviewee predicts that people will be more willing to get involved and "*more active*", "*initiative*". Champion projects must help to compel and impose these changes (1603-KL-3, 2016). In the 1st Stakeholder Workshop, Low (2016) shared Akademi Sains Malaysia [eng. Academia of Science Malaysia] research outcomes, which fiercely supported champion's ideas. Similarly, the interviewee, who is a participant of Akademi Sains Malaysia, stated:

> "*academia support for the acknowledgement for the importance of public participation. […] training for professionals […] long-term training for communities for capacity building skills*" (1603-KL-10, 2016).

The understanding of local situation and processes in society is one of the key to successful public participation. As 1603-KL-9 (2016) mentioned mindset changes gradually; there cannot be big jumps.

> "*We [auth. experts, government officials] not need to rush, because it must follow the people absorption of these ideas, understanding.*" (1603-KL-10, 2016)

According to the interviewee, if people yearn for something, they will make it happen (1603-KL-9, 2016). Meanwhile, experts, who are organizing and designing such complex projects, like the RoL, must be familiar with the social situation, as well as technical circumstances. The additional feature leading towards success in the public participation is acknowledgement and comprehension of the cultural background (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-5, 2016; 1603-KL-7, 2016; 1603-KL-10, 2016).

"The project changes because of its location. This is always reflected in the development ideas. In the RoL case we looked for heritage and land use." (1603-KL-7, 2016)

"But I'm a strong believer in religious education. I had so many meetings in mosques. […] Because the majority of Malaysians are very religious. [auth. people go to the mosque, temple or church.]. So this is the strength what we have." (1603-KL-3, 2016)

In order to have a successful public participation process, it is essential to have a society, which is educated and are willing to actively negotiate their position (1603-KL-3, 2016; 1603-KL-9, 2016). 1603-KL-3 (2016) by sharing experiences from his work, summarized that educated must be not just local people but the government officials as well.

"I think then people learn planning and architecture; they learn to go deep in the area. I think sometimes they know more than local people" (1603-KL-7, 2016)

The role of government includes being adaptive and willing to accommodate the reasonable wishes of the public (1603-KL-7, 2016). They together with project developers must acknowledge the background situation of the project (1603-KL-1, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-5, 2016; 1603-KL-7, 2016; 1603-KL-8, 2016; 1603-KL-10, 2016).

The importance of ownership for the success of public participation was mentioned by only two interviewees, who are proxy from NGOs and the private sector (1603-KL-3, 2016; 1603-KL-10, 2016). Furthermore, society must be not just educated but empowered as well (1603-KL-3, 2016).

"The empowerment […] and the ownership of the project is a key" (1603-KL-3, 2016)

"So I strongly believe that we must educate the public to be active, what role they should play. So far that is missing. The dissemination structures are there, but they [auth. government] fail to educate. Empower the public what role they should play. So, therefore, everything from that side is not happening. They [auth. Public] haven't been taught, educated, empowered. So for that, I will totally blame the government. Not because they display and provide information, but they don't prepare the public. Sometimes I feel that they purposely do not empower the public so that they have less headache. Less problem. This is our assumption why they don't go and empower the public" (1603-KL-3, 2016)

1603-KL-10 (2016) purposed that experts, engineers and government officials should learn from political campaigners how to engage and motivate people to take action. The interviewee is convinced that will promote and enhance communication between the experts and society. That idea is supported by 1603-KL-3 (2016) promotion of the necessity to engage people, who are excluded or not interested in the process. Usually, it is the same cluster of people, who are attending the training and forums regularly. Occasionally, it is useful that same passionate people share

their experiences and learn from one another, however, it is essential to widen the circle and motivate more people to participate. Therefore, the inclusion of non-active members of society will significantly strengthen the development.

Several interviewees acknowledge the importance of the structure and clearness of the political system and governance. Some stated that public participation process must have a structure in order to achieve a success (1603-KL-7, 2016; 1603-KL-9, 2016). Others proposed to use already recognized schemes, like AGENDA 21 (1603-KL-3, 2016; 1603-KL-4, 2016).

"Local AGENDA 21 becomes a platform to attract the society" (1603-KL-3, 2016)

1603-KL-6 (2016) emphasized that government agencies are willing to support local initiatives. Furthermore, DBKL mobilizes people and this process follows AGENDA 21 guidance. From the personal interviewee's experience, DBKL every year have diversified programmes for community involvement by AGENDA 21 approach (1603-KL-6, 2016).

Yet, 1603-KL-10 (2016) convincingly discussed the necessity of planning of the public participation conjointly with the project itself. Furthermore, in order to know what to plan it is inevitable to constitute the clear and precise mission of the project (1603-KL-9, 2016; 1603-KL-10, 2016). Nevertheless, if the future results should be signified, the opinions of interviewees are split. 1603-KL-10 (2016) argues that the process is the most important. Furthermore, because of its length, public participation could drift away from primary goals and reach far out in the future. According to the interviewee, that allows adapting to the upcoming unpredicted events (1603-KL-10, 2016). That idea is contradicted by 1603-KL-1 (2016); 1603-KL-7 (2016); 1603-KL-9 (2016). They suggest that public participation must have a clear structure and well-defined process steps. Additionally, such approach could forge an effortless way to evaluate the process and its denouements.

The interviewees keenly aware of the new technologies (1603-KL-1, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-5, 2016; 1603-KL-6, 2016; 1603-KL-7, 2016; 1603-KL-8, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016). They signified the importance of social media. Although some admit that they are not active users of it but they see its importance for young generation and possibilities to develop faster and versatile dialogue with local people (1603-KL-3, 2016; 1603-KL-9, 2016). Furthermore, social media stimulates a conversation stay alive and acts as a platform for participation (1603-KL-10, 2016).

Other ideas for improving public participation is making history live and creating new traditions (1603-KL-10, 2016). Using historical background to create awareness and care amongst local people could be one of the first steps to bring out long-term results in the society (1603-KL-10, 2016). Furthermore, it could bring attention to the river and local communities (1603-KL-10, 2016). The principle to win people's minds and hearts should be the task for project developers and responsible executive

governmental agencies (1603-KL-9, 2016). Additionally, tourism could inspire participation (1603-KL-10, 2016).

The institutional framework could be a capable and mighty trigger for public participation (1603-KL-9, 2016; 1603-KL-10, 2016). 1603-KL-10 (2016) proposed that existing residence associations could be used as the platforms for public participation. That would save money and resources for the establishment of additional institutions to act as the platform for public involvement. Furthermore, 1603-KL-10 (2016) highlighted that sometimes a tipping point could be a master plan or preparation of master plan could push forward governance ideas. Interviewee expressed its hope that such changes in Malaysia would be caused by young generation. This intention is supported by 1603-KL-9 (2016) wish that planning would be organized with the young generation involved in the discussion because they will live in the future, which is constructed now. The creation of the future plans must be based on both "*hard-core engineering*" and "*soft planning*" (1603-KL-10, 2016). In Malaysia, the most of "*soft planning techniques*" are brought by international organizations, NGOs (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-8, 2016; 1603-KL-10, 2016).

4.4.2.4 Constraints of public participation

The respondents shared the negative experiences from the project development, from personal experiences or their academic work. Some of them merged in the discussion about various examples from around the world. More than once the considerations about project developers were expressed. Adequately, interviewees considered developers in some kind negative attire – snobbish, arrogant or simply not capable and knowledgeable enough. As active and engaging low-level government official could act as a trigger and driver for successful public participation, similarly, the offensive official hinder public participation process and creates a precedent of negative opinion about government and project (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-8, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016). The trust of the political system is shattered by repeatedly not following on the given promises (1603-KL-1, 2016). People notice during election period politicians transform quite a lot (1603-KL-3, 2016).

Additionally, the respondents repeatedly exposed the logrolling (1603-KL-1, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-6, 2016; 1603-KL-7, 2016; 1603-KL-8, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016). They stress that contacts and relationships are the best way to open the doors and influenced the development and governmental decisions (1603-KL-3, 2016; 1603-KL-10, 2016). As 1603-KL-1 (2016) noticed:

> "*in Kuala Lumpur everything is about business. Of course, we have an environmental assessment, but it is required for big projects. If you are a small project, it is not required.*" (1603-KL-1, 2016)

This focus does not provide much support for nature or public good (1603-KL-8, 2016). 1603-KL-8 (2016) indicated that media is controlled by political parties, however, the majority of society is aware, which controls what and accordingly dictate their choice. Additionally, "*public participation is not a news material*" (1603-KL-10, 2016).

Furthermore, institutional capacities are missing the time and again (1603-KL-1, 2016; 1603-KL-2, 2016; 1603-KL-8, 2016).

> "*[…] the enforcement in Malaysia is very bad. The rules are there, but not applied*" (1603-KL-1, 2016).

> "*The government is not spending on the soft side of the master planning. And the other one is the change, although we believe now that there is also what they call non-scientific approach to river management, floods. But what we are not doing is to accept to do non-structural approach requires a different set of skills in people. So we have the same people, who are doing the hard structures, to try and promote the software approaches. So by nature and also by experience and by other things, the tendency is to migrate to hard structures.*" (1603-KL-10, 2016)

Constantly EIA (Environmental Impact Assessment) is not enough because it is neglected and there are no enforcement and monitoring (1603-KL-8, 2016). The legal documents for organizing and monitoring public participation is lacking as well, so engagement in the decision-making process heavily depends on the person(s) in charge (1603-KL-1, 2016). Additionally, public involvement is missing in other legal documents as well as management approaches:

> "*We are very poor in resource management […] we are not taught that resources have the value*" (1603-KL-3, 2016)

The discussions becoming more hostile then issues are crossing state borders, especially, if there is a contradictory ruling political party (1603-KL-3, 2016; 1603-KL-8, 2016). 1603-KL-3 (2016) disclosed that politicians are not interested to invest their energy and money for long-term social projects (such as education or public participation, awareness) because the results might ripe then they would be out of that position. That is why they tend to focus on short-term, structural projects, which could impress by their novelty, size or magnitude (1603-KL-3, 2016; 1603-KL-10, 2016).

> "*They promise this, they promise that, but then they got approval, they cheat. Government do not check. I don't know why they do that*" (1603-KL-1, 2016)

> "*The politicians asked 'I'm not interested about that [auth. land mapping, preservation and conservation plots], show me which part I could develop'.*" (1603-KL-3, 2016)

The interviewees affirmed that although religions share similar core ideas about caring and helping, yet, then it comes to generating mutual discussion about the issues at the hand or ideas for the future, they become the dividing factor, instead of amalgamate and unite the community (1603-KL-1, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-7, 2016). 1603-KL-3 (2016); 1603-KL-10 (2016) envisage such changes stemming from religious leaders. Thus 1603-KL-3 (2016); 1603-KL-5 (2016); 1603-KL-7 (2016) considered that project developers should be distinctly determined about the religious background of the area, otherwise, he/she could face severe disapproval, rebuff or even reject.

At the moment, there are many development projects happening in Kuala Lumpur. Everything is progressing at marvellous tempo. That puts a lot of responsibilities in the hands of city administration. The city council need to coordinate everything and make decisions, which are beneficial for the city and do not interfere negatively with each other (1603-KL-4, 2016). Several interviewees implied that they feel very responsible and honoured for such opportunities to work for their city (1603-KL-4, 2016; 1603-KL-5, 2016; 1603-KL-6, 2016).

The crucial role in public participation is played by cultural characteristics. It could foster or hinder participation. For example, 1603-KL-3 (2016); 1603-KL-7 (2016) called attention to the dominant helplessness in the society.

> *"As a citizen, I don't see myself engaged. Why? […] No one is going to listen to me. Nothing will change. […] if it [auth. public participation] would be like voting, then maybe." (1603-KL-7, 2016)*

Additionally, several interviewees implied that some people do not share any forethought about environmental issues or anticipate any relative problems (1603-KL-1, 2016; 1603-KL-2, 2016; 1603-KL-7, 2016).

> *"I don't know if it's just me, but all Malaysians are not environmental friendly." (1603-KL-7, 2016)*

Furthermore, people do not habitually protest here. 1603-KL-3 (2016) exposed that people do not have a tradition to protest in Malaysia. A similar view was shared by 1603-KL-7 (2016) as well. People's voice is not unyielding and consequently lay people usually feel neglected (1603-KL-2, 2016; 1603-KL-3, 2016). Additionally, that sense is supported by negative experiences, then society wishes were disregarded (1603-KL-2, 2016; 1603-KL-3, 2016).

As it was mentioned above, education is an important characteristic for public participation. Sometimes education or lack of it is hindering entire public participation process (1603-KL-1, 2016; 1603-KL-3, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016).

> *"So I strongly believe that we [auth. experts, government, NGOs] must educate the public to be active, what role they should play. So far that is missing" (1603-KL-3, 2016)*

Public participation depends on the support, which it receives (1603-KL-1, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-4, 2016; 1603-KL-6, 2016; 1603-KL-8, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016). This support could be legal, then it is required to organize public participation in the development projects (1603-KL-10, 2016). Furthermore, the support is a financial funding as well. In the budget for the project development, the most significant part is allocated for structural changes. Meanwhile, the "*soft*" part has only the crumbs left (1603-KL-3, 2016; 1603-KL-8, 2016; 1603-KL-10, 2016).

One of the last concerns shared by interviewees was "*import*" of Western ideas, yet, the traditional substitutes are neglected and disregarded (1603-KL-3, 2016; 1603-KL-8, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016).

> "*[…] here is a shopping spree. [...] we go to learn in Korea or Danube, but then there is no feeling*" (1603-KL-10, 2016).

> "*What disappoints me now is that we import so much technology. We don't need to rush. We can develop local technology*" (1603-KL-10, 2016).

Additionally, then new ideas are incorporated into the existing cultural fabric it requires time for adaptation (1603-KL-3, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016). Such processes cannot be forced:

> "*Changes come slowly. Fast is not good. Instant noodles. Not good*" (1603-KL-3, 2016)

1603-KL-9 (2016) appealed that the project development including public participation is hindered by land ownership traditions in Malaysia. Due to the inheritance the property is owned by many people, equally the eviction/compensation could be substantially complicated and complex (1603-KL-9, 2016).

Last but not least, public participation is hindered by the lack of knowledge and skill how to act (1603-KL-3, 2016). In Malaysia there is an uncompromising tradition for campaigning, that helps to enhance awareness, however, the follow-up is missing exceptionally (1603-KL-3, 2016). Similarly, the commitment to pursue the promises at the governmental level is missing as well (1603-KL-3, 2016; 1603-KL-6, 2016; 1603-KL-10, 2016; Anonymous-JK-1, 2015). That creates the mistrust between government and society, consequently, local people feeling fatigue to act.

4.4.2.5 Influence of public participation on the river development

Every expert testified to the importance of the involvement of the local people. The difference only lies in the degree of involvement. Government officials appreciate local people as an information source (positive way) and/or as a possible conflict generator, which they must be dealt with (negative way) (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-4, 2016; 1603-KL-5, 2016; 1603-KL-6, 2016).

In Malaysia, the clash between federal and State government is quite severe for the land development. The land belongs to the state, except in the federal land, like Kuala Lumpur, Putrajaya and Labuan. Nevertheless, the Klang river passes both federal and State lands. Resultantly, the institutions, which coordinate the Klang river development differ and that causes the confusion for society and makes participation and engagement more complicated (1603-KL-3, 2016; 1603-KL-4, 2016; 1603-KL-8, 2016; 1603-KL-10, 2016). Land and water belong to the state, except for federal territories (1603-KL-3, 2016; 1603-KL-8, 2016). 1603-KL-3 (2016) displayed that federal government indomitably and repeatedly promotes their agendas on the states. But the messy tasks (like land acquisition, public issues) exclusively are left for the state, while acknowledgement goes to federal (1603-KL-3, 2016).

> *"It is not so simple. Even that the project is good, and I'm talking from the perspective of the NGO, but in reality… Occasionally, some politician… They don't see the interest of public or interest of the environment. They see the only political interest. They don't agree. In certain areas, they don't agree. Because why? Land comes under the state. Land and water. So when federal government want to do, they say, the credit must go to state government. But federal government don't agree because money comes from the federal government." (1603-KL-3, 2016)*

Another idea, which was shared by several interviewees, was Champion idea. As one of the interviewees explained it, it is the predicament, which is an unmistakably positive example with beneficial outcomes. Additionally, later it could be applied by "*copy-paste*" principle to other places (1603-KL-3, 2016). These champion projects have assembled and tested a roadmap, to-do list and pre-formed work timeline for the future developments (1603-KL-3, 2016). They differ from Western idea of pilot projects due to the consideration of local cultural conditions. Therefore, the "*Champion*" projects could be copied in the same river basin or close by territories, but for the dissimilar cultural setting, some adaption must be made (1603-KL-3, 2016). Moreover, then the project development requires some land from private owners, although the town council is leading the process. If the requisition of land needed, project developers/designers try to involve the highest government institution possible (1603-KL-7, 2016).

Some of the respondents argue that there are several particles of public participation in the river development projects (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-10, 2016). The involvement level is varied in such project significantly from information insemination to consultation. As 1603-KL-3 (2016) rightly and accurately pinpointed the "*clown campaigns*", even though academia disapprove them fiercely, occasionally they are essential if it is compulsory to attract the attention of broad masses. Such situation occurred due to various political campaigns and newly formed traditions for massive gatherings.

> *"Malaysians are spoiled by politicians. […] Even for the attendance of political talk people will be paid. So now even when a real expert comes and wants to deliver a talk,*

> *nobody turns out. […] So general public will attend just is they will get money. So sometimes clowns are used to getting the attention, especially if numbers are important."* (1603-KL-3, 2016)

In the RoL project public participation, in the public consultation form, was missing at the beginning of the project (1603-KL-3, 2016). For the exchange, they did some stakeholder consultation. Thereafter, Public Outreach Programme does not have a correlation with the structural part of the project (1603-KL-3, 2016). 1603-KL-3 (2016) criticised the financial allocation of the RoL budget. Interviewee argued that 99 % are delegated for the structural changes. Nevertheless, from his/her own experience and international practices, he/she thinks that at least 10 % of the budget should be for public consultation. "*Otherwise, the tangible result in public outreach programme won't be succeeded*" (1603-KL-3, 2016). 1603-KL-3 (2016) suggested that public participation suffered due to the limitation of distributing project money to society any form of incentives, yet, project managers are executing that but it is not declared in official documentation. The RoL could be more yielding if there were done a social survey to understand society needs, wishes and requirements for the new project (1603-KL-6, 2016). Furthermore, the choice of who is involved in Public Outreach Programme is criticized, because merely stakeholders, who are living directly on the river bank, were involved (1603-KL-10, 2016). Moreover, 1603-KL-3 (2016) questioned the importance and signification of community involvement if

> "*[…] public engagement comes as the 12th initiative. […] why it comes so late in the project [...]*" (1603-KL-3, 2016)

All political parties in Malaysia agree and support the concept of RoL project. Nevertheless, the problem rises then the discussion turns about the financial part of the project. As 1603-KL-3 (2016) summarized "*on concept all political parties agree, but the rough path is hit then questions are about implementation*".

1603-KL-7 (2016) argued that resistance during the project implementation is a typical, mundane problem. Occasionally, issues could be averted by compensation schemes or negotiate the middle-ground solution. Nevertheless, it is exhausting and challenging to accommodate the visions in the urban settings. 1603-KL-7 (2016) shared the example about the greening the city and planting some trees by the streets. Despite that, it is splendid for the city and follows project requirements, the trees did not survive. As the interviewee stated, the shop owners, who thought that trees are blocking their shop view, therefore disrupting their businesses, "*pour some chemicals*" on the trees. Ergo, the vigorous discussions with shop owners in the town hall did not be convincing enough and help to change people's minds.

Nevertheless, other interviewees observed that active communities were a positive phenomenon (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-6, 2016; 1603-KL-8, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016). 1603-KL-6 (2016) listed that with time

communities becomes more tenacious and are getting more support, additionally, they are learning from other success stories.

As 1603-KL-10 (2016) summarized there are several reasons why experts habitually say that if you want to make project collapse, do a public participation. Interviewee listed that some of them stemming from traditions and history. There is a need to develop the country rapidly and struggle to compensate what country lost due to the political and economic history. That is why the urban development focuses on hard structures, physical changes, and "*imported*" ideas (1603-KL-10, 2016). Such type of development guarantees quick income and establish something visible (1603-KL-10, 2016).

1603-KL-9 (2016) shared an example from his work experience about Kampong Bharu (old quarters near the central part of Kuala Lumpur). At the moment this area is invaded by various developers, who try to sell miscellaneous proposals (1603-KL-9, 2016; Gartland, 2016). However, as the history of Master plan preparation showed, people are able to negotiate their wishes. After people had voiced their opinions about the development of Kampong Bharu master plan, the document was changed and people's ideas were incorporated (1603-KL-9, 2016).

"We must love your plan because we are the owners of the land" (1603-KL-10, 2016).

To sum up public participation, depending on which measure is applied, could be a very influential tool in the river development. Nevertheless, in Malaysia, this opportunity is not used to its full potential.

4.4.2.6 Future expectations by interviewees

In all interviewers' eyes, the development of river leads to the beautiful and clean Klang river. Although experts acknowledged that several new obstacles emerged in the river development, however, no one hinted an expectation for any adverse unfavourable changes. Contrarily, an optimistic view was influenced by the existing beneficial exemplars. 1603-KL-3 (2016) confessed that "*champion idea*" astonishes and transforms him as well. Additionally, experts were convinced by the trajectory of RoL project and effort from the developers and city hall. Resultantly, it is expected that project would deliver diverse beneficial changes in the future (1603-KL-3, 2016; 1603-KL-4, 2016; 1603-KL-5, 2016; 1603-KL-6, 2016; 1603-KL-7, 2016; 1603-KL-8, 2016).

As 1603-KL-10 (2016) stated, it would be advisable to romanticize the river, "*to create a story about river*", "*to touch human hearts*", "*to create a living history about river*". Additionally, the person stated that it would be great for river memoirs, photo albums about the river and people who used to live by or on the river. The writing down the stories (in any format) would generate the feeling about the place, and form the bond between people and the place, past, present and in a way future (1603-KL-10, 2016).

All interviewees shared the same expectation that in the future water quality must be better than it is at the current moment. They anticipated a multifaceted way to attain this goal, but the improvement of water quality is the fundamental widespread expectation amongst the local people from Kuala Lumpur. Furthermore, the interviewees expect aesthetical changes. Some of the respondents articulated expectation on human behaviour changes causing active engagement and participation in the decision-making processes (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-6, 2016; 1603-KL-10, 2016). Yet, 1603-KL-7 (2016) argued that existing public engagement is very good and it will not change in the future. Further, social media will have a colossal role and the public can ask questions immediately (1603-KL-7, 2016). Nevertheless, some interviewees comprehend that project must continue with or without public support; the government must come with the plan after the finish of the project (1603-KL-4, 2016; 1603-KL-5, 2016; 1603-KL-6, 2016; 1603-KL-7, 2016).

1603-KL-3 (2016) predicted that in 20-30 years projects like the RoL will be like "*white elephant*" [auth. very rare] because to a top-down approach. If the recent tendency to handover the development to the local authorities continues, it could cause a severe clash between the federal and states' governments. As a consequence to the delegation of tasks, but not a budget for implementation. Additionally, the political dependencies will have a tremendous impact as well. That also discourages local governments to initiate and introduce new projects. The solutions could be to "*create the ownership among the public*" (1603-KL-3, 2016) as well the "*local designs*" should be recognized (1603-KL-10, 2016).

In the past politicians did not anticipate the importance of society, however, during recent years politicians are changing their perspectives and starting to support some programmes for public engagement. These programmes occasionally are initiated by NGOs (1603-KL-3, 2016).

> *"In 10 years public will be a champion." […] "I think local champions will put some pressure on policies in Malaysia." […] "Some politicians also become a driver for the decision-making process." […] "The only difficulty will be how values of this new drivers will affect". (1603-KL-3, 2016)*

> *"I'm more concern how do we do the advocacy among the public. How do we get 90 % of people." (1603-KL-10, 2016)*

The future of the RoL project is distinguished as optimistic, good or even "*bright*" (1603-KL-3, 2016; 1603-KL-5, 2016). People will have the "*water touching effect*" (1603-KL-4, 2016; 1603-KL-5, 2016). Nevertheless, there are several considerations.

> *"We are very cautious about the third part of the project. Because they didn't reveal the details yet." (1603-KL-3, 2016)*

Another apprehension is shared by 1603-KL-5 (2016). Interviewee mentioned that people "*want clean river*" – clear water, short cut grass. But something must be preserved for the biodiversity (1603-KL-5, 2016). Adequately, people are becoming more aware and acumen socially and environmentally (1603-KL-6, 2016).

> "*My mission for the rivers in my country become clean, beautiful and active.*" (1603-KL-6, 2016)

Additionally, 1603-KL-10 (2016) argued that in Malaysia, due to the tropical climate, it is the best to leave rivers "*green and natural*". Likewise, the parks are not appreciated and used. Furthermore, the timeframe of implementation is important, and as it was mentioned above, it is compulsory to have time for social and mindset changes (1603-KL-10, 2016).

The political situation could be negatively impacted by the local leaders indomitably pursuing the political leadership (1603-KL-3, 2016). Auxiliary, recent examples showed that such leaders lose their supporters quickly (1603-KL-3, 2016). Additionally, 1603-KL-9 (2016) expressed similar acumen without exemplary, moral and responsible leadership, interviewee could not imagine positive changes in the future.

The future expectation is spinning around the clear and implementable strategy for public participation (1603-KL-10, 2016). Nevertheless, just the legitimate basis is not enough. Additionally, there is a necessity to have an open, broad and candid discussion with society about the future expectations.

> "[…] so we need statements like that [auth. pompous and far outreaching]. In 10 years we will walk together by Sungai Klang beautiful. […] So then we could ask, what can we do [auth. to make it happen]." (1603-KL-10, 2016)

The task for the future is to put value for the river (1603-KL-10, 2016). Activating local economic activities related with river would beneficially assist in generating the value of the river itself (1603-KL-10, 2016). First of all, it is imperative to establish an emotional relationship between people and their close surrounding. The decomposing of existing negative image could have a similar impact. Nevertheless, this virtuous attempt could have unsatisfactory effects like disappointing new tangible physical constructions or favouritism without a substantial outcome for communities along the river (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-8, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016).

4.4.3 Ciliwung river

The Ciliwung river is in Java island, Indonesia. The river starts in Mandalawangi and takes north direction and after 119 km gives its water to Java sea. The Ciliwung river passes Jakarta, which is the biggest and most developed city in Indonesia and Bogor. Altitude difference between a source in Mandalawangi till delta is 3 002 m.

The water source of the river is rainfall. The river basin is 375 km^2 area. Population in the Ciliwung river basin is more 4 million. It is a fast developing area, therefore, the typical widespread problems that are customary with such development rate are constant in Jakarta. Moreover, experts shared versatile opinions about what is happening in Jakarta regarding the river management and community involvement in the decision-making process in affiliated issues.

4.4.3.1 Definition or description of public participation in interviewees' own words

Public participation regularly was described as one-way information flow (1512-JK-1, 2015; 1512-JK-3, 2015; 1512-JK-4, 2015; 1512-JK-6, 2015; 1512-JK-7, 2015; 1512-JK-9, 2015; 1512-JK-12, 2015). It soaks from top governmental level through lower governmental levels till community level. This idea of public participation was shared among various interviewees (experts, governmental officials and community people). Interviewees stated that this is *status quo* now (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-4, 2015; 1512-JK-5, 2015; 1512-JK-6, 2015; 1512-JK-7, 2015; 1512-JK-8, 2015; 1512-JK-9, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015). Additionally, in the majority of discussions interviewees argued, that such way of public participation is good enough, even though, part of information could get lost, withheld or misinterpret.

> *"What is happening here [auth. in Jakarta], is top-down. The people almost cannot deliver their opinion to the major or to the president. […] It [auth. organizing public participation actions, participating in them, including public opinion, wishes, etc.] will become like a homework for the government, so the government will just ignore them." (1512-JK-9, 2015)*

The contrary opinion was shared by 1512-JK-10 (2015), who told about mapping project organized with local aid organizations, where the sensitive areas were marked and provided this map to the government to use for planning purposes. Nonetheless, this was one very exclusive example that is an exception and not a standard routine practice in Jakarta. Yet, it shows the potential withheld in the local communities.

Public participation first and foremost is understood as information delivering measure (1512-JK-2, 2015; 1512-JK-4, 2015; 1512-JK-5, 2015; 1512-JK-6, 2015; 1512-JK-7, 2015; 1512-JK-9, 2015). Customarily, the dissemination of information is done by the oral communications, then one neighbour/ relative/ colleague/ acquaintance pass information to the next one while simply chatting. The newer version of this way is sharing information via a social network (1512-JK-2, 2015; 1512-JK-8, 2015; 1512-JK-11, 2015). Even if this way is quite rapid, it is not consistent and a part of the people is left outside. In Indonesia, information campaigns, as a public participation measure, act as an awareness about disaster spreading tool mostly (1512-JK-3, 2015). In some interviewees' opinion, such situation is good enough, and improvement is not necessary (1512-JK-2, 2015;

1512-JK-7, 2015; 1512-JK-9, 2015). Yet the role of local people as defined by 1512-JK-1 (2015) is a victim or most vulnerable of disasters, but also as actors, which if education is provided could and should develop their close surroundings. Local people were as the end-users at the end on the decision-making process were repeated in several interviews (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-6, 2015; 1512-JK-8, 2015; 1512-JK-9, 2015; 1512-JK-10, 2015; 1512-JK-12, 2015).

Furthermore, 1512-JK-8 (2015) described public participation as a decision-making power delegated to people by the government. The interviewee was able to provide versatile examples of public participation measures used during the Ciliwung *normalisasi* project but in miscellaneous districts. Yet, other interviewees were more focused on flood-related public engagement measures. Overall, the most bewildering to society and very easily noticeable issue in Jakarta is floods. Consequently, the compelling debate goes around the solutions for flood problem (prevention, awareness, organizing drills, aid release, etc.) (1512-JK-1, 2015; 1512-JK-3, 2015; 1512-JK-5, 2015; 1512-JK-6, 2015; 1512-JK-7, 2015; 1512-JK-9, 2015). Nonetheless, not all measures are acknowledged with same attention and concern (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-9, 2015).

The political situation in Indonesia is still evolving and is greatly depended on the person or political party in the leading position (1512-JK-3, 2015; 1512-JK-5, 2015). All interviewees acknowledged that the current governor[20] did several steps, which intrude entire political system and form new ways for people to voice their opinion and be more involved in the decision-making process, such as introducing "*one window principle*" (1512-JK-3, 2015; 1512-JK-5, 2015). Notwithstanding, as Anonymous-JK-2 (2015) stated that the "*consistency*" in the actions are still missing a lot. Similar reflection on this new idea was shared amongst interviewees as well (1512-JK-5, 2015; 1512-JK-6, 2015; 1512-JK-10, 2015; 1512-JK-12, 2015).

1512-JK-10 (2015) shared several examples of public participation in Indonesia. The interviewee said that every year before approving the national budget government holds a forum, in which people from the villages in all around Indonesia are invited. Nonetheless, the interviewee evaluated that action as controversial one. On one hand, the government opens the door for discussion with local people. On the other hand, participants rarely come and if they do they seldom articulate their opinion due to distinct mistrust between people and government and due to people's shyness or lack of education. The second example is the initiative organized by grassroots. Villages open their gates for local artists to decorate their village. This initiative assisted people to recover after the disaster (1512-JK-10, 2015).

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[20] Current governor is the governor at the time of interviews.

Indonesia has a long tradition of the firm mighty leaders (1512-JK-1, 2015; 1512-JK-7, 2015). The majority of interviewees acknowledged, that the first step of public participation is the will of leader to organize and implement an idea (1512-JK-2, 2015; 1512-JK-3, 2015; 1512-JK-4, 2015; 1512-JK-5, 2015; 1512-JK-7, 2015; 1512-JK-8, 2015; 1512-JK-9, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015). The public participation procedure at the neighbourhood level was explicitly recounted by 1512-JK-2 (2015). At the community level, the notable role is delegated to the community leader (neighbourhood chief). If an official community leader (governmental official) and an unofficial leader (the most respected person in the community) are not the same people, they discuss an idea separately at first. Afterwards, when they reach a consensus, the official community leader proceeds to invite community people to attend a seminar (if it is cardinal he/she invites speakers) and/or discussion. Almost all communities have their community hall or some other space to use for the community meetings. After the meeting, people are given some time to discuss that idea amongst themselves and during the next meeting, they render their verdict, and/or share their concerns (1512-JK-2, 2015). Usually, the community meetings are held once a month, if community leader is active and people are motivated to participate (1512-JK-2, 2015; 1512-JK-5, 2015; 1512-JK-9, 2015). Furthermore, 1512-JK-10 (2015) implied that the role of catalyst for community gatherings could be played by NGOs as well.

Due to the size of Jakarta, it could be very complicated and problematic to organize some unified meeting for all citizens to discuss the development issues. It would be a delusion to invite 10 million people and provide a possibility for everyone to express own opinions. Yet, sub-district administration is a platform for discussion about the urban development, it organizes a meeting with society and developer(s) (1512-JK-2, 2015).

> *"People will come to the announcement of sub-district administration because it is about their living" (1512-JK-2, 2015).*

The interviewee evaluates that existing public involvement system is enough. Yet, after sharing and reflecting on hers/his own experiences, he/she complained that government officials did not accomplish their tasks properly (do not arrange meetings with the public in open and accessible manner, do not react to the complains, etc.) (1512-JK-2, 2015). Additionally, new technologies and social media could contribute to make the conversation between society, diverse stakeholders and government more fluent (1512-JK-1, 2015; 1512-JK-10, 2015; 1512-JK-12, 2015).

Furthermore, 1512-JK-12 (2015) emphasized that public participation is very good for the democracy in the country, it helps to keep politicians "*in line*". Additionally,

> *"for good policy, we need a public participation" (1512-JK-3, 2015).*

Moreover, 1512-JK-8 (2015) argued that the second opinion in the decision-making process is profoundly important. Furthermore, the interviewee stated that people who are residing in the area should obtain the most persuasive voice during the decision-making process in order to balance out the solution (1512-JK-8, 2015).

The traditional version of public participation is *gotong royong*[21]. Yet, that has been mentioned just by one interviewee. 1512-JK-11 (2015) confided that even if such tradition of organizing communal work exists, he/she vaguely remember then last time he/she participated or even heard about *gotong royong* action in the Jakarta. He/she indicated that this tradition is still very lively in the rural areas of Indonesia. Furthermore, if that would happening in close premises or neighbourhood, 1512-JK-11 (2015) would attend it. The interviewee was quite supportive and suggested that many young generation people would be motivated to participate as well.

Mostly all interviewees shared the traditional public participation approach. In their opinion, public participation is the tool to inform society. Some innovative ideas were shared. Stakeholders must be organized by heterogeneous forums' discussions, they should be organized by various NGOs and governmental institutions (1512-JK-3, 2015). 1512-JK-2 (2015) mentioned other measures like seminars, especially useful to raise awareness and discussion with communities for introducing new projects and ideas and have some negotiations with local people. Even more forward was 1512-JK-4 (2015), who claimed that public participation must be included in corporate responsibility. Yet, such examples have been rare amongst all interviews.

4.4.3.2 Understanding of the river development process

The Ciliwung development process is tremendously influenced by the problems discussed in the 4.3 chapter. They are land-use changes caused by population booming, uncontrolled immigration, floods, sinking of the ground, etc. Yet, experts during interviews primarily focus on deteriorated water quality, congestion in the city (especially, in the areas which are going through the development process) issues and illegal migration. The understanding of river development regularly was connected with flood control, early warning systems and relief after disasters as well as eviction or relocation process due to constructions on the river banks. Additionally, the interviewees linked social and environmental issues in very

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[21] Silver (2007) wrote "*gotong royong* is a traditional participatory model which places the community above the individual, and assumes that the individual is dependent in all aspects of life on others within the community. It involves collective works, such as those needed to implement the KIP [auth. Kampung Improvement Program] but possesses the higher meaning of subservience to the larger good."

Pye & Pye (2009) described *gotong-rojang* as "an elaborate version of collective decision-making in which everyone can advance his views but in the end the senior figure declares what the consensus is."

stereotypical perception as the linkage between the poverty of the illegal citizens and waste disposal along with general pollution (1512-JK-3, 2015; 1512-JK-6, 2015; 1512-JK-7, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015). Yet, part of that equation related to lack of wastewater collection system and treatment were disregarded. All interviewees discussed about the links between poverty, illegal immigrants (people, who live Jakarta, are not holders of the Jakarta ID card) and the condition of the Ciliwung river. The most noted concept is the one, which blames illegal immigrants for bad river water quality (1512-JK-8, 2015; 1512-JK-12, 2015). That is an overpowering leading opinion in the media as well. The similar standpoint is amongst governmental officials. Sometimes the insensitivity towards such people is earth-shattering[22].

> "People [auth. evicted dwellers] in their comfort zone and don't want to move" (1512-JK-11, 2015).

Yet, 1512-JK-9 (2015) noticed that compensation for relocation is miserable, further, that compensation is provided just for Jakarta citizens and not all dwellers. On the contrarily, 1512-JK-5 (2015) states that housing or compensation is provided for illegal citizens as well. Moreover, public reaction to relocation partly depends on the ownership of the land in the area (1512-JK-2, 2015). Furthermore, 1512-JK-10 (2015), who has an experience of working with grassroots projects and initiatives, embodied the considerations regarding people, who lived on the river bank for several generations already. Interviewee acknowledged that occasionally these people ignore official letters and never completed an official registration of their property. Therefore, now they cannot prove this is their land. They live by the motto:

> "we lived here for a long time". (1512-JK-10, 2015)

Unfortunately, that leads to a lot of problems with land ownership (1512-JK-10, 2015). As 1512-JK-7 (2015) expressed after relocation he could sleep again because as a governmental official responsible for the disaster risk management, he/she is constantly under pressure then flooding come, thus people, who will be relocated, usually are living in flood-prone areas. The interviewee was convinced that relocated people would be safer in the new housing. Nevertheless, the affordability to maintain and pay the rent for social housing is still an open question.

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[22] River has changed because of poor uneducated people who came to live on the river banks (1512-JK-12, 2015).

1512-JK-8 (2015) stated that by doing relocation government tries to "humanize" poor people by providing them better living conditions ("now people have toilet, <…> clean water").

1512-JK-5 (2015) said that he/she not particularly "care" what and how people will live after relocation.

