

## Conference Paper

# Toward optimal provision of regional public goods in Asia and the Pacific : conference highlights, 10-11 May 2018, Tokyo Japan

## Provided in Cooperation with:

Asian Development Bank (ADB), Manila

*Reference:* (2018). Toward optimal provision of regional public goods in Asia and the Pacific : conference highlights, 10-11 May 2018, Tokyo Japan. Mandaluyong City, Metro Manila, Philippines : Asian Development Bank.  
doi:10.22617/TCS189599-2.

This Version is available at:  
<http://hdl.handle.net/11159/2369>

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The image features a 3D illustration of puzzle pieces on a grey background with diagonal lines. One piece is blue and labeled 'REGIONAL PUBLIC GOODS'. Two white pieces are labeled 'NATIONAL PUBLIC GOODS' and 'GLOBAL PUBLIC GOODS'.

**NATIONAL PUBLIC  
GOODS**

**REGIONAL PUBLIC GOODS**

**GLOBAL PUBLIC  
GOODS**

# **TOWARD OPTIMAL PROVISION OF REGIONAL PUBLIC GOODS IN ASIA AND THE PACIFIC CONFERENCE HIGHLIGHTS**

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**OCTOBER 2018**



# TOWARD OPTIMAL PROVISION OF REGIONAL PUBLIC GOODS IN ASIA AND THE PACIFIC

CONFERENCE HIGHLIGHTS

10–11 May 2018 • Tokyo, Japan

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OCTOBER 2018





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ISBN 978-92-9261-356-3 (print), 978-92-9261-357-0 (electronic)  
Publication Stock No. TCS189599-2  
DOI: <http://dx.doi.org/10.22617/TCS189599-2>

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## Message from the Asian Development Bank



On behalf of the Asian Development Bank (ADB), I would like to convey my sincere appreciation to the participants and distinguished speakers who have taken part in this timely conference, *Toward Optimal Provision of Regional Public Goods in Asia and the Pacific*. I am delighted that the conference has been organized by ADB's Economic Research and Regional Cooperation Department with the Asian Development Bank Institute.

Asia's economic growth remains strong, poverty is declining, and the region's share in global gross domestic product has risen, making it a key engine of global growth. Yet, this significant development progress is occurring in a complex landscape of changes through which challenges persist. For example, rapid technological progress offers great opportunities, but also appears to pose unwanted issues in the region such as growing pressures from climate change and environmental degradation. Discontent with globalization is complicating trade relationships immensely and geopolitical tensions among major economies are moving center stage. And Asia's financial interconnectedness brings with it high risk of contagion and spillover across financial markets.

Provision of sufficient regional public goods can help Asia meet its increasingly complex development challenges. Most of all, regional public goods can help meet the Sustainable Development Goals. Efficient regional infrastructure and trade facilitation promote freer movement of people and goods by bringing down transportation and trade costs. Cross-border trading in energy improves access to sustainable energy. Regional financial agreements such as the Chiang Mai Initiative Multilateralization boost regional financial stability.

As such, Asia's policy makers are tasked with developing new ways to cooperate on regional policy to deal with complex and cross-border challenges, ones that can complement national and global public goods. As demand grows for regional public goods, their inadequate provision is a looming concern. Despite the benefits of regional public goods for sustainable and inclusive growth, studies are lacking on the needed conceptual frameworks, empirical approaches, and provision mechanisms. We are particularly interested in the role of multilateral regional banks in the provision of regional public goods in Asia and the Pacific.

I believe that this conference has indeed provided an avenue to advance these areas. Once again, I am grateful to all our speakers and presenters for their experiences and ideas shared during the conference.

A handwritten signature in black ink, appearing to read 'B. Susantono', with a horizontal line underneath.

**Bambang Susantono**

Vice-President for Knowledge Management and Sustainable Development  
Asian Development Bank

## Message from the Asian Development Bank Institute

**O**n behalf of the Asian Development Bank Institute, I would like to express my gratitude to all participants, speakers, and guests of this conference. It was a great pleasure to organize it together with the Asian Development Bank and assemble many eminent professionals from academia, government, and regional institutions to discuss the increasingly important topic of regional public goods.

The Asia and the Pacific region has benefited from rapid economic growth and significant poverty reduction. In the process, the region's economies have become more interdependent, not only from closer trade and investment linkages but from more open external policy regimes. This has created greater cross-border externalities such as vulnerability to volatile capital flows and financial shocks, regional infrastructure gaps, environmental challenges, natural disaster responses, and communicable diseases. These in turn have created the need for discussions, policies, and regional platforms to tackle the issues at the regional level.

Despite the inherent difficulty in taking collective action, regional public goods can stimulate economic development. Provision can enhance employment and private capital inflows that have potential for large spillover effects. Taxes from these spillover effects can be used to finance pension funds and insurance, especially for countries that are just starting regional public goods initiatives. Infrastructure investment, for instance, brings high returns from stimulating economic activity and raises revenue from property and income taxes that can be used to finance insurance funds. Regional public goods can also contribute to managing public “bads” such as regional waste management. With the help of technology, for example, waste management turns waste into energy to supply electricity and hot water for consumption.

It is our hope that the discussions from this conference will extend the theoretical and empirical literature on regional public goods and contribute to policy discussions about how to boost their provision to developing economies in Asia and the Pacific.

Once again, I would like to thank all the participants for their support and contributions.



A handwritten signature in black ink that reads "Naoyuki Yoshino". The signature is fluid and cursive, with the first name and last name clearly distinguishable.

**Naoyuki Yoshino**

Dean

Asian Development Bank Institute





Conference participants gathered together after the opening session.

# Opening Session



In his keynote presentation, Scott Barrett revisited the concepts of regional public goods (RPGs) and game theories of public goods provision and reviewed cases of RPGs in Asia, highlighting the importance of understanding their properties and characteristics. He emphasized the need to improve coordination among regional partners to promote the most efficient provision of RPGs instead of relying on voluntary, uncoordinated national efforts.

It is important to understand how public goods fit the broader context of a variety of goods, noted Mr. Barrett. Private and public goods can be coupled as extremes depending on the two major characteristics of public goods: their “non-rivalry” and “non-excludability”.<sup>1</sup> Many policy analyses are based on private goods, which have opposite qualities to public goods. Meanwhile, other goods (club and common goods) have a mix of the two properties. For club goods, a group of people provide a good and access is exclusive to members. Normally, club goods do not have rivalry, but in the case of road-building, congestion can create it among members of the club. The usual example of a common good is roads connecting countries for use by all. However, when access is free, they can be subject to the tragedy of the commons, where individual users act according to their own self-interest. In that case, congestion charges or tolls may be introduced.

Classifications of public and private goods can be modified by government policy. One example is a published book. The book, in itself, is a private good. The words, as they are arranged in that particular book, are private only because governments have established copyright. As such, governments have made something that otherwise would be a public good (the arrangement of words) into something private. Jurisdiction is also an important topic. Public goods are available at different levels—local, national, regional (where spatial aspects are important), international (affecting many countries, not necessarily in the same region), and global (where all nations are affected). Mr. Barrett gave examples of RPGs:

Function	Regional Public Goods
Peace and security	Preventing state failure, peacekeeping and conflict prevention, non-proliferation.
Health	Surveillance of infectious diseases, when coupled with reporting; outbreak response; disease elimination/eradication.
Regional commons	Air and marine pollution control, river basin and marine fisheries management.
Knowledge	Research and development, leading to new knowledge; funding of “big science.”
Finance and trade	Trade agreements promote dispute settlement and may promote peace indirectly.
Other	Technical standards, tsunami warnings.