1512-JK-7 (2015) hopes that it will be enough and tries to instigate and promote the formation of social network where people help each other. 1512-JK-3 (2015) was even more optimistic stating that rent and facility costs are really minimal and everyone is able to pay it.

1512-JK-4 (2015) accentuated that improvement of water quality is required by law. According to legal requirements, new buildings and special buildings (e.g. hospitals) must have separate water treatment equipment (1512-JK-4, 2015). Yet, the roots of *normalisasi* Ciliwung is laid in 1973 so-called NEDEKO plan (1512-JK-5, 2015). This plan focuses on flood control and is still in motion, however, the revision is on the agenda in the Jakarta's administration (1512-JK-5, 2015). 1512-JK-6 (2015) portrayed it as a never-ending story. Additionally, the interviewee revealed that the lack of enforcement to implement the concepts incorporated in the legal documents. In 1512-JK-11 (2015) opinion the *normalisasi* Ciliwung is a "*brave project*" that will bring out positive change in the city, like beautiful riverfront. The interviewee insisted that this project should provide a better living condition for impoverished people (1512-JK-11, 2015). Nevertheless, how to improve the project or its management the interviewee admitted not knowing (1512-JK-11, 2015). Yet, 1512-JK-5 (2015) shared insights about the social part of implementation:

> *"Before we do any implementation of the master plan, we go and talk to the people, […] we explain how important normalisasi is, […] we look for a win-win solution. People need to move from the territory before we start doing anything" (1512-JK-5, 2015).*

Two of the interviewees were able to list the steps of the *normalisasi* Ciliwung project in the following order (1512-JK-2, 2015; 1512-JK-8, 2015). Nevertheless, it was not the same order and steps. After discussing the process of *normalisasi* Ciliwung project, few interviewees started to question project and its benefits. Additionally, other issues came up, like "*many villas on the upstream of the river*", "*new dams*" and land use changes (1512-JK-10, 2015). If the overarching goal of *normalisasi* Ciliwung were to build concrete ground around the river, it would hardly restore the river. It is more efficient to complete more management measures in the upper stream areas, and establish new green open spaces in the city (1512-JK-10, 2015).

1512-JK-6 (2015) evaluated that existing government are not always able to handle the situation with the river. Further, the interviewee thought that the Ciliwung river problems should be tackled constituting hard structures that later could be followed by "*soft improvements*" if necessary (1512-JK-6, 2015). Industries, which produce wastewater during their work process, are responsible for any kind of waste, but the existing system is quite flexible and the treatment measures and their results depend on the inner policies and culture of the company itself (1512-JK-4, 2015; 1512-JK-5, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015). The lack of the infrastructure for rainwater retention is crippling and making the floods more potent and extensive (1512-JK-1, 2015; 1512-JK-6, 2015).

The interviewees observed the deterioration of river aesthetic and water quality. As well, they mostly agree on the improvement measures – cleaning the bed of river, and pushing the living quarters away from river bank (this area is converted into the roads or some flood protection measures) (1512-JK-3, 2015; 1512-JK-5, 2015; 1512-JK-6, 2015; 1512-JK-7, 2015; 1512-JK-8, 2015; 1512-JK-9, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015). 1512-JK-12 (2015) revealed that the Safe Ciliwung programme is working to encourage some public participation measures, but it is not a massive and fierce action.

A lot of attention in the interviews was focused on the floods. Through Jakarta's history, many developments and constructions were triggered by the flood disasters (1512-JK-5, 2015; 1512-JK-8, 2015; 1512-JK-9, 2015). In the recent decade, floods became longer and severer. Yet, as 1512-JK-7 (2015) mentioned, citizens rarely trust prognosis provided by governmental institutions and do not accomplish necessary actions to be prepared for upcoming disaster. As the interviewee cogitated how it could be that improvement in weather forecasting techniques does not have a positive impact on the trust in weather forecast (containing prognosis about floods) amongst Jakarta's citizens. Anyhow, that is still an undiscovered phenomenon. Markedly,

> *"some people are OK with being flooded, they are just adapted to the conditions" (1512-JK-10, 2015).*

Therefore, people accept relocation contradictorily, it depends on how long did they reside in the area (1512-JK-3, 2015). The critical role in coordinating the disaster relief is done by village chiefs (1512-JK-7, 2015).

Nonetheless, that interviews were held with vastly deviating range of interviewees, they do not explicitly acknowledged the importance of an institutional framework for the river development. Few shared complains about the elevated level of corruption (1512-JK-2, 2015; 1512-JK-3, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015), or lack of capacities in the existing bureaucracy (1512-JK-2, 2015; 1512-JK-5, 2015; 1512-JK-10, 2015; 1512-JK-12, 2015). The organization of river development is delegated to the governmental institutions. As a consequence, experts (academicians or representatives from the private sector) generally feel incapacitated to change existing order and have an impact during the decision-making process (1512-JK-4, 2015; 1512-JK-10, 2015). Moreover, 1512-JK-7 (2015) observed from her/his own experience that one of the biggest challenges, which governmental institutions are facing at the moment, is coordination in order to design and implement any kind of project. 1512-JK-7 (2015) acknowledged if their institution wants to do some flood preparedness measures in the mainstream river they need to coordinate that with all levels of government. Responsibilities for the rivers and water management are scattered among various governmental institutions and agencies (1512-JK-7, 2015). Interviewee additionally shared an example. The government institution organized a participatory open mapping project, which engaged the local community. Further,

this project chart and codify the flood-prone areas along with identified feasible solutions. Although the final report was provided to an upper governmental institution, which is responsible for establishing such actions, the answer never came back as well as new measure never was enacted (1512-JK-7, 2015).

4.4.3.3 Criteria for successful public participation process

The process of public participation was described by local experts as a power delegated to society by the government. That was a very insightful definition. The success of such process depends on various factors, the local experts during interviews exposed several criteria that could be compiled into four clusters. They are discussed below. Further, some criteria are more to stand alone and to do not belong to any cluster.

Habitually, it was mentioned the rise of new behaviour patterns and mindset, which have a "*soft*" approach and focus on promoting active public involvement in the decision-making process. Interviewees noticed that volunteering is mainstream especially amongst young generation people (1512-JK-1, 2015; 1512-JK-7, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015). Social media triumph in the current situation (1512-JK-1, 2015; 1512-JK-7, 2015; 1512-JK-12, 2015). It makes news easy accessible and shared. The new apps assist to make discussions amongst stakeholders and build the path for the "*soft*" decision-making traditions (1512-JK-1, 2015; 1512-JK-10, 2015). These opinions are shared amongst younger interviewees. Additionally, 1512-JK-2 (2015) recognized that it is important to inspire people to choose more eco-friendly life style. Further, 1512-JK-4 (2015) distinguished, that the situation in the future will changes because people will become more educated, more aware of the situation, concern about nature and more active. As interviewee elaborated: "*if people will understand the importance of environment, they will be more committed*". Furthermore, citizens could be reassured by distributing them with some monetary or another type of incentives (1512-JK-4, 2015).

The second cluster of criteria focuses on the governmental role in the public participation process. Firstly, interviewees highlighted that willingness to work and discuss with people could advance public participation (1512-JK-4, 2015). Additionally, there is an existing background or framework (1512-JK-10, 2015). Although it requires additional improvement and consideration. 1512-JK-12 (2015) disclosed that government exhibits some signs to "*wake up society*" and current leaders are breaking the long traditions and opening their offices for the general public. These insights were reflected in interviews with 1512-JK-1 (2015); 1512-JK-2 (2015); 1512-JK-8 (2015); 1512-JK-9 (2015); 1512-JK-10 (2015); 1512-JK-11 (2015); 1512-JK-12 (2015) as well. Furthermore, 1512-JK-12 (2015) argued that the strong hand of government could assist people to achieve their way and to safeguard them from floods (1512-JK-12, 2015). Reasons for success are the dialogue between people and government, information is provided to people, they are aware what and why things happening (1512-JK-1, 2015). If the long-term goals

are kept in mind, instead of the short-term consequences, Jakarta could be prevented from disastrous floods in the future (1512-JK-6, 2015).

The immense encouragement for public participation could be carried out by education (1512-JK-2, 2015; 1512-JK-4, 2015; 1512-JK-6, 2015; 1512-JK-12, 2015), which is primarily organized by the government (1512-JK-6, 2015).

> *"We [auth. government] have to provide them [auth. illegal citizens] with basic needs. <...> so maybe they [auth. illegal citizens] could understand [auth. will be enough educated] to be able to participate" (1512-JK-3, 2015).*

Additionally, education helps people to make more prudent decisions and be responsible and caring for their close environment (1512-JK-1, 2015) and change the mindset (1512-JK-6, 2015). Further, 1512-JK-6 (2015) designated that government is responsible for implementing education and spreading the knowledge. 1512-JK-4 (2015) stressed out that education is important if we want to preserve nature, especially if we want to involve people in nature regeneration actions. Moreover, the interviewee revealed that as a citizen he/she shares her/his knowledge with people around (friends, acquaintances, neighbours) (1512-JK-4, 2015).

The third cluster of criteria is based on the long-time traditions. Indonesia has an enduring tradition to respect the leaders and follow their opinions (1512-JK-12, 2015). The tradition of *gotong royong*, which was discussed previously, provides a stable basis for public participation. *Gotong royong* could be used as a bridge for application and implementation of other public participation measures. As 1512-JK-11 (2015) put it participation is in every Indonesian "*genes*".

> *"You can not stand alone, we need people" (1512-JK-12, 2015).*

Additionally, an extensive part of society still has a permanent bond with the area along with the river (1512-JK-1, 2015; 1512-JK-12, 2015). Nevertheless, these traditions will never survive if they are not shared with youth, therefore younger generation is crucial (1512-JK-3, 2015). Such involvement would contribute to gain compelling support from local people and/or government (1512-JK-2, 2015). In essence, the volunteering is a mainstream activity amongst youngsters and young adults (1512-JK-1, 2015; 1512-JK-7, 2015; 1512-JK-8, 2015; 1512-JK-10, 2015; 1512-JK-12, 2015). Besides, traditionally people are used to passing information as a chain reaction, from one person to another (1512-JK-2, 2015).

Last but not least, few interviewees argued the importance of public participation and its own self-reflecting and improving ability (1512-JK-12, 2015). Public participation could help conquer the existing corruption and that would lead towards steep trust in government amongst society, which could lead towards more active and innovative society (1512-JK-3, 2015; 1512-JK-12, 2015). Social media could energetically and indomitably support public participation process (1512-JK-12, 2015), it is a very

attractive measure for the younger generation (1512-JK-3, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015).

To sum up, the leading, yet, open government, preservation and blooming of necessary traditions, using any form and application to have a discussion with society could strengthen public participation process in Indonesia according to local experts, community leaders, government officials, etc. The necessity to have a successful public participation was expressed by 1512-JK-12 (2015) by saying that it is a part of democratic society.

4.4.3.4 Constraints of public participation

During the interviews with Indonesian experts and representatives of local communities, several considerations appeared more frequently than the others. Some of them are about the negative influence of government, mistrust of their decisions, participation fatigue amongst local people, NIMBY, etc.

One of the major clusters of constraints for public participation is pertaining to government actions, institutions and similar. 1512-JK-3 (2015); 1512-JK-9 (2015); 1512-JK-10 (2015); 1512-JK-12 (2015) disquieted about existing corruption level, which heavily hinders the public participation and raises up the mistrust of government in the society. 1512-JK-6 (2015) displayed the lack of enforcement in the legal system, capacities and political will. Such constraints to develop public participation measures are related to the poor choice of personnel (1512-JK-10, 2015). 1512-JK-4 (2015) accentuated that government usually avoids inviting experts in the development (if they are not involved by other ways) and outside expert rarely have a possibility to join the discussion about the development of water infrastructure and related facilities. Further, the logrolling hinders entire development process, including public participation and raise mistrust amongst society and governmental institutions (1512-JK-2, 2015; 1512-JK-4, 2015; 1512-JK-10, 2015; 1512-JK-12, 2015).

The process of governing must be fluent and eloquent. The consistency of decisions and plans arranged by governmental institutions is missing (1512-JK-9, 2015; Anonymous-JK-2, 2015). Additionally, a lot of critical decisions are made for people, and that spreads the helplessness feeling. It is supported by providing misleading information why people should be relocated (1512-JK-9, 2015). As Anonymous-JK-2 (2015) recapitulated that "*there are just zero standards*" for relocation modus operandi, manner, evaluation of outcomes, etc. Further, institutions themselves do not follow if information, which they provided to the other institution, was reflected and actions were made to compensate or minimize negative outcomes:

> "*we are not chasing other partners in government*" (1512-JK-7, 2015).

Furthermore, as 1512-JK-6 (2015); 1512-JK-7 (2015) revealed there is a constant conflict between governmental institutions and it is visible in the water management

sector, which is scattered among diverse institutions. In the discussion about water sector, it could be boosted by the involvement of NGOs, yet, they are regarded sarcastically (1512-JK-3, 2015).

Public participation requires the two-way dialogue, yet in the Ciliwung and Jakarta case, the experts revealed that clear reflection on the implemented measures and follow up is missing (1512-JK-9, 2015).

> *"what is happening here [auth. Jakarta], is top-down. The people almost cannot deliver*
> *their opinion to the major or to the president. Mostly, if an opinion is shared just among*
> *several people, not the majority". (1512-JK-9, 2015)*

That hinders the next implementation of public participation measures (1512-JK-9, 2015). One-sidedness has negative impacts on trust in government and their decisions. Usually, problems are defined by governmental institutions. Afterwards, the private sector could propose special ideas. Nevertheless, local initiatives, especially from local communities, are very rare (1512-JK-4, 2015). Local people do not have a say where they will be relocated or determine an amount of compensation (1512-JK-1, 2015). Furthermore, 1512-JK-12 (2015) highlighted that non-Jakarta citizens cannot access the same government support for relocation.

Additionally, there is a cluster of constraints related to the actions stemming from the attitudes and actions in society. The best-known example of this cluster is NIMBY. There are a vigorous discussion and fierce opposition about the project outcomes if they perturb the interests of the influential people. Especially, noticeable NIMBY is during the relocation (1512-JK-11, 2015). Yet, as 1512-JK-10 (2015) noticed that local people rarely participate in community gatherings and miss information, because people do not expect that government or project developers would include wishes of the delegate from the area.

Furthermore, the oblivescence of traditions or diluting them in the ways then they cease to exist. Therefore, traditions like *gotong royong* have to be adapted for the new situation and transformed into something suitable for the urban environment or it will stop being applicable. Therefore, public participation measures could be hindered by the actual situation (1512-JK-1, 2015; 1512-JK-8, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015).

Seriously crippling impact on the alteration of social situation during relocation is consequent to the traditional living style (1512-JK-1, 2015; 1512-JK-2, 2015). Resultantly, moving people from horizontal to vertical living style disarranges existing communities (1512-JK-1, 2015). Additionally,

> *"people are not used to live in high-raised buildings" (1512-JK-7, 2015).*

1512-JK-1 (2015) listed several negative sides of relocation, such as neighbourhoods change, the community is lost, no personal connections, too poor to stay in relocation place.

Any discussion amongst local people is hindered by negative perspective about each other. Illegal or non-Jakarta people usually are regarded as worse and blamed for the polluted environment and other problems in the city "*they do not care about river*", they "*throw garbage everywhere*" (1512-JK-3, 2015), "*discharge effluent straight to the river*" (1512-JK-1, 2015). This is not the basis for debate about shared area or issues.

Lastly, some conflict rises due to the position of the expert. 1512-JK-5 (2015) alluded the dichotomy between being a governmental official responsible for the water management and a being citizen. Therefore, public participation could be hindered by government actions (misleading society, providing disarranged information, block local initiatives, etc.), processes in society (lack of education, fatigue, mistrust of the leaders and governmental decisions, etc.) and personal opinions and believes (mistrust, lack of interest in the processes in society and changes in the close environment, negativism, etc.).

4.4.3.5 Influence of public participation on the river development

The influence of public participation to the development projects could be very versatile from society providing the principal ideas for the development route, to the silent acceptance what is lowered from the government or the private sector. In the Ciliwung river case, public participation is not a widely applied tool to generate ideas or collect background information. This process left quite a minimal imprint on the river development. The lack of possibilities to execute any results from public participation is visible in entire river management.

The Ciliwung river caused remarkable discussions and fascinating initiatives in and amongst local communities. Nevertheless, interviewees exposed the existing fatigue in the government as well as the ignorance to any proposals rising from grassroots. Yet, 1512-JK-2 (2015); 1512-JK-9 (2015) shared that he constantly pursuing the possibilities to find some support for the economic development in his community. The member from other community shared his struggle to advocate for the environmental protection and preservation. Both persons claimed that the best support, is a support from international organizations or NGOs, rarely, they expect the help to come from local institutions or governmental agencies (1512-JK-2, 2015; 1512-JK-9, 2015).

Respondents acknowledged that even though communities are active but rarely influential.

"Could they (illegal citizens) contribute? Yes!" [auth. but some conditions must be followed:] "if we have a good communication and diplomacy between government and citizens" (1512-JK-3, 2015).

1512-JK-1 (2015) describes relocation in Jakarta as the successful project. But he notices that changes of living conditions "*from horizontal to vertical building*" cause loss of relationship between people ("*people like to chit-chat, but after relocation, this is not possible*"). The same thing was expressed by 1512-JK-7 (2015), who said that "*people are not used to live in high-raised buildings*", however it is a safer place and a better "*living conditions*" and "*environment*".

The interviewees implied that during the *normalisasi* Ciliwung public participation is not enforced and applied or quite minimal. As it was discussed above a lot of issues were emerged in the relocation part of the project. Public participation could minimize the negative outcomes and pessimistic perspectives, yet, the government of Jakarta do not always consider that public participation could strengthen the Ciliwung development (1512-JK-3, 2015; 1512-JK-7, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015). Despite that relocation, the idea was "*in the air*" for five years, up to 12 years back, but it gets line in the budget just very recently, therefore, many people did not do any preparation actions (Anonymous-JK-2, 2015).

The government officials argued that information was provided for society (1512-JK-5, 2015; 1512-JK-7, 2015). Nevertheless, just provide information is not enough. Further, 1512-JK-12 (2015) make a pitch that current[23] government tries to "*wake-up*" society. *Normalisasi* Ciliwung project could be a good place to develop public participation measures and observe the results. Yet, till now society barely informed and involved in the decision-making process (1512-JK-11, 2015), consequently, lay people can not influence any decisions in the *normalisasi* Ciliwung (1512-JK-5, 2015).

Even though the river must be protected (1512-JK-7, 2015), yet, how to reach this goal and definition of environmental protection is determinate by the government and local citizens are left outside. Some of the interviewees questioned if the involvement of society in the decision-making process would have any and/or positive input for the river development in Jakarta or for entire Indonesia (1512-JK-3, 2015; 1512-JK-5, 2015; 1512-JK-6, 2015; 1512-JK-7, 2015; 1512-JK-11, 2015).

1512-JK-6 (2015) revealed that small initiatives could change a big picture. The interviewee shared that in her/his own life he/she applies diverse measures to improve the close environment and encourages others to do the same (1512-JK-6, 2015). Yet, this is not a customary practice amongst interviewees. Moreover, the

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[23] At the time of interview.

considerable role is delegated to the community leaders to motivate people to express (1512-JK-7, 2015). Therefore, the developers of the Ciliwung river or Jakarta could use that existing framework, yet, it is not employed.

Additionally, 1512-JK-4 (2015) argued that monetary incentives could help to motivate people to participate in community gatherings, forums or discussions. The similar assistance and boost should be provided for local companies (1512-JK-4, 2015). Yet, none of the other interviewees has argued about the importance of monetary incentives. Consequently, the addition of a new budget line for the incentives, which would be directly distributed to participants in the decision-making process, is not foreseen in the near future.

Therefore, during interviews interviewees highlighted the linkage between poverty, illegal citizens and deteriorated environmental quality along with poor urban aesthetics. Hitherto, illegal citizens are regarded as a cause of a wide range of problems in Jakarta. Additionally, people, who protest against relocation, were called "*wild*" by governmental officials (Anonymous-JK-2, 2015).

Anonymous-JK-2 (2015) sums up all changes by the river:

> *"there are just so many questions about all this big project. A lot of people are being rehabitated, a lot of people's lives are changed, impacted negatively for the project which is not even sure benefit for public good. But people just agree because they don't want to go against the government. […] It is just people's mentality. So people just sacrifice for the greater good of the city. […] There is a plan, so people just ask the government pay what was promised." (Anonymous-JK-2, 2015)*

Due to ongoing the Ciliwung river management several decisions, which robustly perturb local communities and people, had been taken. The relocation frequently looks more like eviction. People and communities, which were/are facing the relocation, did not have any possibility of active participation. Moreover, the fairness and decent dissemination of vital information are missing in every step of this process (Anonymous-JK-1, 2015). The relocation rarely alters the lives of middle-class or higher income people. Usually, it adversely perturbs the existence of the illegal citizens of Jakarta (Anonymous-JK-1, 2015).

4.4.3.6 Future expectations by interviewees

Recent predictions and modelling studies about future changes in the Ciliwung river, unfortunately, do not give much hope. In one voice they state that situation will deteriorate, especially if actions in urban planning and governance would not happen (Neolaka, 2013; Remondi et al., 2016; Suryadi et al., 2015; van Voorst, 2016). Similar expectations appeared in discussions with local experts (1512-JK-4, 2015; 1512-JK-6, 2015; 1512-JK-7, 2015; 1512-JK-9, 2015). They shared their concern towards uncertain future, governmental officials expressed their helplessness noticeably influence the processes of river development. Non-experts or

spokespersons of the private sector believed that everything is in the hands of government, resultantly, they are waiting for the guidance from the government.

Furthermore, 1512-JK-3 (2015) indicated the importance of the emotional side of the urban development. Interviewee offered that could be the direction of the future development.

> *"We must have more sense of belonging. We should love the city. We should help the city to become better than before" (1512-JK-3, 2015)*

Additionally, 1512-JK-3 (2015) hoped that project will go on smoothly and be fruitful for all citizens. Similar assumptions were revealed during the discussion with 1512-JK-2 (2015); 1512-JK-6 (2015); 1512-JK-10 (2015); 1512-JK-12 (2015).

1512-JK-4 (2015) wishes for the future circled around the role of the private sector and changes regarding that sector. Interviewee expected that companies would be pushed towards more environmentally and socially orientated business models. Additionally, in the future, all projects will pass through vigorous environmental impact assessment procedures. Markedly, the private sector will learn how to work together with communities (1512-JK-4, 2015).

Several interviewees expect the even more strengthened influence of social media (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-7, 2015; 1512-JK-8, 2015; 1512-JK-9, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015). There are few positive predictions that will cause closer communication between various stakeholders (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-3, 2015; 1512-JK-7, 2015; 1512-JK-8, 2015; 1512-JK-12, 2015). Some even now could be detected the positive changes towards that direction, governmental officials could be reached by social media platforms (1512-JK-9, 2015).

Yet, just a few interviewees have shared some apprehensions that are directly related to social issues, especially public involvement, awareness, etc. Society will become more aware and more active (1512-JK-4, 2015). 1512-JK-11 (2015) emphasized on the role of education and its importance. Additionally, the expectation that education will be the trigger for the actions lead towards the better future is very vivid. It goes hand in hand with belief that it is mandatory to focus on young generation (1512-JK-3, 2015; 1512-JK-8, 2015; 1512-JK-11, 2015).

Additionally, one substantial forethought about predicting the future was shared by 1512-JK-9 (2015). The interviewee underlined that the existing inconsistency of the governmental decisions created uncertainty and shades people's hopes for the better future. Governmental visions and development goals regularly change after every new election (1512-JK-9, 2015). Furthermore, several of interviewees revealed the all-hindering corruption. Yet, 1512-JK-11 (2015) underlined that public participation will help to conquer the corruption itself. Consequently, despite various impediments, all experts anticipated for the better future.

Additionally, the principal expectation is related to education. Also, It is regarded as a progressive trigger for positive changes. 1512-JK-6 (2015) shared the opinion that mindset change is crucial for the beneficial changes in the future, though the key to that is education. Education could contribute to form the new overview and perception of nature preservation and awareness (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015). Meanwhile, education of society is closely related with openly sharing information with society or amongst people (1512-JK-1, 2015; 1512-JK-3, 2015; 1512-JK-8, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015). In daily life informed society could decide on actions that lead to nature preservation, social enhancement and promotion. These ideas go hand in hand with 1512-JK-6 (2015) belief that small decentralized water conservation and preservation measures could change the big picture of water management in whole Indonesia.

Therefore, the primary future changes regard the unyielding focus on young generation and their involvement in arranging plans for the development. Further, the future expectation is closely related to education as well as the hopes that the sense of belonging and social ownership will raise up. Last but not least, interviewees voiced optimism that rise of the public participation will conquer the corruption and logrolling in the government.

4.5 Summary comparison of outcomes from qualitative interviews

All three case studies along with sub-case studies provide astute and sensible insights into the situation with the development of the Mekong, Klang and Ciliwung rivers. Interviewees shared experiences from their job and studies as well as personal realities and wisdom. Several categories derive out of this disclosure of the analysis of qualitative interviews.

Firstly, the importance of lay people' involvement may not always correlate with project results themselves, although involvement of people steadily uncovers the perception of the project, its outcomes and support for favourable ones. Citizens of the cities in the case study areas regard the river development as a versatile long-term project, which not always have a precise begging and end, comprehensible process, well-defined goal, determined partners and stakeholders. Similarly, public participation is habitually regarded simplified and elementarily. As easy to predict, understanding of public participation shared by interviewees are scattered in a wide spectrum of the Arnstein ladder (Arnstein, 1969).
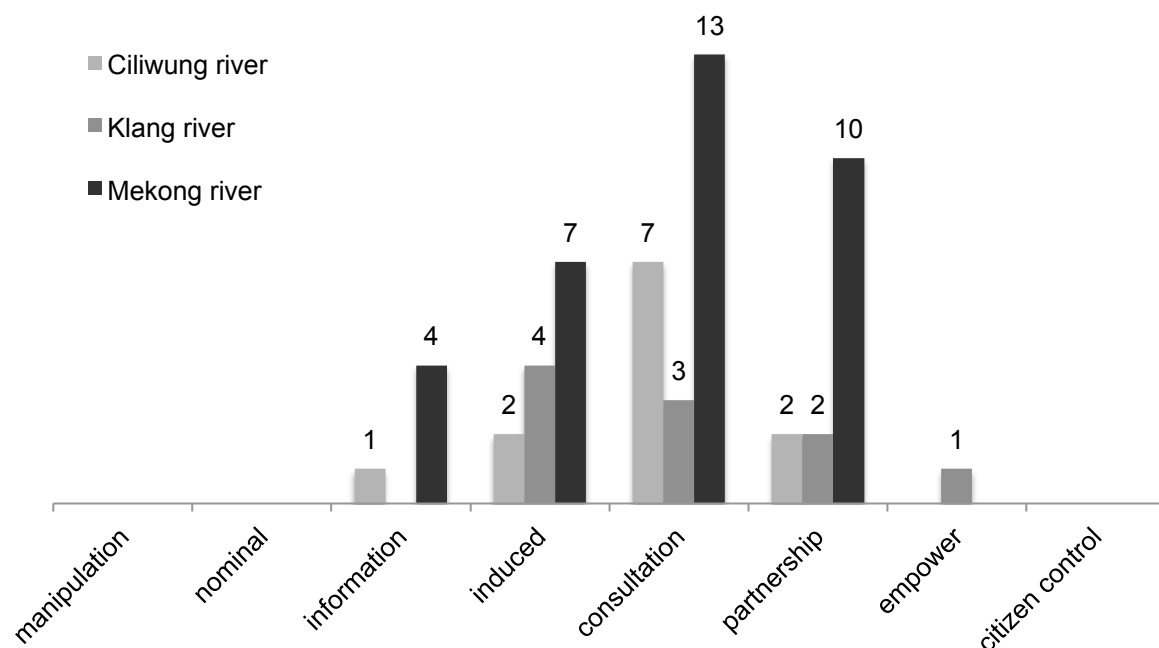
Figure 4-5. The diversity of understanding of public participation (by Arnstein's ladder approach).

Generally in the Mekong and Klang rivers' case studies experts referred public participation as consultation, while in the Ciliwung case study public participation is likely to be comprehended as an induced rug on Arnstein's (1969) ladder. Secondly, the development in the entire region is mightily influenced by the Western world and current ideas. Yet, the researchers doubt this application more and more, few even start to criticize it. Furthermore, there is the surge of the promotion to arrange the development, which permanently deviated because of local traditions and background situation (Coenen, 2009; Drazkiewicz et al., 2015; Leino & Laine, 2012; Sobral et al., 2017). Despite that many researchers pointing towards immense influence from Western culture and life style (Taylor, 2012), none of the interviewees in the Ciliwung case study had negative considerations about westernisation during the project. In the Mekong river development is based on international negotiation, yet, here also experts from Europe, Australia or Northern America are glorified. Kuala Lumpur is a very dynamic and versatile city and local experts here are constantly bombarded by ideas from other parts of the World. Nevertheless, here due to the existing background, some local traditions are bouncier and more resilient than in other case studies. Interviewees in the Klang case study were more optimistic about the river development and its future.

Thirdly, during the urbanisation of the area, a lot of open green area is converted into concrete covered one. Such change permanently impacts the natural hydrological systems, which could increase flood (Booth, 1991; Booth & Bledsoe, 2009; Foley et al., 2005; Li et al., 2015). Jakarta and Kuala Lumpur could be as examples of these changes. The cities and towns in the Mekong delta are existing proofs how changes far away could considerably influence the lives of people and engineering structures.

In the areas of the case studies urbanization is rapid, draconian and uncompromising, in every case study every interviewee had indicated issues related with urban sprawl, such as pollution, including rivers, traffic, drinking water over-extraction, or general deteriorating of the environment, etc.

Fourth, Li et al. (2015) revealed that "*a major challenge most megacities face is fragmented institutional governance structures*". Interviewees in all three case studies acknowledged the importance of the institutional framework for the success of public participation. Interviewees in the Mekong case study exposed the role and expectations from the MRC, while Malaysians and Indonesians indicated challenges in the national or local institutions and laws. Nevertheless, the multilayeredness of governmental structure by default creates fragmentation and possibility for malfunctioning (Li et al., 2015; Richardson, 1989; Sorensen, 2011). According to this concept, the interviewees from the Mekong river case study should complain the most.

Fifth, all three case studies uncover the necessity to bridle the corruption in national governmental structures. According to the interviewees, corruption creates mistrust, which discourages any partnership between society and government. Corruption was one of the most mentioned criteria that hinder public participation in all three case studies. Leino & Laine (2012) demonstrated that in the decision-making process the most important are "*a procedure, authority, right and representativity*", yet, corruption degrades all four of them. Consequently, the successful fight against corruption would improve public participation along with other issues in case studies.

Sixth, in Indonesia decentralization is getting rooted to a greater extent, as Silver (2007) phrased it decentralization is already in the fabric of Jakarta city (city of *kampungs*). A similar arrangement is in the Kuala Lumpur, here the old historic districts are stemming from a historical background of the city. Nevertheless, quite a lot of that is not surpassed the harsh forces of urbanization and engineering development. The fragmentation of the urban fabric was addressed in the Ciliwung and Klang case studies. In the Mekong case study, the opposite ideas were more frequent during the discussions with local experts. Here reality requires the overarching agreement amongst the countries and honest and scrupulous fulfilment of obligations.

Seventh, public participation is a very versatile and divergent process that is why it is extremely challenging to find one approach to evaluate it and to orchestrate it for the most beneficial denouements (Junker et al., 2007). Consequently, interviewees in every case study described public participation according to their own perspective and previous experiences. Nevertheless, the importance of honourable, generous and unimpeachable sharing of information with society is the first necessity for public participation affirmed by the interviewees. Additionally, the topic of educating society circled in the discussions with interviewees of all three case studies.

Eight, in all three case studies part or society had been or is being relocated and/or evicted. The roots of resettlement in Malaysia are stemming from post-1970 policy changes. Some of that yielded very beneficial outcomes from Selangor Zero Squatters Programme by 2005 (Keuk et al., 2016), others caused harsh segregation like in Kuala Lumpur (in order to reach the goal that there were no slums in the city; many poor people were mowed to social housing). So, there is no urgency to have any additional massive relocation during the RoL project. None of the interviewees talked about relocation or eviction as a part of river development. On the contrarily, in the Mekong and Ciliwung case studies, the interviewees repeatedly acknowledged relocation and/or eviction and its role and consequences in the community life or society in general. Although several of interviewees were directly involved in the relocation, they did not share many insightful or thoroughly scrutinized acumens about local people, more like simplistic and purely rational statements.

Ninth, public participation and culture are co-dependent on one another (Enserink et al., 2007; van Voorst, 2016). Enserink et al. (2007) disclosed: "*national, local, and professional cultures and their formal institutions co-determine the level and methods of public participation*". Directly or indirectly every interviewee uncovered the importance of culture to public participation and river development. Some implied that participation is in the blood of Indonesians, others called attention to how one-party rule influence the decision-making process at the grassroots level, and so on and on. So cultural characteristics play important, yet, the poorly understood role in public participation, decision-making process and in general, governance. Additionally, in the future, the evolving of values will influence the public participation and will generate new forms of it, which will better suit the situation and expectations (Sivapalan & Blöschl, 2015). Yet, rarely, interviewees acknowledged that topic during the discussions about the future ambitions and intentions along with forthcoming prospects and plans, which now are being refined.

Tenth, another essential point, which was repeatedly risen by interviewees, is the role of the social media. There were versatile discussions about it going on in academia (Berman, 2016; Nabatchi & Leighninger, 2015; Nabatchi & Mergel, 2010; Zavattaro & Sementelli, 2014) as well as during case study interviews. Prime tendency describes social media as a positive and empowering tool for society to share information and have a discussion as well as express their opinion and pass it to upper government levels. Rarely, interviewees had some concerns, generally, they recounted that social media is for the younger generation, and older along with poor and uneducated are left outside. Yet, in the cities or megacities that is less of an issue compared with rural and remote areas.

Last but not least, the stance of the government is truly significant. Padawangi (2016) offered an example of bottom-up initiatives carried out by local activists to encourage urban gardening and specifically to prove to government officials the necessity of regulations regarding urban gardening. Nevertheless, these successful local initiatives did not bear substantial consequences and did not convince policy

makers to follow up and acquire these ideas to the decision-making level (Padawangi, 2016). As the Ciliwung case study revealed the activeness of communities not always overcome the fatigue and ignorance in the government. Yet, from the examples that were shared during interviews, the ignorance from various stakeholder groups is quite solid and tenacious. In the Klang river development, the involvement of government is very intense, although the wish to expound Malaysia as a democratic country pushes forward the implementation of public participation measures during the project development. The Mekong case study is more versatile. There are very supportive governmental approaches mixed with undisputable top-down arrangements.

All in all, interviews in all three case studies exposed the importance of people's involvement in public participation and understanding of the process of public participation. Usually, people, who are involved, perceived public participation more open to society and more involving of local people. However, rarely public participation was described higher than the partnership (by the Arnstein's (1969) ladder of public participation). Furthermore, the expanded use of social media transforms the traditional measures of public participation. Meanwhile, the versatile societies in the region create the astonishing realm of archaic local practices and modern use of Internet and social media. The urban background strengthens and accelerates these processes.

5 Discussion

This chapter summarizes and compares the findings from the literature review and all three case studies research. There is a huge pile of books and journals, which present knowledge of scientists and experts about the newest achievements in the fields of water governance, river management, water politics and diplomacy, sustainable management, social sciences, etc. However, is this knowledge exerted, exhausted and practised in the real time and place? Outcomes of the case studies show despite that an ample amount of knowledge is missing in the daily routines of local people, and sometimes government officials, the void is often compensated by local traditions and practices. In this final chapter, the merge of all previous researches are presented by comparing and contradicting academic knowledge with practices and traditions at the grassroots level.

5.1 Comparison between findings in the literature, legal documents and interviews of case studies

The literature review recaps a material from the water governance approaches to the practices of river restoration with the perspective of public participation. In the decision-making process public participation could significantly contribute and is usually recognized as an important affair in the democratic society (1512-JK-12, 2015; 1601-MD-CT-12, 2016; 1604-MR-PP-27, 2016; Coenen, 2009; Colvin et al., 2014; Connors & McDonald, 2010; Fischer, 2009; Hopwood et al., 2005; Jahn et al., 2012; Jenkins & Forsyth, 2009; Kellon & Arvai, 2011; Lee, 2006; Nabatchi & Leighninger, 2015; Popa et al., 2015; Törnquist, 2013; Zaccai, 2012). The most critical discordances and the most pronounced similarities between academic knowledge and outcomes of case studies are presented as juxtapositions below.

5.1.1 Juxtaposition No 1 – the understanding of concepts

In every conversation or publication, the words and their meanings are crucial. It is essential for mutual comprehension to agree on definitions of the keywords, otherwise, the understanding is impossible as well as communication of the essence. That is why the part of this research is dedicated to discussing the definitions and comprehension of public participation, river development and their concepts. The research based on scholar publications, the keywords usually have some kind of definition or there is an explanation about the area of interest, the focus of research or etc. It helps a reader to navigate through the text and understand the findings. Oppositely, in the interviews interviewer needed to ask questions to know the understanding of the keywords of the discussion. That helped to gain united and unified competencies and aptitudes.

The most important keywords in this research are public participation and river management. In the literature review part, public participation is mostly based on the Arnstein's (1969) description. Yet, often in the later scientific literature, the first two

steps (manipulation and nominal) are excluded, but upper steps recognize the principles as in the Arnstein's (1969) work. The principal differences in the definitions of public participation appear due to the interest area or the field of research. So for example, the scholar, who focuses on governance and democratic processes and structures, usually, regards public participation as a process of democracy or keystone for democracy, etc. (Bherer & Breux, 2012; Jenkins & Forsyth, 2009; Kidney, 2002; Newman et al., 2004; Nzeadibe et al., 2015; Rydin & Pennington, 2000). On the contrary, other scholars concentrate on the practical side of public participation, and state that it is a decision-making tool (Messner et al., 2006; Pandey & Wright, 2006; Rouillard et al., 2014; Taylor, 2007; van Ast & Gerrits, 2017; Wesselink et al., 2011; Wiedemann & Femers, 1993). Yet, for others, it is an opportunity for lay people to express opinions and wishes (Martin, 2009; Pahl-Wostl et al., 2011; Rydin & Pennington, 2000; Symons, 2013; Wojcieszak, 2017). Researchers from social psychology or similar field of expertize would point out that participation is the value to gain control over their own lives and pursue an active role in issues that affect their communities (Gruman et al., 2017; Keller, 2003; Lafreniere et al., 2017). The best way to sum up that, it is to point out that some researchers find out almost one hundred definitions (Rowe & Frewer, 2005), yet, till now the consensus is not reached and one uniformed definition for public participation is yet to be discovered. In the case studies, the first part of interviews focuses to uncover the interviewee's understanding of the public participation. In the Figure 4-5, the diversity of definitions of public participation is presented. Usually, interviewees focused on the practical side of the public participation, they shared actions and measures of public participation, but not so much of the principles of particular public participation approach. In sum, public participation is perceived as a tool to develop[24] or hinder[25] the project, to know the needs of society[26] or to predict the possible flaws

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[24] According to 1512-JK-1 (2015); 1512-JK-2 (2015); 1512-JK-10 (2015); 1512-JK-12 (2015); 1601-MD-BT-16 (2016); 1601-MD-CT-11 (2016); 1601-MD-CT-12 (2016); 1601-MD-CT-13 (2016); 1601-MD-CT-14 (2016); 1601-MD-HCM-8 (2016); 1602-MR-VNT-22 (2016); 1603-KL-2 (2016); 1603-KL-3 (2016); 1603-KL-8 (2016); 1603-KL-10 (2016); 1604-MR-PP-23 (2016); 1604-MR-PP-26 (2016); 1604-MR-PP-28 (2016); 1604-MR-PP-29 (2016); 1604-MR-PP-33 (2016); 1604-MR-PP-34 (2016)

[25] According to 1512-JK-3 (2015); 1512-JK-4 (2015); 1602-MR-VNT-17 (2016); 1602-MR-VNT-18 (2016); 1602-MR-VNT-20 (2016); 1603-KL-1 (2016); 1603-KL-4 (2016); 1603-KL-5 (2016); 1603-KL-7 (2016); 1604-MR-PP-31 (2016)

[26] According to 1601-MD-BT-16 (2016); 1601-MD-CT-11 (2016); 1601-MD-CT-12 (2016); 1601-MD-CT-13 (2016); 1601-MD-CT-14 (2016); 1601-MD-HCM-2 (2015); 1602-MR-VNT-21 (2016); 1602-MR-VNT-22 (2016); 1603-KL-2 (2016); 1603-KL-3 (2016); 1603-KL-8 (2016); 1603-KL-9 (2016); 1603-KL-10 (2016); 1604-MR-PP-28 (2016); 1604-MR-PP-29 (2016); 1604-MR-PP-30 (2016); 1604-MR-PP-33 (2016); 1604-MR-PP-34 (2016)

and deficiencies during project implementation[27].

Although the involvement of society in the decision-making as the concept changed during historical circumstances, these changes left imprint to todays understanding of public participation (Choi, 2011; Coenen, 2009; Keller, 2003; Lane, 2005; Mercea, 2016; Penna, 2010; Renn et al., 1995). The impact of religion and dominant social values as well as leading political regime left their impacts on today's public participation in all three case studies. Additionally, in every case, study the leftovers from colonialism and traditions brought by colonizers are stemming from the past and influence today's decisions (Gainsbor, 2008). However, rarely experts during interviews acknowledged such circumstances, as it was mentioned above they highlighted the practical side of public participation.

In the legal documents, public participation is presented as a concept and requirement to organize the process of public participation in trustworthy, credible and meticulous manner. So that provides the endless possibilities for experts in the application and implementation process. Yet, it also sets the bridle that process would be inclusive, representative and accurate. Nonetheless, the lack of criteria to evaluate the process and outcomes of public participation could generate contradictory results in the future.

5.1.2 Juxtaposition No 2 – starting point of public participation

In the literature, the best starting point of public participation is as early as possible (Bernhardt et al., 2007; Coenen, 2009; Jenkins & Forsyth, 2009). It should provide enough time for people to learn about upcoming changes and prepare for them as well as accept them and their predictable outcomes (Coenen, 2009; Gartland, 2016; Heldt et al., 2016). Early involvement was strongly supported by interviewees from all case studies, especially, by ones, who are actively involved in organizing some public participation measures or are involved in doing so (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-5, 2015; 1512-JK-6, 2015; 1512-JK-7, 2015; 1512-JK-8, 2015; 1512-JK-9, 2015; 1512-JK-10, 2015; 1512-JK-12, 2015; 1601-MD-BT-16, 2016; 1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-13, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-1, 2015; 1601-MD-HCM-6, 2016; 1601-MD-HCM-8, 2016; 1601-MD-HCM-10, 2016; 1602-MR-VNT-19, 2016; 1602-MR-VNT-20, 2016; 1602-MR-VNT-21, 2016; 1602-MR-VNT-22, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-6, 2016; 1603-KL-8, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-30, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016; Gartland, 2016). An existing atmosphere in the society is

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[27] According to 1512-JK-7 (2015); 1512-JK-11 (2015); 1601-MD-BT-16 (2016); 1601-MD-HCM-6 (2016); 1602-MR-VNT-17 (2016); 1602-MR-VNT-18 (2016); 1602-MR-VNT-20 (2016); 1603-KL-4 (2016); 1603-KL-5 (2016); 1603-KL-7 (2016); 1604-MR-PP-30 (2016)

based on the previous corruption scandals, the experience of neglected need and wishes of society steadily transform the development of all three rivers.

Although public participation, in theory, should bring about favourable outcomes, it urges people to question every decision, which concerns the project. If local people are involved just at the end of the project without real possibility for negotiation or discussion, they feel beguiled and are discouraged to participate in any other following project. For example, relocation is quite a new concept in Indonesia, as well as practices of its implementation. Additionally, the perception of social housing is also new, and people are quite suspicious about it (1512-JK-1, 2015; 1512-JK-8, 2015; 1512-JK-10, 2015; 1512-JK-12, 2015; Anonymous-JK-1, 2015; Anonymous-JK-2, 2015). Moreover, relocated people will not own the new apartment, so after relocation, they easily could lose their living quarters (1512-JK-1, 2015; 1512-JK-10, 2015; Anonymous-JK-1, 2015). These projects required additional care and caution as well as sensitivity, yet, as Anonymous-JK-2 (2015) observed, the lack of consistency in the governmental actions, insensitivity of government officials is staggering. In practice, public participation (as the measure to negotiate wishes, concerns and perspectives of local communities and communicate the outcomes) does not exist during relocation in Jakarta (1512-JK-1, 2015; 1512-JK-10, 2015; Anonymous-JK-2, 2015).

In the Mekong basin relocation projects are mainly based in the rural areas. Yet, few relocation examples in the cities or towns exist. In Phnom Penh in few neighbourhoods, people are waiting to be relocated for several years; they were informed that this would happen, but not precisely when it would happen or how (Budryte et al., 2017). In Can Tho city (the Mekong delta, Viet Nam) relocation had already passed almost a decade ago (1601-MD-BT-16, 2016; 1601-MD-CT-14, 2016; Anonymous-VT-1, 2016; Budryte et al., 2017). These experiences proved the importance of communication with society and the necessity to know the needs and expectations of society, as well as the importance of background situation (Budryte et al., 2017). Therefore, in one neighbourhood in Can Tho, local people are content with the outcome of the development – poor neighbours were relocated, nice park by the river channels was established, water quality in the channel improved, additionally, it caused the blooming of small local economies. Yet, in the other neighbourhood, which is dominated by single-family houses with backyards and gardens, a park on the river bank is unused for any recreational or leisure activities. It is a surprizing architectural decision, especially, then on the shore there are old and neglected ships as well as still used docking points. However, in both areas people do not particularly complain about the changes and do not hold the grudge about governmental actions or told about loses due to the development project (Anonymous-VT-4, 2016).

In the Ciliwung case study, situation is different, people do complain more about relocation, yet, sincerely applaud the river development in general (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-3, 2015; 1512-JK-5, 2015; 1512-JK-7, 2015; 1512-JK-8, 2015; 1512-JK-9, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015). Critics for Ciliwung

river changes could be grouped in: (1) short-term effect on flooding problem, (2) lack of strategic perspective on existing problems and choice for solutions (e.g. there is no allocated funds for infrastructure maintenance), (3) no prior research about outcomes (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-5, 2015; 1512-JK-7, 2015; 1512-JK-8, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015; Anonymous-JK-2, 2015). This case study is the best to show an inconsistency of governmental actions. Here, the timeline of the relocation project or river restoration, including the public participation (mainly, an information step based on Arnstein (1969) approach) part, is as unpredictable as it could be. Such situation raises the mistrust of government, negative attitudes, instability in society, and general scepticism about the development.

According to the majority of interviews, the most common mistake done by developers is belated public participation. Society needs time to grow up to the project level. As 1603-KL-10 (2016) argued it is crucial to groom the society and to let people shape positive relation with their surroundings, that would establish the ownerships between nature (river) and person. However, the examples show despite that experts are aware of the strengths of early involvement of society rarely they utilize it.

5.1.3 Juxtaposition No 3 – possibilities to participate (two realities)

In the scholar publications public participation, often is lighted as a positive tool to improve the life of the society and create an ownership of an area (Coenen, 2009; Lydon & Garcia, 2015). It also holds a vast range of possibilities for society to get involved in decision-making process. Local people could be attracted by announcements in social media or invited by letters or via oral invitation by community leader or organizers, or, etc. (1512-JK-1, 2015; 1512-JK-9, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015; 1601-MD-CT-11, 2016; 1601-MD-CT-13, 2016; 1601-MD-HCM-2, 2015; 1601-MD-HCM-6, 2016; 1601-MD-HCM-7, 2016; 1601-MD-HCM-10, 2016; 1602-MR-VNT-19, 2016; 1602-MR-VNT-20, 2016; 1602-MR-VNT-21, 2016; 1602-MR-VNT-22, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-4, 2016; 1603-KL-5, 2016; 1603-KL-6, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-30, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016; Anonymous-VT-1, 2016; Anonymous-VT-2, 2016; Anonymous-VT-3, 2016; Anonymous-VT-4, 2016; Anonymous-VT-5, 2016; Coenen, 2009). The public participation measures have an even bigger scope. They are from information campaigns till forums or till the full managerial power of local people. This topic was extensively discussed in the 3.2 chapter.

Wojcieszak (2017) started his article with a question: "*What encourages citizens to take an active part in the political process?*" and offered several answers on the basis of previous researchers. According to the researcher they range from individual characteristics (like education, strength/passion of the belief (Ho et al., 2011; Noelle-

Neumann, 1974; Rojas, 2010)) or social factors (like socialization into networks, diverse communication medium, communicative factors, political discussions with friends and family (Eveland & Hively, 2009; Shah et al., 2005; Smith, 1999; Verba et al., 1995)). Additionally, Wojcieszak (2017) find evidence in other theories and researches (Rojas, 2010; Willnat et al., 2002) that minorities are more active in participation. In the three case studies minorities and/or impoverish people were forced to be more active because they were the most distressed and their lives were the most alternated.

In observed practice, i.e. in the case studies, interviewees mentioned that local people are invited two ways. One is by informing people via media (announcement in newspapers, radio shows, etc.), another way is via direct invitation by community leaders. It is applied in all case studies. In Jakarta a community leader is government official position, so people are getting paid to communicate government's ideas with local people. However, in traditional societies, the informal leader is an influential feature (1512-JK-1, 2015; 1512-JK-7, 2015; 1512-JK-9, 2015; 1512-JK-10, 2015). At times, the community could ignore the struggle of official community leader, if unofficial one has a negative opinion about the project or action or is unsatisfied with official community leader (1512-JK-9, 2015). Despite that, the community leaders during interviews shared their struggles and persistence to promote environmental ideas amongst their people (1512-JK-2, 2015; 1512-JK-9, 2015).

In the Mekong basin the practices how to involve local communities in some public participation measures is diverse, depending on the country, yet, similar to the Ciliwung example. However, the major issue with public participation is not how to reach out to local people, but the struggle against a fatigue and disappointment along with a negative opinion and towards public participation and government (1601-MD-BT-16, 2016; 1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-13, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-1, 2015; 1601-MD-HCM-6, 2016; 1601-MD-HCM-8, 2016; 1601-MD-HCM-10, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-30, 2016; 1604-MR-PP-32, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016). Often local people acknowledged that they did not feel that they would be heard (1601-MD-CT-12, 2016; 1601-MD-HCM-1, 2015; 1601-MD-HCM-7, 2016; 1602-MR-VNT-17, 2016; 1602-MR-VNT-18, 2016; 1602-MR-VNT-19, 2016; 1604-MR-PP-32, 2016), despite that the laws, which support involvement of society, and institutions, where local people can express their opinions and complains, do exist.

In interviewees' opinion, the Klang case study demonstrates very developed and refined framework how to get people involved and encourage expressing their ideas. Furthermore, in Kuala Lumpur, the society about the RoL project was informed by information stands in the most visited places, bus stations, shopping centres. Additionally, special internet pages were created with an online survey, which influences the final project outcome, was established (1603-KL-4, 2016; 1603-KL-7,

2016). Experts in this case study perceive public participation during the river development the most positive in comparison with other two case studies.

Maynard (2013) revealed that developers (private companies and/or governmental institutions) provide just part of all project information. The selected information is determined if it is relevant, in developer's opinion, to the stakeholder (Maynard, 2013). During interviews this experience was never directly acknowledged, however, experts admitted that information outlets (information boards, news articles, etc.) present positive side of the project as well as positive outcomes (1512-JK-5, 2015; 1512-JK-7, 2015; 1512-JK-8, 2015; 1512-JK-9, 2015; 1601-MD-HCM-9, 2016; 1601-MD-HCM-10, 2016; 1602-MR-VNT-20, 2016; 1602-MR-VNT-21, 2016; 1602-MR-VNT-22, 2016; 1603-KL-4, 2016; 1603-KL-5, 2016; 1603-KL-6, 2016; 1603-KL-7, 2016).

Wojcieszak (2017) with reference to Salmon & Kline (1983) acknowledges that comparative research of "*perceptions and reality has been scarce and has produced inconsistent results*". A similar problem was observed during interviews. Here the dichotomy between the reality established in the legal documents and institutional framework and the reality existing at the grassroots level is quite contrasting. On one hand, there are legal documents with the picture of democratic participation, the set of principles of participatory water governance and inclusive decision-making process. On another hand, at the grassroots level, there is a conflict of the fatigue and mistrust towards government's actions and traditional community life, which involve the majority of the community in decision-making process already. Furthermore, participatory measures are rarely used alone (Lynam et al., 2007) therefore the broader picture is always required and conflicting circumstances and positions should be anticipated and attended.

5.1.4 Juxtaposition No 4 – public participation is a pacifier or a troublemaker

Public participation as a tool to extract the inner needs and wishes of society also creates a notion that it helps to negotiate quite negative measures with local communities. However, the experts sometimes inside joke that the best way to hinder the project implementation is to do public participation (Beunderman, 2017). Such situation raises a question if a significant part of knowledge is missing or experts do not implement public participation measures correctly. The critical observations by experts themselves point out that it is a little bit of both (1512-JK-2, 2015; 1512-JK-10, 2015; 1601-MD-CT-11, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-10, 2016; 1604-MR-PP-33, 2016; Anonymous-JK-2, 2015).

Moreover, during interviews, a new contradicting observation rose. Advanced public participation measures are often used as an expedient to calm society. Relocation and eviction are a very sensitive topic and must be dealt with extreme care and caution, yet, the practice often proofs different. In the Mekong and Ciliwung case studies there were several relocation/eviction actions happening around the time of

interviews, showed that public participation is used to inform local people about the government's will and the future of the urban development of the neighbourhood or area. Rarely, public participation is applied as a communication tool with communities or as a platform for local people to have a two-sided conversation with government officials and seek for mutual consensus (1512-JK-1, 2015; 1512-JK-5, 2015; 1512-JK-10, 2015; 1601-MD-BT-16, 2016; 1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-14, 2016; 1604-MR-PP-32, 2016; Anonymous-JK-2, 2015). However, all case studies showed that the governmental structure to accommodate such goals is arranged, but seldom applied and put into use.

As Bradley (2010); Douglass et al. (2007); Lydon & Garcia (2015); Nas (2005); Nasongkhla & Sintusingha (2012); Nayati et al. (2002); Said et al. (2013) observed any beautification projects are commonly the ones, which increase gentrification and push away poverty. Furthermore, such projects practically never involve slum people in project design. These people are involved only in the action of relocation or eviction without real choice or influence to the project. Similar observations were pointed by interviewees (1512-JK-2, 2015; 1512-JK-5, 2015; 1512-JK-7, 2015; 1512-JK-8, 2015; 1512-JK-9, 2015; Anonymous-JK-1, 2015; Anonymous-JK-2, 2015). Yet, the share amount of expectations, related to economic growth, including the better living conditions of the poorest citizens, are bonded with River of Life or *normalisasi* Ciliwung projects, which in addition to restoration measures include diverse actions for beautification purposes.

Lynam et al. (2007) pointed out that "*success is not guaranteed by selecting the right tool, but it is excluded by selecting the wrong one*". At grassroots level, public participation measures must be selected cautiously and sensitively to local traditions (Lynam et al., 2007). So, if public participation is used as some kind of extractor of local knowledge, high rate of success and acceptance is unexpected. Nevertheless, the sensitive application could yield the results that include behaviour changes and open sharing of knowledge between the "*insiders*" and "*outsiders*" of the project (Chambers, 1992, 1997; Lynam et al., 2007). Amongst interviewees through all case studies, it is observed that experts, who are directly involved in the application of public participation and present local community are well aware of such information. However, if the interviewee is more familiar with theoretical part of work with communities tend to identify the society as a receiver.

5.1.5 Juxtaposition No 5 – multilayeredness of the participatory process

Public participation could have multiple layers. They usually are determined by the power participants hold. So the stakeholders in the transboundary river basin are representatives of countries' governments, they negotiate about the highest importance of strategic decisions. The process rarely could be called as public participation; nonetheless, the entire society is strongly affected by these decisions. At this level, the significance of river basin organizations is very strong. Yet, the Mukhtarov & Gerlak (2013) research on the requirement for successful work of river

basin organizations, revealed the necessity of greater democratization and "*synergy in the work of translational policy entrepreneurs*" and the process of water governance.

The multilateral participation is followed by the decision-making and formulation of country's strategy. Here particular stakeholders are various institutions, organizations, some of them could be the ones, which represent the society or some particular group of society. The decisions, which are set in strategies, will impact a wide range of people. Here the strategic and planning documents and guidance are prepared.

The most extensive public participation is then it prevails decisions at the local level. In this decision-making process, diverse stakeholders are involved directly. The outcomes will indicate and present the local needs and reflect concerns, however, the application is limited to the local level and in general, influence just miniscule part of all society. At this level, the private sector is involved as the implementer of various technologies and measures. Additionally, here the top-down and bottom-up participatory approaches merge.

In the Mekong region, interviewees were the most aware of the multilevel feature of public participation. That stems from the existing framework for the Mekong basin development (Cooper, 2012; Hirsch, 2012). Here the multilayeredness of participation is the most visible and experienced. Although some attempts to break it are noted in the projects, which are based on the multilateral administrative border (1602-MR-VNT-18, 2016; 1602-MR-VNT-20, 2016; 1602-MR-VNT-21, 2016; 1602-MR-VNT-22, 2016). Additionally, this practice is comparatively limited. Despite that the Klang river crosses administrative borders (Selangor state and Kuala Lumpur), the communication between both administrations is minimal (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-4, 2016; 1603-KL-5, 2016; 1603-KL-6, 2016). Amongst the interviewees of the Ciliwung case study public participation is perceived as a one-way information channel. Necessary information flows down from the government to local people (1512-JK-1, 2015; 1512-JK-5, 2015; 1512-JK-7, 2015; 1512-JK-9, 2015; 1512-JK-10, 2015) and the impression of distinct layers of public participation never surge during the interviews.

5.1.6 Juxtaposition No 6 – government

Sivapalan & Blöschl (2015) revealed that top-down and bottom-up approaches are useful for numerous projects; yet, the use of a combination of both of them is excellent in governance. The top-down approach is excellent for risk assessment in long-term, complex, and with overarching guidance (or necessity to acquire one). Contrary, the bottom-up approach focuses on vulnerabilities and resilience (Sivapalan & Blöschl, 2015). So far the dominant approach in case studies is top-down one. It was acknowledged by all interviewees, however, few pointed out the bottom-up measures as well (1512-JK-10, 2015; 1512-JK-12, 2015; 1601-MD-BT-16,

2016; 1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-13, 2016; 1601-MD-CT-14, 2016; 1602-MR-VNT-19, 2016; 1602-MR-VNT-22, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-6, 2016; 1603-KL-8, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-30, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016; Anonymous-JK-2, 2015; Anonymous-VT-1, 2016).

Steinberg (2007) revealed the performance of government officials in Jakarta is under scrutiny and is criticized constantly. A similar observation was generated by interviewees. Several of them highlighted that they are sharing news regularly on their social media and are actively participating in the discussions on diverse forums online. Some of them could be criticizing government's actions (1512-JK-3, 2015; 1512-JK-10, 2015; 1512-JK-12, 2015). In other case studies such scrutiny from the interviewee side rarely appeared, yet, persons were aware of corruption scandals, shenanigans in the political arena (1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1601-MD-HCM-1, 2015; 1601-MD-HCM-3, 2015; 1601-MD-HCM-7, 2016; 1601-MD-HCM-10, 2016; 1601-MD-HCM-15, 2016; 1602-MR-VNT-17, 2016; 1602-MR-VNT-19, 2016; 1604-MR-PP-23, 2016; 1604-MR-PP-25, 2016).

Government and its institutions are often accused of lack of transparency. This lack forms due to "*insufficient users' commitment, lack of concern, awareness and participation*" (Havekes et al., 2013). The considerations about corruption were shared by interviewees, they prove how fragile is the trust amongst society and government, and how Sisyphean struggle is to build it up again (1512-JK-3, 2015; 1512-JK-8, 2015; 1512-JK-11, 2015; 1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1602-MR-VNT-19, 2016; 1602-MR-VNT-22, 2016; 1603-KL-3, 2016; 1603-KL-10, 2016; 1604-MR-PP-32, 2016; 1604-MR-PP-33, 2016).

In the river development the guiding policies are very significant. However, if policies are unclear, not well framed and the roles of institutions are fragmented across ministries and agencies it hinders entire process (Havekes et al., 2013). Moreover, other authors ascertained that the changes in the adaptive flood risk management required changes in entire water governance – processes, institutions, agreements, etc. (Huitema et al., 2009; Ward et al., 2013). Risk management is influenced by social dynamics as well (van Voorst, 2016). However, in the Klang and Ciliwung case study interviews disclose that even if there are some improvements happening they are rarely coordinated between one another. Furthermore, Silver (2007) shared an observation of his colleague Prof. Djoko Sujarto, of the Bandung Institute of Technology, who said that "*Jakarta's 'planners do not know what public aspirations are in the absence of public hearings'*".

In the Mekong case study, the entire development is complicated by the transboundary issues and the necessity to predict what, how and when other countries are establishing. K. A. Wittfogel (1957) argued that there is a distinct relationship between power and the control of a river (Nikmah, n.d.). The Mekong

river is a significant supporter of this argument. The interviewees from Viet Nam, Cambodia and Lao PDR shared diverse examples what kind of power countries hold against each other by implementing or not some technological measures, infrastructure, etc.

5.1.7 Juxtaposition No 7 – position of academics

It is widely believed that academics should be neutral in presenting and discussing any new inventions. However, in reality, a promotion (open or hidden) exists. During interviews, the people more passionately debated the topics, which were the most relevant to them. Notwithstanding, the interviews seek to grasp the core attitudes of the person, so full neutrality was unexpected. Academicians and experts in the particular field indicated their preferences straightforward along with their arguments for the precise idea.

In the Mekong case study some scientists highlighted that in the Vietnamese scientific journals or in the books for students the issues are discussed as they are, contrarily, for government "*sweeten*" and "*adjusted*" reports are produced (1601-MD-HCM-1, 2015; 1601-MD-HCM-7, 2016; 1601-MD-HCM-10, 2016). Furthermore, the prime tendency of complains usually are about a firm governmental hand upon scientific research (1601-MD-HCM-1, 2015; 1602-MR-VNT-17, 2016; 1602-MR-VNT-18, 2016). In all three sub-case studies, the government's wish to influence the final research result occurs. Laotian academicians revealed that they suffer for lack of financial support. That is why many scientists hold an additional job in the private sector or work as independent consultant in the international projects (1602-MR-VNT-18, 2016; 1602-MR-VNT-19, 2016; 1602-MR-VNT-20, 2016). In Viet Nam the truth could be distorted due to the statements in the political programs (1601-MD-CT-12, 2016; 1601-MD-CT-13, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-1, 2015; 1601-MD-HCM-3, 2015; 1601-MD-HCM-5, 2016; 1601-MD-HCM-7, 2016; 1601-MD-HCM-10, 2016). The Cambodian reality suffers from the insufficient funding and profound impact from international financial aid. Here academicians struggle to cultivate a younger generation of scientists, since historical events in the past significantly minimize the academia (1604-MR-PP-23, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-32, 2016).

In the Ciliwung case study, scientist shared their eagerness to incorporate the newest inventions and ideas (1512-JK-6, 2015). In the Klang river case study, the enthusiasm of colleagues from Jakarta is diluted with more refined attitudes and critics. Yet, none of the scientists has acknowledged that they are very active in creating an educated society by participating community gatherings. Several of academicians stated that they had participated in community meetings if they were representing some new technologies implemented close by (1603-KL-1, 2016; 1603-KL-2, 2016; 1603-KL-6, 2016; 1603-KL-8, 2016).

The interactions between stakeholders and scientists contribute to success in the interdisciplinary research (Renner et al., 2013). These interactions should be based on mutual trust, clear outcomes of participation and most importantly avoid using participation as a tool to alternate of power imbalances and control the project information (Renner et al., 2013). Despite that interviewees through all case studies are aware of such concept, yet, mostly never execute it. In the Klang case study, the situation is a bit better in comparison with other two case studies. Here the IWRM approach is applied for several projects and programmes, therefore, the positive perception about the work with communities is settled and beneficent outcomes are experienced first-hand (1603-KL-1, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-6, 2016; 1603-KL-8, 2016; 1603-KL-10, 2016).

Garmendia & Stagl (2010) in the analysis of John Dewey[28] work states that academia should act as teachers instead of technocratic overpowering chieftains. According to researchers, they should "*facilitate citizens' capacity to make sensible political judgments and identify social needs and troubles*" (Garmendia & Stagl, 2010; Lee, 1994). Additionally, in this complex world academicians must be creative and stop being just objective truth seekers, advice Garmendia & Stagl (2010). That is quite a high set hurdle. Yet, in theory, several academicians acknowledged that sometimes they seek to educate society and expect that their actions will have a long-lasting impact in the communities. But they revealed, it is a Sisyphean struggle and there is the lack of motivation and encouragement as well as incentives to attempt such effort (1512-JK-6, 2015; 1601-MD-CT-13, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1604-MR-PP-23, 2016; 1604-MR-PP-24, 2016).

5.1.8 Juxtaposition No 8 – society

In public participation, the society must be an principal partner in the decision-making process as well as be settling the final decisions of this process. Thus, the society is the end user of the outcome of some particular project, programme, implementation, etc. However, it is often pushed away from the decision-making process and usually, it is left with insignificant choices, which imitate the public participation idea but do not delegate any power to local people.

As several researchers observed in restoration projects public perception could contribute to an elaboration of the idea. Public perception could point out to the direction of what should be a primary focus of the project (Åberg & Tapsell, 2013; Fliervoet et al., 2013; Seidl & Stauffacher, 2013; Steiner, 2018). However, in the area of the case studies, the pre-project implementation public perception survey had been done, so, to evaluate final results will be very arduous and exhausting. The Skerne river example showed the change in local people mindset about nature and

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[28] According Boydston (1969)

ecological integrity as well as a sprout of social benefits (Åberg & Tapsell, 2012, 2013; Petts & Gray, 2006). Additionally, it was revealed that positive perception motivates people to consider and execute some tasks and accomplish them voluntarily (Coenen, 2009; Rutland, 2013; Svara & Denhardt, 2010). In the area of the case study, the research on public perception is comparatively limited. Interviewees shared several stories with progressive changes in the mindset of the local people as well as their experiences in organizing the projects where the public is engaged and active (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-10, 2015; 1601-MD-BT-16, 2016; 1601-MD-CT-13, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-8, 2016; 1603-KL-9, 2016; 1603-KL-10, 2016; 1604-MR-PP-23, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016). These encounters are viewed very warmly and proudly by interviewees themselves.

Society should be knowledgeable (Garmendia & Stagl, 2010). The previous studies showed that educated and informed society often is more supportive for projects, which improve environmental quality (Gigliotti, 1992; Hausbeck et al., 1992; Tilt & Williams, 1997). Moreover, Garmendia & Stagl (2010) highlighted that democratic crisis, which is so overarching in the present, could be overcome by social learning and experimental politics. In general learning or education is a key element to manage ecological crisis and cultivate better social values (Light & Katz, 1996). Furthermore, education is proved to be the most important for establishing sustainability (Antunes et al., 2009; Lee, 1994; Seidl & Stauffacher, 2013) as well as to overcome complexity, clear uncertainty and conflict (Garmendia & Stagl, 2010; Mostert et al., 2007; Reed et al., 2010; Roling & Wagemakers, 2000). Yet, in the case study areas such education is practically non-existent. Although the local experts are knowledgeable about the necessity to educate the society and well as expected improvement in project implementation and acceptance, the lack of funding, capacities and know-how stops any attempts to elaborate the existing practice.

Society is often blamed for the lack of concern or interest in the water management and policy as well as many other issues (Havekes et al., 2013). Additionally, lay people are accused of fatigue and insufficient or absent participation in decision-making (Havekes et al., 2013). However, the shortage of the platforms to get involved, negative previous experiences, lack of engagement, non-existent customs of participation, discrepancies in the legal and institutional framework is contributing for general fatigue in the society and should consider the implications for such situation (1512-JK-2, 2015; 1512-JK-4, 2015; 1512-JK-8, 2015; 1512-JK-10, 2015; 1601-MD-BT-16, 2016; 1601-MD-CT-13, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-2, 2015; 1601-MD-HCM-7, 2016; 1601-MD-HCM-8, 2016; 1602-MR-VNT-19, 2016; 1602-MR-VNT-20, 2016; 1602-MR-VNT-21, 2016; 1602-MR-VNT-22, 2016; 1603-KL-1, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-6, 2016; 1603-KL-8, 2016; 1603-KL-10, 2016; 1604-MR-PP-23, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016;

1604-MR-PP-30, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016). Local experts acknowledged the compulsory improvements in the society. Nonetheless, they did not exaggerate the situation and shared the hope that with time situation turns to a more desired direction.

5.1.9 Juxtaposition No 9 – social media

As some researchers highlighted social media could play an important role in social movements, organized resistance or contribute in organizing protests, etc. (Mercea, 2016; Van Dijck, 2013). That is an influential tendency amongst the younger generation of people, who hardly imagine public participation without new technologies, especially, social media. They regularly are implicated in generating a continuous flow of information, as well as, quite freely expressing their own ideas and critics on various topics, including governmental actions, social processes, etc. (1512-JK-1, 2015; 1512-JK-10, 2015; 1512-JK-12, 2015; 1601-MD-CT-14, 2016; 1603-KL-2, 2016). The more prior generation, if they are professionals, experts, etc. often perceive social media as a tool to reach out for wider public (1512-JK-2, 2015; 1512-JK-6, 2015; 1512-JK-7, 2015; 1512-JK-9, 2015; 1601-MD-CT-11, 2016; 1601-MD-CT-13, 2016; 1601-MD-HCM-4, 2016; 1601-MD-HCM-8, 2016; 1601-MD-HCM-10, 2016; 1603-KL-1, 2016; 1603-KL-5, 2016; 1603-KL-6, 2016; 1604-MR-PP-23, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-25, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-33, 2016), yet, for younger generation that is more constructs of community and personal relationship (1512-JK-1, 2015; 1512-JK-3, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015; 1601-MD-BT-16, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-6, 2016; 1603-KL-2, 2016; 1603-KL-7, 2016). In all three case studies it is the same tendency of widespread use of social media, including sharing information, debating new political and social issues, etc., yet, the enthusiasm of users of social media slightly reflect the size of the city. In Jakarta, Kuala Lumpur, Ho Chi Minh social media is in every step, however, smaller cities like Vientiane or Can Tho are not so much soaked with social media.

Social media is erratic, its forms and rules are constantly shaped and adapting (Van Dijck, 2013), this situation allows users to construct it by their own need and necessity of the topic. In all three case studies, this feature is highly appreciated and used. 1512-JK-12 (2015) highlighted how social media in her daily life is used for private communication with friends, and how social media is the tool to share information and to form groups of like-minded and to lead discussions about the relative topic. In general, social media was applauded by most of the interviewees.

There are some hidden consequences if people are devoting more time in the virtual reality, as Putnam (1995) highlighted that increased access to the internet caused the decline in "*civic engagement and social participation*" (Kraut et al., 1998), that means that people are less involved in some organizations, or just in general less "*social*", and are less involved in community life (that bear all bunches of additional

consequences) (Lafreniere et al., 2017). However, during interviews, such considerations never emerged that may be linked to the import of western ideas, which rarely are genuinely questioned or scrupulously challenged against of prominent traditions and customs.

5.1.10 Juxtaposition No 10 – development strategies

Harper (2015) distinguished four strategies for improvement from the perspective of a developer. Researcher wrote that the most popular are strategies, which promote technological fixes. These strategies lead to building new infrastructure, implementing new innovating technologies, etc. The second one is behaviour fixes, then the behaviour of people (or society) is changed or significantly influenced through the application of versatile incentives. The third strategy endorses cognitive characteristics of the society. It seeks to generate awareness of an issue and encourage modifying the existing circumstances. It is a persuasion and negotiation technique. The last fourth strategy is based on legal fixes, which means that laws and regulations are altered in order to affect behaviour, change current situation or solve a particular problem (Harper, 2015). During interviews, it becomes evident that the implementable strategies are a mix of all strategies mentioned above. For example, the widely applied IWRM obtains goals, which focus on behaviour changes, yet, promote the government to implement laws, which support these changes. The IWRM approach is tremendously popular amongst the interviewees in all three case studies, especially in the Klang and Ciliwung case studies. The experts in Kuala Lumpur were exceptionally supporting and welcoming the principles of IWRM (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-5, 2016; 1603-KL-6, 2016; 1603-KL-10, 2016).

Nonetheless, the development strategy, which incorporates not just technological changes, but attitude, perception changes, and social involvement, is slow. Society needs time to absorb changes, acquire new habits and form new traditions and customs. 1603-KL-10 (2016) was exceptionally supportive of the slow development strategies. Interviewee argued that this strategy would procure the full conversion in society (1603-KL-10, 2016).

The most of the case studies face the risk of the flood disaster. van Alphen et al. (2006) discussed diverse technical strategies to solve this issue. They range from capture water upstream and release it slowly to the downstream areas or contrariwise, the upcoming water is discharged downstream more intensely. Researchers encourage the use of other natural or artificial water bodies or detention areas for the storage of the excess water (van Alphen et al., 2006). In Kuala Lumpur the SMART tunnel plays this role (1512-JK-2, 2015; 1512-JK-6, 2015), however, the flash floods is as severe as it always been. In Ciliwung river basin the decrease of the natural green surface is so small that all rainwater goes straight to the river and its tributaries, so the harm and intensity of flash floods are raising every year (1512-

JK-4, 2015; 1512-JK-5, 2015; 1512-JK-6, 2015; 1512-JK-7, 2015; 1512-JK-8, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015).

The development process is often hindered by the lack of technical and knowledge capacities, shortage of personnel, time, equipment or infrastructure and even design and implementation policies as well as strategies themselves (Havekes et al., 2013). In some cases, the motivation to constitute and implement the overarching strategies is stopped by resistance to work together between distinct departments and institutions (Havekes et al., 2013). These issues were highlighted by the interviewees in all case studies. The lack of beneficial communication is awfully short in the Mekong basin development. Here the multilayeredness of the governing scheme originates a complex bureaucratic monster, where the clash of different cultural background, working customs, communicating habits and political and development agendas are intertwining between each other. Nonetheless, in transboundary river basins, it is paramount that different countries should be able to form one institution to organize the river basin development. Additionally, countries must be able to negotiate and discussed even sensitive issues (Havekes et al., 2013; Pahl-Wostl et al., 2012; Schmeier, 2013a, 2013b; Schmeier & Schulze, 2010). The interviewees, from the Mekong case study, stress the necessity and attempts reach for success during multilateral meetings mediated by MRC (1601-MD-CT-11, 2016; 1601-MD-CT-13, 2016; 1602-MR-VNT-19, 2016; 1602-MR-VNT-20, 2016; 1602-MR-VNT-21, 2016; 1602-MR-VNT-22, 2016; 1604-MR-PP-23, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-30, 2016). Additionally, with time the Mekong basin development strategies became more and more lenient and more focused on the social prospect.

Furthermore, Mayo & La France (1980) noted, "*improving quality of life may entail social changes [that are] not always to everyone's liking*". That is a typical concern of engineers and developers that the wishes of society will conflict with the idea of the project. Additionally, experts concern that will block or hinder the implementation of the project. These concerns were repeated by interviewees in all case studies. Menacingly, quite a lot of experts see society as the receiver of their created goods and inventions (1512-JK-5, 2015; 1512-JK-6, 2015; 1512-JK-7, 2015; 1601-MD-HCM-6, 2016; 1601-MD-HCM-9, 2016; 1601-MD-HCM-10, 2016; 1602-MR-VNT-20, 2016; 1602-MR-VNT-21, 2016; 1603-KL-1, 2016; 1603-KL-4, 2016; 1603-KL-5, 2016; 1603-KL-7, 2016; 1604-MR-PP-31, 2016). Although almost half of century ago an idea of social design was presented and extensively developed by Sommer (1972, 1983), till now this idea is in the step-daughter role. The core concept of social design is to work "*with people rather than for them*", or in other words the congruence of the building is high, satisfaction of the users is (very) positive and pushes to facilitate social support as well as instigates scheduled favoured and preferred behaviour changes (Gifford, 2017; Lafreniere et al., 2017). Unfortunately, customarily the goal of architects or designers is a creation of beautiful buildings or constructions, however, to whom it is built or what purpose it will serve in the future is rarely play a key role during the project developing and idea generation stages (Lafreniere et al., 2017; Sommer, 1983). Similarly, for the water development project the engineers

design the infrastructure, which is not always appreciated or have a personnel to be maintained (1512-JK-1, 2015; 1512-JK-10, 2015; 1601-MD-BT-16, 2016; 1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-10, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-10, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016).