## WELCOME REMARKS

### **Naoyuki Yoshino**

Dean, Asian Development Bank Institute (ADBI)

## OPENING REMARKS

### **Bambang Susantono**

Vice-President for Knowledge Management and Sustainable Development, Asian Development Bank (ADB)

## KEYNOTE PRESENTATION

### **Scott Barrett**

Columbia University

*Independent actions from each nation with different interests may not generate the adequate supply of regional public goods.*

<sup>1</sup> Non-rivalry of (pure) public goods means that consumption by one party does not diminish the consumption opportunities of others. Non-excludability implies that once provided, their benefits can be consumed by both payers and nonpayers.



Citing experiments of a simple public goods game, Mr. Barrett pointed out that most countries continue to want control over which public goods they provide, but they and the region would be better off collectively if countries were to cede this and work toward a fully cooperative and coordinated regional outcome. He indicated that this is the ideal and it is what ADB should be aiming for. However, the big challenge comes in achieving the ideal. Indeed, game theory shows that, in a similar setting with multiple rounds, in succeeding rounds, less people decide to hand in their “red cards”<sup>2</sup> (that represent a nation’s voluntary provision of public goods) until ultimately no one does so. This type of pattern has been seen in the broad literature of what is called the linear public goods game.



Columbia University's Scott Barrett gave a keynote presentation at the conference.

A nation state plays a key role in the provision of RPGs because it can provide what individuals cannot when they interact voluntarily. For example, the government can offer different ways of enforcing public goods, such as national laws, regulations, and executive orders. Although it is easy to take the view that international public goods are difficult to supply because of sovereignty, the opposite is true. Lack of sovereign control in the provision of RPGs has produced some of the biggest problems. In addition, institutions are a key factor in the success of regional public goods provision and can play a bigger role than geography.

Regional public goods are supplied in different ways: through states acting unilaterally, through self-enforcing international institutions (such as customary international law and international agreements), or through multilateral organizations (usually to facilitate provision). Being free to choose whether to join international agreements is one way that countries exercise their sovereignty.

He also noted that coordination can be quite easy, illustrating his point through a bargaining game where the rules and outcome are clear.<sup>3</sup> It is an amazing thing, he said, that when people know the rules of the game, most can agree on the best strategy to win without needing to communicate. The main point of the experiment is that it may not be hard for countries to negotiate and it is astonishing how many countries can agree. The United Nations is one example, with its 193 countries as member states.

Mr. Barrett also provided case studies of the benefits of cooperation and coordination in RPGs.

- *Tsunami in Sri Lanka.* If an early warning system had been in place at the national level when the 2004 tsunami hit Sri Lanka, the number of fatalities may have been reduced. Detection is a regional public good, but only if the information is shared. How can the integrated tsunami warning system be supplied at the regional level? These can be supplied unilaterally, that is, each country would have their own warning system, but this would be costly. To top it off, when countries cooperate, more information is available and duplication of effort may be avoided.

<sup>2</sup> In the game, everyone gets two playing cards (each card is either black or red) and must hand one back. You get \$5 dollars if you keep your red card plus \$1 for every red card handed in.

<sup>3</sup> You and another player can share \$100 if you can agree how to divide it without communicating. On a slip of paper, write down the amount you claim for yourself; the other player does the same. If the amounts you both claim add up to no more than \$100, you will each get the amount you claimed. If the amounts you both claim add up to more than \$100, you will both get nothing.

- *Malaria eradication.* The elimination of malaria is also a good example.<sup>4</sup> The Greater Mekong Subregion (GMS) is of interest in this topic, since many cases of resistance to the main anti-malaria drug started there. Malaria is not as big a problem in the GMS as it is in Africa (342 deaths from malaria were recorded in the region in 2013, as opposed to hundreds of thousands in Africa). As such, when the resistant strain moved to Africa, this posed a big challenge. The World Health Organization has endorsed an elimination effort, believing it will remove a risk to sub-Saharan Africa. However, elimination will require intensifying the use of interventions, making the emergence of resistance more likely.
- *Cooperative management of the Mekong River Basin.* Authorities have tried to manage the Mekong River Basin cohesively, as one of the most important river basins in the world. However, the countries of the basin have different interests and settings, and there is no agreement on preexisting rights on property allocation.<sup>5</sup> Moreover, collective management of the river basin is difficult because the People's Republic of China and Myanmar, both upstream countries, are not members of the Mekong River Commission. The region would gain more by acting as a group and sharing the benefits of collective management.

Concluding his remarks, Mr. Barrett emphasized that development depends utterly on the provision of national public goods (specifically basic ones such as contract enforcement, rule of law, and peace and security). A state's ability to provide these national public goods depends on its ability to exercise domestic sovereignty. Without basic public goods, it will be difficult for a country to develop.

Conversely, the provision of regional, international, and global public goods can give a tremendous boost to the national development. However, the tendency is to neglect such opportunities. Cooperative international arrangements must be self-enforcing. This is very different from the public goods a nation supplies for domestic use.

In addition, not all transnational public goods are alike. Some are more difficult for the international system to supply than others. Mr. Barrett observed that countries tend to be better at coordination than voluntary cooperation. It is therefore good to look at a public goods problem or scenario from the perspectives of coordination and voluntary cooperation.

During the Q&A, Mr. Barrett, questioned about research quantifying the optimal benefits of collective management, replied that quantifying the benefits is indeed a crucial step. If parties do not know what their collective interests are, and they do not see what they stand to gain through negotiation and cooperation, then they are never going to do it. It is very important that benefits are demonstrated. This is a role that ADB can fill.

On how to use the insights gained from game theory or illustrations with policy makers, Mr. Barrett said the significant point is that if one wants to understand something like climate change negotiations or a regional fisheries agreement, one only gets a single observation, and it is very hard to infer information from that alone. It is important to use the tools available, however limited, to try to get more information, whether through theory, experiments, or other methods. At the same time, it is not possible for any of the methods to replicate what countries

*Regional public goods are supplied in different ways: through states acting unilaterally... or through multilateral organizations (usually to facilitate provision).*

<sup>4</sup> Elimination means zero cases of malaria in some clearly defined area over a period of time.

<sup>5</sup> The main questions are as follows. Do the upstream states have a right to act as they please? Are the downstream states entitled to protection?

do. Another method is to approach negotiators and find out what happened in reaching an agreement. Game theory experiments have also been performed repeatedly on negotiators, and it is good to note that they respond pretty much in the same ways as everyone else.

On the enforcement of an international agreement and on tit-for-tat as a tool to carry out such arrangements, Mr. Barrett replied that one area where tit-for-tat can work is a bilateral international trade agreement. If country A violates the agreement, it is possible for country B to retaliate. However, if they are in a multilateral system, a violation by country A can affect all other parties. This is where coordination comes in. It gives a signal that if other countries are doing something or contributing, it is in a country's interest to do the same.

On relaying information about international agreements to a country's citizens, Mr. Barrett noted that a theory in political science called a "two-level game", from Robert Putnam, might apply. One level would be the international negotiations and, the other, domestic negotiations. An international agreement is binding only if a country's parliament ratifies it. One way of getting around this is what happened in Paris in 2015. Countries were asked to submit a list of what they were willing to do nationally, knowing that this was voluntary and not going to be enforced. The result would be much like people declaring what they would have done anyway. Reaching an international agreement and, at the same time, getting the support of citizens nationally is something that needs to be addressed.