In the theory of applied social psychology, the motivation for society could be organized based on antecedent strategies or consequence strategies (Lafreniere et al., 2017). The first one expects that is enough convincing information is provided for people they will change their behaviour consequently. So various information campaigns, news outlets or recruited people talks and demonstration of the desired behaviour are examples of this strategy. The second one includes a diverse range of incentives to motivate the change in human behaviour since it is not expecting that just information will cause the desired change. Here the applications of versatile incentives or measures built on "*carrot and wipe*" [auth. reward or punishment] principle are typical illustrations (Lafreniere et al., 2017). In public participation, the first type of strategies is mostly used to develop the various measures to promote involvement, awareness of society. In the interviews, the examples of public participation measures were based on antecedent strategy.

As Steiner (2018) emphasized the urban plan could be based on ecological principals, which proved to "*lead to healthier, safer, and more beautiful and sustainable places for people and other species*" (Steiner, 2016, 2018; Steiner et al., 1995). Similarly, the plans for the urban river development could have the incorporated core principals of sustainability, however, interviewees acknowledged that it is a long, winding road for the Klang, Ciliwung and Mekong rivers (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-8, 2015; 1512-JK-10, 2015; 1601-MD-BT-16, 2016; 1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-13, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-4, 2016; 1601-MD-HCM-8, 2016; 1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-10, 2016; 1604-MR-PP-23, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016).

5.1.10.1 Juxtaposition No 10.1 – IWRM

Lebel et al. (2007) highlighted that vagueness of IWRM cause that principles are "*hardly useful in practical and operational contexts*". This generic approach is difficult to define as right or wrong (Lebel et al., 2007). The IWRM appeared in interviews through all case studies. Many academicians put trust in this approach and expect that it will induce significant beneficial changes in the water management along with the river management. However, in the Klang case study and the Cambodian part of Mekong case study, the IWRM approach is applauded by experts and local people. In Malaysia, experts are implementing IWRM for a diverse range of water-related projects. The interviewees highlighted the progressive side of the approach along with unique concrete experiences related to IWRM implementation. In Cambodian

law, IWRM is chosen as a baseline for any water management in the country. Thus, it is a very significant statement and declaration, yet, so far it did not instigate any major reform in the water management.

Fulazzaky (2014) research revealed that the improvement of IWRM in Indonesia required a premeditated choice of management approach, integrated planning, coordination and stakeholders' interaction. During interviewees, IWRM approach was rarely mentioned by local experts from Indonesia. Experts discussed the Ciliwung *normalisasi* as a singular and unique project.

The overall perception of management approach, which de-politicize the process (Gerlak & Mukhtarov, 2015), could contribute to the Mekong river development, which at the moment is very politically driven. The MRC produced the Mekong river development strategies and plans based on IWRM, however, the more inquisitory research revealed that several of these documents lacking the essence of IWRM (Budryte et al., 2017). The experts, who are/were working in the MRC or the National Mekong River Committees, pointed out the significance of unifying approach and its international origins (1602-MR-VNT-19, 2016; 1602-MR-VNT-20, 2016; 1602-MR-VNT-21, 2016; 1602-MR-VNT-22, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-25, 2016).

In general, IWRM could act as a binding approach, therefore, it should contribute mostly to transboundary river basins. Unluckily, its vagueness brings impracticalities (Biswas, 2004) and endless discussions without fruitful outcomes. In the case studies, IWRM is quite a new approach and is supported by national laws, so that could lead to more implementable applications.

5.1.11 Juxtaposition No 11 – role of cultural background

The culture according to Cohen (2012) culture "*is not a fixed collection of texts and practices, but rather an emergent, historically and materially contingent process through which understandings of self and society are formed and re-formed.*" The power of joint volunteering actions lead by cultural features of society and carried out by local people and/or communities could be truly extreme. For example, in Poland during Soviet oppression, almost 4000 churches were built without government approval and support, additionally, 50 % of them were founded fully or partly by the private sector (Obarska, 2017). The similar outcomes were exposed in Kinshasa (Democratic Republic of Congo) were "*people become the key forms of infrastructure*" after the fall of government (De Boeck & Plissart, 2004; Lockrem & Lugo, 2011; Simone, 2010). In the discussion about the role of culture in the restoration, Drenthen (2009) wrote: "*ecological restoration can thus be seen as an attempt to complement the anthropocentric narrative that the cultural landscape activists refer to: not to eradicate human traces, but rather to – literally – dig up legible layers that priced habitation.*"

In all three case studies, several cultural features raise up as influential criteria for public participation and attitudes towards the development. In the Klang case study, one of the interviewees acknowledged that his choice in studies (environmental protection) and later in the job (river management) was strongly influenced by his belief (Hinduism) (1603-KL-3, 2016). Interviewee elaborated that in his belief people should care about nature and river as well as all nature is a representation of divinity (1603-KL-3, 2016). The other interviewee in the Klang case study highlighted that the lack of cultural importance of the river in the Kuala Lumpur causes the deteriorating of the river (1603-KL-10, 2016). As a solution interviewee proposed to romanticize the river (it was discussed previously) (1603-KL-10, 2016). According to 1603-KL-10 (2016), the mutual history of the relationship between people and nature is significant in nature preservation and protection. Similar emphasis on the human and nature relationship were shared by several other interviewees in the Klang river case study (1603-KL-2, 2016; 1603-KL-3, 2016; 1603-KL-5, 2016; 1603-KL-6, 2016; 1603-KL-9, 2016) as well as the Ciliwung (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-5, 2015; 1512-JK-8, 2015; 1512-JK-10, 2015; 1512-JK-12, 2015) and Mekong (1601-MD-BT-16, 2016; 1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-13, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-1, 2015; 1601-MD-HCM-2, 2015; 1601-MD-HCM-3, 2015; 1601-MD-HCM-4, 2016; 1601-MD-HCM-7, 2016; 1601-MD-HCM-8, 2016; 1601-MD-HCM-15, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016) case studies.

In the Ciliwung case study, the most significant cultural feature is *gotong royong* tradition, which itself is some form of public participation. This tradition is still alive in rural areas, yet, in the Jakarta, it is rarely applied. As 1512-JK-11 (2015) explained this tradition is going to extinct very fast if nobody will undertake some actions to revive it.

In the Mekong case study, due to its vast basin area traditions are diverse. In Viet Nam (the Mekong delta) area is dominated by relatively small urban settlements, society is versatile because of the overwhelming influx of immigrants from Northern and Central Viet Nam during the Viet Nam War. It is encounter a person, whose parents are from the same area. Nevertheless, the Mekong river (in the Mekong delta river splits to the Bassac, Tien, My Tho, Ba Lai, Ham Luong, Co Chien and many smaller rivers) plays a significant role in all areas, including culture. Yet, firstly, the river is perceived as a commodity and is appraised for its economic value. The researchers, who are working with local communities to preserve the rivers, tend to bestow contradictory arguments. They revealed how to embed and imbed in people's daily life is the river, they highlighted that people do not imagine the day without the river (1601-MD-BT-16, 2016; 1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-1, 2015). 1601-MD-BT-16 (2016); 1601-MD-CT-12 (2016) highlighted although people do know regulation, they will pursue them if it is useful for them and/or if they get monetary incentives or economic gain. Additionally, interviewees asserted the importance of educating society to protect and preserve

nature as well as become active partners in the decision-making process in the diverse development projects.

Cambodian people, the ancestors of the great Khmer (Angkor) empire, which was based on the use of water recourses, now see the Mekong river as a water source for irrigation, navigation and future source of energy production. Moreover, several of experts highlighted the importance of inclusion of local people in decision-making process. They are encouraging this process to become a renounced culture amongst the experts and developers (1604-MR-PP-24, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-28, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-30, 2016; 1604-MR-PP-33, 2016; 1604-MR-PP-34, 2016).

Nassauer (1995a) wrote that "*culture changes landscapes and culture is embodied by landscapes*". The researcher revealed four general principles of the relationship between the culture and nature[29]. All of them are supported by the interviewee's ideas and experiences. For example, the first one states that "*human perception, cognition and values directly affect the landscape and are affected by the landscape*", similarly, 1601-MD-CT-11 (2016) shared personal experiences from a work with local people in the Mekong delta, people adhere to the traditions of arranging their surroundings in the same way as it was done for many years before. Additionally, 1601-MD-HCM-4 (2016), who was researching about the typical urban pattern in Mekong delta settlements, pointed out that this pattern is significantly influenced by the landscape and is repeated over and over in the region. Later Nassauer et al. (2001) revealed that "*the appearance of landscapes affects public willingness to accept plans and designs that improve ecological quality*", so the development ideas should echo the local culture, otherwise, they would not be followed. This observation has been repeated by the interviewees in all three case studies.

Gadamer (1989) indicated the importance of the historical circumstances in the understanding since it is "*historically situated and thus historically shaped*" (Davis, 2015; Drenthen, 2016). So the project timelines have impact on project evaluation (Drenthen, 2016). Each of the case studies has its own rich and often long history, especially, if prehistory and circumstances, which instigate the project, are considered. In general, all development of the rivers started then some tipping point of knowledge, the dissatisfaction with existing situation, legal background and finances are reached. For the Klang and Ciliwung the major actor for the development is extreme floods, which affected cities significantly (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-5, 2015; 1512-JK-7, 2015; 1512-JK-10, 2015; 1603-KL-6,

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[29] General principles of the culture and nature relationship: "*(1) human landscape perception, cognition, and values directly affect the landscape and are affected by the landscape; (2) cultural conventions powerfully influence landscape patterns in both inhabited and apparently natural landscapes; (3) cultural concepts of nature are different from scientific concepts of ecological function; (4) the appearance of landscapes communicates cultural values*" (Nassauer, 1995a).

2016; 1603-KL-9, 2016; 1603-KL-10, 2016; Afroz et al., 2014; Anonymous-JK-1, 2015; Anonymous-JK-2, 2015; Caljouw et al., 2005; Othman et al., 2012; Taylor, 2012; Zakaria et al., 2004). These floods altered the picture of the cities as well as raise awareness and the necessity for preparedness for the next one.

Harsh living conditions in the tropical region are crucial for the development and formation of some specific traditions. They incite the traditions of voluntary family/communal actions, such as *gotong royong* in Indonesia. In Viet Nam, the *phue due* and *uy tin* traditions, which stems from the necessity to support own family and community, are still in effect, despite the *doi moi* program. Although it is substantial to consider that in Vietnamese culture the collective interest tramps individual needs (Renaud & Kuenzer, 2012), therefore these traditions aim for the outcome, which is beneficial for community despite individual requests. Some of the interviewees pointed out the significance of these traditions (1512-JK-11, 2015; 1601-MD-BT-16, 2016; 1601-MD-CT-11, 2016; 1601-MD-CT-12, 2016; 1604-MR-PP-29, 2016); nonetheless, the diversity in the cities swallows such traditions and ceases them only in rural settings.

Li et al. (2015) highlighted the concern "*how to take advantage of advanced technologies while incorporating historical and cultural legacies and complying with ancient philosophies and local wisdom*" even in the multicultural megacities. The answer to this question will provide the proper water management measures within local historical and cultural contexts (Li et al., 2015). In every case studies slightly distinctive approach to the water management rose up, yet, according to local persons that should provide the best water management. To sum up, the cultural background could be versatile from the respect and care for nature to traditions of participation in decision-making processes, yet, without the doubt culture is important and must be considered in every development action.

5.1.11.1 Juxtaposition No 11.1 – the perspective of the infrastructure

One of the first who started to argue that infrastructure is part of culture and influential feature how people perceive and experience the place was Susan Leigh Star, who is ethnographer of infrastructure. In 1999 she highlighted that it is outrageous to excogitate the city without "*its sewers and power supplies*", otherwise, the "*essential aspects of distributional justice and planning power*" will slip unnoticed. Moreover, Dourish & Bell (2007) argued that infrastructure is an everyday experience through the eyes of the users.

In the Ciliwung and Klang case studies, where rivers are converted into the channels, people described river as more of the infrastructure element, instead of nature (1512-JK-1, 2015; 1512-JK-2, 2015; 1512-JK-7, 2015; 1512-JK-9, 2015; 1512-JK-10, 2015; 1512-JK-11, 2015; 1512-JK-12, 2015; 1603-KL-1, 2016; 1603-KL-4, 2016; 1603-KL-5, 2016; 1603-KL-7, 2016; 1603-KL-9, 2016). In the social survey held in Mekong delta urban settlements showed that local people notice the deterioration of the river, especially in the comparison with the past (Budryte et al., 2017). Interviewees follow

the similar path and list their concerns about the river (1601-MD-HCM-1, 2015; 1601-MD-HCM-3, 2015; 1601-MD-HCM-4, 2016; 1601-MD-HCM-5, 2016; 1601-MD-HCM-7, 2016; 1601-MD-HCM-15, 2016; 1602-MR-VNT-17, 2016; 1602-MR-VNT-18, 2016; 1602-MR-VNT-19, 2016; 1602-MR-VNT-20, 2016; 1604-MR-PP-23, 2016; 1604-MR-PP-24, 2016; 1604-MR-PP-25, 2016; 1604-MR-PP-26, 2016; 1604-MR-PP-29, 2016; 1604-MR-PP-30, 2016; 1604-MR-PP-31, 2016; 1604-MR-PP-33, 2016)

Additionally, infrastructure is organized by physical laws as well as cultural perceptions (Dourish & Bell, 2007). In observing the case study areas it is very visible that the main and most important objects are built close by the river[30]. These objects were established there some time ago due to some historical circumstances. They all have a profound cultural impact/sign in the mindset of local people. The interviewees observed that the rivers are important for daily life of local people, so they should obtain an opportunity to participate in decision-making, which concerns the river (1512-JK-1, 2015; 1512-JK-10, 2015; 1601-MD-CT-12, 2016; 1601-MD-CT-14, 2016; 1603-KL-2, 2016; 1603-KL-6, 2016; 1603-KL-10, 2016; Dourish & Bell, 2007).

Dourish & Bell (2007) pointed out that indigenous people have rituals for connecting with the land and other surroundings it constructs a symbolic dependence and inspires and strengthen stewardship. So people initiate a symbiotic relationship, which incorporates social, cultural and historical features, with their surrounding.

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[30] The most significant religious place in Kuala Lumpur – the Masjid Jamek mosque – is at the confluence of Klang and Gombak rivers. The Kuala Lumpur railway Station is close to the Klang river, as well as Central Market, Sultan Abdul Samad Building. Merdeka Square, which is the most significant historical site in all Kuala Lumpur, is located only few minutes of walk away from the Klang and Gombak rivers. The City Hall and the Bank Negara Malaysia (Central Bank of Malaysia) is on the shore of the Gombak river. There are a lot of smaller mosques and local markets as well as other public buildings (libraries, museums, art centers, schools, etc.) established the rivers.

In Vientiane the copious amount of bigger and smaller temples (e.g. Wat Phie Vat, Ho Pa Keo, Wat Tai Noy, Wat Somevank, Wat That Khao, Wat Ho Phra Keo and many others) are build on the Mekong side. Several markets (Kok Po, Sikhay, Souanemone, etc. markets), which supply the city with necessary goods and foods, are based by the river too. Some of them are also tourist attraction points. The extraordinary cultural object of Buddha Park is on the Mekong riverbank. The Presidential Palace is facing the Mekong flow.

Phnom Penh city is based on the confluence of the Tonle Sap, Mekong and Bassac rivers. Here on the riverfront, there are the Royal Palace, Silver Pagoda, Budduhist Institute, National Museum, Wat Phnom and Wat Ounalom, Masjid Ammar Ebn Yasser mosque and Chua Phuoc Long Tu temple, which is erected on the water.

In Can Tho – the main markets of Tan An and Xuan Khanh, Old Market Can Tho, An Nghiep are set up on the Mekong riverbank. There are several religious buildings close to the rivers as well, like Bunh Thuy temple and Nam Nha and Long Quang Pagodas.

Local people believe that their behaviour leaves the imprint, moreover, the "*space is not experienced neutrally*" and "*is coextensive with the cultural practices of everyday life, and these then provide people with a critical interpretive resource in engaging in a collective action coordinated in shared spatial environments*". Additionally, even the technological infrastructure has its social and cultural interpretations. Yet, infrastructure is not static as well as the environment in which it is implemented. Therefore, new implementation could transform existing symbiosis between people and existing infrastructure (Dourish & Bell, 2007). Notwithstanding, such rituals were not observed in the cities, yet, few of the interviewees shared some local legends and believes about rivers and creatures living in their water (1512-JK-1, 2015; 1512-JK-3, 2015; 1512-JK-8, 2015; 1512-JK-9, 2015; 1601-MD-CT-11, 2016; 1601-MD-CT-14, 2016; 1601-MD-HCM-6, 2016; 1603-KL-3, 2016; 1603-KL-10, 2016; 1604-MR-PP-27, 2016; 1604-MR-PP-29, 2016).

In summary, the rivers possessed an immense power in people's lives, and it does not matter if it is acknowledged and comprehended or not. Local traditions sustain the inner guidance personally. Additionally, the river as Wittfogel (1957) highlighted has a political power over the life of the nations. From interviews rises an image of the monumental challenge to direct the development of the Mekong river for the majestic future.

5.2 Tendencies from the interviews

In this chapter the relations between various data from interviews are compared, however, it is the data extracted from qualitative interviews so it has not fulfilled the requirements for the statistical survey. These results present tendencies, but not statistical dependencies or correlation.
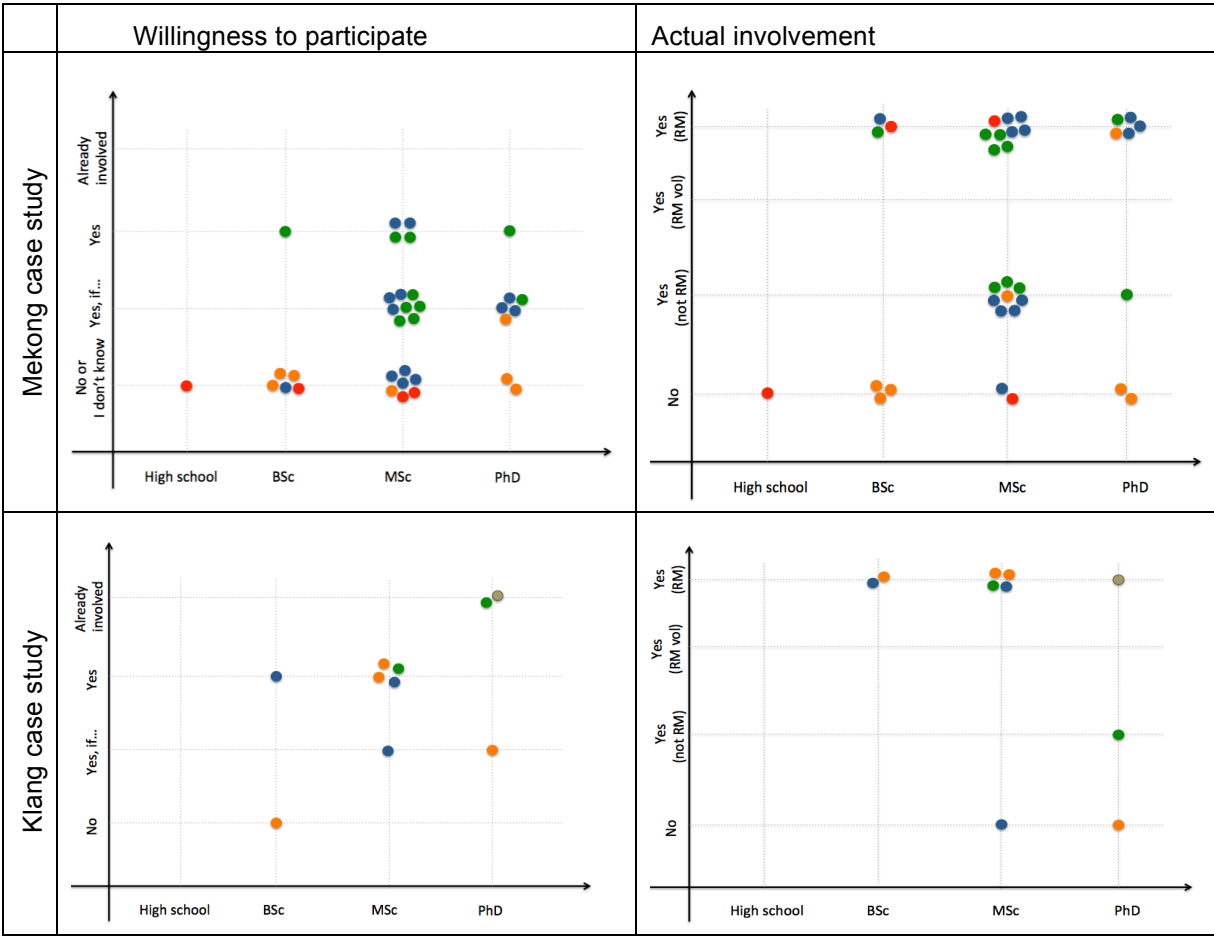
5.2.1 Tendency No 1 – education and involvement

Various researchers argued how important education are for people to make intelligent decisions, plus, that was already discussed in the previous chapters. The interviewees acknowledged the significance of education in society. Statistical evaluation of interviewees showed (Figure 5-1) that the most active was persons who have a master degree, higher degree brings tampered attitude and more negative perception towards public participation.

In the Mekong case study interviewees, even some of them are directly working with the river development projects, none of them was involved in public participation at the moment of the interview. The comprehension of public participation is the highest amongst the holders of a master's degree with the current position in the river development or related field. These persons acknowledge they would be willing to participate if the condition and circumstances would be convenient. Nevertheless, there are a number of interviewees, who perceive public participation as simple as information or induced form and are not interested in taking part in the decision-making process, yet, some have positions related to the Mekong management.

In the Klang case study, the interviewees' features are scattered all around. Therefore, any grouping of results is impossible. Yet, a positive exception here has ben presented by the person who has PhD degree, is involved in the river management and is taking part in public participation. Nonetheless, that was not repeated amongst any other case study.

In the Ciliwung case study the majority of the interviewees, who are involved in the river development, do not hold high education degree. They often have high school or BSc diploma. The holders of MSc and PhD degrees have more negative perspective on the river development projects in the Jakarta.
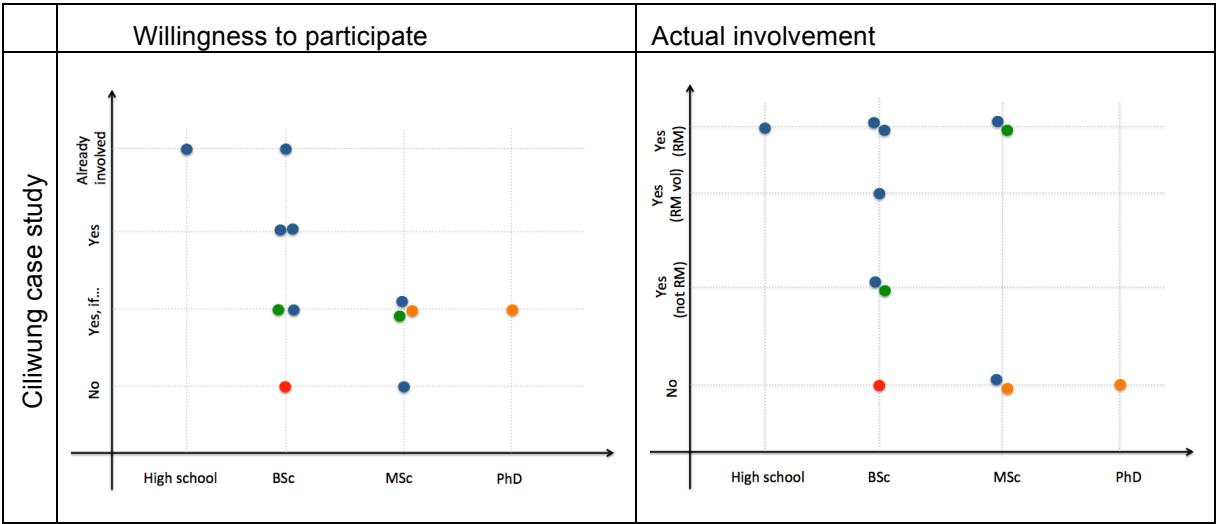
Figure 5-1. Relationship between interviewee's education, willingness to participate and actual involvement in the river development project (from top down the Mekong, Ciliwung and Klang case studies).

5.2.2 Tendency No 2 – actual involvement versus willingness to participate

This shows a tendency that persons who are not involved in the river management rarely are willing to get involved (even theoretically) in any decision-making process if it is not related to their direct work position. They also tend to perceive public participation in the form of various information campaigns or news outlets for general society. On the contrary, interviewees, who are already involved in the river development, are more willing to participate in decision-making process. Conjointly, they perceive public participation as a partnership or consultation. Here society is included in the project development and playing an active role in creating, designing and/or implementing the project. Additionally, if a person perceives public participation as a partnership, he/she admitted going to engage in the decision-making process.
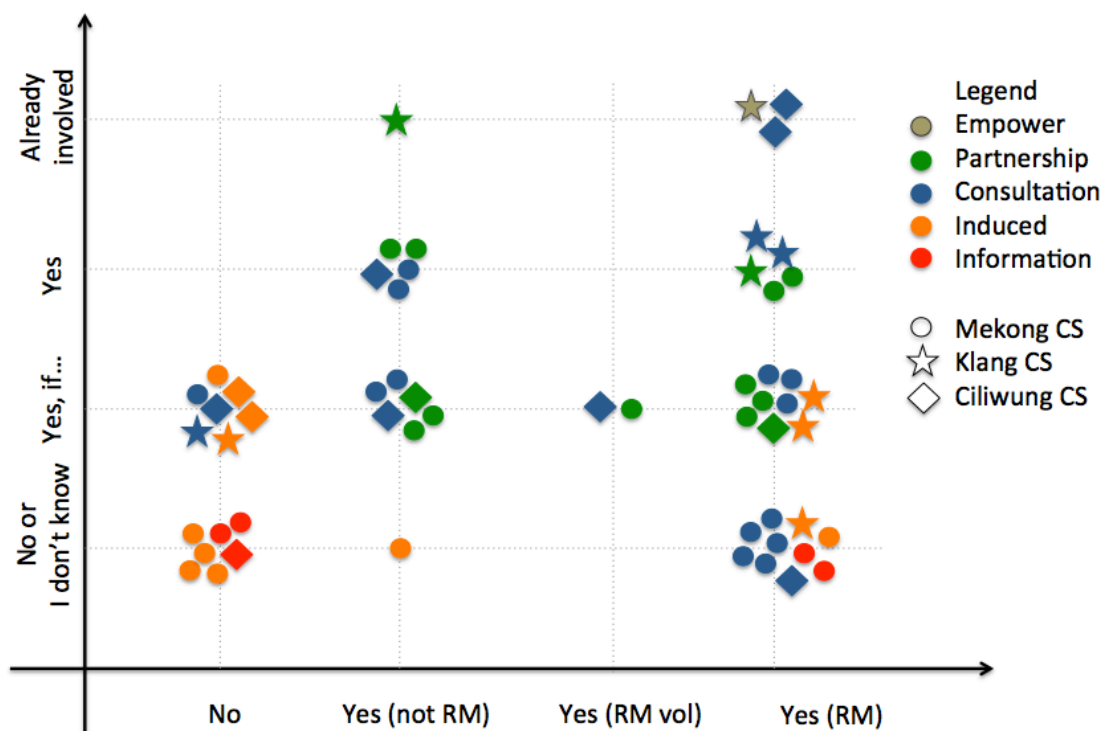
Figure 5-2. Overall comparison between interviewees' willingness to participate (vertical axis) and involvement in the river development (horizontal axis).

5.2.3 Tendency No 3 – attitudes about the river management and public participation

The dominant understanding, what public participation is, is based around consultation. It means that interviewees main role delegate to project developer (government, the private sector), yet, society is involved as well. The public is included in some decision-making and/or its opinion is requested, investigated and reflected if needed in the project.

Interviewees' attitude about the river management shows that commonly it is seen as positive and/or essential process. Its performance strongly corresponds with actual persons' involvement in the designing or implementing the project. Interviewees tend to have a higher perception of public participation if they have a better evaluation of river development. That is so called ownership of the project and its results.
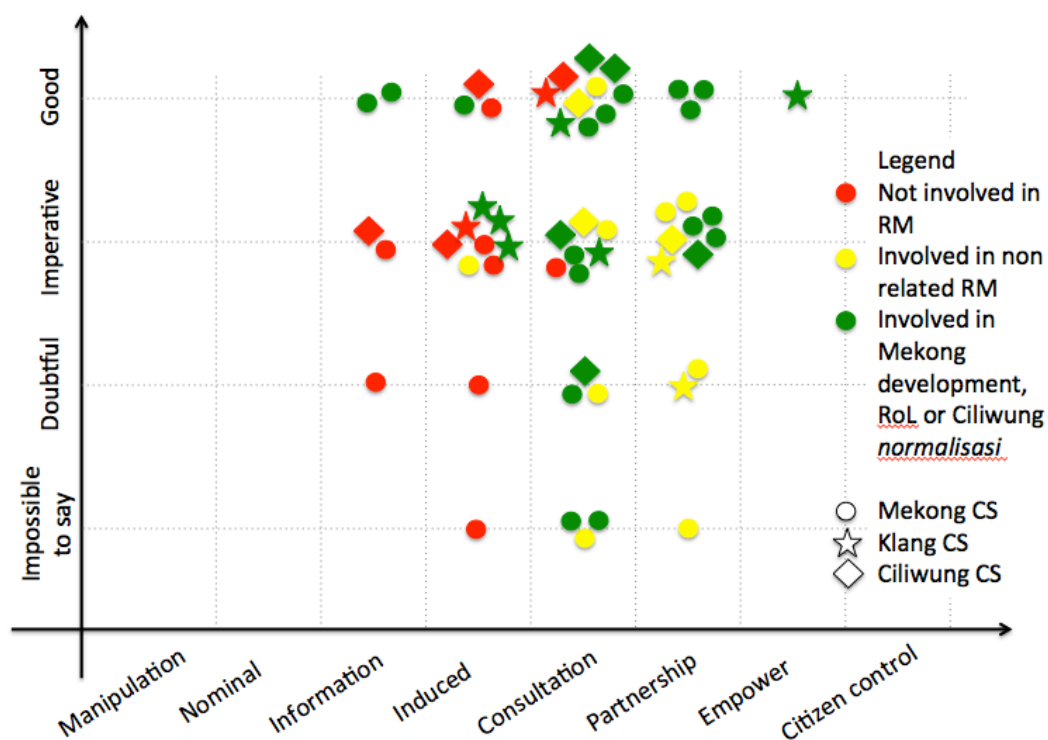
Figure 5-3. Comparison between interviewees' perceptive of public participation (horizontal axis) and the river development (vertical axis) as well as involvement in the river management (RM) (colour markings).

Overall, all tendencies provide some insight on the probable relation between interviewee's perception about the river management, public participation, involvement in the river development project and willingness to participate in one of them. Notwithstanding, this research focused on the qualitative data, therefore the qualitative interviews provided penetrating, astute, yet sensitive observation on person's perspective in given question. So first and foremost, the discussions were explanatory, which requires time and trust between the interviewee and interviewer. The tendencies are the generalization of the most common categories that appreared during the interviews.

6   Concluding remarks

The roots of the entire research lie in the observation that so frequently the development projects tend to fail or raise a wave of dissatisfaction and anxiety in the society. Some academics argue that up to three-quarters of all river management project do not fully reach their initial goals and aims (Conniff, 2014). Such significant divergence is not an encouraging indication of any type of process. Since the technical side of the project is always prepared by well-educated engineers and experts, significant discrepancies here are not expected. Thus, these discrepancies are intrinsically or extrinsically caused by the society that is not being properly involved in the river restoration. This research uncovered several considerations reflecting the implementation and acceptance of the project in the society. These factors could hinder the project development, despite its designing and applied technical/technological solutions.

The acceptance by the society is possible by inviting people to participate in the development project. However, as it is seen through the research above, public participation as such is very difficult to define, that, consequently, brings unfavourable conditions to its implementation (Rowe & Frewer, 2005). Moreover, the diverse understanding of public participation breeds miscommunication and disagreement among different stakeholders and experts themselves (Blackstock et al., 2012; Rowe & Frewer, 2005). In this research, it is uncovered that public participation is usually applied as some form of information dissemination, yet, experts are aware of possibilities to organize public forums or debates. Nevertheless, the applied and implemented public participation measures are usually simpler (is on the lower step of Arnstein's (1969) ladder of public participation) than the understanding of possible public participation measures. The link between knowledge, application and implementation of public participation exists, yet the outcomes of implementation depend on more on human factors than on technicalities of the process.

Secondly, the cultural background has a substantial and capable supporting boost to implement versatile measures of public partnership and empowering (the higher steps on Arnstein's (1969) ladder of public participation). However, in Southeast Asian context, traditional values and practices are frequently overpowered and dismissed by the western ideas and concepts. In every case study, there were exposed the traditional measures for community involvement and participation in decision-making process, however, in the river development projects, such measures have been applied very rarely and with significant altercations. Meanwhile, the projects, which are regarded as the most successful ones and are displayed as examples, have the mixture of the traditions and modern concepts.

Thirdly, the wish to have a developed society overnight forges the leaders in the case study countries to rush implementing any idea right at the moment. Consequently, that usually brings out negative perception in the society and general fatigue. Even

interviewees (experts) admitted that as citizens they would not be engaged in public participation measures, although they are the ones, who are implementing such measures in the river management projects. Habitually, experts and government officials tend to neglect accommodating that society needs time to "swallow" changes and accept innovations.

The research questions focused on the interrelation between public participation and river management. As the first hypothesis proposed the outcomes of river development are affected by the public participation. In elaboration, such outcomes are dependent on the successful public participation process, if the aim of river management is sustainability and positive perception of the entire project. Literature review exposed the strong link between the success and acceptance of the entire project and involving public participation measures. The empirical research proved that the success of public participation significantly contributes to the river management. Interviewees shared versatile examples from their own country or around the world were the correlation between the success of public participation process and positive outcomes of river management are very strong. However, respondents rarely thought that their project (RoL, *normalisasi* Ciliwung) could be developed as such exemplar project. Additionally, they did not share the ambition to create such project. Yet, the exceptions amongst the interviewees exist. Furthermore, the second part of the hypothesis is affirmed neither by literature review nor by empirical research. Public participation cannot cause failure in the river management despite how poorly organized and/or carried out.

The second hypothesis implied that the higher steps on Arnstein's (1969) ladder of public participation, the more holistic river development would be. Many academicians theorize that more open and involving process of public participation is, more holistic entire management would be. However, there are researchers like Bill Cooke, Uma Kothari or others, who see public participation as a new form of tyranny and a tool for manipulation[31]. Similarly, in the empirical research, there is a dichotomy between the opinions, ones are supporting the hypothesis, others do not support. So on one hand, there are exemplary cases of river development that show how involving and open public participation process contributed to creating a holistic river management. On the other hand, there are a lot of river development projects, which do not receive positive input from public participation measures.

Furthermore, the growing body of legal requirements and agreements nationally and internationally, reinforce the necessity of sustainability in the development projects. Further, one of the key elements to reach such aim is by implementing public participation measures. Moreover, researchers find links between sustainability and inclusion of society in the decision-making processes and seek to establish (Colvin et

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[31] Cooke & Kothari (2001)

al., 2014). This expectation is shared between interviewees as well. Yet, the implementation of this approach is still missing in many cases. Majority of experts disclosed that often they do not expect much attention and participation from society when they organize activities for the public participation. However, they also share the belief that public participation is a key element to achieve sustainability.

Additionally, the success of public participation depends on versatile criteria – procedures, limitations, methods, standards, etc. They could be applied during entire project development time or just in particular moment or stage. Meanwhile, experts during the interviews did not cover all of the criteria mentioned in the literature. However, some tendencies are quite clear. The importance of the social media, structure of government, multilayeredness of the public participation plays a very important role in the success of public participation. The social media is often regarded as a substitute for community gatherings. Furthermore, the research shows that there are archetypes that already exist in societies how to organize the decision-making process within the communities, however, they are neglected by today's experts. The interviews disclosed the paradigm shift from traditional forms of public participation to the electronic versions. So the debates and discussions with communities expand into the realm of Internet and social media.

In summary, this research demonstrates how the river development projects cannot limit themselves to solving issues by engineering and technologies since society, its involvement and social development go hand in hand. Furthermore, the focus only on the engineering part could hinder project implementation in the long run perspective and even delay any future enhancements. The findings enable to apply this research and use as an extended knowledge to existing and future river restoration projects.

7 References

Interviews

1512-JK-1. (2015, 2015 December 6) *Interview/Interviewer: P. Budryte*. Jakarta, Indonesia, 34 minutes, English.

1512-JK-2. (2015, 2015 December 11) *Interview/Interviewer: P. Budryte*. Jakarta, Indonesia, 1 hour 45 minutes, Bahasa (with interprete to English).

1512-JK-3. (2015, 2015 December 14) *Interview/Interviewer: P. Budryte*. Jakarta, Indonesia, 39 minutes, English.

1512-JK-4. (2015, 2015 December 9) *Interview/Interviewer: P. Budryte*. Jakarta, Indonesia, 1 hour 21 minute, English.

1512-JK-5. (2015, 2015 December 27) *Interview/Interviewer: P. Budryte*. Jakarta, Indonesia, 1 hour 31 minute, English.

1512-JK-6. (2015, 2015 December 23) *Interview/Interviewer: P. Budryte*. Bandung, Indonesia, 46 minutes, Bahasa (with interpret to English).

1512-JK-7. (2015, 2015 December 16) *Interview/Interviewer: P. Budryte*. Jakarta, Indonesia, 1 hour 25 minutes, English.

1512-JK-8. (2015, 2015 December 12) *Interview/Interviewer: P. Budryte*. Jakarta, Indonesia, 22 minutes, English.

1512-JK-9. (2015, 2015 December 14) *Interview/Interviewer: P. Budryte*. Jakarta, Indonesia, 1 hour 14 minutes, English.

1512-JK-10. (2015, 2015 December 22) *Interview/Interviewer: P. Budryte*. Jakarta, Indonesia, 2 hours 44 minutes, English.

1512-JK-11. (2015, 2015 December 12) *Interview/Interviewer: P. Budryte*. Jakarta, Indonesia, 48 minutes, English.