# SESSION 1:

## Issues and Challenges in the Provision of Regional Public Goods (Policy Panel 1)



MODERATOR  
**Naoyuki Yoshino**  
Dean, ADBI

POLICY PANEL 1:  
**Junkyu Lee**  
Principal Economist, ADB

**John Weiss**  
University of Bradford

**Peter Warr**  
Australian National University

**Tam Robert Nguyen**  
Global Head of External Affairs and  
Sustainability, Bechtel Corporation

**Yasuo Takamura\***  
Director, Regional Financial  
Cooperation Division, International  
Bureau, Ministry of Finance, Japan

**Alfredo Perdiguero**  
Director, ADB

\* As of this publication, Mr. Takamura is now  
Director General, Budget, Personnel and  
Management Systems Department, ADB.

**P**olicy Panel 1 focused on the challenges many actors face in providing RPGs. Participants from academia, government, international organizations, and the private sector discussed the definition and concept of RPGs, valuation of their regional benefits, issues, theory, and practice in the provision of RPGs.

Mr. Lee noted that RPG provision is less studied than national and global public goods. However, as development challenges in Asia and the Pacific become more complex and interconnected, collective action is required, and, in some cases, regional public goods can be more effective than global or national ones. RPGs can also substitute for or complement global and national public goods in achieving goals such as the Sustainable Development Goals. It would be good to look at how RPGs can be connected to regional economic development and important to think about whether RPGs are implemented effectively.

He highlighted what factors make RPGs more challenging to provide than global or national public goods. One of the main factors is that it can be difficult to identify the beneficiaries of RPGs, reducing the incentive to provide them. Particular challenges exist for developing countries, such as the absence of coordinating roles, and in some instances countries in a region are more prone to rivalry than cooperation. Various definitions and ambiguity in the scope of benefits were pointed out as additional issues that need to be resolved when providing RPGs.

Mr. Weiss shared five lessons learned from RPG project experiences. Successful RPG provision requires (i) strong country commitment to cooperation, (ii) accurate assessment of costs and benefits to participating countries, (iii) clear division of responsibility between national and regional institutions, (iv) accountable governance arrangements, and (v) planning for future sustainability.

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*With fewer nations  
involved, regional  
arrangements can  
reduce uncertainty  
and take advantage  
of spatial and cultural  
proximity in effectively  
supplying regional  
public goods.*

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ADB's Junkyu Lee participated in the panel discussion during session 1 of the conference.

*Common knowledge or good practice in regional financial markets can also be considered regional public goods.*



ADB's Yasuo Takamura, formerly of Japan's Ministry of Finance, participated in the panel discussion during session 1 of the conference.

Common concerns in RPG programs and projects include difficulty in creating a regional body to oversee effective implementation. Multilateral development bank staffing may be insufficient and the incentives to address regional cooperation activity inadequate. Establishing an appropriate financial framework is also a challenge and brings up issues such as what proportion of funds should come from a special resource envelope and what from national allocations. Likewise, difficulties such as accurately assessing the costs and benefits for participating countries are an issue. Economic analyses by multilateral development banks, as part of due diligence, can establish whether incentives are adequate for participating countries, by presenting appropriate cost-sharing and financing arrangements.

Mr. Warr shifted the discussion to the theoretical background of under-provision of public goods and the optimal level of provision. Optimal provision theoretically can be attained when external agents such as international or regional organizations intervene to increase provision where some suppliers of RPGs have been crowded-out by an exogenous increase in supply. Then, individual countries will reoptimize their behavior by choosing to decrease their supply of RPGs. This may lead again to suboptimal provision in the region since the presence of an external agent does not necessarily decrease free-riding, where costs are not distributed evenly. To overcome this dilemma, instead of a quantity-based solution, a price-based option can be considered, such as subsidizing RPG provision to individual countries so that the marginal cost becomes equal to the marginal benefit in such a way as it is consistent with the attainment of optimal regional supply.

Mr. Nguyen noted that key considerations in providing infrastructure projects from a business perspective include the need for national development efforts to improve and create not only enabling conditions, but balanced conditions that optimize regional infrastructure projects. Association of Southeast Asian Nations (ASEAN) countries differ in their progress on the domestic reforms needed for quality of institutions, policies, and infrastructure services that enable smooth cross-border flows and that thereby improve investment attractiveness. Infrastructure progress needs to take place nationally before it is scaled up regionally. The choice of infrastructure investment or prioritization is based on sociopolitical factors as well as economic assessment. From a business standpoint, positive and negative sentiment toward a particular public good may affect operations and business. Negative sentiment can pose a reputational risk and will ultimately hamper performance.

Meanwhile, Mr. Takamura shared progress in ASEAN+3 regional financial cooperation, which started almost 20 years ago in response to the Asian financial crisis. At that time, the International Monetary Fund (IMF) was offering a public good to help stabilize the crisis and prevent contagion. But, on recognizing the consequences of IMF intervention, the region realized that it needed to implement a self-help mechanism. In that sense, the IMF can be considered a global public good, while the Chiang Mai Initiative Multilateralization created through ASEAN+3 cooperation can be considered an RPG. Capturing synergies between the Chiang Mai Initiative (as an RPG) and IMF (as a global public good) requires that they work toward better coordination.

Common knowledge or good practice in regional financial markets can also be considered RPGs. "Good Practices in Developing Bond Market" is a good example, as is the knowledge and experiences shared through the ASEAN+3 Bond Market Forum, an open platform for public and private entities to promote information sharing and standardization of procedures and market practices in the region.



Mr. Perdiguero shared the organization's experiences and challenges in providing RPGs in the region. One of the main challenges is that regional institutions are not strong facilitators of the provision process. Another is that regulations are not harmonized across countries; unified regulations are necessary to promote RPG provision. Regional financial mechanisms are also lacking, as are viable regional projects, which remain a challenge to find, prepare, and implement.

A good starting point would be examining existing regional institutions to find opportunities. Several regional institutions do operate in the region, but are not coordinating effectively according to an ADB study about a decade ago. In some cases, the efficiency of institutions posed a problem, and even well-established regional institutions such as the ASEAN Secretariat still experience challenges. Regional agreements and regulations are also important. The Greater Mekong Subregion Cross-Border Transport Facilitation Agreement and the GMS Power Transmission Standards are good examples. It is important to map out the costs and benefits of a regional project, as the balance between these greatly influences a country's willingness to participate or contribute. Developing joint financial cooperation, whether among countries or development banks, is also crucial in sharing costs and risks associated with a regional project.

In the discussion that followed, panelists were asked about how benefits, including externalities, are defined and measured. They agreed that despite its importance, it is a challenging task to properly define and measure the benefits of RPGs. Calculating the benefits may very much depend on the sector. Defining the scope of an RPG and measuring its benefits is a key issue. Literature on this topic is broad, but in practice, different methods such as partial equilibrium and computable general equilibrium analysis can be used.

On the question of potential overlapping roles in RPG provision between an RPG and global public good provider (e.g., the Chiang Mai Initiative Multilateralization and the IMF), it was noted on the panel that the relationship should take a balanced approach that allows the provider to act independently while coordinating with the global public good provider.

A comment from the audience turned to the role of the market or private sector. This pointed out several instances where public goods are provided by the private sector. As such, the role of the private sector in mobilizing private funding should be considered and defined, not least because the region is facing huge infrastructure needs that the public sector alone cannot finance.



The panelists answered questions from the floor during the session 1 policy panel discussion.

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*Collaboration and coordination among regional and subregional institutions can help boost regional public good provision further by complementing each other's different institutional roles and scopes of regional public good provision.*

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# SESSION 2:

## Concept, Theory, and Framework of Regional Public Goods

### MODERATOR

**Alfredo Perdiguero**  
Director, ADB

PAPER 1: Protecting and Providing  
Regional Public Goods in Asia and  
the Pacific

Presenters

**Ursula Stiegler** and **Madita Weise**  
Deutsche Gesellschaft für  
Internationale Zusammenarbeit  
(GIZ)

### DISCUSSANT

**Se-il Mun**  
Kyoto University

PAPER 2: Joint Infrastructure  
Projects by Multiple Governments

**Se-il Mun**  
Kyoto University

### DISCUSSANT

**John Weiss**  
University of Bradford



**T**his session dealt with the concept of RPGs, focusing on provision in Asia and the Pacific, the role of the multilateral development banks, and on a theory on mechanism design for joint transport infrastructure provision by multiple governments.

The authors of the first paper, “Protecting and Providing Regional Public Goods in Asia and the Pacific,” noted transnational challenges, both globally and regionally, being tackled at different levels of agreement. Global agreements include the 2030 Agenda for Sustainable Development, with its 17 goals, the Paris Agreement on climate change, and the global compact on refugees and migration. Despite current levels of provision, the paper argued that more regional and global public goods, multilateral cooperation, and collective action are still needed.

Multilateral development banks play an important role, according to the literature on the institutional set-up for providing RPGs. And, in line with the subsidiarity principle, decisions and provision of public goods should be taken at the lowest possible level in the smallest appropriate jurisdiction. Accordingly, the World Bank should address global public goods and the regional development banks should handle RPGs.

Also notable, final public goods—a stable climate, free movement of people, peace, and financial stability—are outcomes rather than goods in the narrower sense, whereas intermediate public goods are steps that contribute to a final public good, such as international regimes, shared policy frameworks, and institutions. Furthermore, the “publicness” of public goods is not limited to non-excludability and non-rivalry of *consumption* but extends to non-excludability and non-rivalry of *provision*.



ADB's Alfredo Perdiguero moderated session 2 discussion at the conference.



RPGs are essential to attaining the 2030 Agenda for Sustainable Development. Analyzing the link established between the agenda and RPGs, the authors found that even though RPGs and global public goods are not explicitly mentioned in the 2030 Agenda, RPGs are an integral part of all 17 Sustainable Development Goals (SDGs). The opportunity for RPGs with multiple functions to bring many different benefits is relevant for multilateral development banks looking to optimize the provision of RPGs in achieving the SDGs. In addition, while most SDG targets require policy action for RPG provision (of the 169 targets, 101 that are RPG-relevant were identified), opportunities exist for market-based solutions.



Session 2 panelists listened to the presentation of the first paper.

Regional development banks and the World Bank are ideally situated to translate the RPG and SDG link because they have multiple roles and comparative advantages over other international, regional, and national actors that can contribute to optimizing RPG provision. These comparative advantages or roles include:

- *Financing*: the banks pool public money and leverage it in international financial markets. They also leverage money from private companies to support national development projects.
- *Knowledge provision*: different instruments of knowledge capacity development include research products and publications. An important part of this knowledge function is data collection and dissemination, which is the provision of data as a public good.
- *Convening (and acting as honest brokers)*: this role is meant to build consensus on priorities and incentivize country commitments, as well as to facilitate transborder agreements, which are important to strengthen cooperation for regional and global public goods.
- *Setting standards*: the banks develop shared standards for crucial global and RPG topics and issues. It is important to optimize provision, especially of RPGs, because shared standards are not in place across many fields.

The authors also proposed that multilateral development banks sequence, focus, and prioritize RPGs. Sequencing means working on several RPG projects at the same time at different speeds. A focus on RPG provision means using its functions as a useful guide for looking at the strategy of the institutions and where they have comparative advantage, such as building infrastructure or activities like developing standards, migration, and forced displacement. Prioritizing is then needed to develop the vision, identify gaps where more cooperation is needed, and foster partnerships (not just with financial institutions but with organizations with political mandates, such as ASEAN).

Finally, the authors recommended pooling resources among multilateral banks to share risk and create comfort space for innovative approaches to providing public goods. Comparative advantage is best realized when cooperation among

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*The opportunity for regional public goods with multiple functions to bring many different benefits is relevant for multilateral development banks looking to optimize the provision of regional public goods in achieving the Sustainable Development Goals.*

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Session 2 panelists discussed, among other things, the concept and framework of regional public goods.

multilateral banks is intensified and cooperation with political partners is strengthened.

The author of the second paper, “Joint Infrastructure Projects by Multiple Governments,” discussed pricing and investment of cross-border transport infrastructure in a system involving multiple regions or countries and highlighted the problems of decentralized decisions. It is common knowledge that voluntary provision of public goods tends to be under-provided. Many infrastructure projects collect user charges, unlike public goods. And in the case of cross-border transport infrastructure, each country decides on pricing and capacity for the infrastructure in its territory. Under these circumstances, the problem in

resource allocation arises typically due to double marginalization.<sup>6</sup>

Charging a fee at use is an alternative to incentivize voluntary provision. However, this approach comes with its own limitation in that optimality depends on the assumption of “constant returns to scale in congestion technology.” That is, the user cost remains unaffected when both the level of use and the capacity change in the same proportion. This assumption is reasonable in road traffic but not in many other cases. The non-rival case can be interpreted as increasing returns. Optimal pricing then leads to insufficient contributions, and while a joint project with break-even pricing is feasible, it produces suboptimal results.

To attain optimality in more general situations, the paper introduced the concept of shadow tolling, where the operator charges the per-usage fee of a facility to the government and not to users. For joint infrastructure projects, a shadow toll is charged to the government of the region where each user resides. The optimum is attained by reaching breakeven shadow tolling. The operator sets the shadow toll such that the sum of the user charge revenue and the shadow toll revenue is equal to the capacity cost. Each government chooses the amount of financial contribution that determines the capacity of the infrastructure to maximize regional welfare. Joint projects attain the optimum for general situations as long as congestion technology does not exhibit increasing returns to scale. As the degree of increasing returns expands, participation is less likely, while, in the case of increasing returns to scale, governments are likely to participate if regions are of similar size.

The paper concluded that the key to success is to set the breakeven condition accurately, which is crucial to inducing optimal decentralized decisions about contributions. Decentralized decisions are very useful, particularly for international infrastructure, where an upper level authority does not exist.

<sup>6</sup> The goal of optimal provision in Mun’s paper is to maximize social welfare, or the sum of users’ benefits from the regions plus the revenues from user charges minus the investment cost.

On the first paper about the role of multilateral banks in the provision of RPGs, Mr. Mun commented that the choice of instrument should depend on the type of RPGs being produced, and noted that it might be useful to discuss this in relation to the type of public good. He emphasized that it might be useful to think about problems multilateral development banks have faced in delivering programs. Another participant added that ADB is aiming for regional projects to comprise 30% of total projects, from 20%–30% now. A third pointed out that, in the whole 2030 Agenda, “public good” is mentioned only once, and only passively in reference to the need to raise public funds to pay for public goods.