1512-JK-12. (2015, 2015 December 12) *Interview/Interviewer: P. Budryte*. Jakarta, Indonesia, 28 minutes, English.

1601-MD-BT-16. (2016, 2016 January 18) *Interview/Interviewer: P. Budryte*. Can Tho, Viet Nam, 1 hour 21 minute, English.

1601-MD-CT-11. (2016, 2016 January 6) *Interview/Interviewer: P. Budryte*. Can Tho, Viet Nam, 1 hour 30 minutes, English.

1601-MD-CT-12. (2016, 2016 January 7) *Interview/Interviewer: P. Budryte*. Can Tho, Viet Nam, 1 hour 52 minutes, English.

1601-MD-CT-13. (2016, 2016 January 8) *Interview/Interviewer: P. Budryte*. Can Tho, Viet Nam, 1 hour 21 minute, English.

1601-MD-CT-14. (2016, 2016 January 14) *Interview/Interviewer: P. Budryte*. Can Tho, Viet Nam, 58 minutes, English.

1601-MD-HCM-1. (2015, 2015 December 31) *Interview/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, 1 hour 29 minutes, English.

1601-MD-HCM-2. (2015, 2015 December 30) *Interview/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, 59 minutes, English.

1601-MD-HCM-3. (2015, 2015 December 30) *Interview/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, 1 hour 27 minutes, English.

1601-MD-HCM-4. (2016, 2016 January 19) *Interview/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, 1 hour 59 minutes, English.

1601-MD-HCM-5. (2016, 2016 January 16) *Interview/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, 35 minutes, Vietnamese (with interpret to English).

1601-MD-HCM-6. (2016, 2016 January 6) *Interview/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, 42 minutes, English.

1601-MD-HCM-7. (2016, 2016 January 22) *Interview/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, 27 minutes, English.

1601-MD-HCM-8. (2016, 2016 December 31) *Interview/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, 50 minutes, English.

1601-MD-HCM-9. (2016, 2016 December 31) *Interview/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, 1 hour 4 minutes, Vietnamese (with interpret to English).

1601-MD-HCM-10. (2016, 2016 January 22) *Interview/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, hour minutes, English.

1601-MD-HCM-15. (2016, 2016 January 22) *Interview/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, 1 hour 14 minutes, English.

1602-MR-VNT-17. (2016, 2016 January 26) *Interview/Interviewer: P. Budryte*. Vientiane, Lao PDR, 2 hour 15 minutes, English.

1602-MR-VNT-18. (2016, 2016 January 27) *Interview/Interviewer: P. Budryte*. Vientiane, Lao PDR, 1 hour 50 minutes, English.

1602-MR-VNT-19. (2016, 2016 February 11) *Interview/Interviewer: P. Budryte*. Vientiane, Lao PDR, 1 hour 1 minute, English.

1602-MR-VNT-20. (2016, 2016 February 16) *Interview/Interviewer: P. Budryte*. Vientiane, Lao PDR, 1 hour 32 minutes, English.

1602-MR-VNT-21. (2016, 2016 February 18) *Interview/Interviewer: P. Budryte*. Vientiane, Lao PDR, 55 minutes, English.

1602-MR-VNT-22. (2016, 2016 February 10) *Interview/Interviewer: P. Budryte*. Vientiane, Lao PDR, 1 hour 13 minutes, English.

1603-KL-1. (2016, 2016 February 24) *Interview/Interviewer: P. Budryte*. Bangi, Selangor, Malaysia, 1 hour 19 minutes, English.

1603-KL-2. (2016, 2016 February 26) *Interview/Interviewer: P. Budryte*. Bangi, Selangor, Malaysia, 1 hour 57 minutes, English.

1603-KL-3. (2016, 2016 March 21) *Interview/Interviewer: P. Budryte*. Kuala Lumpur, Malaysia, 1 hour 20 minutes, English.

1603-KL-4. (2016, 2016 April 20) *Interview/Interviewer: P. Budryte*. Kuala Lumpur, Malaysia, 57 minutes, English.

1603-KL-5. (2016, 2016 April 13) *Interview/Interviewer: P. Budryte*. Kuala Lumpur, Malaysia, 51 minute, English.

1603-KL-6. (2016, 2016 March 15) *Interview/Interviewer: P. Budryte*. Kuala Lumpur, Malaysia, 1 hour 36 minutes, English.

1603-KL-7. (2016, 2016 March 14) *Interview/Interviewer: P. Budryte*. Kuala Lumpur, Malaysia, 36 minutes, English.

1603-KL-8. (2016, 2016 March 11) *Interview/Interviewer: P. Budryte*. Kuala Lumpur, Malaysia, 1 hour 28 minutes, English.

1603-KL-9. (2016, 2016 March 2) *Interview/Interviewer: P. Budryte*. Kuala Lumpur, Malaysia, 1 hour 36 minutes, English.

1603-KL-10. (2016, 2016 April 11) *Interview/Interviewer: P. Budryte*. Kuala Lumpur, Malaysia, 1 hour 13 minutes, English.

1604-MR-PP-23. (2016, 2016 March 23) *Interview/Interviewer: P. Budryte*. Phnom Pehn, Cambodia, 1 hour 35 minutes, English.

1604-MR-PP-24. (2016, 2016 March 24) *Interview/Interviewer: P. Budryte*. Phnom Penh, Cambodia, 1 hour 9 minutes, English.

1604-MR-PP-25. (2016, 2016 March 25) *Interview/Interviewer: P. Budryte*. Phnom Penh, Cambodia, 1 hour 6 minutes, English.

1604-MR-PP-26. (2016, 2016 March 28) *Interview/Interviewer: P. Budryte*. Phnom Penh, Cambodia, 1 hour 26 minutes, English.

1604-MR-PP-27. (2016, 2016 March 30) *Interview/Interviewer: P. Budryte*. Phnom Penh, Cambodia, 55 minutes, English.

1604-MR-PP-28. (2016, 2016 April 14) *Interview/Interviewer: P. Budryte*. Phnom Penh, Cambodia, 48 minutes, English.

1604-MR-PP-29. (2016, 2016 March 30) *Interview/Interviewer: P. Budryte*. Phnom Penh, Cambodia, 1 hour 49 minutes, English.

1604-MR-PP-30. (2016, 2016 March 31) *Interview/Interviewer: P. Budryte*. Phnom Penh, Cambodia, 1 hour 36 minutes, English.

1604-MR-PP-31. (2016, 2016 April 1) *Interview/Interviewer: P. Budryte*. Phnom Penh, Cambodia, 1 hour 6 minutes, English.

1604-MR-PP-32. (2016, 2016 April 3) *Interview/Interviewer: P. Budryte*. Siam Riep, Cambodia, 1 hour 23 minutes, English.

1604-MR-PP-33. (2016, 2016 April 5) *Interview/Interviewer: P. Budryte*. Phnom Penh, Cambodia, 1 hour 5 minutes, English.

1604-MR-PP-34. (2016, 2016 April 5) *Interview/Interviewer: P. Budryte*. Phnom Penh, Cambodia, 1 hour 5 minutes, English.

Anonymous-JK-1. (2015, 2015 November 9) *Interview/Interviewer: C. Dupuis & M. Kuiper*. Jakarta, Indonesia, 52 minutes, English.

Anonymous-JK-2. (2015, 2015 November 12) *Interview/Interviewer: C. Dupuis & M. Kuiper*. Jakarta, Indonesia, 50 minutes, English.

Anonymous-VT-1 (2016, 2016 January 19). [Personal communication with local person].

Anonymous-VT-2 (2016, 2016 January 17). [Personal communication with local person].

Anonymous-VT-3. (2016, 2016 January 4) *Personal communication with local person/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, 35 minutes, English.

Anonymous-VT-4. (2016, 2016 January 17) *Personal communication with local person/Interviewer: P. Budryte*. Can Tho, Viet Nam, 44 minutes, Vietnamese (with interpret to English).

Anonymous-VT-5. (2016, 2016 January 18) *Personal communication with local person/Interviewer: P. Budryte*. Ho Chi Minh, Viet Nam, 1 hour 56 minutes, English.

Gartland, A. (2016, 2016 March) *Discussion about cultural features of Malay lifestyle/Interviewer: P. Budryte*. Kuala Lumpur, Malaysia, English.

Primary Sources

Aarhus Convention. (1998). The UNECE Convention on Access to information, Public Participation in Decision-Making and Access to Justice in Environmental Matters.

Abdullah, J., Ahmad, C. B., Sa'ad, S. R. M., & Wahab, S. A. (2016). Public Participation: KL Draft City Plan 2020. *Asian Journal of Behavioural Studies, 1*(3), 33-41.

Abdullah, K., Anukularmphai, A., Kawasaki, T., & Nepomuceno, D. (2015). A tale of three cities: water disaster policy responses in Bangkok, Kuala Lumpur and Metro Manila. *Water Policy, 17*(S1), 89-113.

Abelson, J., & Gauvin, F.-P. (2006). *Assessing the impacts of public participation: Concepts, evidence and policy implications*: Canadian Policy Research Networks Ottawa.

Åberg, U. E., & Tapsell, S. (2013). Revisiting the River Skerne: The long-term social benefits of river rehabilitation. *Landscape and Urban Planning, 113*, 94-103. doi:10.1016/j.landurbplan.2013.01.009

ADB. (2004). Network of Asian River Basin Organizations (NARBO). CHARTER. Retrieved from http://www.narbo.jp/whats/materials/NARBO_Charter_Revised_Feb_2017.pdf.

ADB. (2006). *Involuntary Resettlement Safeguards*. Retrieved from https://www.oecd.org/countries/philippines/38032102.pdf

ADB. (2009). *Annual Report of the Community of Practice on Water*. Retrieved from Manila:

ADB. (2016). *River Basin Management Planning in Indonesia: Policy and Practice*. Retrieved from Mandaluyong City, Philippines:

Adger, W. N., Kelly, P. M., & Ninh, N. H. (2012). *Living with environmental change: social vulnerability, adaptation and resilience in Vietnam*: Routledge.

Affeltranger, B. (2001). *Public Participation in the design of local strategies for flood mitigation and control*: Unesco.

Afroz, R., Masud, M. M., Akhtar, R., & Duasa, J. B. (2014). Water pollution: Challenges and future direction for water resource management policies in Malaysia. *Environment and Urbanization Asia, 5*(1), 63-81.

Agenda 21. (1992). *United Nations Conference on Environment & Development. Earth Summit. Agenda 21*. Retrieved from Rio de Janeiro, Brazil:

Ahmed, S. M., & Palermo, A.-G. S. (2010). Community engagement in research: frameworks for education and peer review. *American journal of public health, 100*(8), 1380-1387.

Amérigo, M. (2007). Underlying dimensions of ecocentric and anthropocentric environmental beliefs. *The Spanish Journal of Psychology, 10*(1), 97-103.

Ananga, E. O., Njoh, A. J., Anchang, J. Y., & Akiwumi, F. A. (2016). Participation-related factors influencing performance in four urban-based community-operated water schemes in Kisumu, Kenya. *Community Development Journal, 52*(2), 319-336.

Andolina, R., Laurie, N., & Radcliffe, S. A. (2009). *Indigenous development in the Andes: Culture, power, and transnationalism*: Duke University Press.

Antlöv, H. (2003). Village government and rural development in Indonesia: The new democratic framework. *Bulletin of Indonesian Economic Studies, 39*(2), 193-214.

Antunes, P., Kallis, G., Videira, N., & Santos, R. (2009). Participation and evaluation for sustainable river basin governance: Elsevier.

APFM. (2012). *Conservation and restoration of rivers and floodplains* (Vol. 13): World Meteorological Organization.

Aradóttir, Á., Petursdottir, T., Halldorsson, G., Svavarsdottir, K., & Arnalds, O. (2013). Drivers of ecological restoration: lessons from a century of restoration in Iceland. *Ecology and Society, 18*(4).

Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of planners, 35*(4), 216-224.

Aronson, J., Blignaut, J. N., Milton, S. J., Le Maitre, D., Esler, K. J., Limouzin, A., . . . Prinsloo, P. (2010a). Are Socioeconomic Benefits of Restoration Adequately Quantified? A Meta‐analysis of Recent Papers (2000–2008) in Restoration Ecology and 12 Other Scientific Journals. *Restoration Ecology, 18*(2), 143-154.

Aronson, J., Blignaut, J. N., Milton, S. J., Le Maitre, D., Esler, K. J., Limouzin, A., . . . Lederer, N. (2010b). Are Socioeconomic Benefits of Restoration Adequately Quantified? A Meta-analysis of Recent Papers (2000–2008) in Restoration Ecology and 12 Other Scientific Journals. *Restoration Ecology, 18*(2), 143-154. doi:10.1111/j.1526-100X.2009.00638.x

Arslanian, S. (2015). Rethinking Urban Planning in a Changing Climate: Case study on Flood-Prone Jakarta. http://www.newcitiesfoundation.org/rethinking-urban-planning-in-a-changing-climate-case-study-on-flood-prone-jakarta/.

ASEAN. (1997). *ASEAN Vision 2020*. Retrieved from http://asean.org/?static_post=asean-vision-2020

Attfield, R. (1994). Rehabilitating nature and making nature habitable. *Royal Institute of Philosophy Supplement, 36*, 45-57.

Bäckstrand, K. (2003). Civic science for sustainability: reframing the role of experts, policy-makers and citizens in environmental governance. *Global Environmental Politics, 3*(4), 24-41.

Badenoch, N. (2002). *Transboundary Environmental Governance*. Retrieved from http://pdf.usaid.gov/pdf_docs/Pnacs660.pdf

Baker, S., & Eckerberg, K. (2013). A policy analysis perspective on ecological restoration. *Ecology and Society, 18*(2).

Baker, S., Eckerberg, K., & Zachrisson, A. (2014). Political science and ecological restoration. *Environmental Politics, 23*(3), 509-524.

Bakker, K. (1999). The politics of hydropower: developing the Mekong. *Political Geography, 18*(2), 209-232.

Bandaragoda, D. J. (2000). *A framework for institutional analysis for water resources management in a river basin context* (Vol. 5): IWMI.

Bandura, A. (2002). Social cognitive theory in cultural context. *Applied psychology, 51*(2), 269-290.

Barlow, C. (2016). *Conflicting agendas in the Mekong River: mainstream hydropower development and sustainable fisheries.* Paper presented at the Freshwater, fish and the future: proceedings of the global cross-sectoral conference. Food and Agriculture Organization of the United Nations, Rome.

Barnard, T. P. (2014). Introduction. In T. O'Dempsey, M. Emmanuel, J. van Wyhe, N. P. Taylor, F. L. Tan, C. Chou, G. H. Yi, & C. Heng (Eds.), *Nature Contained: Environmental Histories of Singapore*: NUS Press.

Barnes, J. (2012). Pumping possibility: Agricultural expansion through desert reclamation in Egypt. *Social Studies of Science, 42*(4), 517-538.

Barrow, C. J. (1998). River basin development planning and management: A critical review. *World Development, 26*(1), 171-186.

Bason, C. (2013). Engaging Citizens in Policy Innovation. Benefiting public policy from the design inputs of citizens and stakeholders as experts *Putting Citizens First* (Retrieved from http://www.jstor.org/stable/j.ctt4cg5sm.9pp. 61-74): ANU Press.

Beard, V. A. (2005). Individual determinants of participation in community development in Indonesia. *Environment and Planning C: Government and Policy, 23*(1), 21-39.

Beierle, T. C. (1998). *Public participation in environmental decisions: an evaluation framework using social goals*: Resources for the Future Washington, DC.

Bell, S. (1994). Methods and mindsets: towards an understanding of the tyranny of methodology. *Public administration and development, 14*(4), 323-338.

Bell, S., Allen, A., Hofmann, P., & Teh, T.-H. (2016). *Urban Water Trajectories* (Vol. 6). Switzerland: Springer.

Bello, A. (2014). Agriculture Communal Labor in the Nuba Mountains. *J. Res. Peace Gend. Dev. 4 (3): 48, 54*.

Bello, A., & Dola, K. (2014). Sustainable development and the role of local governance: experience from Malaysian model regions. *International Journal of Humanities and Social Science, 4*(1), 268-280.

Benages-Albert, M., Di Masso, A., Porcel, S., Pol, E., & Vall-Casas, P. (2015). Revisiting the appropriation of space in metropolitan river corridors. *Journal of Environmental Psychology, 42*, 1-15. doi:10.1016/j.jenvp.2015.01.002

Benjamin, G., & Chou, C. (2002). *Tribal communities in the Malay World: Historical, cultural and social perspectives*: Institute of Southeast Asian Studies.

Bergmann, J. R. (2006). Qualitative Methoden der Medienforschung–Einleitung und Rahmung. *Qualitative Methoden der Medienforschung, Rowohlt, Reinbek bei Hamburg*, 13-41.

Berke, P. R., Song, Y., & Stevens, M. (2009). Integrating hazard mitigation into new urban and conventional developments. *Journal of Planning Education and Research, 28*(4), 441-455.

Berman, T. (2016). *Public Participation as a Tool for Integrating Local Knowledge Into Spatial Planning: Planning, Participation, and Knowledge*: Springer.

Bernauer, T. (2002). Explaining success and failure in international river management. *Aquatic Sciences-Research Across Boundaries, 64*(1), 1-19.

Bernhardt, E. S., Sudduth, E. B., Palmer, M. A., Allan, J. D., Meyer, J. L., Alexander, G., . . . Pagano, L. (2007). Restoring Rivers One Reach at a Time: Results from a Survey of U.S. River Restoration Practitioners. *Restoration Ecology, 15*(3), 482-493. doi:10.1111/j.1526-100X.2007.00244.x

Beunderman, J. (2017). *Collaborative urbanism in a changing world. massive challenges, multiple actors* Paper presented at the Lietuvos Urbanistinis Forumas, Panevezys, Lithuania.

Bherer, L., & Breux, S. (2012). The diversity of public participation tools: Complementing or competing with one another? *Canadian Journal of Political Science, 45*(02), 379-403.

Bijlsma, R., Bots, P., Wolters, H., & Hoekstra, A. (2011). An empirical analysis of stakeholders' influence on policy development: the role of uncertainty handling. *Ecology and Society, 16*(1).

Biswas, A. K. (2008). Current directions: integrated water resources management–a second look. *Water international, 33*(3), 274-278.

Biswas, A. K. (2011). Cooperation or conflict in transboundary water management: case study of South Asia. *Hydrological Sciences Journal, 56*(4), 662-670.

Blackstock, K. L., Waylen, K. A., Dunglinson, J., & Marshall, K. M. (2012). Linking process to outcomes — Internal and external criteria for a stakeholder involvement in River Basin Management Planning. *Ecological Economics, 77*, 113-122. doi:10.1016/j.ecolecon.2012.02.015

Boelens, R., & Gelles, P. H. (2005). Cultural politics, communal resistance and identity in Andean irrigation development. *Bulletin of Latin American Research, 24*(3), 311-327.

Boer, B., Hirsch, P., Johns, F., Saul, B., & Scurrah, N. (2015). *The Mekong: A socio-legal approach to river basin development*. New York: Routledge.

Boomgaard, P. (2007). *A world of water: rain, rivers and seas in Southeast Asian histories*: Brill.

Borch, C., & Kornberger, M. (2015). *Urban commons: rethinking the city*: Routledge.

Bouleau, G. (2014). The co-production of science and waterscapes: The case of the Seine and the Rhône Rivers, France. *Geoforum, 57*, 248-257. doi:10.1016/j.geoforum.2013.01.009

Bowden, W. B., Fenemor, A., & Deans, N. (2004). Integrated water and catchment research for the public good: The Motueka River–Tasman Bay initiative, New Zealand. *International Journal of Water Resources Development, 20*(3), 311-323.

Bowen, J. R. (1986). On the political construction of tradition: Gotong Royong in Indonesia. *The Journal of Asian Studies, 45*(03), 545-561.

Boydston, J. A. (1969). *The Collected Works of John Dewey, 1882-1953 (37 Volumes)*: Southern Illinois Up.

Bradley, R. M. (2010). Direct and indirect benefits of improving river quality: quantifying benefits and a case study of the River Klang, Malaysia. *The Environmentalist, 30*(3), 228-241. doi:10.1007/s10669-010-9267-8

Broady, M. (1969). Public participation - a panacea for planners? *Municipal Review, 40*, 216-217.

Brookes, A., & Shields Jr, F. D. (1996). River channel restoration: guiding principles for sustainable projects.

Brosius, J. P. (1997). Endangered Forest, Endangered People: Environmentalist Representations of Indigenous Knowledge. *Human Ecology, 25*(1), 47-69. doi:10.1023/a:1021983819369

Brox, O. (2006). The Political Economy of Rural Development: Development Without Centralisation. *Delft, the Netherlands: Eburon*.

Bruch, C. E., Jansky, L., Nakayama, M., & Salewicz, K. A. (2005). *Public participation in the governance of international freshwater resources*: United Nations University Press.

Brunet-Jailly, E., Kataoka, S., Keil, R., Sancton, A., & Taylor, Z. (2013). Commentary on Politics of Urbanism: Seeing Like a City by Warren Magnusson. *International Journal of Urban and Regional Research, 37*(2), 790-803.

Bucx, T., Marchand, M., Makaske, B., & van de Guchte, C. (2010). *Comparative assessment of the vulnerability and resilience of 10 deltas: work document*: Deltares.

Budryte, P., Heldt, S., & Denecke, M. (2017). Foundations of the participatory approach in the Mekong River basin management. *Science of The Total Environment*.

Buijs, A. E. (2009). Public support for river restoration. A mixed-method study into local residents' support for and framing of river management and ecological restoration in the Dutch floodplains. *Journal of Environmental Management, 90*(8), 2680-2689. doi:10.1016/j.jenvman.2009.02.006

Bullock, J. M., Aronson, J., Newton, A. C., Pywell, R. F., & Rey-Benayas, J. M. (2011). Restoration of ecosystem services and biodiversity: conflicts and opportunities. *Trends in Ecology & Evolution, 26*(10), 541-549.

Byrne, D., & Callaghan, G. (2013). *Complexity theory and the social sciences: The state of the art*: Routledge.

Cairns Jr, J. (1997). Eco-societal restoration: creating a harmonious future between human society and natural systems. In J. E. Williams, C. A. Wood, & M. P. Dowbeck (Eds.), *Watershed Restoration: Principles and Practices.* (pp. 487-500). Bethesda, Maryland: American Fisheries Society.

Caljouw, M., Nas, P. J., & Pratiwo, M. (2005). Flooding in Jakarta: Towards a blue city with improved water management. *Bijdragen tot de taal-, land-en volkenkunde/Journal of the Humanities and Social Sciences of Southeast Asia, 161*(4), 454-484.

Camilleri, J. A., & Schottmann, S. (2013). *Culture, religion and conflict in Muslim Southeast Asia: negotiating tense pluralisms* (Vol. 56): Routledge.

Campbell, C. J. (2016). Space, Place and Scale: Human Geography and Spatial History in Past and Present. *Past & Present*, 10.1093/pastj/gtw006. doi:10.1093/pastj/gtw006

Caponera, D. A., & Nanni, M. (2007). *Principles of water law and administration: national and international*: Taylor & Francis.

Carnes, S. A., Schweitzer, M., Peelle, E. B., Wolfe, A. K., & Munro, J. F. (1998). Measuring the success of public participation on environmental restoration and waste management activities in the U.S. Department of Energy. *Technology in Society, 20*(4), 385-406. doi:10.1016/S0160-791X(98)00024-4

Casciarri, B. (2009). Globalization in contemporary Sudan (Case studies from Central and Western Sudan). *NOMADIC PEOPLES, 13*(1).

Chaffin, B. C., Garmestani, A. S., Gosnell, H., & Craig, R. K. (2016). Institutional networks and adaptive water governance in the Klamath River Basin, USA. *Environmental Science & Policy, 57*, 112-121. doi:10.1016/j.envsci.2015.11.008

Chan, N. W. (2012). Managing Urban Rivers and Water Quality in Malaysia for Sustainable Water Resources. *International Journal of Water Resources Development, 28*(2), 343-354. doi:10.1080/07900627.2012.668643

Charpleix, L. (2017). The Whanganui River as Te Awa Tupua: place-based law in a legally pluralistic society. *The Geographical Journal*.

Checkland, P., Poulter, J., Williams, T., Hitchins, D. K., Hoverstadt, P., Pidd, M., . . . Brotby, K. (2006). Dialogue mapping: Building shared understanding of wicked problems.

Chess, C., & Purcell, K. (1999). Public participation and the environment: Do we know what works? : ACS Publications.

Chin, A. (2006). Urban transformation of river landscapes in a global context. *Geomorphology, 79*(3), 460-487.

Choi, N. (2011). *Local Politics in Indonesia. Pathways to Power*: Routledge.

Chomchai, P. (2005). Public participation in watershed management in theory and practice: A Mekong River Basin Perspective. In C. E. Bruch, L. Jansky, M. Nakayama, & K. A. Salewicz (Eds.), *Public participation in the governance of international freshwater resources*: United Nations University Press.

Chou, C. (2016). The Water World of the Orang Suku Laut in Southeast Asia. *TRaNS: Trans-Regional and-National Studies of Southeast Asia, 4*(02), 265-282.

Chou, C. G. H. (2013). Space, Movement and Place: The Sea Nomads. In S. Chandra & H. P. Ray (Eds.), *Sea, Identity and History: From the Bay of Bengal to the South China Sea* (pp. 41-66). New Dehli: Monohar: Manohar Publications.

Coenen, F. (2009). Public participation and better environmental decisions. *The Promise and Limits of Participatory Processes for the Quality of Environmentally Related Decision-making*, 209.

Cohen, C., & Werker, E. D. (2008). The Political Economy of``Natural''Disasters. *Journal of Conflict Resolution, 52*(6), 795-819.

Cohen, J. E. (2012). *Configuring the networked self: Law, code, and the play of everyday practice*: Yale University Press.

Collier, M. J., & Scott, M. (2010). Focus group discourses in a mined landscape. *Land Use Policy, 27*(2), 304-312.

Colven, E. (2017). Understanding the Allure of Big Infrastructure: Jakarta's Great Garuda Sea Wall Project. *Water Alternatives, 10*(2), 250.

Colvin, J., Blackmore, C., Chimbuya, S., Collins, K., Dent, M., Goss, J., . . . Seddaiu, G. (2014). In search of systemic innovation for sustainable development: A design praxis emerging from a decade of social learning inquiry. *Research Policy, 43*(4), 760-771. doi:10.1016/j.respol.2013.12.010

Conklin, J. (2001). Wicked problems and social complexity. *CogNexus Institute*.

Conniff, R. (2014). Rebuilding the Natural World: A shift in Ecological Restoration. *Yale Environment 360 [online]* Retrieved from

http://e360.yale.edu/feature/rebuilding_the_natural_world_a_shift_in_ecologic
al_restoration/2747/

Connors, P., & McDonald, P. (2010). Transitioning communities: community, participation and the Transition Town movement. *Community Development Journal, 46*(4), 558-572. doi:10.1093/cdj/bsq014

Cooke, B., & Kothari, U. (2001). *Participation: The new tyranny?* : Zed books.

Cooper, R. (2012). The potential of MRC to pursue IWRM in the Mekong: Trade-offs and public participation. In J. Öjendal, S. Hansson, & S. Helberg (Eds.), *Politics and Development in a Transboundary Watershed* (pp. 61-82). Dordrecht Heidelberg London New York: Springer.

Cornwall, A. (2003). Whose voices? Whose choices? Reflections on gender and participatory development. *World Development, 31*(8), 1325-1342.

Cuppen, M., & Winnubst, M. (2008). *How public participation influenced the legitimation of a policy process: the case of a dike relocation*.

Darby, S., & Sear, D. (2008). *River Restoration: Managing the Uncertainty in Restoring Physical Habitat* (Retrieved from https://books.google.de/books?id=ijPPcxUu7MsC): John Wiley & Sons.

Dasgupta, A., & Beard, V. A. (2007). Community driven development, collective action and elite capture in Indonesia. *Development and change, 38*(2), 229-249.

Davis, D. R. (2015). Three principles for an Asian humanities: Care first... Learn from... Connect histories. *The Journal of Asian Studies, 74*(1), 43-67.

Davis, M. A., & Slobodkin, L. B. (2004). The science and values of restoration ecology. *Restoration Ecology, 12*(1), 1-3.

de Boer, C., & Bressers, H. (2012). Environmental reviews and case studies: New Strategies for Implementing Locally Integrated Stream Restoration Projects. *Environmental Practice, 14*(01), 26-34. doi:10.1017/S1466046611000500

de Groot, M. (2012). Exploring the relationship between public environmental ethics and river flood policies in western Europe. *Journal of Environmental Management, 93*(1), 1-9. doi:10.1016/j.jenvman.2011.08.020

de Groot, R. S., Blignaut, J., Ploeg, S., Aronson, J., Elmqvist, T., & Farley, J. (2013). Benefits of investing in ecosystem restoration. *Conservation Biology, 27*(6), 1286-1293.

de Groot, W. T., & Warner, J. (2011). *The social side of river management*: Nova Science.

DeCaro, D., & Stokes, M. (2013). Public participation and institutional fit: a social–psychological perspective. *Ecology and Society, 18*(4).

Dehnhardt, A., & Petschow, U. (2008). *Sustainability in River Basins: A Question of Governance*: Oekom.

The Federal Constitution of Malaya, (1957).

Dellapenna, J. W., Gupta, J., Li, W., & Schmidt, F. (2013). Thinking about the future of global water governance. *Confronting Ecological and Economic Collapse: Ecological Integrity for Law, Policy and Human Rights, 120*.

Delli Priscoli, J. (n.d.). River Basin Organizations. *Database for River basin organizations. Oregon State University. Institute for Water and Watersheds* Retrieved from http://www.transboundarywaters.orst.edu/publications/index.html.

Delli Priscoli, J., & Wolf, A. T. (2009). *Managing and Transforming Water Conflicts*. Cambridge: Cambridge University Press.

Dennett, D. C. (2017). *From Bacteria to Bach and Back. The Evolution of Minds*: W. W. Norton & Company.

DeWeerdt, S. (2017). As a city grows, its impact on rivers doesn't have to. *Anthropocene, 2*. Retrieved from http://www.anthropocenemagazine.org/2017/08/urban-effects-on-rivers-have-long-reach/

Diamond, J. M. (2005). *Collapse: How societies choose to fail or succeed*: Penguin.

Diduck, A. P., Pratap, D., Sinclair, A. J., & Deane, S. (2013). Perceptions of impacts, public participation, and learning in the planning, assessment and mitigation of two hydroelectric projects in Uttarakhand, India. *Land Use Policy, 33*, 170-182. doi:10.1016/j.landusepol.2013.01.001

DiEnno, C. M., & Thompson, J. L. (2013). For the love of the land: How emotions motivate volunteerism in ecological restoration. *Emotion and Ecology, 6*, 63-72. doi:10.1016/j.emospa.2012.02.002

Dinar, A., & Albiac, J. (2012). *Policy and strategic behaviour in water resource management*: EarthScan.

Dinar, A., Dinar, S., McCaffrey, S., & McKinney, D. (2013). *Bridges over water: understanding transboundary water conflict, negotiation and cooperation* (second edition ed. Vol. 3): World Scientific Publishing Co Inc.

Dinar, S. (2007). *International water treaties: Negotiation and cooperation along transboundary rivers*: Routledge.

Diokno, M. S. I., & Chinh, N. V. (2006). *The Mekong arranged & rearranged*. Chiang Mai, Thailand: Mekong Press.

Dola, K., & Mijan, D. (2006). Public participation in planning for sustainable development: operational questions and issues. *International Journal on Sustainable Tropical Design Research & Practice, 1*(1), 1-8.

Dola, K., & Noor, K. B. M. (2012). Managing towards sustainable city: Public participation for safety and security. *British Journal of Arts and Social Sciences, 4*(1).

Dore, J. (2007). Multi-stakeholder platforms (MSPS): unfulfilled potential. In L. Lebel, J. Dore, R. Daniel, & Y. S. Koma (Eds.), *Democratizing water governance in the Mekong Region*: Mekong Press.

Douglass, M., Ho, K.-C., & Ooi, G. L. (2007). *Globalization, the city and civil society in Pacific Asia: the social production of civic spaces*: Routledge.

Dourish, P., & Bell, G. (2007). The infrastructure of experience and the experience of infrastructure: meaning and structure in everyday encounters with space. *Environment and Planning B: Planning and Design, 34*(3), 414-430.

Drazkiewicz, A., Challies, E., & Newig, J. (2015). Public participation and local environmental planning: Testing factors influencing decision quality and implementation in four case studies from Germany. *Land Use Policy, 46*, 211-222. doi:10.1016/j.landusepol.2015.02.010

Drenthen, M. (2009). Ecological restoration and place attachment: emplacing non-places? *Environmental Values*, 285-312.

Drenthen, M. (2016). Environmental hermeneutics and the meaning of nature *The Oxford Handbook of Environmental Ethics*.

Dudgeon, D., Arthington, A. H., Gessner, M. O., Kawabata, Z. I., Knowler, D. J., Lévêque, C., . . . Stiassny, M. L. (2006). Freshwater biodiversity: importance, threats, status and conservation challenges. *Biological reviews, 81*(2), 163-182.

Easterly, W. (2014). *The tyranny of experts: Economists, dictators, and the forgotten rights of the poor*: Basic Books.

Eckersley, R. (1992). *Environmentalism and political theory: Toward an ecocentric approach*: Suny Press.

Edelenbos, J., van Buuren, A., & van Schie, N. (2011). Co-producing knowledge: joint knowledge production between experts, bureaucrats and stakeholders in Dutch water management projects. *Environmental Science & Policy, 14*(6), 675-684. doi:10.1016/j.envsci.2011.04.004

Elfithri, R., Toriman, M., Mokhtar, M. B., & Juahir, H. (2011). Perspectives and initiatives on integrated river basin management in Malaysia: A review. *The Social Sciences, 6*(2), 169-176.

Enserink, B., Patel, M., Kranz, N., & Maestu, J. (2007). Cultural factors as co-determinants of participation in river basin management. *Ecology and Society, 12*(2).

Environmental Quality Act, (1974).

Escobar, A. (2011). *Encountering development: The making and unmaking of the Third World*: Princeton University Press.

European Commission. (2003). *Common Implementation Strategy for the Water Framework Directive (2000/60/EC). Guidance document no 8. Public Participation in relation to the Water Framework Directive*. Retrieved from Luxembourg:

Common Implementation Strategy for the Water Framework Directive (2000/60/EC). Guidance Documnet No 8. Public Participation in Relation to the Water Framework Directive (2003).

Eveland, W. P., & Hively, M. H. (2009). Political discussion frequency, network size, and "heterogeneity" of discussion as predictors of political knowledge and participation. *Journal of Communication, 59*(2), 205-224.

Fachrul, M. F., Hendrawan, D., & Sitawati, A. (2007). *Land use and water quality relationships in the Ciliwung River Basin, Indonesia.* Paper presented at the Proceedings of the International Congress on River Basin Management.

Fagence, M. (2014). *Citizen participation in planning* (Vol. 19): Elsevier.

Feld, C. K., Birk, S., Bradley, D. C., Hering, D., Kail, J., Marzin, A., . . . Pletterbauer, F. (2011a). From natural to degraded rivers and back again: a test of restoration ecology theory and practice. *Advances in Ecological Research, 44*(3), 119-209. doi:10.1016/B978-0-12-374794-5.00003-1

Feld, C. K., Birk, S., Bradley, D. C., Hering, D., Kail, J., Marzin, A., . . . Friberg, N. (2011b). From Natural to Degraded Rivers and Back Again. *44*, 119-209. doi:10.1016/b978-0-12-374794-5.00003-1

Ferguson, J. (1990). *The anti-politics machine:'development', depoliticization and bureaucratic power in Lesotho*: CUP Archive.

Feyen, J., Shannon, K., & Neville, M. (2008). *Water and urban development paradigms: towards an integration of engineering, design and management approaches*: CRC Press.

Firman, T. (1997). Land conversion and urban development in the northern region of West Java, Indonesia. *Urban Studies, 34*(7), 1027-1046.

Fischer, F. (2009). *Democracy and expertise: Reorienting policy inquiry*: Oxford University Press.

Fiske, A. P. (1991). *Structures of social life: The four elementary forms of human relations: Communal sharing, authority ranking, equality matching, market pricing*: Free Press.

Fleeger, W. E., & Becker, M. L. (2008). Creating and sustaining community capacity for ecosystem-based management: Is local government the key? *J Environ Manage, 88*(4), 1396-1405. doi:10.1016/j.jenvman.2007.07.018

Flick, U., von Kardoff, E., & Steinke, I. (2004). *A companion to qualitative research*: Sage.

Fliervoet, J., Van den Born, R., Smits, A., & Knippenberg, L. (2013). Combining safety and nature: a multi-stakeholder perspective on integrated floodplain management. *Journal of Environmental Management, 128*, 1033-1042.

Flotemersch, J. E., Leibowitz, S. G., Hill, R. A., Stoddard, J. L., Thoms, M. C., & Tharme, R. E. (2016). A Watershed Integrity Definition and Assessment Approach to Support Strategic Management of Watersheds. *River Research and Applications, 32*(7), 1654-1671. doi:10.1002/rra.2978

Foo, K. (2015). A shared view of the integrated urban water management practices in Malaysia. *Water Science and Technology: Water Supply, 15*(3), 456-473.

Forman, R. T. T. (2014). *Urban Ecology. Science of Cities*: Cambridge University Press.

Frazer, L. (2005). Paving paradise: the peril of impervious surfaces. *Environmental Health Perspectives, 113*(7), A456.

Friberg, N., Bonada, N., Bradley, D. C., Dunbar, M. J., Edwards, F. K., Grey, J., . . . Woodward, G. (2011). Biomonitoring of Human Impacts in Freshwater Ecosystems. *44*, 1-68. doi:10.1016/b978-0-12-374794-5.00001-8

Friedhoff, S., Meier zu Verl, C., Pietsch, C., Meyer, C., Vompras, J., & Liebig, S. (2013a). Replicability and comprehensibility of social research and its technical implementation.

Friedhoff, S., Meier zu Verl, C., Pietsch, C., Meyer, C., Vompras, J., & Liebig, S. (2013b). Social research data: Documentation, management, and technical implementation within the SFB 882.

Fritz, V., & Menocal, A. R. (2007). Developmental states in the new millennium: Concepts and challenges for a new aid agenda. *Development Policy Review, 25*(5), 531-552.