Referring to the second paper on the joint infrastructure, Mr. Weiss asked if the operator of a joint infrastructure project can pursue a pricing role without knowing the capacity. Would this mean that it can only work with constant returns to scale, because that was the implication? The presenter answered that the usual setting in the Nash-type game is that the operator knows how much the other players are contributing, and that every player chooses strategy optimally in response to the choices of other players. This implies that the operator knows the amount of the contribution of the different governments/players (takes it as a given) and then optimally responds by setting the user charge.

In answer to a question about whether a shadow toll procedure is practical, Mr. Mun said a shadow toll requires sophisticated information—and shadow tolling is not always applicable, because it requires that the location of users is known.



Kyoto University's Se-il Mun presented on infrastructure projects by multiple governments.

# SESSION 3:

## Benefits of Regional Public Goods: Sectoral Approaches with Evidence and Implications—Infrastructure, Technology, and Health

### MODERATOR

**Yasuyuki Sawada**

Chief Economist and Director General, ADB

PAPER 3: Benefits and Spillover Effects of Infrastructure: A Spatial Econometric Approach

Presenters

**Junkyu Lee and Kijin Kim**

ADB

### DISCUSSANT

**Ursula Stiegler**

GIZ

PAPER 4: Measuring the Economic Impact of Cross-border Infrastructure and Technology: CGE Analysis

Presenter

**Chang-Soo Lee**

Kyung Hee University

### DISCUSSANT

**Peter Warr**

Australian National University

PAPER 5: Regional Health Security, One of the Key Regional Public Goods, through Regional Cooperation and Inter-sectoral Cooperation

Presenter

**Yukihiro Shiroishi**

Kyushu University

### DISCUSSANT

**Matthias Helble**

ADBI



This session highlighted the regional spillover benefits of infrastructure as a regional public good, and the need for regional cooperation in health systems to enhance regional health security. Policies highlight the role of multilateral development banks arising out of their comparative advantage in coordinating country initiatives and dealing with multi-sectoral concerns.

Three types of empirical methods are used to measure the benefits of RPGs: a partial equilibrium (econometric) model, a general equilibrium model, and case studies. Among them, the first presenter discussed the benefits of infrastructure using a spatial econometric approach. The paper considered infrastructure an RPG, and the benefits of increased connectivity were estimated. Infrastructure includes transport (road and rail), energy, and information and communication technology (ICT) (telephone, mobile, and fixed broadband). To separately estimate the direct, indirect, or cross-border benefits of infrastructure, a spatial econometric approach was employed that accounts for neighbor effects in the model.

The spillover effects of infrastructure include productivity benefits through agglomeration effects and scale economies. Transport infrastructure allows the impact of global value chains to more easily extend across multiple countries. ICT raises the quality and productivity of other inputs and facilitates knowledge dissemination from one country to another. The literature shows that infrastructure facilitates trade and reduces trade costs. However, most studies focus on the subnational level. Spillover impacts can also be negative, where one country's GDP is negatively correlated to another. This can be explained by a competing economic relationship between a given country and neighboring regions in obtaining the resources needed for production.



The first presentation highlighted the highly positive and significant impact of infrastructure on country income, particularly in transport and energy. The results also show positive externality effects of rail, broadband, and human capital, and these results are robust for broadband and human capital. A simulation shows that a 10% increase in broadband subscription in the People's Republic of China could lead to a 0.17% increase in the country's GDP, while its impact on neighbors' GDP is higher, at 0.24%. Human capital also has strong direct and indirect impacts. The impact of traditional infrastructure is the highest, followed by human capital and ICT. The results show, in terms of the cross-border spillovers, the RPG aspects of transport networks, access to internet, and education. The findings also support the rationale for multilateral development banks to encourage infrastructure investments in Asia.

The second presentation employed a computable general equilibrium (CGE) model to calculate the impact of infrastructure investments on GDP using a 2017 ADB study on infrastructure needs to shock the CGE model.<sup>7</sup> The findings and policy implications include the following:

- Cambodia, the Lao People's Democratic Republic, Myanmar, and Viet Nam; ASEAN4 (Indonesia, Malaysia, the Philippines, and Thailand); and other ADB developing member countries benefit most from infrastructure shocks.
- To increase potential RPG benefits, it is crucial to strengthen the forward linkages of infrastructure industries of a region to industries that use infrastructure inputs.
- To maximize potential benefits and minimize possible over-allocation of factors toward infrastructure industries, it is important to enhance a region's capacity to design policies to stimulate infrastructure-building consistent with the competitiveness of other domestic industries.

The third presenter discussed health security as an RPG. Asia and the Pacific is home to several rising threats to health security, such as emerging and re-emerging diseases, antimicrobial resistance, cross-border trade and migration, urbanization, and natural disasters. In the GMS, for instance, significant movement of animals, goods, and people across borders risks transmission of pathogens. About 75% of emerging infectious diseases among humans have their origins in animals, and antimicrobial resistance, caused by misuse of antibiotics in animals and humans, is also a significant threat.

To respond to such increasing health threats, cooperation in the region is required between human health agencies and others, such as for animal health and sanitary phytosanitary standards for animal-related trade. The cross-border nature of disease requires regional cooperation under the One Health Approach (a multisector approach including human health, animal health, and disaster management) and a strong role for multilateral development banks for their regional and multisectoral expertise. Likewise, subregional programs such as the South Asia Subregional Economic Cooperation, the Central Asia Regional Economic Cooperation, and the GMS can include health security among their strategies. And information systems in health need to be improved to collect adequate data on disease surveillance. Financing is needed for responses to disease as well as for preparedness. The private sector too, which is predominant in areas such as animal health and human health services in urban areas, has a role to play in regional health security.



ADB's Kijin Kim presented on the benefits of infrastructure using a spatial econometric approach.

*Addressing threats to regional health issues needs to first understand the multisectoral nature of the issue and requires integrated approaches and a common set of technical expertise and skills.*

<sup>7</sup> ADB. 2017. *Meeting Asia's Infrastructure Needs*. Manila: Asian Development Bank. <https://www.adb.org/sites/default/files/publication/227496/special-report-infrastructure.pdf>

*Control and elimination of communicable diseases require regional arrangements, and providing poor countries with financing and capacity building can facilitate the process.*

In the first presentation on spillovers from infrastructure projects, Ms. Stiegler commented that infrastructure benefits should be seen as contributing to sustainable development rather than just to GDP. Another participant suggested that, in addition to CGE, an econometric approach, and case studies, a cost-benefit analysis at the project level could provide a fourth method for estimating RPG benefits. Studies find that econometric methods tend to have higher positive benefits. A project approach would avoid problems of endogeneity, missing variables, and time lags. It was also suggested that human capital can be differentiated between secondary and university schooling to represent unskilled and skilled labor, as used in other studies to study their impacts on regional development.

Others asked about the use of time lags in infrastructure. Mr. Kim noted that the study used a static model where the variables were shown to be cointegrated. On the question of endogeneity of infrastructure, he noted that the literature shows infrastructure and output can run both ways, or in either direction. As a work in progress, the study used two-stage least squares to address this issue. Thus far, endogeneity does not affect the study findings. Aside from geographical distance, spatial interaction of fiscal policies can be considered.