Fulazzaky, M. A. (2014). Challenges of integrated water resources management in Indonesia. *Water, 6*(7), 2000-2020.

Fulazzaky, M. A., & Sutardi, S. (2009). *Integrated water resources management in view of environmental sustainbility aspects*: Penerbit UTHM.

Gainsbor, M. (2008). *On The Borders of State Power. Frontiers in the Greater Mekong Sub-Region*: Routledge.

Garmendia, E., & Stagl, S. (2010). Public participation for sustainability and social learning: Concepts and lessons from three case studies in Europe. *Ecological Economics, 69*(8), 1712-1722.

Gelles, P. H. (2000). *Water and power in highland Peru: The cultural politics of irrigation and development*: Rutgers University Press.

Gerlak, A. K., & Grant, K. A. (2009). The Correlates of Cooperative Institutions for International Rivers. In T. J. V. e. d. Fellow, Z. Š. S. R. F. President, P. R. A. R. F. V. Fellow, & A. K. G. D. V. R. Scholar (Eds.), *Mapping the New World Order* (Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/9781444306552.ch5/summary

files/522/summary.html

files/525/summary.htmlpp. 114-147): Wiley-Blackwell.

Gerlak, A. K., & Mukhtarov, F. (2015). 'Ways of knowing'water: integrated water resources management and water security as complementary discourses. *International Environmental Agreements: Politics, Law and Economics, 15*(3), 257-272.

Gerring, J. (2006). *Case study research: Principles and practices*: Cambridge University Press.

Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., & Trow, M. (1994). *The new production of knowledge: The dynamics of science and research in contemporary societies*: Sage.

Gifford, R. (2017). Applying Social Psychology to the Environment. In J. A. Gruman, F. W. Schneider, & L. M. Coutts (Eds.), *Applied Social Psychology: Understanding and Addressing Social and Practical Problems* (3rd ed.). Los Angeles: SAGE Publications, Inc.

Gill, M., & Gittings, B. (1998). Public participation and the development plan: a GIS approach. *GISRUK98, University of Edinburgh, to be published in: B. Gittings (Ed.) Innovations in GIS, 6*.

Gillespie, J. (2008). Localizing global rules: Public participation in lawmaking in Vietnam. *Law & Social Inquiry, 33*(3), 673-707.

Girard, C., Rinaudo, J.-D., Pulido-Velazquez, M., & Caballero, Y. (2015). An interdisciplinary modelling framework for selecting adaptation measures at the river basin scale in a global change scenario. *Environmental Modelling & Software, 69*, 42-54. doi:10.1016/j.envsoft.2015.02.023

GIZ. (2014a). *Avoiding Social Risks Caused by Resettlement of the Xiaolangdi Multipurpose Project in China*. Retrieved from Vientiane, Lao PDR:

GIZ. (2014b). *Compensation and Livelihood Restoration at Nam Theun 2 Hydropower Project*. Retrieved from Vientiane, Lao PDR:

Glucker, A. N., Driessen, P. P., Kolhoff, A., & Runhaar, H. A. (2013). Public participation in environmental impact assessment: why, who and how? *Environmental Impact Assessment Review, 43*, 104-111.

Goldman, M., & Schurman, R. A. (2000). Closing the "great divide": New social theory on society and nature. *Annual Review of Sociology, 26*(1), 563-584.

Gómez-Baggethun, E., & Barton, D. N. (2013). Classifying and valuing ecosystem services for urban planning. *Ecological Economics, 86*, 235-245. doi:10.1016/j.ecolecon.2012.08.019

Grijns, C. D., & Nas, P. (2000). *Jakarta-Batavia: Socio-cultural Essays* (Retrieved from https://books.google.co.id/books?id=cBJr9viseXEC): KITLV.

Grolleau, G., & McCann, L. M. J. (2012). Designing watershed programs to pay farmers for water quality services: Case studies of Munich and New York City. *Ecological Economics, 76*, 87-94. doi:10.1016/j.ecolecon.2012.02.006

Gross, M. (2008). Return of the wolf: ecological restoration and the deliberate inclusion of the unexpected. *Environmental Politics, 17*(1), 115-120.

Gruman, J. A., Schneider, F. W., & Coutts, L. M. (2017). *Applied Social Psychology: Understanding and Addressing Social and Practical Problems* (3rd Ed.). Los Angeles: SAGE Publications, Inc.

Gupta, A. (1995). Blurred boundaries: the discourse of corruption, the culture of politics, and the imagined state. *American ethnologist, 22*(2), 375-402.

Gupta, J., Pahl-Wostl, C., & Zondervan, R. (2013). 'Glocal'water governance: a multi-level challenge in the anthropocene. *Current Opinion in Environmental Sustainability, 5*(6), 573-580.

Gupta, R., Pfeffer, K., Verrest, H., & Ros-Tonen, M. (2015). *Geographies of urban governance*: Springer.

GWP. (2004). *Catalyzing Change: A handbook for developing IWRM and water efficiency strategies*. Retrieved from Stockholm:

Hadi, A. S., Idrus, S., Mohamed, A. F., Taha, M. R., Othman, M. R., Ismail, S. M. F. S., & Ismail, S. M. (2017). Managing the Growing Kuala Lumpur Mega Urban Region for Livable City: The Sustainable Development Goals as Guiding Frame *Handbook of Sustainability Science and Research* (pp. 357-368): Springer.

Hadiz, V. R. (2004). Decentralization and Democracy in Indonesia: A Critique of Neo-Institutionalist Perspectives. *Development and change, 35*(4), 697-718.

Halvorsen, K. E. (2001). Assessing public participation techniques for comfort, convenience, satisfaction, and deliberation. *Environmental management, 28*(2), 179-186.

Hannigan, J. A. (1995). *Environmental sociology: A social constructionist perspective*: Taylor & Francis US.

Hansen, S. H., & Mäenpää, M. (2008). An overview of the challenges for public participation in river basin management and planning. *Management of Environmental Quality: An International Journal, 19*(1), 67-84.

Hansen, W. (2014). Generalizable principles for ecosystem stewardship-based management of social-ecological systems: lessons learned from Alaska. *Ecology and Society, 19*(4).

Hansson, S., Hellberg, S., & Öjendal, J. (2012). Politics and development in a transboundary watershed: The case of the lower Mekong Basin *Politics and Development in a Transboundary Watershed* (pp. 1-18): Springer.

Harari, Y. N. (2014). *Sapiens: A brief history of humankind*: Random House.

Harper, C. L. (2015). *Society. Human Perspectives on Environemntal Issues* (5 edition ed.). Boston Columbus Indianapolis New York San Francisco Upper Saddle River Amsterdam Capa Town Dubai London Madrid Milan Munich Paris Montreal Toronto Delhi Mexico City Sao Paulo Sydney Hong Kong Seoul Singapore Taipei Tokyo: Pearson.

Hassenforder, E., Smajgl, A., & Ward, J. (2015). Towards understanding participatory processes: framework, application and results. *Journal of Environmental Management, 157*, 84-95.

Hastrup, K. (2013). Water and the configuration of social worlds: An anthropological perspective. *Journal of Water Resource and Protection, 5*(04), 59.

Havekes, H. J. M., Hofstra, M., van der Kerk, A., & Teeuwen, B. (2013). *Building blocks for good water governance*: Water Governance Centre (WGC).

Hawkins, C. P., Olson, J. R., & Hill, R. A. (2010). The reference condition: predicting benchmarks for ecological and water-quality assessments. *Journal of the North American Benthological Society, 29*(1), 312-343.

Hedelin, B. (2008). Criteria for the assessment of processes for sustainable river basin management and their congruence with the EU Water Framework Directive. *Environmental Policy and Governance, 18*(4), 228-242.

Hedman, E.-L. E. (2001). Contesting state and civil society: Southeast Asian trajectories. *Modern Asian Studies, 35*(04), 921-951.

Hegger, D., Lamers, M., Van Zeijl-Rozema, A., & Dieperink, C. (2012). Conceptualising joint knowledge production in regional climate change adaptation projects: success conditions and levers for action. *Environmental Science & Policy, 18*, 52-65. doi:10.1016/j.envsci.2012.01.002

Heldt, S., Budryte, P., Ingensiep, H. W., Teichgräber, B., Schneider, U., & Denecke, M. (2016). Social pitfalls for river restoration: How public participation uncovers problems with public acceptance. *Environmental Earth Sciences, 75*(13), 1-16.

Hezri, A. A., & Nordin Hasan, M. (2006). *Towards sustainable development? The evolution of environmental policy in Malaysia.* Paper presented at the Natural Resources Forum.

Hirsch, P. (2012). IWRM as a Participatory Governance Framework for the Mekong River Basin? In J. Öjendal, S. Hansson, & S. Helberg (Eds.), *Politics and*

Development in a Transboundary Watershed (pp. 61-82). Dordrecht Heidelberg London New York: Springer.

Hirsch, P. (2017). Integration, fragmentation and assemblage in the Mekong: Elaborating on responses to shifting regional geopolitics. *Political Geography, 58*, 142-144.

Hirsch, P., & Warren, C. (1998). *The politics of environment in Southeast Asia: Resources and Resistance*. London, New York: Routledge.

Hitzhusen, F. (2006). Cost-benefit analysis: applications to restoration rivers. *WIT Transactions on Ecology and the Environmental, 98*, 215-224.

Hladyz, S., Åbjörnsson, K., Chauvet, E., Dobson, M., Elosegi, A., Ferreira, V., . . . Woodward, G. (2011). Stream Ecosystem Functioning in an Agricultural Landscape. *44*, 211-276. doi:10.1016/b978-0-12-374794-5.00004-3

Hlavinek, P., Kukharchyk, T., Marsalek, J., & Mahrikova, I. (2007). *Integrated urban water resources management*: Springer Science & Business Media.

Ho, S. S., Binder, A. R., Becker, A. B., Moy, P., Scheufele, D. A., Brossard, D., & Gunther, A. C. (2011). The role of perceptions of media bias in general and issue-specific political participation. *Mass Communication and Society, 14*(3), 343-374.

Hobbs, R. J., & Norton, D. A. (1996). Towards a conceptual framework for restoration ecology. *Restoration Ecology, 4*(2), 93-110.

Hoekstra, A. Y. (2006). The global dimension of water governance: Nine reasons for global arrangements in order to cope with local water problems.

Hoekstra, A. Y., & Chapagain, A. K. (2006). Water footprints of nations: Water use by people as a function of their consumption pattern. *Water Resources Management, 21*(1), 35-48. doi:10.1007/s11269-006-9039-x

Hoff, H. (2009). Global water resources and their management. *Current Opinion in Environmental Sustainability, 1*(2), 141-147.

Holston, J. (1989). *The modernist city: An anthropological critique of Brasília*: University of Chicago Press.

Hooper, B. (2008). Best practice integrated river basin governance. *Sustainability in River Basin Management. A Question of Governance. München: Oekom, 135*, 161.

Hooper, B. P. (2003). Integrated Water Resource Management and River Basin Governance. *Water Resources Update*(126), 12-20.

Hopwood, B., Mellor, M., & O'Brien, G. (2005). Sustainable development: mapping different approaches. *Sustainable Development, 13*(1), 38-52. doi:10.1002/sd.244

Hordijk, M., Miranda Sara, L., Sutherland, C., & Scott, D. (2015). Participatory Instruments and Practices in Urban Governance. In J. Gupta, K. Pfeffer, H. Verrest, & M. Ros-Tonen (Eds.), *Geographies of Urban Governance: Advanced Theories, Methods and Practices* (10.1007/978-3-319-21272-2_7pp. 127-146). Cham: Springer International Publishing.

Houba, H., Do, K. H. P., & Zhu, X. (2013). Saving a river: a joint management approach to the Mekong River Basin. *Environment and Development Economics, 18*(1), 93-109. doi:10.1017/S1355770X12000435

Houdret, A., Dombrowsky, I., & Horlemann, L. (2014). The institutionalization of River Basin Management as politics of scale – Insights from Mongolia. *Water governance across competing scales: Coupling land and water managementIncorporating water resources in integrated urban and regional planning, 519, Part C*, 2392-2404. doi:10.1016/j.jhydrol.2013.11.037

Hsiao, E. C. (2012). Whanganui River Agreement. *Envtl. Pol'y & L., 42*, 371.

Hu, Y., Liu, C. Y., & Chen, T. (2017). Ecological improvement and community participation: lessons from Xiaoqing River Ecological Improvement Project in Jinan, China. *Community Development Journal, 52*(1), 21-37. doi:10.1093/cdj/bsw049

Huang, G. H., & Xia, J. (2001). Barriers to sustainable water-quality management. *J Environ Manage, 61*(1), 1-23. doi:10.1006/jema.2000.0394

Huddart-Kennedy, E., Beckley, T. M., McFarlane, B. L., & Nadeau, S. (2009). Rural-urban differences in environmental concern in Canada. *Rural sociology, 74*(3), 309-329.

Huitema, D., & Meijerink, S. (2017). The politics of river basin organizations: institutional design choices, coalitions, and consequences. *Ecology and Society, 22*(2). doi:10.5751/ES-09409-220242

Huitema, D., Mostert, E., Egas, W., Moellenkamp, S., Pahl-Wostl, C., & Yalcin, R. (2009). Adaptive water governance: assessing the institutional prescriptions of adaptive (co-) management from a governance perspective and defining a research agenda. *Ecology and Society, 14*(1).

Hurlbert, M., & Gupta, J. (2015). The split ladder of participation: A diagnostic, strategic, and evaluation tool to assess when participation is necessary. *Environmental Science & Policy, 50*, 100-113.

Hutchison, A. (2014). The Whanganui river as a legal person. *Alternative Law Journal, 39*(3), 179-182.

Hyyppä, M. T. (2010). Emergent Social Capital *Healthy Ties* (pp. 131-134): Springer.

ICWE Secretariat. (1992). *The Dublin Statement on Water and Sustainable Development*. Paper presented at the International Conference on Water and the Environment, Dublin, Ireland.

Ingalls, M. L. (2017). Not just another variable: untangling the spatialities of power in social–ecological systems. *Ecology and Society, 22*(3). doi:10.5751/ES-09543-220320

Inglehart, R., & Welzel, C. (2005). *Modernization, cultural change, and democracy: The human development sequence*: Cambridge University Press.

Inglehart, R., & Welzel, C. (2009). How development leads to democracy: What we know about modernization. *Foreign Affairs*, 33-48.

Inglehart, R., & Welzel, C. (2010). Changing mass priorities: The link between modernization and democracy. *Perspectives on Politics, 8*(02), 551-567.

Ingold, T. (2000). *The perception of the environment: essays on livelihood, dwelling and skill*: Psychology Press.

Innes, J. E., & Booher, D. E. (2000). Public participation in planning: new strategies for the 21st century.

Ismail, H., Hussain, T. P. R. S., Noh, M. K. M., & Subhan, M. (2015). Community Involvement in Urban Environmental Management System. *Asian Social Science, 11*(12), 62.

Jahn, T., Bergmann, M., & Keil, F. (2012). Transdisciplinarity: Between mainstreaming and marginalization. *Ecological Economics, 79*, 1-10. doi:10.1016/j.ecolecon.2012.04.017

Jami, A. A., & Walsh, P. R. (2014). The role of public participation in identifying stakeholder synergies in wind power project development: The case study of Ontario, Canada. *Renewable Energy, 68*, 194-202.

Jaspers, F. G. (2003). Institutional arrangements for integrated river basin management. *Water Policy, 5*(1), 77-90.

Jenerette, G. D., Marussich, W. A., & Newell, J. P. (2006). Linking ecological footprints with ecosystem valuation in the provisioning of urban freshwater. *Ecological Economics, 59*(1), 38-47. doi:10.1016/j.ecolecon.2005.09.023

Jenkins, P., & Forsyth, L. (2009). *Architecture, participation and society*: Routledge.

Jepsen, A. L., & Eskerod, P. (2009). Stakeholder analysis in projects: Challenges in using current guidelines in the real world. *international Journal of Project Management, 27*, 335-343.

Jia, H., Ma, H., & Wei, M. (2011). Calculation of the minimum ecological water requirement of an urban river system and its deployment: A case study in Beijing central region. *Ecological modelling, 222*(17), 3271-3276.

JICA. (1991). The Study on Urban Drainage and Wastewater Disposal Project in the City of Jakarta – Master Plan Study.

JICA. (1997). Study on Comprehensive Water Management Plan in Jabotabek.

JICA. (2013). *Jakarta Comprehensive Flood Management Project*. Retrieved from http://www.jica.go.jp/project/indonesia/006/newsletter/pdf/JCFM_Newsletter01.pdf

Jones, P. B., Petrescu, D., & Till, J. (2005). *Architecture and participation*. London, New York: Spon Press, Taylor & Francis.

Jorda-Capdevila, D., & Rodriguez-Labajos, B. (2017). Socioeconomic Value (s) of Restoring Environmental Flows: Systematic Review and Guidance for Assessment. *River Research and Applications, 33*(3), 305-320.

Junker, B., & Buchecker, M. (2006a). Recreation Interests and Participation in River Restoration Projects. *Exploring the Nature of Management*, 266.

Junker, B., & Buchecker, M. (2006b). Social science contributions to the participatory planning of water systems—results from Swiss case studies. *Topics on System Analysis and Integrated Water Resources Management. Elsevier, Oxford*, 243-255.

Junker, B., Buchecker, M., & Müller-Böker, U. (2007). Objectives of public participation: Which actors should be involved in the decision making for river restorations? *Water resources research, 43*(10).

Kabeer, N. (1994). *Reversed realities: Gender hierarchies in development thought*: Verso.

Kaika, M. (2003). The Water Framework Directive: A New Directive for a Changing Social, Political and Economic European Framework. *European Planning Studies, 11*(3), 299-316. doi:10.1080/09654310303640

Kantor, S. (2012). *The Economic Benefits of the San Joaquin River Restoration*. Retrieved from

Kareiva, P., & Marvier, M. (2012). What is conservation science? *BioScience, 62*(11), 962-969.

Katz, E. (2000). Another look at restoration: technology and artificial nature. *Restoring nature: Perspectives from the social sciences and humanities*, 37-48.

Keane, M. J., & Cinnéide, M. S. Ó. (1986). Promoting economic development amongst rural communities. *Journal of rural studies, 2*(4), 281-289.

Keller, S. (2003). *Community: Pursuing the dream, living the reality*: Princeton University Press.

Kellon, D., & Arvai, J. (2011). Five propositions for improving decision making about the environment in developing communities: insights from the decision sciences. *Journal of Environment Management, 92*(3), 363-371. doi:10.1016/j.jenvman.2010.10.010

Kemper, K. E., Blomquist, W. A., & Dinar, A. (2007). *Integrated river basin management through decentralization*: Springer.

Keskinen, M., Kummu, M., Käkönen, M., & Varis, O. (2011). Mekong at the crossroads: Alternative paths of water development and impact assessment *Politics and Development in a Transboundary Watershed* (pp. 101-126): Springer.

Keuk, J. N., Abdullah, Y. A., & Hamdan, H. (2016). *Eradicating Squatters through Resettlement Programme: A Conceptual Paper.* Paper presented at the MATEC Web of Conferences.

Kevlihan, R. (2005). Developing'Connectors' During Humanitarian Intervention: Is It Possible in Western Sudan? *June 2005*, 30-31.

Kidney, T. C. (2002). *Public involvement and civic rationalism in local authority planning and decision making.* University of Wales Cardiff.

Kingdom of Cambodia. (2012). *The Cambodian Government's Achievements and Future Direction in Sustainable Development*. Retrieved from

KLCH. (2004). *Kuala Lumpur structure plan 2020*. Retrieved from Kuala Lumpur: http://www.dbkl.gov.my/pskl2020/english/index.htm

Koontz, T. M., Steelman, T. A., Carmin, J., Korfmacher, K. S., Moseley, C., & Thomas, C. W. (2004). *Collaborative environmental management: What roles for government?* : Resources for the Future.

Koremenos, B., Lipson, C., & Snidal, D. (2001). The rational design of international institutions. *International organization, 55*(04), 761-799.

Kothari, A., & Bajpai, S. (2017). We Are the River, the River is Us. *Economic and Political Weekly, 52*.

Kramer, A., & Pahl-Wostl, C. (2014). The global policy network behind integrated water resources management: is it an effective norm diffusor? *Ecology and Society, 19*(4). Retrieved from https://www.ecologyandsociety.org/vol19/iss4/art11/

Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukophadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American psychologist, 53*(9), 1017.

Krchnak, K. M. (2005). Improving water governance through increased public access to information and participation. *Sustainable Dev. L. & Pol'y, 5*, 34.

Kusumawijaya, M. (2014). Peta Hijau Jakarta [Jakarta Green Map].

Lafreniere, K. D., Page, S., & Senn, C. (2017). Applying Social Psychology to the Community. In J. A. Gruman, F. W. Schneider, & L. M. Coutts (Eds.), *Applied Social Psychology: Understanding and Addressing Social and Practical Problems* (3rd ed.). Los Angeles: SAGE Publications, Inc.

Lane, M. B. (2005). Public participation in planning: an intellectual history. *Australian Geographer, 36*(3), 283-299.

Lansing, J. S. (2009). *Priests and programmers: technologies of power in the engineered landscape of Bali*: Princeton University Press.

Le Lay, Y.-F., Piégay, H., & Rivière-Honegger, A. (2013). Perception of braided river landscapes: Implications for public participation and sustainable management. *Journal of Environmental Management, 119*, 1-12. doi:10.1016/j.jenvman.2013.01.006

Leaf, M. (1994). Legal authority in an extralegal setting: The case of land rights in Jakarta, Indonesia. *Journal of Planning Education and Research, 14*(1), 12-18.

Lebel, L., Anderies, J., Campbell, B., Folke, C., Hatfield-Dodds, S., Hughes, T., & Wilson, J. (2006). Governance and the capacity to manage resilience in regional social-ecological systems. *Ecology and Society, 11*(1).

Lebel, L., Dore, J., Daniel, R., & Koma, Y. S. (2007). *Democratizing water governance in the Mekong Region*: Mekong Press.

Lebel, L., Garden, P., & Imamura, M. (2005). The politics of scale, position, and place in the governance of water resources in the Mekong region. *Ecology and Society, 10*(2), 18.

Lee, K. N. (2006). Urban sustainability and the limits of classical environmentalism. *Environment and Urbanization, 18*(1), 9-22. doi:10.1177/0956247806063940

Lee, S., & Choi, G.-W. (2011). Governance in a River Restoration Project in South Korea: The Case of Incheon. *Water Resources Management, 26*(5), 1165-1182. doi:10.1007/s11269-011-9952-5

Leino, H., & Laine, M. (2012). Do matters of concern matter? Bringing issues back to participation. *Planning Theory, 11*(1), 89-103.

Lenhart, L. (2002). Orang Suku Laut Identity: the construction of ethnic realities. In G. Benjamin & C. Chou (Eds.), *Tribal communities in the Malay world. Historical, cultural and social perspectives* (pp. 293-317).

Leopold, A. (1949). *A Sand County Almanac: And Sketches Here and There*. New York: Ballantine: Oxford University Press.

Lewis, R. R. (2005). Ecological engineering for successful management and restoration of mangrove forests. *Ecological Engineering, 24*(4), 403-418.

Li, E., Endter-Wada, J., & Li, S. (2015). Characterizing and contextualizing the water challenges of megacities. *JAWRA Journal of the American Water Resources Association, 51*(3), 589-613.

Li, T. M. (1999). Compromising power: development, culture, and rule in Indonesia. *Cultural anthropology, 14*(3), 295-322.

Li, V. Y. W. (2016). Everyday Political Knowledge and the Construction of Regional Identity: The East Asian Experience. In M. Robertson & P. K. E. Tsang (Eds.), *Everyday Knowledge, Education and Sustainable Futures: Transdisciplinary Approaches in the Asia-Pacific Region* (Retrieved from http://dx.doi.org/10.1007/978-981-10-0216-8_16pp. 237-253). Singapore: Springer Singapore.

Lienert, J., Schnetzer, F., & Ingold, K. (2013). Stakeholder analysis combined with social network analysis provides fine-grained insights into water infrastructure planning processes. *Journal of Environmental Management, 125*, 134-148.

Linh, H. T. P. (2015). *State–Society Interaction in Vietnam.* (PhD Dissertation), ULB Bonn, Bonn. Retrieved from http://hss.ulb.uni-bonn.de/2015/3998/3998.htm

Linton, J., & Budds, J. (2014). The hydrosocial cycle: Defining and mobilizing a relational-dialectical approach to water. *Geoforum, 57*, 170-180.

Loan, N. T. P. (2010). *Legal framework of the water sector in Vietnam. ZEF working paper No. 52*. Retrieved from Bonn: http://www.zef.de/ fi leadmin/web fi les/downloads/zef_wp/wp52.pdf

Lockrem, J., & Lugo, A. (2011). Infrastructure: Editorial Introduction. *Cultural anthropology, 26*(4). Retrieved from https://culanth.org/curated_collections/11-infrastructure

London, J. (2014). *Politics in Contemporary Vietnam: Party, State, and Authority Relations*: Springer.

Low, K. S. (2016, 2016 March 3). *Integrated Urban Water Management. ASM Activity: Task Force on IUWM.* Paper presented at the 1st Stakeholder Workshop, Kuala Lumpur, Malaysia.

Lubell, M., Robins, G., & Wang, P. (2014). Network structure and institutional complexity in an ecology of water management games. *Ecology and Society, 19*(4). doi:10.5751/ES-06880-190423

Luyet, V., Schlaepfer, R., & Iorgulescu, I. (2006). Identification and structuration of stakeholders: important steps in a participative process for a large project? Case study: the Third Rhône Correction Project (R3) in Switzerland (reviewed paper). *Schweizerische Zeitschrift fur Forstwesen, 157*(10), 464-470.

Luyet, V., Schlaepfer, R., Parlange, M. B., & Buttler, A. (2012). A framework to implement Stakeholder participation in environmental projects. *Journal of Environmental Management, 111*, 213-219. doi:10.1016/j.jenvman.2012.06.026

Lydon, M., & Garcia, A. (2015). A Tactical Urbanism How-To *Tactical Urbanism* (pp. 171-208): Springer.

Lynam, T., De Jong, W., Sheil, D., Kusumanto, T., & Evans, K. (2007). A review of tools for incorporating community knowledge, preferences, and values into

decision making in natural resources management. *Ecology and Society, 12*(1).

Magnusson, W. (2011). *Politics of urbanism: seeing like a city* London: Routledge.

Maldonado, J. K. (2014). A multiple knowledge approach for adaptation to environmental change: Lessons learned from coastal Louisiana's tribal communities. *Journal of Political Ecology, 21*, 61-82.

Manger, L. O. (1987). *Communal labour in the Sudan*: Lilian Barber Pr.

Mardiasmo, D., & Barnes, P. H. (2015). *Community response to disasters in Indonesia: Gotong Royong; a double edged-sword.* Paper presented at the Proceedings of the 9th annual international conference of the international institute for infrastructure renewal and reconstruction.

Martínez, M. (2011). The citizen participation of urban movements in spatial planning: a comparison between Vigo and Porto. *International Journal of Urban and Regional Research, 35*(1), 147-171.

Matthies, A.-L., Kattilakoski, M., & Rantamäki, N. (2011). Citizens' participation and community orientation–indicators of social sustainability of rural welfare services. *Nordic Social Work Research, 1*(2), 125-139.

Mauser, W., Klepper, G., Rice, M., Schmalzbauer, B. S., Hackmann, H., Leemans, R., & Moore, H. (2013). Transdisciplinary global change research: the co-creation of knowledge for sustainability. *Current Opinion in Environmental Sustainability, 5*(3-4), 420-431. doi:10.1016/j.cosust.2013.07.001

Mauss, M. (1990). *The gift: The form and reason for exchange in archaic societies*. London and New York: Routledge Classics.

Maynard, C. M. (2013). How public participation in river management improvements is affected by scale. *Area, 45*(2), 230-238.

McDonnell, M. A. (2005). Paths not yet taken, voices not yet heard rethinking Atlantic history *Complex Science for a Complex World* (Retrieved from http://www.jstor.org/stable/j.ctt2jbhz2.7pp. 45-62): ANU Press.

McGurrin, J., & Forsgren, H. (1997). What works, what doesn't, and why. In J. E. Williams, C. A. Wood, & M. P. Dowbeck (Eds.), *Watershed Restoration: Principles and Practices.* (pp. 459-471). Bethesda, Maryland: American Fisheries Society.

Mega, V. P. (2010). *Sustainable cities for the third millennium: The odyssey of urban excellence*: Springer Science & Business Media.

Mehtonen, K., Keskinen, M., & Varis, O. (2008). The Mekong: IWRM and Institutions. In O. Varis, A. K. Biswas, & C. Tortajada (Eds.), *Management of Transboundary Rivers and Lakes* (Retrieved from http://dx.doi.org/10.1007/978-3-540-74928-8_8pp. 207-226). Berlin, Heidelberg: Springer Berlin Heidelberg.

Mercea, D. (2016). *Civic Participation in Contentious Politics* (10.1057/978-1-137-50869-0): Springer.

Merkens, H. (2004). 4.4 Selection Procedures, Sampling, Case Construction. *A companion to qualitative research*.

Messner, F., Zwirner, O., & Karkuschke, M. (2006). Participation in multi-criteria decision support for the resolution of a water allocation problem in the Spree River basin. *Resolving Environmental Conflicts:Combining Participation and Muli-Criteria Analysis, 23*(1), 63-75. doi:10.1016/j.landusepol.2004.08.008

Metcalf, E. C., Mohr, J. J., Yung, L., Metcalf, P., & Craig, D. (2015). The role of trust in restoration success: public engagement and temporal and spatial scale in a complex social-ecological system. *Restoration Ecology, 23*(3), 315-324.

Migdal, J. S. (1988). *Strong societies and weak states: state-society relations and state capabilities in the Third World*: Princeton University Press.

Milich, L., & Varady, R. G. (1999). Openness, sustainability, and public participation: New designs for transboundary river basin institutions. *Journal of Environment and Development, 8*(3), 258-306. Retrieved from files/506/display.html

Miller, F., Nguyễn, V. T., & Đỗ, T. M. Đ. (1999). *Resource management in the Vietnamese Mekong Basin*: Asia Research Centre on Social, Political and Economic Change, Murdoch University.

Miller, J. R., & Miller, S. M. O. (2007). *Contaminated rivers: a geomorphological-geochemical approach to site assessment and remediation*: Springer Science & Business Media.

Milton, K. (2003). *Environmentalism: The view from anthropology*: Routledge.

Milton, K. (2013). *Environmentalism and cultural theory: Exploring the role of anthropology in environmental discourse*: Routledge.

Ministry of Environmental in Indonesia. (2012). National policy and strategy for Ciliwung river restoration. Joint Cooperation Between The Goverment of Indonesia-Korea [Press release]

Mirumachi, N. (2015). *Transboundary Water Politics in the Developing World* (Retrieved from files/515/display.html).

Mirumachi, N., & Chan, K. (2014). Anthropocentric Hydro Politics? Key Developments in the Analysis of International Transboundary Water Politics and Some Suggestions for Moving Forward. *Aquatic Procedia, 2*, 9-15.

Mitchell, B. (2005). Participatory partnerships: Engaging and empowering to enhance environmental management and quality of life? *Quality-of-Life Research in Chinese, Western and Global Contexts*, 123-144.

Mitchell, T. (2002). *Rule of experts: Egypt, techno-politics, modernity*: University of California Press.

Mithen, S. (2012). *Thirst: For Water and Power in the Ancient World*: Harvard University Press.

Mixap, B. (2015). Mekong River, Public Participation in hydropower development: Does it matter? Retrieved from http://www.gwp.org/Global/ToolBox/Case Studies/Americas and Caribbean/CS_463_Mekong_Hydropower_full case (3).pdf

Mokhtar, M., & Tan, K. (2004). Integrated Water Resources Management in Malaysia: An Effective Institutional Framework. *Bangi: Institute for Environment And Development (LESTARI), National University of Malaysia, UKM Bangi, Selangor, Malaysia*.

Molle, F., Wester, P., & Hirsch, P. (2010). River basin closure: Processes, implications and responses. *Agricultural Water Management, 97*(4), 569-577.

Momtaz, S., & Kabir, S. M. Z. (2013). Evaluating Social Impact Assessment. 10.1016/b978-0-12-408129-1.00005-x, 85-111. doi:10.1016/b978-0-12-408129-1.00005-x

Montgomery, D. R., Grant, G. E., & Sullivan, K. (1995). Watershed analysis as a framework for implementing ecosystem management. *JAWRA Journal of the American Water Resources Association, 31*(3), 369-386.

Moote, M. A., McClaran, M. P., & Chickering, D. K. (1997). Theory in practice: Applying participatory democracy theory to public land planning. *Environmental management, 21*(6), 877-889.

Moran, S., Perreault, M., & Smardon, R. (2017). Finding our way: A case study of urban waterway restoration and participatory process. *Landscape and Urban Planning*, 10.1016/j.landurbplan.2016.08.004. doi:10.1016/j.landurbplan.2016.08.004

Morandi, B., Piégay, H., Lamouroux, N., & Vaudor, L. (2014). How is success or failure in river restoration projects evaluated? Feedback from French restoration projects. *Journal of Environmental Management, 137*, 178-188.

Mostert, E., Pahl-Wostl, C., Rees, Y., Searle, B., Tàbara, D., & Tippett, J. (2007). Social learning in European river-basin management: barriers and fostering mechanisms from 10 river basins. *Ecology and Society, 12*(1).

Mountjoy, N. J., Whiles, M. R., Spyreas, G., Lovvorn, J. R., & Seekamp, E. (2016). Assessing the efficacy of community-based natural resource management planning with a multi-watershed approach. *Biological Conservation, 201*, 120-128.

MRC. (1995). Agreement on the Cooperation fot the Sustainable Developmentof the Mekong River Basin. Retrieved from http://www.mrcmekong.org/assets/Publications/agreements/95-agreement.pdf, 13.

MRC. (2001). *Procedures for Data and Information Exchange and Sharing*. Retrieved from   http://www.mrcmekong.org/assets/Publications/policies/Communication-Strategy-n-Disclosure-Policy.pdf

MRC. (2009a). *Communication Strategy and Disclosure Policy*. Retrieved from http://www.mrcmekong.org/assets/Publications/policies/Communication-Strategy-n-Disclosure-Policy.pdf

MRC. (2009b). *Stakeholder Participation and Communication Plan for the Basin Development Planning in the Lower Mekong Basin*. Retrieved from

MRC. (2010a). *Social Impact Monitoring and Vulnerability Assessment: Regional Report*. Retrieved from Vientiane, Lao PDR:

MRC. (2010b). *Stakeholder analysis for the MRC basin development plan programme*. Retrieved from

MRC. (2015a). IWRM-based Basin Development Strategy 2016-2020. *Phnom Penh: Mekong River Commission*.

MRC. (2015b). *Strategic Plan 2016-2020*. Retrieved from Vientiane, Lao PDR:

MRC. (2016). *Regional Workshop on Water Diplomacy in the Mekong River Basin*. Retrieved from Vientiane, Lao PDR: http://www.waterandchange.org/wp-content/uploads/2017/02/Workshop-WaterDiplomacy-Mekong-2016.pdf

Muga, H. E., & Mihelcic, J. R. (2008). Sustainability of wastewater treatment technologies. *J Environ Manage, 88*(3), 437-447. doi:10.1016/j.jenvman.2007.03.008

Muhar, S., Januschke, K., Kail, J., Poppe, M., Schmutz, S., Hering, D., & Buijse, A. (2016). Evaluating good-practice cases for river restoration across Europe: context, methodological framework, selected results and recommendations. *Hydrobiologia, 769*(1), 3-19.

Muhar, S., Schmutz, S., & Jungwirth, M. (1995). River restoration concepts—goals and perspectives *The Importance of Aquatic-Terrestrial Ecotones for Freshwater Fish* (pp. 183-194): Springer.

Mukerji, C. (2009). *Impossible engineering: technology and territoriality on the Canal du Midi*: Princeton University Press.

Mukhtarov, F., & Gerlak, A. K. (2013). River basin organizations in the global water discourse: An exploration of agency and strategy. *Global Governance: A Review of Multilateralism and International Organizations, 19*(2), 307-326.

Muñoz-Erickson, T. A. (2014). Co-production of knowledge–action systems in urban sustainable governance: The KASA approach. *Environmental Science & Policy, 37*, 182-191. doi:10.1016/j.envsci.2013.09.014

Nabatchi, T. (2012). *A manager's guide to evaluating citizen participation*: IBM Center for the Business of Government Washington, DC.

Nabatchi, T., & Leighninger, M. (2015). *Public participation for 21st century democracy*: John Wiley & Sons.

Nabatchi, T., & Mergel, I. (2010). Participation 2.0: Using internet and social media technologies to promote distributed democracy and create digital neighborhoods.

Naff, T. (2009). Islamic Law and the Politics of Water. In D. J.W. & G. J. (Eds.), *The Evolution of the Law and Politics of Water*. Dordrecht: Springer.

Naiman, R. J. (2013). Socio-ecological complexity and the restoration of river ecosystems. *Inland Waters, 3*(4), 391-410.

Naiman, R. J., Magnuson, J. J., McKnight, D. M., Stanford, J. A., & Karr, J. R. (1995). Freshwater Ecosystems and Their Management: A National Initiative. *Science, 270*, 27.

Nakayama, M. (n.d.). Transition from Mekong Committee to Mekong River Commission. https://www.researchgate.net/publication/237534731_TRANSITION_FROM_MEKONG_COMMITTEE_TO_MEKONG_RIVER_COMMISSION. doi:https://www.researchgate.net/publication/237534731_TRANSITION_FROM_MEKONG_COMMITTEE_TO_MEKONG_RIVER_COMMISSION

NAP. (2002). *Riparian areas: functions and strategies for management* Retrieved from Washington DC

Narayan, D., & Pritchett, L. (1999). Cents and sociability: household income and social capital in Rural Tanzania. *Economic Development and Cultural Change, 47*, 871-897.

Nas, P. J. (2005). *Directors of urban change in Asia*: Routledge.

Nasongkhla, S. T., & Sintusingha, S. (2012). Conflicting Green Landscape Ideologies in a Tai Rural Town in Thailand. *International Journal of Urban and Regional Research, 36*(6), 1146-1165. doi:10.1111/j.1468-2427.2011.01081.x

Law on Urban Plans, 03-99/NA C.F.R. (1999).

Law on Water Resources, (2014).

Nayati, W., Grijns, K., & Nas, P. J. (2002). Jakarta-Batavia: Socio-Cultural Essays: JSTOR.