On the second presentation about the CGE approach, on clarifying the counterfactual scenario, Mr. Lee noted that it is mainly the difference between the baseline simulation and policy simulation. The baseline impact refers to projection of data from 2014–35 as an external shock for skilled and unskilled labor, population, GDP; the policy shock refers to these plus the infrastructure shock. On the negative impacts of infrastructure, he noted that infrastructure investment raises the output in the infrastructure industries, but this in turn could have negative impact on noninfrastructure industries through the reallocation of labor, capital, and land to infrastructure industries. A suggestion was made by other participants that the study should be clear on how infrastructure spending affects shocks in the model, such as input-output and productivity coefficients.

In the third presentation on regional health projects, most comments reinforced the presentation findings. Mr. Helble pointed out that urbanization and climate change will be the key factors responsible for emerging diseases. Aging in the region will also be a factor, along with a rise of noncommunicable diseases such as diabetes. ICT can help develop regional health systems, and capital markets can raise funds.

Mr. Helble noted that at ADB, efforts in the health sector include strengthening health systems, as well as on HIV and communicable diseases. The organization's Strategy 2030 calls for more regional cooperation in health systems. A project run until 2020 aims to advance regional health security among Cambodia, the Lao People's Democratic Republic, Myanmar, and Viet Nam, with a total loan-grant package of \$125 million.<sup>8</sup> Some components include disease surveillance and outbreak response.

The GMS is also working on a regional health security strategy, to be completed by the end of 2018. The speaker noted that the GMS case, already on its third phase, as a flagship project, can provide lessons to regional programs such as in Central Asia and South Asia.

<sup>8</sup> ADB. 2016. *Greater Mekong Subregion Health Security Project*. Manila: Asian Development Bank. <https://www.adb.org/sites/default/files/project-document/212751/48118-002-rrp.pdf>





One commenter noted that disease surveillance findings suggest that minimum standards should apply globally (e.g., for detection or information systems for surveillance). But poor countries would have difficulty financing and achieving the capacity to fulfill these standards. On preparedness, for example, there is a mismatch of stockpiles of retroviral drugs, where supplies are widely available in countries that do not need them but are lacking in countries with high potential for disease outbreaks. Countries therefore tend to focus on national rather than regional concerns.

However, individual country systems for prevention are more prevalent than a global standard, including against drug resistance. It was noted that mechanisms are needed to tackle the conflict between national and regional interests.

## Day 2:

# KEYNOTE PRESENTATION: Regional Public Goods and Their Technologies of Aggregation



**Todd Sandler**  
University of Texas, Dallas

*Understanding how individual nation's contribution adds to the overall provision of regional public goods can help regional public good suppliers take the most appropriate modes of provision to avoid collective action problem.*

The keynote presentation was on aggregation technologies and how they affect the prognosis for efficiency in providing RPGs.

Mr. Sandler noted that public goods have four defining properties. One is non-excludability of benefits, where, once provided, payers and nonpayers get the benefits of these public goods. Two is non-rivalry of benefits that goods' benefits, when consumed by one agent (or a country), do not detract from the consumption benefit available to others from that same unit of provision. The third property is the aggregation technology that refers to the distribution of contributions for adequate provision. The fourth relates to the range of public good spillovers, which influences how a region is defined.

Seven types of aggregator technologies were examined: summation, weighted sum, weakest link, weaker link, threshold, best shot, and better shot. Under summation, each country's provision of the public good is simply summed, and this serves as the overall level that everyone in the spillover range would get. In the weakest link, the smallest contribution determines the overall level. The weaker link is a somewhat softer version, where the smallest has the greatest marginal effect, the next smallest has the second-greatest marginal effect, and so on. For the threshold, the goods level must surpass some threshold before any benefits are received. For the best shot, the largest contribution determines the overall level. And for the better shot, the largest has the greatest marginal effect on the overall level, followed by the next larger, and so on.

The four properties of a public good do not necessarily determine efficiency, which is typically achieved when the sum of the marginal benefits—over all of the public goods recipients—is at least equal to the marginal cost of provision. A pure public good under the summation technology has the poorest prognosis for supply efficiency and is prone to free-riding problems, where contributions of each party are regarded as perfect substitutes. This becomes less true for weighted sum and some other aggregators. In the impure public good situation, generally there is some under-provision and overuse, in keeping with a lack of exclusion. Club goods have the best prognosis, where tolls can be used to internalize the crowding externality and then use toll proceeds to finance the public good over time. For instance, if loans are paid for the club good, then these could be paid back based on a congestion-internalizing toll, and countries reveal their preferences. The loans can be provided by subregional institutions, such as the Central Asia Regional Economic Cooperation, the GMS, and the South Asia Subregional Economic Cooperation.

With the weighted sum technology, there are much less free-riding tendencies from imperfect substitutability—it is important for the countries to know how they are affected differently by the public good, which requires collecting information. In the weakest link, it is efficient if countries are homogeneous, and may not be efficient if they are heterogeneous. This may mean countries have to have their

individual provisions shored up, because all fall if one country does not contribute enough. Threshold technology provides greater incentive to act and Asian institutions can reward countries that become actors. The best-shot technology is best done in cases where participating countries are very unequal—where some country is dominant—and can then privilege everybody.

In the weakest link technology, where poor countries need assistance, grants are more advisable over loans. This is in contrast to the best-shot technology, where countries are fairly well-to-do and loans are more advisable. Advanced economies will gain the most from providing these best-shot goods, and they are more motivated to take out loans. In the threshold technology, it is recommended to expand thresholds, since this pushes outcomes toward efficiency.

<b>Aggregation Technology</b>	<b>Pure Public Good</b>	<b>Impure Public Good</b>	<b>Club Good</b>
<i>Summation:</i> Overall level of public good equals the sum of countries' contributions.	Curbing an ecosystem's pollution level	Accommodating refugees from a conflict	Highway network
<i>Weighted sum:</i> Overall level of public good equals a weighted sum of countries' contributions.	Reducing the spread of an infectious disease	Reducing acid rain	Power network
<i>Weakest link:</i> Smallest contribution determines the good's aggregate level.	Maintaining the functionality of a network	Surveillance of regional financial crisis	Air-traffic control
<i>Weaker link:</i> Smallest contribution has the greatest influence on the good's aggregate level, followed by the second smallest contribution, and so on.	Inhibiting the spread of financial instability	Inhibiting regional pest diffusion	Railway system
<i>Threshold:</i> Benefits from the public good only arise once the cumulative quantity of the good surpasses a certain level.	Preparing for national disasters, including floods and earthquakes	Suppressing regional forest fires	Crisis-management teams
<i>Best shot:</i> Largest contribution determines the good's aggregate level.	Limiting regional conflict or ending such conflict	Developing financial best practices	Regional internet system
<i>Better shot:</i> Largest contribution has the greatest influence on the good's aggregate level, followed by the second largest contribution, and so on.	Discovering effective vaccines	Curbing the spread of regional terrorist campaigns	Biohazard facility

He also explained the concept of subsidiarity. This basically equates the benefit spillovers to the political jurisdiction. For instance, economies of scale favor larger jurisdictions than RPG's spillover range. Economies of scope favor two or more goods in the same jurisdiction, even though spillover ranges may not coincide. Learning economies favor larger, cumulative jurisdictions, and often, that expands the jurisdiction. Sometimes, the requisite jurisdiction is not available, which requires moving to the next larger or smaller one. Moreover, there would be too many jurisdictions if every public good provided were based on its range of spillovers.





Conference participants discussed University of Texas' Todd Sandler's keynote presentation on RPGs' technologies of aggregation.

*Multilateral institutions can primarily help in transregional public goods and global public goods, but they can also aid in regional public goods.*

On the role of institutions in providing various RPGs, ADB and ASEAN may support subregional RPGs, RPGs, and transregional public goods in the form of grants (to shore up the weakest- and weaker-link countries) and loans (to help with other aggregation technologies). Subregional cooperation institutions may provide similar support, but more locally. Free trade areas promote regional trade and can foster connectivity between regions, governments, and institutions. Multilateral institutions can primarily help in transregional public goods and global public goods, but they can also aid in RPGs. Partnerships, charitable foundations, and nongovernment organizations can come in to shore up the weakest links and promote threshold public goods, while dominant countries are very useful in best-shot public goods. Networks usually help promote transregional public goods.

Mr. Sandler concluded with the following policy implications:

- Avoid blind adherence to subsidiarity.
- Grants are preferable to shore up weakest link-countries.
- Loans are preferable for supporting best-shot, threshold, and better-shot RPGs.
- Monitoring and information-gathering are essential in providing weighted-sum RPGs.
- ADB and other regional institutions should coordinate efforts for threshold RPGs.
- For functional areas, policies must account for each area's predominant aggregator.
- Club arrangements are best for infrastructure and connectivity.
- Loans can be used to finance club RPGs and support poor members.

Many questions were asked during the open forum. On the question of short political cycles that determine decision-making, time frames are not really considered in discussions of public goods. At the same time discounting eventually plays a role in determining costs and benefits of public goods, where long time frames such as 20 and 30 years can be considered.

Clarifying the role of multilateral development banks, Mr. Sandler explained that these institutions should address all types of public goods, regardless of aggregation technology. However, they are best at global or trans-regional public goods or helping fund regional public goods. They may also create partnership arrangements among themselves. In addition, charitable organizations may play a role as financiers for shoring up weakest, weaker links, and threshold goods.

He agreed that in dealing with the complexity of RPG provision, it is difficult to model total reality and deal with all situations and all combinations of goods at the same time. One approach is to set out different public goods and different aggregators at the same time to gain an appreciation of needs. It is also important to think simply about one good at a time. In dealing with connectivity, for instance, it is good to realize that the principles involved in weakest-link goods are important. It is also important to get all stakeholders in the same direction, or nothing will be achieved. That is, it is important to understand the nature of the good being considered. This will help determine the approach best suited to it.

A question was raised about ADB's graduation policy of not granting loans to countries that have reached a threshold income level per capita. Such countries may be more cooperative in providing RPGs if they continued to receive loans, for instance. Mr. Sandler noted that if ADB wants to continue providing RPGs, then it must also be guided by allocative efficiency, even if it means modifying its graduation rule. Best-shot and better-shot RPGs are generally provided by rich countries for the gain of all benefit-recipient countries. Such rich countries not only have the technical and financial wherewithal to provide such goods, but they also have the motivation, given their regional dominance. In addition, loans should be given to rich countries that can do the most for the provision of better-shot and threshold RPGs. Connectivity RPGs, such as major road projects linking the region, are threshold public goods. Similarly, the issuing of loans should not be based on a graduation policy. If rich countries are not given loans for best-shot, better-shot, and some threshold RPGs, then a far more difficult coordination problem ensues, where ADB must pool efforts through loans and grants among less well-endowed countries that may also have less expertise and motivation.

On the question of the best instrument (whether loans or grants) to use for every aggregation technology, Mr. Sandler noted that it would depend on the good being considered. For example, one possible instrument for certain weakest-link scenarios would be technological expertise. The weakest link may not only be due to income or endowment. It could be due to knowledge as well, in which case, the instrument should be technological assistance.



ADB's Yasuyuki Sawada remarked on day 2's keynote presentation.

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*...multilateral  
development banks  
should address  
all types of public  
goods, regardless  
of aggregation  
technology.*

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# SESSION 4:

## Developing Countries' Perspectives on Regional Public Good Provision: Sectors and Mechanisms (Policy Panel 2)

MODERATOR  
**Cyn-Young Park**  
Director, ADB

POLICY PANEL 2:  
**Phan Ngoc Mai Phuong**  
Vice President, Viet Nam Institute  
for Development Strategies, Ministry  
of Planning and Investment,  
Viet Nam

**Kyi Kyi Win**  
Director, Financial Regulatory  
Department, Ministry of Planning  
and Finance, Myanmar

**Jigme Namgyel**  
Director, Directorate of Services,  
Ministry of Finance, Bhutan

**Gulnur Smagul**  
Deputy Director, Department  
of Foreign Trade Development,  
Ministry of National Economy,  
Republic of Kazakhstan



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s. Park began by noting that the session aimed to get developing countries' perspectives on RPG provision, since they face the greater constraints. In this, developing countries may be the weakest links, given that they may require external support to match their priorities with regional ones. She presented the following questions to guide the panel:

- (i) What makes it difficult to provide RPGs adequately in developing countries?
- (ii) What do you think are the particular barriers to making collective action in RPG provision?
- (iii) Do you see that certain sectors or areas pose more challenges than others?
- (iv) Are there existing regional mechanisms in your region that can help mobilize RPGs?
- (v) What type of assistance do you want to ensure from donor countries and multilateral development banks such as the ADB in meeting the demand for RPGs?

Ms. Phan noted that regional environmental problems such as watershed management issues affect upstream and downstream countries. Viet Nam, as a downstream country, has suffered the ill effects of activities such as upstream hydropower plants. Environmental protection and regional shared infrastructure are among areas in which provision of efficient RPGs is easier thanks to their close links to national

public goods. The common view among individual economies is that they benefit a lot from regional infrastructure—such as the Trans-Asian Highway—with more tangible benefits than other RPGs. In this, assistance from donors and multilateral



ADB's Cyn-Young Park moderated session 4 discussion at the conference.



Session 4 panelists shared developing countries' perspectives on regional public good provision.

banks is necessary for developing economies given the shortage in such countries of financial resources and capacity to meet the huge demands of RPGs, said the panelist.

The Mekong River Commission could be improved to create more cooperation in achieving efficient and sustainable use of the river's resources and that a new mechanism could be established in the GMS to deal with this issue. Greater joint effort, she said, will help improve provision of RPGs in the GMS. The Asia-Pacific Economic Cooperation has also been very important in deepening cooperation.

Rapid economic growth and regional integration, meanwhile, has created cross-border challenges for developing countries, according to the panelist from Myanmar, such as facilitating transborder infrastructure, mitigating financial contagion, and tackling environmental concerns. She recommended that regional development banks scale up assistance and partnerships with developing member countries to promote regional cooperation and integration, and pay attention to RPGs in new country programs.

Mr. Namgyel noted that given the resource constraints developing countries face, if RPGs' benefits fall short of expectations, they can be viewed as luxury rather than necessity, making it difficult for those countries to attend to regional interests, and instead focus on national interests. The perception in individual countries that RPG benefits are unequally distributed is also challenging politically and for bilateral relations. He added that RPGs can help benefit Bhutan through transport connectivity, investment in clean energy, and knowledge transfers. Other areas for regional cooperation are reforestation, pollution control, clean energy, communicable diseases, food security, and good governance.