NEDECO. (1973). *Master Plan for Drainage and Flood Control*.

Nefas, S. (2007). Funkcionali vietos bendruomenė Lietuvos kaimuose ir miesteliuose. *Daktaro disertacija: socialiniai mokslai, vadyba ir administravimas (S03). Vilnius: Mykolo Romerio universitetas*.

Neolaka, A. (2013). Stakeholder participation in flood control of Ciliwung river, Jakarta, Indonesia. *Water Resources Management VII, 171*, 275.

Newig, J., & Fritsch, O. (2009). Environmental governance: participatory, multi-level– and effective? *Environmental Policy and Governance, 19*(3), 197-214.

Newig, J., Pahl-Wostl, C., & Sigel, K. (2005). The role of public participation in managing uncertainty in the implementation of the Water Framework Directive. *Environmental Policy and Governance, 15*(6), 333-343.

Newman, J., Barnes, M., Sullivan, H., & Knops, A. (2004). Public Participation and Collaborative Governance. *Journal of Social Policy, 33*(2), 203-223. doi:10.1017/S0047279403007499

Niazi, T. H. (2011). *Decconcentration and decentralization reforms in Cambodia. Recommendations for institutional framework*. Retrieved from

Niemela, J., Breuste, J. H., Guntenspergen, G., McIntyre, N. E., Elmqvist, T., & James, P. (2011). *Urban Ecology: Patterns, Processes, and Applications*: Oxford University Press

Nienhuis, P. H., Leuven, R. S. E. W., & Ragas, A. (1998). *New concepts for sustainable management of river basins*: Backhuys publishers Leiden.

Nikmah, S. K. (n.d.). The Study of Ciliwung River. Retrieved from http://infid.org/wp-content/uploads/2016/03/The-Study-of-Ciliwung-River-ok.pdf.

Nikolic, S. J. S., & Koontz, T. M. (2008). Nonprofit Organizations in Environmental Management: A Comparative Analysis of Government Impacts. *Journal of Public Administration Research and Theory, 18*(3), 441-463. doi:10.1093/jopart/mum022

Nilsson, C., & Aradóttir, Á. (2013). Ecological and social aspects of ecological restoration: new challenges and opportunities for northern regions. *Ecology and Society, 18*(4).

Nilsson, C., Aradottir, A. L., Hagen, D., Halldórsson, G., Høegh, K., Mitchell, R. J., . . . Wilson, S. D. (2016). Evaluating the process of ecological restoration.

Nilsson, C., Jansson, R., Malmqvist, B., & Naiman, R. (2007). Restoring riverine landscapes: the challenge of identifying priorities, reference states, and techniques. *Ecology and Society, 12*(1).

Nilsson, C., Polvi, L. E., Gardeström, J., Hasselquist, E. M., Lind, L., & Sarneel, J. M. (2015). Riparian and in-stream restoration of boreal streams and rivers: success or failure? *Ecohydrology, 8*(5), 753-764.

Noelle-Neumann, E. (1974). The spiral of silence a theory of public opinion. *Journal of Communication, 24*(2), 43-51.

Norman, E. S. (2014). *Governing Transboundary Waters. Canada, the United States, and Indigenous communities*: Routledge.

Nzeadibe, T. C., Ajaero, C. K., Okonkwo, E. E., Okpoko, P. U., Akukwe, T. I., & Njoku-Tony, R. F. (2015). Integrating community perceptions and cultural

diversity in social impact assessment in Nigeria. *Environmental Impact Assessment Review, 55*, 74-83.

O'Dempsey, T., Emmanuel, M., van Wyhe, J., Taylor, N. P., Tan, F. L., Chou, C., . . . Heng, C. (2014). *Nature Contained: Environmental Histories of Singapore*: NUS Press.

Obarska, M. (2017). Architecture of the VII Day. *Cities Magazine. Shared Cities: mapping the post-connunist status quo, 1*, 90-92.

Orr, P., Colvin, J., & King, D. (2006). Involving stakeholders in integrated river basin planning in England and Wales. *Water Resources Management, 21*(1), 331-349. doi:10.1007/s11269-006-9056-9

Othman, F., M, E. A., & Mohamed, I. (2012). Trend analysis of a tropical urban river water quality in Malaysia. *J Environ Monit, 14*(12), 3164-3173. doi:10.1039/c2em30676j

Page, B., & Bakker, K. (2005). Water governance and water users in a privatised water industry: participation in policy-making and in water services provision: a case study of England and Wales. *International Journal of Water, 3*(1), 38-60.

Pahl-Wostl, C. (2009). A conceptual framework for analysing adaptive capacity and multi-level learning processes in resource governance regimes. *Global Environmental Change, 19*(3), 354-365.

Pahl-Wostl, C. (2015). *Water governance in the face of global change: from understanding to transformation*: Springer.

Pahl-Wostl, C., Gupta, J., & Petry, D. (2008a). Governance and the global water system: a theoretical exploration. *Global Governance: A Review of Multilateralism and International Organizations, 14*(4), 419-435.

Pahl-Wostl, C., Lebel, L., Knieper, C., & Nikitina, E. (2012). From applying panaceas to mastering complexity: toward adaptive water governance in river basins. *Environmental Science & Policy, 23*, 24-34.

Pahl-Wostl, C., Nilsson, C., Gupta, J., & Tockner, K. (2011). Societal learning needed to face the water challenge. *AMBIO: A Journal of the Human Environment, 40*(5), 549-553.

Pahl-Wostl, C., Palmer, M., & Richards, K. (2013a). Enhancing water security for the benefits of humans and nature—the role of governance. *Current Opinion in Environmental Sustainability, 5*(6), 676-684.

Pahl-Wostl, C., Tàbara, D., Bouwen, R., Craps, M., Dewulf, A., Mostert, E., . . . Taillieu, T. (2008b). The importance of social learning and culture for sustainable water management. *Ecological Economics, 64*(3), 484-495. doi:10.1016/j.ecolecon.2007.08.007

Pahl-Wostl, C., Vörösmarty, C., Bhaduri, A., Bogardi, J., Rockström, J., & Alcamo, J. (2013b). Towards a sustainable water future: shaping the next decade of

global water research. *Current Opinion in Environmental Sustainability, 5*(6), 708-714.

Palmer, M. A., & Allan, J. D. (2006). Restoring rivers. *Issues in Science and Technology, 22*(2), 40-48.

Palmer, M. A., Bernhardt, E., Allan, J., Lake, P., Alexander, G., Brooks, S., . . . Follstad Shah, J. (2005). Standards for ecologically successful river restoration. *Journal of applied ecology, 42*(2), 208-217.

Palmer, M. A., Hondula, K. L., & Koch, B. J. (2014). Ecological restoration of streams and rivers: shifting strategies and shifting goals. *Annual Review of Ecology, Evolution, and Systematics, 45*, 247-269.

Pandey, S. K., & Wright, B. E. (2006). Connecting the Dots in Public Management: Political Environment, Organizational Goal Ambiguity, and the Public Manager's Role Ambiguity. *Journal of Public Administration Research and Theory, 16*(4), 511-532. doi:10.1093/jopart/muj006

Pasternack, G. B. (2013). Geomorphologist's Guide to Participating in River Rehabilitation *Treatise on Geomorphology* (Retrieved from http://www.sciencedirect.com/science/article/pii/B9780123747396002682pp. 843-860). San Diego: Academic Press.

Penna, A. N. (2010). *The human footprint: A global environmental history*: John Wiley & Sons.

Petts, J., & Gray, A. J. (2006). *SMURF and the public: Engagement and learning*. Retrieved from Bristol:

Pickett, S. T., Cadenasso, M. L., Grove, J. M., Boone, C. G., Groffman, P. M., Irwin, E., . . . Warren, P. (2011). Urban ecological systems: scientific foundations and a decade of progress. *J Environ Manage, 92*(3), 331-362. doi:10.1016/j.jenvman.2010.08.022

Poff, N. L., & Matthews, J. H. (2013). Environmental flows in the Anthropocene: past progress and future prospects. *Current Opinion in Environmental Sustainability, 5*(6), 667-675.

Poff, N. L., Richter, B. D., Arthington, A. H., Bunn, S. E., Naiman, R. J., Kendy, E., . . . Freeman, M. C. (2010). The ecological limits of hydrologic alteration (ELOHA): a new framework for developing regional environmental flow standards. *Freshwater Biology, 55*(1), 147-170.

Pohl, C., Rist, S., Zimmermann, A., Fry, P., Gurung, G. S., Schneider, F., . . . Wiesmann, U. (2010). Researchers' roles in knowledge co-production: experience from sustainability research in Kenya, Switzerland, Bolivia and Nepal. *Science and Public Policy, 37*(4), 267-281. doi:10.3152/030234210x496628

Polizzi, C., Simonetto, M., Barausse, A., Chaniotou, N., Känkänen, R., Keränen, S., . . . Scipioni, A. (2015). Is ecosystem restoration worth the effort? The

rehabilitation of a Finnish river affects recreational ecosystem services. *Ecosystem Services, 14*, 158-169. doi:10.1016/j.ecoser.2015.01.001

Popa, F., Guillermin, M., & Dedeurwaerdere, T. (2015). A pragmatist approach to transdisciplinarity in sustainability research: From complex systems theory to reflexive science. *Futures, 65*, 45-56. doi:10.1016/j.futures.2014.02.002

Preister, K., & Kent, J. A. (1997). Social ecology: A new pathway to watershed restoration. In J. E. Williams, C. A. Wood, & M. P. Dowbeck (Eds.), *Watershed restoration: Principles and practices* (pp. 28-48). Bethesda, Maryland: American Fisheries Society.

Prell, C., Hubacek, K., & Reed, M. (2009). Stakeholder Analysis and Social Network Analysis in Natural Resource Management. *Society & Natural Resources, 22*(6), 501-518. doi:10.1080/08941920802199202

Priscoli, J. D., & Wolf, A. T. (2009). *Managing and transforming water conflicts*: Cambridge University Press.

Radcliffe, S. A., & Laurie, N. (2006). Culture and development: taking culture seriously in development for Andean indigenous people. *Environment and Planning D: Society and Space, 24*(2), 231-248.

Rauschmayer, F., Berghöfer, A., Omann, I., & Zikos, D. (2009). Examining processes or/and outcomes? Evaluation concepts in European governance of natural resources. *Environmental Policy and Governance, 19*(3), 159-173.

Raven, P. H., Aronson, J., Milton, S. J., & Blignaut, J. N. (2012). *Restoring natural capital: science, business, and practice*: Island press.

Reed, M. S. (2008). Stakeholder participation for environmental management: a literature review. *Biological Conservation, 141*(10), 2417-2431.

Reed, M. S., Evely, A. C., Cundill, G., Fazey, I., Glass, J., Laing, A., . . . Stringer, L. C. (2010). What is social learning? *Ecology and Society* Retrieved from http://www.ecologyandsociety.org/volXX/issYY/artZZ/.

Reed, M. S., Graves, A., Dandy, N., Posthumus, H., Hubacek, K., Morris, J., . . . Stringer, L. C. (2009). Who's in and why? A typology of stakeholder analysis methods for natural resource management. *Journal of Environmental Management, 90*(5), 1933-1949.

Renaud, F. G., & Kuenzer, C. (2012). *The Mekong Delta system: Interdisciplinary analyses of a river delta*: Springer Science & Business Media.

Renn, O., Webler, T., & Wiedemann, P. (1995). *Fairness and Competence in Citizen Participation. Evaluating Models for Environemental Discourse* (Vol. 10). Dordrecht Boston London: Kluwer Academic Publishers.

Renner, R., Schneider, F., Hohenwallner, D., Kopeinig, C., Kruse, S., Lienert, J., . . . Muhar, S. (2013). Meeting the challenges of transdisciplinary knowledge

production for sustainable water governance. *Mountain Research and Development, 33*(3), 234-247.

Riley, M. (2016). How does longer term participation in agri-environment schemes [re]shape farmers' environmental dispositions and identities? *Land Use Policy, 52*, 62-75. doi:10.1016/j.landusepol.2015.12.010

Rittel, H. W. J. (1969). *Reflections on the scientific and political significance of decision theory*: Institute of Urban & Regional Development, University of California.

Rittel, H. W. J. (1972). *On the Planning Crisis: Systems Analysis of the First and Second Generations*: Institute of Urban and Regional Development Berkeley.

Rittel, H. W. J. (1982). Structure and usefulness of planning information systems *Human and Energy Factors in Urban Planning: A Systems Approach* (pp. 53-63): Springer.

Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy sciences, 4*(2), 155-169.

Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F. S., Lambin, E. F., . . . Schellnhuber, H. J. (2009a). A safe operating space for humanity. *nature, 461*(7263), 472-475.

Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin III, F. S., Lambin, E., . . . Schellnhuber, H. J. (2009b). Planetary boundaries: exploring the safe operating space for humanity. *Ecology and Society, 14*(2).

Rojas, H. (2010). "Corrective" actions in the public sphere: How perceptions of media and media effects shape political behaviors. *International Journal of Public Opinion Research, 22*(3), 343-363.

Rosenlund, J., Rosell, E., & Hogland, W. (2017). Overcoming the triple helix boundaries in an environmental research collaboration. *Science and Public Policy, 44*(2), 153-162. doi: https://doi.org/10.1093/scipol/scw045

Rouillard, J. J., Reeves, A. D., Heal, K. V., & Ball, T. (2014). The role of public participation in encouraging changes in rural land use to reduce flood risk. *Land Use Policy, 38*, 637-645. doi:10.1016/j.landusepol.2014.01.011

Rowe, G., & Frewer, L. J. (2005). A typology of public engagement mechanisms. *Science, Technology, & Human Values, 30*(2), 251-290.

Rubin, Z., Kondolf, G. M., & Rios-Touma, B. (2017). Evaluating Stream Restoration Projects: What Do We Learn from Monitoring? *Water, 9*(3), 174.

Ruiz-Jaen, M. C., & Mitchell Aide, T. (2005). Restoration success: how is it being measured? *Restoration Ecology, 13*(3), 569-577.

Rutland, T. (2013). Activists in the Making: Urban Movements, Political Processes and the Creation of Political Subjects. *International Journal of Urban and Regional Research, 37*(3), 989-1011. doi:10.1111/j.1468-2427.2012.01110.x

Ryan, R. L., Gobster, P., & Hull, R. (2000). A people-centered approach to designing and managing restoration projects: insights from understanding attachment to urban natural areas. *Restoring nature: Perspectives from the social sciences and humanities*, 209-228.

Rydin, Y., & Pennington, M. (2000). Public participation and local environmental planning: the collective action problem and the potential of social capital. *Local environment, 5*(2), 153-169.

Said, S. Y., Aksah, H., & Ismail, E. D. (2013). Heritage conservation and regeneration of historic areas in Malaysia. *Procedia-Social and Behavioral Sciences, 105*, 418-428.

Salmon, C. T., & Kline, F. G. (1983). The Spiral of Silence Ten Years Later: An Examination and Evaluation.

Schmeier, S. (2013a). *Governing International Watercourses. River Basin Organizations and the Sustainable Governance of Internationally Shared Rivers and Lakes*. London New York: Routledge.

Schmeier, S. (2013b). The Institutional Design of River Basin Organizations–Introducing the RBO, Institutional Design Database and its main Findings. *Transboundary Freshwater Dispute Database (TFDD) Working Paper, Corvallis, OR, USA*.

Schmeier, S. (2015). The institutional design of river basin organizations–empirical findings from around the world. *International Journal of River Basin Management, 13*(1), 51-72.

Schmeier, S., Gerlak, A. K., & Blumstein, S. (2016). Clearing the muddy waters of shared watercourses governance: conceptualizing international River Basin Organizations. *International Environmental Agreements: Politics, Law and Economics, 16*(4), 597-619. doi:10.1007/s10784-015-9287-4

Schmeier, S., & Schulze, S. (2010). Governing Environmental Change in International River Basins-The Role of River Basin Organizations.

Schwilch, G., Bachmann, F., & de Graaff, J. (2012). Decision support for selecting SLM technologies with stakeholders. *Applied Geography, 34*, 86-98. doi:10.1016/j.apgeog.2011.11.002

Scott, J. C. (1998). *Seeing like a state: How certain schemes to improve the human condition have failed*: Yale University Press.

Scott, J. C. (2008). *Weapons of the weak: Everyday forms of peasant resistance*: yale university Press.

SDC. (2005). *Water 2015. Policy Principles and Strategic Guidelines fo Integrated Water Resource Management - IWRM*. Retrieved from Bern:

Seidl, R., & Stauffacher, M. (2013). Evaluation of river restoration by local residents. *Water resources research, 49*(10), 7077-7087. doi:10.1002/2013WR013988

SERIS. (2004). The SER International Primer on Ecological Restoration.

Shah, D. V., Cho, J., Eveland, W. P., & Kwak, N. (2005). Information and expression in a digital age modeling Internet effects on civic participation. *Communication research, 32*(5), 531-565.

Shrestha, B. K., & Shrestha, S. (2008). Urban waterfront development patterns: Water as astructuring element of urbanity. In J. Feyen, K. Shannon, & M. Neville (Eds.), *Water and urban development paradigms: towards an integration of engineering, design and management approaches*. London: CRC Press.

Silver, C. (2007). *Planning the megacity: Jakarta in the twentieth century*: Routledge.

Simmons, D. G. (1994). Community participation in tourism planning. *Tourism Management, 15*(2), 98-108.

Sinaulan, J. H., AR, N. H., Tyasmoro, S. Y., & Nugroho, B. A. (2013). Behaviour Analysis of Riverbank Society on Pollution of Water Quality in Ciliwung River Downstream, Jakarta. *Behaviour, 3*(12).

Sivapalan, M., & Blöschl, G. (2015). Time scale interactions and the coevolution of humans and water. *Water resources research, 51*(9), 6988-7022.

Smajgl, A., & Ward, J. (2013a). A framework to bridge science and policy in complex decision making arenas. *Futures, 52*, 52-58. doi:10.1016/j.futures.2013.07.002

Smajgl, A., & Ward, J. (2013b). *The Water-Food-Energy Nexus in the Mekong Region. Assessing Development Strategies Considering Cross-Sectoral and Transboundary Impacts* (10.1007/978-1-4614-6120-3). Verlag New York: Springer.

Smajgl, A., Ward, J., & Pluschke, L. (2016). The water–food–energy Nexus– Realising a new paradigm. *Journal of Hydrology, 533*, 533-540.

Smith, E. S. (1999). The Effects of Investments in theSocial Capital of Youth on Political and Civic Behavior in Young Adulthood: A Longitudinal Analysis. *Political psychology, 20*(3), 553-580.

Smith, G. (1996). Community-arianism. Community and Communitarianism: Concepts and Contexts. http://www.communities.org.uk/greg/gsum.html. doi:http://www.communities.org.uk/greg/gsum.html

Sok, S. (2013). *Institutional development and the socio-economic resilience of the riverine rural communities in the Lower Meking Basin, Cambodia.* (PhD), Hong

Kong Baptist University. Retrieved from http://repository.hkbu.edu.hk/etd_oa (Paper 52)

Sokhem, P. (2004). Regional Characteristics and Water Issues: From Mekong River Basin Perspectives. *Population, 18*(19), 11.

Speer, J. (2012). Participatory governance reform: a good strategy for increasing government responsiveness and improving public services? *World Development, 40*(12), 2379-2398.

Spink, A., Hillman, M., Fryirs, K., Brierley, G., & Lloyd, K. (2010). Has river rehabilitation begun? Social perspectives from the Upper Hunter catchment, New South Wales, Australia. *Geoforum, 41*(3), 399-409. doi:10.1016/j.geoforum.2009.12.003

Spruijt, P., Knol, A. B., Vasileiadou, E., Devilee, J., Lebret, E., & Petersen, A. C. (2014). Roles of scientists as policy advisers on complex issues: A literature review. *Environmental Science & Policy, 40*, 16-25. doi:10.1016/j.envsci.2014.03.002

Stange, K., van Tatenhove, J., & van Leeuwen, J. (2015). Stakeholder-led knowledge production: Development of a long-term management plan for North Sea Nephrops fisheries. *Science and Public Policy, 42*(4), 501-513. doi:10.1093/scipol/scu068

Steinberg, F. (2007). Jakarta: Environmental problems and sustainability. *Habitat International, 31*(3), 354-365.

Steiner, F. (2018). The Ecological Wisdom of Plan-Making. *Penn: Current Research on Sustainable Urban Development | The Ecological Wisdom of Placemaking, adapted from the first chapter of Making Plans: How to Engage with Landscape, Design, and the Urban Environment (2018, University of Texas Press)*, 12.

Steiner, F. R., Thompson, G. F., & Carbonell, A. (1995). Nature and Cities. Retrieved from https://www.lincolninst.edu/sites/default/files/pubfiles/nature_and_cities_w16ll.pdf.

Stevenson, R. J., & Sabater, S. (2010). Understanding effects of global change on river ecosystems: science to support policy in a changing world. *Hydrobiologia, 657*(1), 3-18. doi:10.1007/s10750-010-0392-7

Stoker, G. (2013). Engaging Citizens: Can Westminster coexist with meaningful citizen-centric engagement? *Putting Citizens First* (Retrieved from http://www.jstor.org/stable/j.ctt4cg5sm.6pp. 25-38): ANU Press.

Sutter, C., & Parreño, J. C. (2007). Does the current Clean Development Mechanism (CDM) deliver its sustainable development claim? An analysis of officially registered CDM projects. *Climatic Change, 84*(1), 75-90.

Svara, J. H., & Denhardt, J. (2010). The connected community: Local governments as partners in citizen engagement and community building. *Promoting Citizen Engagement and Community Building*, 4-51.

Symons, D. (2013). Dilemmas of Engagement. Seriously empowering our community *Putting   Citizens   First*   (Retrieved   from http://www.jstor.org/stable/j.ctt4cg5sm.23pp. 179-184): ANU Press.

Taylor, J. G. (2012). *Global Indonesia* (Vol. 57): Routledge.

Taylor, M. (2007). Community participation in the real world: opportunities and pitfalls in new governance spaces. *Urban Studies, 44*(2), 297-317.

Te Awa Tupua (Whanganui River Claims Settlement) Act 2017, 129-2 C.F.R. (2017).

The Constitution of the Kingdom of Cambodia, (1993).

Law on Land Use Planning, Urbanization and Construction, Retrieved from http://www.cambodiainvestment.gov.kh/law-on-land-use-planning-urbanization-and-construction_940524.html (1994).

Law on Water Resources Management of the Kingdom of Cambodia, (2007).

Law on Urban Planning, 32/2009/QH12 C.F.R. (2009).

Law on Water Resources, 17/2012/QH13 C.F.R. (2012).

The Constituttion of the Socialist Republic of Vietnam, Retrieved from http://vietnamnews.vn/politics-laws/250222/the-constitution-of-the-socialist-republic-of-viet-nam.html - FogWT8w5HYDECAow.97 (2013).

Tilt, W., & Williams, C. A. (1997). Building public and private partnerships. In J. E. Williams, C. A. Wood, & M. P. Dowbeck (Eds.), *Watershed Restoration: Principles and Practices.* (pp. 145-157). Bethesda, Maryland: American Fisheries Society.

Törnquist, O. (2013). *Assessing Dynamics of Democratisation: Transformative Politics, New Institutions, and the Case of Indonesia*: Springer.

Törnquist, O. (2013). *Assessing Dynamics of Democratisation. Transformative Politics, New Institutions, and the Case of Indonesia*: Palgrave Macmillan US.

Tortajada, C. (2008). Rethinking water governance. In J. Feyen, K. Shannon, & M. Neville (Eds.), *Water and urban development paradigms: towards an integration of engineering, design and management approaches*. London: CRC Press.

Town and Country Planning Act, (1976).

Town and Country Planning Act, (2003).

Trench, B., & O'Donnell, S. (1997). The internet and democratic participation: uses of ICTs by voluntary and community organisations in Ireland. *Economic and Social Review, 28*(3), 213.

Turner, B. L., Clark, W. C., Kates, R. W., Richards, J. F., Mathews, J. T., & B., M. W. (1993). *The earth as transformed by human action: global and regional changes in the biosphere over the past 300 years*. New York: Cambridge University Press.

Turner, K. G., Anderson, S., Gonzales-Chang, M., Costanza, R., Courville, S., Dalgaard, T., . . . Wratten, S. (2016). A review of methods, data, and models to assess changes in the value of ecosystem services from land degradation and restoration. *40th Anniversary of Ecological Modelling Journal, 319*, 190-207. doi:10.1016/j.ecolmodel.2015.07.017

Turner, W. M. (1997). Achieving private-sector involvement and its implications for resource professionals. In J. E. Williams, C. A. Wood, & M. P. Dowbeck (Eds.), *Watershed Restoration: Principles and Practices.* (pp. 158-178). Bethesda, Maryland: American Fisheries Society.

UN. (2002). *Water: A shared responsibility. The United Nations World Water Development Report 2*. Retrieved from Paris:

UN-Habitat. (2016). *Planning sustainable cities: global report on human settlements 2009*: Routledge.

UN-Water. (2013). Water security & the global water agenda. *UN Water Analytical Brief. Hamilton, Canada: UN University*.

US EPA. (2000). National water quality inventory: 2000 report. EPA-841-R-02-001.

van Alphen, J., van Beek, E., & Taal, M. (2006). *Floods, from Defence to Management: Symposium Proceedings of the 3rd International Symposium on Flood Defence, Nijmegen, The Netherlands, 25-27 May 2005*: CRC Press.

van Ast, J. A., & Gerrits, L. (2017). Public participation, experts and expert knowledge in water management in the Netherlands. *Water Policy, 19*(1), 115-127.

Van Dijck, J. (2013). *The culture of connectivity: A critical history of social media*: Oxford University Press.

van Voorst, R. (2016). *Natural Hazards, Risk and Vulnerability: Floods and Slum Life in Indonesia*: Routledge.

Varis, O., Varis, O., Tortajada, C., & Biswas, A. K. (2008b). *Management of Transboundary Rivers and Lakes*. Verlag Berlin Heidelberg: Springer.

Varvasovszky, Z., & Brugha, R. (2000). A stakeholder analysis. *Health policy and planning, 15*(3), 338-345.

Verba, S., Schlozman, K. L., & Brady, H. E. (1995). *Voice and equality: Civic voluntarism in American politics*: Harvard University Press.

Voinov, A., Kolagani, N., McCall, M. K., Glynn, P. D., Kragt, M. E., Ostermann, F. O., . . . Ramu, P. (2016). Modelling with stakeholders–next generation. *Environmental Modelling & Software, 77*, 196-220.

Von Korff, Y., Daniell, K., Moellenkamp, S., Bots, P., & Bijlsma, R. (2012). Implementing participatory water management: recent advances in theory, practice, and evaluation. *Ecology and Society, 17*(1).

Ward, P. J., Pauw, W. P., van Buuren, M. W., & Marfai, M. A. (2013). Governance of flood risk management in a time of climate change: the cases of Jakarta and Rotterdam. *Environmental Politics, 22*(3), 518-536. doi:10.1080/09644016.2012.683155

Welzel, C., Inglehart, R., & Deutsch, F. (2005). Social capital, voluntary associations and collective action: Which aspects of social capital have the greatest 'civic' payoff? *Journal of Civil Society, 1*(2), 121-146. doi:10.1080/17448680500337475

Wesselink, A., Paavola, J., Fritsch, O., & Renn, O. (2011). Rationales for Public Participation in Environmental Policy and Governance: Practitioners' Perspectives. *Environment and Planning A, 43*(11), 2688-2704. doi:10.1068/a44161

Wheaton, J. M. (2005). *Review of River Restoration Motives and Objectives*. Unpublished Review. Southampton, U.K.

Wiedemann, P. M., & Femers, S. (1993). Public participation in waste management decision making: Analysis and management of conflicts. *Journal of Hazardous Materials, 33*(3), 355-368.

Wiek, A., & Larson, K. L. (2012). Water, people, and sustainability—a systems framework for analyzing and assessing water governance regimes. *Water Resources Management, 26*(11), 3153-3171.

Williams, J. E., Wood, C. A., & Dowbeck, M. P. (1997). *Watershed restoration: principles and practices*. Bethesda, Maryland: American Fisheries Society.

Willnat, L., Lee, W., & Detenber, B. H. (2002). Individual-level Predictors of Public Outspokenness: A Test of the Spiral of Silence Theory in Singapore. *International Journal of Public Opinion Research, 14*(4), 391-412.

Wittfogel, K. A. (1957). *Oriental despotism: A comparative study of total power*. New Haven LOndon: Yale University Press.

Wohl, E., Angermeier, P. L., Bledsoe, B., Kondolf, G. M., MacDonnell, L., Merritt, D. M., . . . Tarboton, D. (2005). River restoration. *Water resources research, 41*(10).

Wohl, E., Lane, S. N., & Wilcox, A. C. (2015). The science and practice of river restoration. *Water resources research, 51*(8), 5974-5997.

Wojcieszak, M. (2017). Hostile Public Effect: Minority Status Mobilizing Political Participation. *International Journal of Public Opinion Research, 29*(1), 46-69. doi:10.1093/ijpor/edv036

Wolf, E. (1972). Ownership and political ecology. *Anthropological Quarterly, 45*(3), 201-205.

Wolsink, M. (2006). River basin approach and integrated water management: Governance pitfalls for the Dutch Space-Water-Adjustment Management Principle. *Geoforum, 37*(4), 473-487. doi:10.1016/j.geoforum.2005.07.001

Wood, C. A., Williams, J. E., & Dombeck, M. P. (1997). Learning to live within the limits of the land: Lessons from the watershed restoration case studies. In C. A. Wood, J. E. Williams, & M. P. Dombeck (Eds.), *Watershed Restoration: Principles and Practices.* (pp. 445-458). Bethesda, Maryland: American Fisheries Society.

Woolsey, S., Capelli, F., Gonser, T., Hoehn, E., Hostmann, M., Junker, B., . . . Tiegs, S. D. (2007). A strategy to assess river restoration success. *Freshwater Biology, 52*(4), 752-769.

Wyborn, C., Jellinek, S., & Cooke, B. (2012). Negotiating multiple motivations in the science and practice of ecological restoration. *Ecological Management & Restoration, 13*(3), 249-253.

Yao, M., Tramberend, S., Kabat, P., Hutjes, R. W. A., & Werners, S. E. (2016). Building Regional Water-Use Scenarios Consistent with Global Shared Socioeconomic Pathways. *Environmental Processes* Retrieved from http://dx.doi.org/10.1007/s40710-016-0203-x, 1-17.

Zaccai, E. (2012). Over two decades in pursuit of sustainable development: Influence, transformations, limits. *Environmental Development, 1*(1), 79-90. doi:10.1016/j.envdev.2011.11.002

Zakaria, N. A., Ghani, A. A., Abdullah, R., Sidek, L. M., Kassim, A., & Ainan, A. (2004). *MSMA–a new urban stormwater management manual for Malaysia.* Paper presented at the International Conference "ICHE.

Zedler, J., Doherty, J., & Miller, N. (2012). Shifting restoration policy to address landscape change, novel ecosystems, and monitoring. *Ecology and Society, 17*(4).

Zeunert, J. (2017). *Landscape Architecture and Environmental Sustainability: Creating Positive Change Through Design*: Bloomsbury Publishing.

Zhao, Q., Bai, J., Huang, L., Gu, B., Lu, Q., & Gao, Z. (2016). A review of methodologies and success indicators for coastal wetland restoration. *Ecological Indicators, 60*, 442-452. doi:10.1016/j.ecolind.2015.07.003

Ziemer, R. R. (1997). Temporal and spatial scales. In J. E. Williams, C. A. Wood, & M. P. Dowbeck (Eds.), *Watershed restoration: Principles and practices*. Bethesda, Maryland: American Fisheries Society.

Secondary Sources

Åberg, U. E., & Tapsell, S. (2012). Rehabilitation of the River Skerne and the River Cole, England: A Long-Term Public Perspective. *River conservation and management*, 249-259.

Acreman, M., Arthington, A. H., Colloff, M. J., Couch, C., Crossman, N. D., Dyer, F., . . . Young, W. (2014). Environmental flows for natural, hybrid, and novel riverine ecosystems in a changing world. *Frontiers in Ecology and the Environment, 12*(8), 466-473.

Anand, N. (2012). Municipal disconnect: on abject water and its urban infrastructures. *Ethnography, 13*(4), 487-509.

Asakawa, S., Yoshida, K., & Yabe, K. (2004). Perceptions of urban stream corridors within the greenway system of Sapporo, Japan. *Landscape and Urban Planning, 68*(2), 167-182.

Baccaro, L. (2001). *Civil Society, NGOs, and Decent Work Policies: Sorting out the Issues (Unpublished)*. International Institute for Labour Studies. Geneva.

Bakker, K., & Morinville, C. (2013). The governance dimensions of water security: a review. *Phil. Trans. R. Soc. A, 371*(2002), 20130116.

Banville, C., Landry, M., Martel, J. M., & Boulaire, C. (1998). A stakeholder approach to MCDA. *Systems Research and Behavioral Science, 15*(1), 15-32.

Benayas, J. M. R., Newton, A. C., Diaz, A., & Bullock, J. M. (2009). Enhancement of biodiversity and ecosystem services by ecological restoration: a meta-analysis. *Science, 325*(5944), 1121-1124.

Benz, A. (2006). Governance in Mehrebenensystemen. In G. Schuppert (Ed.), *Governance-Forschung. Vergewisserung über Stand und Entwicklungslinien. 2. Aufl age* (pp. 95–120). Baden-Baden: Nomos.

Bernhardt, E. S., Palmer, M. A., Allan, J., Alexander, G., Barnas, K., Brooks, S., . . . Follstad-Shah, J. (2005). Synthesizing US river restoration efforts. *Science, 308*(5722), 636-637.

Binimelis, R., Born, W., Monterroso, I., & Rodríguez-Labajos, B. (2008). Socio-economic impact and assessment of biological invasions *Biological invasions* (pp. 331-347): Springer.

Bishop, P., & Davis, G. (2002). Mapping public participation in policy choices. *Australian journal of public administration, 61*(1), 14-29.

Biswas, A. K. (2004). Integrated water resources management: a reassessment: a water forum contribution. *Water international, 29*(2), 248-256.

Blackstock, K. L., Kelly, G. J., & Horsey, B. L. (2007). Developing and applying a framework to evaluate participatory research for sustainability. *Ecological Economics, 60*(4), 726-742.

Bonn 2011. (2011). *Messages from the Bonn2011 conference: The water, energy and food security nexus – Solutions for a green economy.*

Booth, D. B. (1991). Urbanization and the natural drainage system--impacts, solutions, and prognoses.

Booth, D. B., & Bledsoe, B. P. (2009). Streams and urbanization *The Water Environment of Cities* (pp. 93-123): Springer.

Bradshaw, A. D. (1996). Underlying principles of restoration. *Canadian Journal of Fisheries and Aquatic Sciences, 53*(S1), 3-9.

Brinkman, J. J. (2012). *Jakarta Coastal Defence Strategy (JCDS) Study: Towards a Public-Private Partnership for the Coastal Development and Protection of Jakarta*. Paper presented at the Flood Risk Management and Urban Resilience workshop, Indonesia.

Brooks, A. (1998). *Channelized Rivers: Perspectives for Environmental Management*. New York: John Wiley.

Bryant, R. L. (1997). Beyond the impasse: the power of political ecology in Third World environmental research. *Area, 29*(1), 5-19.

Burger, J. (2008). Environmental management: integrating ecological evaluation, remediation, restoration, natural resource damage assessment and long-term stewardship on contaminated lands. *Science of The Total Environment, 400*(1), 6-19.

Carver, S. (2001). *Participation and Geographical Information: a position paper.* Paper presented at the ESF-NSF Workshop, Spoleto, Italy.

Chambers, R. (1992). *Rural appraisal: rapid, relaxed, participatory*. Institute of Development Studies, University of Sussex, Brighton, UK: Vikas Publishing House.

Chambers, R. (1997). *Whose reality counts?: putting the first last*. London UK: Intermediate Technology Publications Ltd (ITP).

Cook, C., & Bakker, K. (2012). Water security: debating an emerging paradigm. *Global Environmental Change, 22*(1), 94-102.

Costanza, R., d'Arge, R., de Groot, R., & Farger, S. (1997). Mon ca Grasso, Bruce Hannon, Kar n L nburg, Shah d Naeem, Robert V. O'Ne ll, Jose Paruelo, Robert G. Rask n, Paul Sutton and Marjan van den Belt. 1997."The Value of the World's Ecosystem Serv ces and Natural Cap tal.". *nature, 387*, 253-260.

Crozier, M., & Friedberg, E. (1977). L'acteur et Le Système: Les Contraintes de L'action Collective, Seuil: Paris.

Daily, G. (1997). *Nature's services: societal dependence on natural ecosystems*: Island Press.

Dasgupta, S., Hettige, H., & Wheeler, D. (2000). What improves environmental compliance? Evidence from Mexican industry. *Journal of Environmental Economics and Management, 39*(1), 39-66.

Davidsen, P. A. (2006). Between Rhetoric and Reality–A Critical Account of Stakeholder Participation in Decision Making in the Mekong River Basin. In A. Earle & D. Malzbender (Eds.), *Stakeholder participation in transboundary water management–selected case studies* (pp. 131-155). Germany: Internationale Weiterbildung und Entwicklung.

Davidson, S. (1998). Spinning the wheel of empowerment. *Planning, 1262*(3), 14-15.

Day Jr, J. W., Hall, C. A., Yáñez-Arancibia, A., Pimentel, D., Martí, C. I., & Mitsch, W. J. (2009). Ecology in times of scarcity. *BioScience, 59*(4), 321-331.

De Boeck, F., & Plissart, M.-F. (2004). *Kinshasa: tales of the invisible city*: Leuven University Press.

De Groot, R. S., Wilson, M. A., & Boumans, R. M. (2002). A typology for the classification, description and valuation of ecosystem functions, goods and services. *Ecological Economics, 41*(3), 393-408.

Dietz, T., & Stern, P. C. (2008). *Public Participation in Environmental Assessment and Decision-Making. Panel on Public Participation in Environmental Assessment and Decision Making*. Washington, DC.: National Research Council.

Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of management Review, 20*(1), 65-91.

Dorcey, A., Doney, L., & Rueggeberg, H. (1994). Public Involvement in Government Decision-Making: Choosing the Right Model.(Victoria, Round Table on the Environment and the Economy).

Dore, J., & Yu, X. (2004). Yunnan hydropower expansion—update on China's energy industry reforms and the Nu. *Lancang and Jinsha hydropower dams, Chiang Mai University's Unit for Social and Environmental Research and Green Watershed, Kunming, PR of China*.

Downs, P. W., & Kondolf, G. M. (2002). Post-project appraisals in adaptive management of river channel restoration. *Environmental management, 29*(4), 477-496.

Dyson, M., Bergkamp, G., & Scanlon, J. (2008). Flow–The essentials of environmental flows, Gland, Switzerland: IUCN. Reprint, Gland, Switzerland: IUCN.

Eden, S., & Tunstall, S. (2006). Ecological versus social restoration? How urban river restoration challenges but also fails to challenge the science–policy nexus in the United Kingdom. *Environment and Planning C: Government and Policy, 24*(5), 661-680.

Ehrenfeld, J. G. (2000). Defining the limits of restoration: the need for realistic goals. *Restoration Ecology, 8*(1), 2-9.

Ehrlich, P. R., & Pringle, R. M. (2008). Where does biodiversity go from here? A grim business-as-usual forecast and a hopeful portfolio of partial solutions. *Proceedings of the National Academy of Sciences, 105*(Supplement 1), 11579-11586.

Elliot, R. (1982). Faking nature. *Inquiry: An Interdisciplinary Journal of Philosophy, 25*, 81-93.

Elliott, C., & Schlaepfer, R. (2001). Understanding forest certification using the Advocacy Coalition Framework. *Forest Policy and Economics, 2*(3), 257-266.

Falkenmark, M., & Rockström, J. (2004). *Balancing water for humans and nature: the new approach in ecohydrology*: Earthscan.

FAO. (2000). *Public Participation in Forestry in Europe and North America* Retrieved from Geneva:

Foley, J. A., DeFries, R., Asner, G. P., Barford, C., Bonan, G., Carpenter, S. R., . . . Gibbs, H. K. (2005). Global consequences of land use. *Science, 309*(5734), 570-574.

Fottler, M. D., Blair, J. D., Whitehead, C. J., Laus, M. D., & Savage, G. T. (1989). Assessing Key Stakeholders: Who Matters to Hospitals and Why? *Journal of Healthcare Management, 34*(4), 525-546.

Fung, A. (2006). Varieties of participation in complex governance. *Public administration review, 66*(s1), 66-75.

Gadamer, H.-G. (1989). Truth and Method, trans. Joel Weinsheimer and Donald G. Marshall. *New York: Continuum*.

Gigliotti, L. M. (1992). Environmental attitudes: 20 years of change? *The Journal of Environmental Education, 24*(1), 15-26.

Giordano, M., & Shah, T. (2014). From IWRM back to integrated water resources management. *International Journal of Water Resources Development, 30*(3), 364-376.

Gopalakrishnan, C., Levy, J., Li, K. W., & Hipel, K. W. (2005). Water allocation among multiple stakeholders: conflict analysis of the Waiahole water project, Hawaii. *International Journal of Water Resources Development, 21*(2), 283-295.

Grimble, R., & Wellard, K. (1997). Stakeholder methodologies in natural resource management: a review of principles, contexts, experiences and opportunities. *Agricultural systems, 55*(2), 173-193.

Habermas, J. (1984). The Theory of Communicative Action: vol. 1: Reason and the Rationalization of Society; vol. 2: Lifeworld and System: A Critique of Functionalist Reason. *Trans. Thomas McCarthy). Boston, MA: Beacon Press*.

Hall, M. (2010). *Restoration and history: the search for a usable environmental past* (Vol. 8): Routledge.

Hausbeck, K. W., Milbrath, L. W., & Enright, S. M. (1992). Environmental knowledge, awareness and concern among 11th-grade students: New York State. *The Journal of Environmental Education, 24*(1), 27-34.

Hensher, D., Shore, N., & Train, K. (2005). Households' willingness to pay for water service attributes. *Environmental and Resource Economics, 32*(4), 509-531.

Hering, J. G., & Ingold, K. M. (2012). Water resources management: what should be integrated? *Science, 336*(6086), 1234-1235.

ICEM. (2010). *MRC strategic environmental assessment of hydropower on the Mekong mainstream. Impacts assessment (opportunities and risks) discussion draft*. Retrieved from Hanoi:

IJC. (1997). *The IJC and the 21st Century*. Retrieved from Washington, DC and Ottawa, ON:

Isunju, J., Schwartz, K., Schouten, M., Johnson, W. P., & van Dijk, M. P. (2011). Socio-economic aspects of improved sanitation in slums: a review. *Public health, 125*(6), 368-376.

Johnson, N., Lilja, N., Ashby, J. A., & Garcia, J. A. (2004). *The practice of participatory research and gender analysis in natural resource management.* Paper presented at the Natural Resources Forum.

Jordan III, W. R. (1994). Sunflower Forest': ecological restoration as the basis for a new environmental paradigm. *Beyond preservation: restoring and inventing landscapes*, 17-34.

Kail, J., Hering, D., Muhar, S., Gerhard, M., & Preis, S. (2007). The use of large wood in stream restoration: experiences from 50 projects in Germany and Austria. *Journal of applied ecology, 44*(6), 1145-1155.

Kellert, S. R. (1997). *The value of life: Biological diversity and human society*: Island Press.

Keulartz, J. (2009). European nature conservation and restoration policy—Problems and perspectives. *Restoration Ecology, 17*(4), 446-450.

Keulartz, J., & Van der Weele, C. (2008). Framing and reframing in invasion biology. *Configurations, 16*(1), 93-115.

Kondolf, G. M. (1995). Five elements for effective evaluation of stream restoration. *Restoration Ecology, 3*(2), 133-136.

Kondolf, G. M., & Micheli, E. R. (1995). Evaluating stream restoration projects. *Environmental management, 19*(1), 1-15.

Korten, D. C. (1990). *Getting to the 21st Century: Voluntary Action and the Global Agenda*. West Hartford: Kumarian Press.

Kujinga, K. (2002). Decentralizing water management: an analysis of stakeholder participation in the management of water in Odzi subcatchment area, Save Catchment. *Physics and Chemistry of the Earth, Parts A/B/C, 27*(11), 897-905.

Laumann, E. O., & Knoke, D. (1987). *The organizational state: Social choice in national policy domains*: Univ of Wisconsin Press.

Lee, K. N. (1994). *Compass and gyroscope: integrating science and politics for the environment*: Island Press.

Lewis, V. A., Macgregor, C. A., & Putnam, R. D. (2013). Religion, networks, and neighborliness: The impact of religious social networks on civic engagement. *Soc Sci Res, 42*(2), 331-346. doi:10.1016/j.ssresearch.2012.09.011

Light, A., & Higgs, E. S. (1996). The politics of ecological restoration. *Environmental Ethics, 18*(3), 227-247.

Light, A., & Katz, E. (1996). *Environmental Pragmatism*. New York: Routledge.

Lubell, M., & Edelenbos, J. (2013). Integrated Water Resources Management. *International Journal of Water Governance, 1*(3-4), 177-196.

MacDonald, D. H., Bark, R., Garrick, D., Banerjee, O., Connor, J., & Morrison, M. (2011). Multiple Benefits through the Life Cycle of the Basin Plan *Basin Futures* (Retrieved from http://www.jstor.org/stable/j.ctt24hdpc.20pp. 263-276): ANU Press.

Macnaghten, P., & Jacobs, M. (1997). Public identification with sustainable development: Investigating cultural barriers to participation. *Global Environmental Change, 7*(1), 5-24.

Makkonen, K. (2005). Integrated water resources management in China. *Integrated Water Resources Management in South and South-East Asia. Oxford University Press, New Delhi*, 267-296.

Marshall, R. (2001). Contemporary urban space-making at the water's edge. In R. Marshall (Ed.), *Waterfronts in post-industrial cities* (pp. 3-14). London: Spon Press.

Martin, G. P. (2009). Public and user participation in public service delivery: tensions in policy and practice. *Sociology Compass, 3*(2), 310-326.

Mayo, C., & La France, M. (1980). Toward an applicable social psychology. In R. F. Kidd & M. J. Saks (Eds.), *Advances in applied social psychology* (Vol. 1, pp. 81-96). Hillsdale, NJ: Erlbaum.

McManamay, R., & al., e. (2017). US cities can manage national hydrology and biodiversity using local infrastructure policy. *Proceedings of the National Academy of Sciences*.

Millington, P. (1999). *River Basin Management - Its Role in Major Water Infrastructure Projects (Draft)*. Retrieved from Cape Town, South Africa:

Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of management Review, 22*(4), 853-886.

Molle, F. (2009). River-basin planning and management: The social life of a concept. *Geoforum, 40*(3), 484-494.

Mount, J. F. (1995). *California rivers and streams: the conflict between fluvial process and land use*: Univ of California Press.

Naiman, R. J., Bunn, S. E., Nilsson, C., Petts, G. E., Pinay, G., & Thompson, L. C. (2002). Legitimizing fluvial ecosystems as users of water: an overview. *Environmental management, 30*(4), 455-467.

Nassauer, J. I. (1995a). Culture and changing landscape structure. *Landscape ecology, 10*(4), 229-237. Retrieved from https://deepblue.lib.umich.edu/bitstream/handle/2027.42/49247/Land_Ecology_1995.pdf?sequence=1&isAllowed=y

Nassauer, J. I. (1995b). Messy ecosystems, orderly frames. *Landscape journal, 14*(2), 161-170.

Nassauer, J. I., Kosek, S. E., & Corry, R. C. (2001). Meeting public expectations with ecological innovation in riparian landscapes.

Nellemann, C., & Corcoran, E. (2009). *Blue carbon: the role of healthy oceans in binding carbon: a rapid response assessment*: UNEP/Earthprint.

Newig, J. (2007). Does public participation in environmental decisions lead to improved environmental quality?: towards an analytical framework. *Communication, Cooperation, Participation (International Journal of Sustainability Communication), 1*(1), 51-71.

Newson, M., & Chalk, L. (2004). Environmental capital: An information core to public participation in strategic and operational decisions—The example of river 'best practice' projects. *Journal of Environmental Planning and Management, 47*(6), 899-920.

Njoh, A. (2006). Determinants of success in community self-help projects: the case of the Kumbo water supply scheme in Cameroon. *International Development Planning Review, 28*(3), 381-406.

Norman, E. S., & Bakker, K. (2009). Transgressing scales: Water governance across the Canada–US borderland. *Annals of the Association of American Geographers, 99*(1), 99-117.

Palme, U. (2010). Multiple conceptions of sustainable urban water systems: problem or asset? *Water Policy, 12*(3), 425-443.

Perrow, M., & Wightman, A. (1993). River Restoration Project Phase 1. Feasability Study. *ECON, University of East Anglia & River Restoration Secretariat, Oxford Polytechnic: Oxford*.

Petts, J. (2004). Barriers to participation and deliberation in risk decisions: evidence from waste management. *Journal of risk research, 7*(2), 115-133.

Petts, J. (2007). Learning about learning: lessons from public engagement and deliberation on urban river restoration. *The Geographical Journal, 173*(4), 300-311.

Postel, S., & Carpenter, S. R. (1997). Freshwater ecosystem services. In G. Daily (Ed.), *Nature's services: societal dependence on natural ecosystems* (pp. 195-214). Washington D. C. : Island Press.

Pourebrahim, S., Hadipour, M., & Bin Mokhtar, M. (2011). Integration of spatial suitability analysis for land use planning in coastal areas; case of Kuala Langat District, Selangor, Malaysia. *Landscape and Urban Planning, 101*(1), 84-97. doi:10.1016/j.landurbplan.2011.01.007

Putnam, R. (1995). Bowling Alone: The Decline of America's Social Capital. *Journal of Democracy, 6*, 65.

Putnam, R. D., Leonardi, R., & Nanetti, R. Y. (1994). *Making democracy work: Civic traditions in modern Italy*: Princeton university press.

Rappaport, J. (1987). Terms of empowerment/exemplars of prevention: Toward a theory for community psychology. *American journal of community psychology, 15*(2), 121-148.

Richardson, H. W. (1989). The big, bad city: Mega-city myth? *Third World Planning Review, 11*(4), 355.

Rist, S., Chidambaranathan, M., Escobar, C., Wiesmann, U., & Zimmermann, A. (2007). Moving from sustainable management to sustainable governance of natural resources: The role of social learning processes in rural India, Bolivia and Mali. *Journal of rural studies, 23*(1), 23-37.

Roling, N. G., & Wagemakers, M. A. E. (2000). *Facilitating sustainable agriculture: participatory learning and adaptive management in times of environmental uncertainty*: Cambridge University Press.

Rondinelli, D. A. (1991). Decentralizing water supply services in developing countries: factors affecting the success of community management. *Public administration and development, 11*(5), 415-430.

Roni, P., Beechie, T. J., Bilby, R. E., Leonetti, F. E., Pollock, M. M., & Pess, G. R. (2002). A review of stream restoration techniques and a hierarchical strategy for prioritizing restoration in Pacific Northwest watersheds. *North American Journal of Fisheries Management, 22*(1), 1-20.

Roni, P., & Quimby, E. (2005). *Monitoring stream and watershed restoration*: CABI.

Ryan, R. L., Kaplan, R., & Grese, R. E. (2001). Predicting volunteer commitment in environmental stewardship programmes. *Journal of Environmental Planning and Management, 44*(5), 629-648.

Santiago, C. (2005). Murky figures cloud water tariff hikes: Challenges and issues of governance in water management in Malaysia.

Schaffer Boudet, H., Jayasundera, D. C., & Davis, J. (2011). Drivers of conflict in developing country infrastructure projects: experience from the water and pipeline sectors. *Journal of Construction Engineering and Management, 137*(7), 498-511.

Schenk, A., Hunziker, M., & Kienast, F. (2007). Factors influencing the acceptance of nature conservation measures—A qualitative study in Switzerland. *Journal of Environmental Management, 83*(1), 66-79.

Global Biodiversity Outlook 3, Convention on Biological Diversity, (2010).

Simone, A. (2010). *City life from Jakarta to Dakar: movements at the crossroads*: Routledge.

Smith, G. (2005). Beyond the Ballot: 57 Democratic Innovations From Around the World. UK Power Inquiry.

Sommer, R. (1972). Design awareness.

Sommer, R. (1983). *Social design: creating building with people in mind*: Prentice Hall.

Sorensen, A. (2011). Megacity Sustainability: Urban Form, Development, and Governance *Megacities* (pp. 397-418): Springer.

Steiner, F. (2016). The application of ecological knowledge requires a pursuit of wisdom. *Landscape and Urban Planning, 155*, 108-110.

Steinwender, A., Gundacker, C., & Wittmann, K. J. (2008). Objective versus subjective assessments of environmental quality of standing and running waters in a large city. *Landscape and Urban Planning, 84*(2), 116-126.

Stenseke, M. (2009). Local participation in cultural landscape maintenance: lessons from Sweden. *Land Use Policy, 26*(2), 214-223.

Stoney, C., & Winstanley, D. (2001). Stakeholding: confusion or utopia? Mapping the conceptual terrain. *Journal of Management studies, 38*(5), 603-626.

Stromquist, N. P. (1998). NGOs in a new paradigm of civil society. *Current issues in comparative education, 1*(1), 1-5.

Tischew, S., Baasch, A., Conrad, M. K., & Kirmer, A. (2010). Evaluating restoration success of frequently implemented compensation measures: results and demands for control procedures. *Restoration Ecology, 18*(4), 467-480.

van der Brugge, R., & Rotmans, J. (2006). Towards transition management of European water resources *Integrated Assessment of Water Resources and Global Change* (pp. 249-267): Springer.

van der Heijden, H.-A. (2005). Ecological restoration, environmentalism and the Dutch politics of'new nature'. *Environmental Values*, 427-446.

van Vliet, B. J., Spaargaren, G., & Oosterveer, P. (2011). Sanitation under challenge: contributions from the social sciences. *Water Policy, 13*(6), 797-809.

Vining, J., Tyler, E., & Kweon, B.-S. (2000). Public values, opinions, and emotions in restoration controversies. *Restoring nature: Perspectives from the social sciences and humanities*, 143-162.

Wahl, V. (2007). *More than meets the eye: community participation in environmental stewardship.* Paper presented at the Proceedings of the 2007 Georgia Basin Puget Sound Research Conference. Vancouver, British Columbia.

Weidemann, I., & Femers, S. (1993). Public participation in waste management decision-making: analysis and management of conflicts. *Journal of Hazardous Materials, 33*, 355-368.

Westphal, L. M., Gobster, P., Gross, M., & Hall, M. (2010). Models for renaturing brownfield areas. *Restoration and history: the search for a usable environmental past. Routledge, New York*.

Weyer, M. V. (1996). In an ideal world. *Management Today September*, 34–38.

Willis, K. G., Scarpa, R., & Acutt, M. (2005). Assessing water company customer preferences and willingness to pay for service improvements: A stated choice analysis. *Water resources research, 41*(2).

Uncategorized References

Ahlers, R., Cleaver, F., Rusca, M., & Schwartz, K. (2014). Informal space in the urban waterscape: Disaggregation and co-production of water services. *Water Alternatives, 7*(1).

Andaya, B. W. (2016). Rivers, Oceans, and Spirits: Water Cosmologies, Gender, and Religious Change in Southeast Asia. *TRaNS: Trans -Regional and -National Studies of Southeast Asia, 4*(2), 239-263.

Barraqué, B. (2012). *Urban water conflicts* (Vol. 8). Taylor & Francis, The Netherlands: UNESCO.

Bhushan, B. (2015). Perspective: Science and technology policy – What is at stake and why should scientists participate? *Science and Public Policy, 42*(6), 887-900. doi:10.1093/scipol/scv005

Carr, G., Blöschl, G., & Loucks, D. P. (2012). Evaluating participation in water resource management: A review. *Water resources research, 48*(11), n/a-n/a. doi:10.1029/2011WR011662

Cradock-Henry, N. A., Greenhalgh, S., Brown, P., & Sinner, J. (2017). Factors influencing successful collaboration for freshwater management in Aotearoa, New Zealand. *Ecology and Society, 22*(2). doi:10.5751/ES-09126-220214

Delli Priscoli, J. (2000). Water and civilization: using history to reframe water policy debates and to build a new ecological realism. *Water Policy, 1*(6), 623-636.

Environmental Impact Assessment (EIA). Instructional Guide. (2007). Retrieved from Malaysia:

Gibbs, L. M. (2010). "A beautiful soaking rain": environmental value and water beyond Eurocentrism. *Environment and Planning D: Society and Space, 28*(2), 363-378.

Grigg, N. S. (2014). Integrated water resources management: unified process or debate forum? *International Journal of Water Resources Development, 30*(3), 409-422.

Gross, M. (2002). New natures and old science: hands-on practice and academic research in ecological restoration. *Science & Technology Studies, 28*(2).

Gross, M. (2006). Beyond expertise: ecological science and the making of socially robust restoration strategies. *Journal for Nature Conservation, 14*(3), 172-179.

Hanh, L. H. (2016). Public Participation in the Legislative Process in Vietnam and the Concept of Public Consultation. *Australian Journal of Asian Law, 17*(2), 1-18.

Huitema, D., & Meijerink, S. (2010). Realizing water transitions: the role of policy entrepreneurs in water policy change. *Ecology and Society, 15*(2).

Kanwar, P., Kaza, S., & Bowden, W. B. (2016). An evaluation of Māori values in multiscalar environmental policies governing Kaipara Harbour in New Zealand. *International Journal of Water Resources Development, 32*(1), 26-42.

Keil, A., & Wetterau, B. (2013). *Metropolis Ruhr. A Regional Study of the New Ruhr.* Essen: Regionalverband Ruhr.

Krause, F., & Strang, V. (2016). Thinking relationships through water. *Society & Natural Resources, 29*(6), 633-638.

Krause, R. M., Feiock, R. C., & Hawkins, C. V. (2016). The Administrative Organization of Sustainability Within Local Government. *Journal of Public Administration Research and Theory, 26*(1), 113-127. doi:10.1093/jopart/muu032

Liu, Z., Cui, B., & He, Q. (2016). Shifting paradigms in coastal restoration: Six decades' lessons from China. *Science of The Total Environment, 566–567*, 205-214. doi:10.1016/j.scitotenv.2016.05.049

Meijerink, S., & Huitema, D. (2017). The institutional design, politics, and effects of a bioregional approach: observations and lessons from 11 case studies of river basin organizations. *Ecology and Society, 22*(2). doi:10.5751/ES-09388-220241

Moellenkamp, S., Lamers, M., Huesmann, C., Rotter, S., Pahl-Wostl, C., Speil, K., & Pohl, W. (2010). Informal participatory platforms for adaptive management. Insights into niche-finding, collaborative design and outcomes from a participatory process in the Rhine basin. *Ecology and Society, 15*(4).

National Forestry Act, (1984).

O'Donnell, E. L. (2017). At the Intersection of the Sacred and the Legal: Rights for Nature in Uttarakhand, India. *Journal of Environmental Law*, 10.1093/jel/eqx026. doi:10.1093/jel/eqx026

Obertreis, J., Moss, T., Mollinga, P., & Bichsel, C. (2016). Water, infrastructure and political rule: Introduction to the special issue. *Water Alternatives, 9*(2).

Öjendal, J., Hansson, S., & Hellberg, S. (2012). *Politics and development in a transboundary watershed: the case of the Lower Mekong Basin* (Vol. 10). Dordrecht Heidelberg London New York: Springer.

Öjendal, J., Mathur, V., & Sithirith, M. (2002). *Environmental governance in the Mekong: Hydropower site selection processes in the Se San and Sre Pok Basins*: Stockholm Environment Institute (SEI).

Ollier, L. C.-P., & Winter, T. (2006). *Expressions of Cambodia: the politics of tradition, identity and change*: Routledge.

Omar, D. B., & Leh, O. L. H. (2009). Malaysian development planning system: Kuala Lumpur structure plan and public participation. *Asian Social Science, 5*(3), 30.

Orchard, S. E., Stringer, L. C., & Quinn, C. H. (2015). Environmental Entitlements: Institutional influence on mangrove social-ecological systems in Northern Vietnam. *Resources, 4*(4), 903-938.

Orlove, B., & Caton, S. C. (2010). Water sustainability: Anthropological approaches and prospects. *Annual Review of Anthropology, 39*, 401-415.

Ostrom, E. (1990). Governing the commons: The evolution of institutions for collective action Cambridge University Press Cambridge Google Scholar.

Othman, A. R., & Majid, N. H. A. (2016). Urban River and Its Heritage Value: A river of life at Precinct 7, Kuala Lumpur. *Environment-Behaviour Proceedings Journal, 1*(1), 58-67.

Padawangi, R. (2016). The Role of Communities in the Governance of Jakarta's City Food System.

Padawangi, R., & Douglass, M. (2015). Water, water everywhere: Toward participatory solutions to chronic urban flooding in Jakarta. *Pacific Affairs, 88*(3), 517-550.

Padawangi, R., Turpin, E., Prescott, M. F., Lee, I., & Shepherd, A. (2016). Mapping an alternative community river: The case of the Ciliwung. *Sustainable Cities and Society, 20*, 147-157.

Paisley, R. K., Weiler, P., Henshaw, T., Holley, C., & Rayfuse, R. (2016). 'Trans-boundary Waters Governance Through The Prism of the Mekong River Basin'. *Trans-jurisdictional Water Law and Governance*, 43-61.

Paredes, O. (2016). Rivers of Memory and Oceans of Difference in the Lumad World of Mindanao. *Trans-Trans-Regional and -National Studies of Southeast Asia, 4*(2), 329-349. doi:10.1017/trn.2015.28

Potoski, M., & Prakash, A. (2005). Green clubs and voluntary governance: ISO 14001 and firms' regulatory compliance. *American journal of political science, 49*(2), 235-248.

Presidential Decree 52/1995 on the North Coast Reclamation in Jakarta, (1995).

Purnomohadi, N. (2000). Jakarta: Urban agriculture as an alternative strategy to face the economic crisis. *Bakker N., Dubbeling M., Gündel S., Sabel-Koshella U., de Zeeuw H. Growing cities, growing food. Urban agriculture on the policy agenda. Feldafing, Germany: Zentralstelle für Ernährung und Landwirtschaft (ZEL)*, 453-465.

Pye, M. W., & Pye, L. W. (2009). *Asian power and politics: The cultural dimensions of authority*: Harvard University Press.

Rakodi, C., & Firman, T. (2009). Planning for an Extended Metropolitan Region in Asia: Jakarta, Indonesia. *Case study prepared for Revisiting Urban Planning: Global Report on Human Settlements*.

Randy, A. F., Hutomo, M., & Purnama, H. (2015). Collaborative Efforts on Mangrove Restoration in Sedari Village, Karawang District, West Java Province. *Basic Researches in The Tropical and Coastal Region Eco Developments, 23*, 48-57. doi:10.1016/j.proenv.2015.01.008

Rault, P. A. K., & Jeffrey, P. J. (2008). On the appropriateness of public participation in Integrated Water Resources Management: some grounded insights from the Levant. *Integrated Assessment, 8*(2).

Razzaque, J. (2009). Public Participation in Water Governance. In J. W. Dellapenna & J. Gupta (Eds.), *The evolution of the law and politics of water*: Springer.

Remondi, F., Burlando, P., & Vollmer, D. (2016). Exploring the hydrological impact of increasing urbanisation on a tropical river catchment of the metropolitan Jakarta, Indonesia. *Sustainable Cities and Society, 20*, 210-221.

Resosudarmo, I., Resosudarmo, B. P., & Isham, B. (1997). The Indonesian Clean river program (PROKASIH) as perceived by the people residing along the rivers in Jakarta. *The Indonesian Journal of Geography, 29*(74), 47-63.

Resosudarmo, P. O. (1995). *Evaluation of the Indonesian Clean River Program (Prokasih) as Perceived by the People Living Along the Rivers: A Case Study of River Communities Along the Ciliqung, Cipinang, and Mookervart Rivers* (Retrieved from https://books.google.de/books?id=s1lEAAAAYAAJ): Cornell University, August.

Richter, B. D., Postel, S., Revenga, C., Scudder, T., Lehner, B., Churchill, A., & Chow, M. (2010). Lost in development's shadow: The downstream human consequences of dams. *Water Alternatives, 3*(2), 14.

Rigg, J. (2004). *Southeast Asia: The human landscape of modernization and development*: Routledge.

Rivera, J. E. (2010). *Business and public policy: Responses to environmental and social protection processes*: Cambridge University Press.

Robinson, J. A., & Acemoglu, D. (2012). Why nations fail: The origins of power, prosperity, and poverty. *New York: Crown Pub*.

Rohde, S., Hostmann, M., Peter, A., & Ewald, K. C. (2006). Room for rivers: An integrative search strategy for floodplain restoration. *Landscape and Urban Planning, 78*(1–2), 50-70. doi:10.1016/j.landurbplan.2005.05.006

Rowe, G., & Frewer, L. J. (2000). Public Participation Methods: A Framework for Evaluation. *Science, Technology & Human Values, 25*, 3-29. doi:10.1177/016224390002500101

Rowe, G., & Frewer, L. J. (2004). Evaluating public-participation exercises: a research agenda. *Science, Technology, & Human Values, 29*(4), 512-556.

Sachs, J. (2008). *Common wealth: Economics for a crowded planet*: Penguin.

Sagala, S., Lassa, J., Yasaditama, H., & Hudalah, D. (2013). *The evolution of risk and vulnerability in Greater Jakarta: contesting government policy*. Retrieved from

Sang, N. (2008). Informing common pool resource problems: A survey of preference for catchment management strategies amongst farmers and the general public in the Ythan river catchment. *Journal of Environmental Management, 88*(4), 1161-1174. doi:10.1016/j.jenvman.2007.06.014

Santasombat, Y. (2011). *The river of life: Changing ecosystems of the Mekong Region*: Mekong Press.

Sarzynski, A. (2015). Public participation, civic capacity, and climate change adaptation in cities. *Building Capacity for Climate Change Adaptation in Urban Areas, 14, Part 1*, 52-67. doi:10.1016/j.uclim.2015.08.002

Satriastanti, F. E. (2012). Big Plans for Ciliwung River, One of World's Most Polluted Rivers. *Jakarta Globe*. Retrieved from http://jakartaglobe.id/archive/big-plans-for-ciliwung-one-of-worlds-most-polluted-rivers/ website:

Schaich, H. (2009). Local residents' perceptions of floodplain restoration measures in Luxembourg's Syr Valley. *Landscape and Urban Planning, 93*(1), 20-30. doi:10.1016/j.landurbplan.2009.05.020

Schively, C. (2007). Understanding the NIMBY and LULU Phenomena: Reassessing Our Knowledge Base and Informing Future Research. *Journal of Planning Literature, 21*(3), 255-266. doi:10.1177/0885412206295845

Schoeman, J., Allan, C., & Finlayson, C. M. (2014). A new paradigm for water? A comparative review of integrated, adaptive and ecosystem-based water management in the Anthropocene. *International Journal of Water Resources Development, 30*(3), 377-390.

Schottmann, S., & Camilleri, J. (2013). Culture, religion and Southeast Asian state. In S. Schottmann & J. Camilleri (Eds.), *Culture, religion and conflict in Muslim Southeast Asia: negotiating tense pluralisms* (Vol. 56): Routledge.

Scott, J. C. (2014). *The art of not being governed: An anarchist history of upland Southeast Asia*: Yale University Press.

Scott, J. C., & Kerkvliet, B. J. (1986). *Everyday forms of peasant resistance in South-East Asia*: Psychology Press.

Sewell, W. D., & Phillips, S. D. (1979). Models for the evaluation of public participation programmes. *Natural Resources Journal, 19*(2), 337-358.

Shamsuddin, S., Abdul Latip, N. S., & Sulaiman, A. B. (2008). Waterfront regeneration as a sustainable approach to city development in Malaysia. *WIT Transactions on Ecology and the Environment, 117*, 45-54.

Shamsuddin, S., Abdul Latip, N. S., Ujang, N., Sulaiman, A. B., & Alias, N. A. (2013). How a city lost its waterfront: tracing the effects of policies on the sustainability of the Kuala Lumpur waterfront as a public place. *Journal of Environmental Planning and Management, 56*(3), 378-397.

Shubin, S. (2010). Cultural exclusion and rural poverty in Ireland and Russia. *Transactions of the Institute of British Geographers, 35*(4), 555-570.

Sidel, J. T. (2015). Primitive Accumulation and 'Progress' in Southeast Asia: The Diverse Legacies of a Common (s) Tragedy. *TRaNS: Trans-Regional and National Studies of Southeast Asia, 3*(01), 5-23.

Sihite, V. (2013). Penanganan Banjir Jakarta "Dikit-dikit" Normalisasi Perlu Langkah Taktis Strategis. *Air minum, 209*.

Sisowath, D. C. (2006). Region within a region: the Mekong and ASEAN. In M. S. I. Diokno & N. V. Chinh (Eds.), *The Mekong arranged & rearranged* (pp. 121-140). Chiang Mai, Thailand: Mekong Press.

Siu, H. F., Tagliacozzo, E., & Perdue, P. C. (2015). Asia Inside Out: Connected Places.

Sneddon, C., & Fox, C. (2006). Rethinking transboundary waters: A critical hydropolitics of the Mekong basin. *Political Geography, 25*(2), 181-202. doi:10.1016/j.polgeo.2005.11.002

Sneddon, C., & Fox, C. (2007). Power, Development, and Institutional Change: Participatory Governance in the Lower Mekong Basin. *World Development, 35*(12), 2161-2181. doi:10.1016/j.worlddev.2007.02.002

Sobral, A., LA TORRE, M. d. l. Á., Alves, R. R. N., & Albuquerque, U. P. (2017). Conservation efforts based on local ecological knowledge: The role of social variables in identifying environmental indicators. *Ecological Indicators, 81*, 171-181.

Sokhem, P., Sunada, K., & Oishi, S. (2007). Managing transboundary rivers: The case of the Mekong river basin. *Water international, 32*(4), 503-523.

Stanturf, J. A., Palik, B. J., & Dumroese, R. K. (2014). Contemporary forest restoration: A review emphasizing function. *Forest Ecology and Management, 331*, 292-323. doi:10.1016/j.foreco.2014.07.029

Strøm, K. (2000). Delegation and accountability in parliamentary democracies. *European journal of political research, 37*(3), 261-290.

Suhardiman, D., Giordano, M., & Molle, F. (2015). Between interests and worldviews: the narrow path of the Mekong River Commission. *Environment and Planning C: Government and Policy, 33*(1), 199-217.

Sullivan, J. (1992). *Local government and community in Java: An urban case-study*: Oxford University Press Singapore.

Sun, L., Zhu, D., & Chan, E. H. (2016). Public participation impact on environment NIMBY conflict and environmental conflict management: Comparative analysis in Shanghai and Hong Kong. *Land Use Policy, 58*, 208-217.

Suryadi, F., Kurniawati, M., Razak, M., Marpaung, F., & Kurniawan, B. (2015). River Restoration in DKI Jakarta, Indonesia. A case study of Ciliwung river. *E-proceedings 36th IAHR World Congr.(ed. IAHR)*, 1-6.

Tan, K. W., & Mokhtar, M. (2009). An appropriate institutional framework towards integrated water resources management in Pahang River basin, Malaysia. *European Journal of Scientific Research, 27*(4), 536-547.

Taylor, J. G. (2003). *Indonesia: peoples and histories*: Yale University Press.

Teague, P. (2007). Developing the social economy in Ireland? *International Journal of Urban and Regional Research, 31*(1), 91-108.

Teeuwen, B. (2011). Modernization of Indonesian Water Legislation. *Water Governance, 3*, 33-39.

Constitution of the Lao People's Democratic Respublic, (1991).

Thompson, S. C. G., & Barton, M. A. (1994). Ecocentric and anthropocentric attitudes toward the environment. *Journal of Environmental Psychology, 14*(2), 149-157.

Thone, F. (1935). Nature ramblings: we fight for grass. *The Science News-Letter, 27*(717), 14-14.

Trigger, B. G. (1998). *Sociocultural evolution: Calculation and contingency*: Wiley-Blackwell.

Uphoff, N., & Wijayaratna, C. M. (2000). Demonstrated benefits from social capital: the productivity of farmer organizations in Gal Oya, Sri Lanka. *World Development, 28*(11), 1875-1890.

Urbanice Malaysia. (2016). *Asian City - Regions: The New Urban Agenda*. Paper presented at the UN-Habitat III, Quito, Ecuador.

van de Kerkhof, M. (2006). Making a difference: On the constraints of consensus building and the relevance of deliberation in stakeholder dialogues. *Policy sciences, 39*(3), 279-299.

van Dijk, M. P. (2012). Introduction special issue: Shifts in Urban Water Governance paradigms. *International Journal of Water, 6*(3-4), 137-154.

Varis, O., Enckell, K., & Keskinen, M. (2014). Integrated water resources management: Horizontal and vertical explorations and the 'water in all policies' approach. *International Journal of Water Resources Development, 30*(3), 433-444.

Varis, O., Keskinen, M., & Kummu, M. (2008a). Mekong at the crossroads. *AMBIO: A Journal of the Human Environment, 37*(3), 146-149.

Verbiest, J. P. A. (2013). Regional cooperation and integration in the Mekong region. *Asian Economic Policy Review, 8*(1), 148-164.

Wackernagel, M., Kitzes, J., Moran, D., Goldfinger, S., & Thomas, M. (2006). The Ecological Footprint of cities and regions: comparing resource availability with resource demand. *Environment and Urbanization, 18*(1), 103-112. doi:10.1177/0956247806063978

Waibel, G., Ehlert, J., & Feuer, H. N. (2013). *Southeast Asia and the Civil Society Gaze: Scoping a Contested Concept in Cambodia and Vietnam* (Retrieved from https://books.google.com.my/books?id=BlIlAgAAQBAJ): Routledge.

Walk, H., Mohajeri, S., Wurbs, S., & Horlemann, L. (2012). Partizipation im „Integrierten Wasserressourcen-Management "(IWRM). Retrieved from https://www.inter3.de/fileadmin/user_upload/Downloads/Veroeffentlichungen/Endbericht_IWRM-Partizipation.pdf.

Warmink, J., Brugnach, M., Vinke-de Kruijf, J., Schielen, R., & Augustijn, D. (2017). Coping with Uncertainty in River Management: Challenges and Ways Forward. *Water Resources Management*, 1-14.

WB. (2008). *Jakarta Urgent Flood Mitigation Project/ Jakarta Emergency Dredging Initiative Project*. Retrieved from http://documents.worldbank.org/curated/en/911741468040156450/Indonesia-Jakarta-Urgent-Flood-Mitigation-Project

Wells-Dang, A. (2014). The political influence of civil society in Vietnam. In J. London (Ed.), *Politics in Contemporary Vietnam* (pp. 162-183): Springer.

Welzel, C., & Inglehart, R. (2008). The role of ordinary people in democratization. *Journal of Democracy, 19*(1), 126-140.

Winarso, H. (2011). Urban dualism in the Jakarta metropolitan area *Megacities* (pp. 163-191): Springer.

Winnubst, M. (2011). Turbulent Waters. *Cross-Scale Conflict and Collaboration in River Lanscape Planning, Radboud Universiteit*.

Wolf, A. T. (2006). Transboundary water conflicts and cooperation. In D. S. Kenney (Ed.), *In search of sustainable water management: international lessons for the American West and beyond*: Edward Elgar Publishing.

Wright, J. S. (1982). Money and the Pollution of Politics: Is the First Amendment an Obstacle to Political Equality? *Columbia Law Review, 82*(4), 609-645.

Xu, F., Baoligao, B., Wang, X., & Yao, Q. (2016). Integrated River Restoration in a Mountainous City and Case Study. *12th International Conference on Hydroinformatics (HIC 2016) - Smart Water for the Future, 154*, 787-793. doi:10.1016/j.proeng.2016.07.407

Yakob, H., Yusof, F., & Hamdan, H. (2016). Constraints in Urban Housing Planning and Control: A stakeholders' perceptions. *Asian Journal of Behavioural Studies, 1*(3), 23-32.

Yang, W., Hyndman, D. W., Winkler, J. A., ViÒa, A., Deines, J. M., Lupi, F., . . . Liu, J. (2016). Urban water sustainability: framework and application. *Ecology and Society, 21*(4). doi:10.5751/ES-08685-210404

Zainal Abidin, N. (2017). *Designing sustainable city centre regeneration in Malaysia: the case of Kuala Lumpur.* University of Birmingham.

Zavattaro, S. M., & Sementelli, A. J. (2014). A critical examination of social media adoption in government: Introducing omnipresence. *Government Information Quarterly, 31*(2), 257-264.

Zuidema, C. (2016). *Decentralization in Environmental Governance: A post-contingency approach*: Routledge.