Ms. Smagul noted the benefits of cross-border transport infrastructure between Kazakhstan and other countries. Examples include the construction of a railroad from Alashankou through Kazakhstan to Europe, the Khorgos land port that also connects Kazakhstan with Europe, and construction of a road in western

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*It is recommended that regional development banks scale up assistance and partnerships, and support regional public goods in new country programs.*

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*Collective action  
can be promoted if  
national development  
priorities align with  
the need for regional  
public goods.*

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Kazakhstan connecting the country with the People's Republic of China. This infrastructure has improved transit through Kazakhstan and increased trade. She urged ADB to continue arranging open cooperation platforms with the private sector, civil society, development partners, and other stakeholders. ADB was also encouraged to strengthen links and cooperation platforms with other regional cooperation programs, including the Belt and Road Initiative of the People's Republic of China.

Panelists recounted their experiences in cooperating with ADB. The panelist from Viet Nam noted its long-standing cooperation with the organization as a founding member, and said the aim of this cooperation is to restore physical infrastructure, institutions, and human resources. If national development priorities align with RPGs, each economy will be much more willing to contribute. Also, a mechanism is needed for sharing information on development priorities. The panelist from Bhutan noted the importance of capacity development—learning how to fish rather than being given a fish.

Ms. Kyi Kyi Win listed roads and communications, especially in border areas, as an RPG priority. Cross-border transport, especially in the GMS, needs more assistance to be completed. Institutional and structural changes, she said, are important for higher ranking officials cooperating with development partners.

More focus is also needed on clean energy investments, said the Bhutan panelist, since this will have a multiplying effect: it will capitalize on hydropower capacity and have a positive effect on the energy markets. The panelist from Myanmar said peace and stability are the country's first concerns. While the public preference is for the country to comply with rules and regulations, without peace and stability, inclusive and sustainable development cannot be attained. This is followed by improving productive investment and developing capacity among the younger generation and mid-level officials.

Ms. Phan noted that Viet Nam's relationship with ADB has evolved from loans or grants to other financial support and knowledge sharing. Regional infrastructure—roads in particular—are of great importance, and ADB has supported the development of the East–West Economic Corridor, providing more convenient links between Viet Nam and other countries and promoting trade, tourism, and movement of people. ADB can mobilize experts, said the panelist, and Viet Nam needs knowledge sharing.

Finally, the panelist from Bhutan acknowledged that cross-border infrastructure will always be a secondary priority in the national budget because of the country's fiscal deficit, and this is where regional cooperation and joint efforts are welcomed.

# SESSION 5:

## Case Studies and Lessons from International Experience in Regional Public Good Provision: Europe and Latin America



### MODERATOR

**John Weiss**  
Emeritus Professor,  
University of Bradford

### CASE STUDIES AND LESSONS FROM EUROPE

Presenter  
**Guntram Wolff**  
Bruegel (via a pre-recorded video)

### DISCUSSANTS

**Ursula Stiegler**  
GIZ

**Taufan Kurnianto**  
Ministry of Finance, Indonesia

### CASE STUDIES AND LESSONS FROM LATIN AMERICA

Presenter  
**Antoni Esteveadeordal**  
Manager, Inter-American  
Development Bank

### DISCUSSANTS

**Yukihiro Shiroishi**  
Kyushu University

**Taufan Kurnianto**  
Ministry of Finance, Indonesia

This session focused on case studies in RPG provision from Europe and Latin America, with speakers from the Brussels-based economic think tank, Bruegel, and the Inter-American Development Bank (IDB).

The presentation from Bruegel revolved around case studies found in three sectors: banking, energy, and ICT. The speaker from the IDB described lessons from Latin America, highlighting problems in RPG provision, RPG execution structure, and specific examples of RPGs in the region.

Mr. Wolff noted that Europe illustrates the value of regional integration and political cohesion for the provision of RPGs. In the European Union (EU), new policies made a big difference to the provision of RPGs in member countries. The pooling of decision-making power and setting common rules and standards has significantly helped provisioning of RPGs by private and public actors. He further illustrated using RPG cases in three sectors in Europe:

- **Banking:** The EU has pursued monetary integration to gain monetary stability. The eurozone crisis highlighted the need for closer financial integration (policy integration) to improve financial stability. At the time of the 2012 crisis, few mechanisms were in place to absorb regional shocks. It also became clear that a mechanism to absorb country-specific shocks was missing, and this has not been fully resolved. Moreover, the EU has not created sufficient financial institutions to safeguard financial stability. The momentous initiation in the summer 2012 of the banking union, a response to the eurozone crisis, created a strong regulatory and supervisory integration framework and resolution and deposit insurance systems.

Monetary union and elimination of exchange rates are RPGs, meanwhile, that have also had big consequences for financial integration, financial supervisory



*European experiences show the provision of regional public goods can be led and coordinated by regional institutions, including common legislations and regulations.*

- architecture, and resolution architecture. The creation of one of these public goods in isolation, without the others, said the speaker, would have produced an incomplete and dangerous set-up.
- *Energy:* Integration of the EU energy market is considered an RPG with benefits including security of supply, lower energy prices, and a stable electrical grid (especially the one powered by renewable energy). These attributes can be achieved through a common legislative framework (software) and cross-border infrastructure (hardware), the speaker noted. Significant software progress includes the adoption of legislative packages and more harmonized laws across member states so that energy-related matters are treated similarly across the EU. Less hardware progress, however, means that electricity markets and natural gas flows are still imperfect.
  - *Information and communication technology:* Two important RPGs in Europe's ICT sector are mobile roaming and cross-border e-commerce. Due to a big difference in wholesale prices and actual costs, the European Parliament lowered roaming prices through regulations on telecom providers. Domestic online purchases are growing but lag significantly, so measures were taken to bring down cross-border e-commerce costs. Without proper legislation, standards, and enforcement, it is difficult to sustain cheap mobile roaming and low cross-border e-commerce prices.

On the first presentation, Ms. Stiegler commented that final and intermediate public goods, as well as the different aggregation technologies in each sector, can be elaborated more clearly to better appreciate the steps that other regions could follow. The discussant also mentioned that the benefits of energy integration include not only security of supply and cost reductions, but also a contribution to climate change reduction and improvements to public health. The benefits to the ICT sector could be expounded to give a clearer picture about the regional effects, aside from regional cohesion and integration already mentioned. Clear recommendations were needed about the potential knowledge to be gained from EU experience, she said.

In the second presentation, Mr. Estevadeordal noted four major issues in RPG provision in Latin America. The first, on sequencing, focuses on what is the foundational RPG on which others can be built. In Latin America, there is a presumption that trade collaboration will lead to other types of cooperation. The second issue is building a new geography: generally regions providing public goods are linked under traditional geography (i.e., the Central American common market, the Caribbean common market, Mercosur, the Southern common market, the Andean community). The emergence of the Pacific Alliance<sup>9</sup> demonstrates that this is changing. The third issue is about institutional design. Latin America has followed some EU practice. However, the Pacific Alliance is a different model that shows that the region is going its own way. The fourth issue to be tackled is evaluation, which deals with how the different types of initiatives are assessed.

Mr. Estevadeordal reviewed IDB's RPG initiatives followed by the regional definition of the concept. He noted that the IDB started off with a small initiative of about \$100 million comprised of 10 to 12 projects a year. It has grown to more than 150 projects, of which more than half have been completed. This is coupled with more than 100 executing agencies in the region, and more than 700 entities from the nongovernment, private, and public sectors, which are experimenting with these concepts on small-scale RPGs. The rationale is to get to grips with the many development challenges that have to be tackled regionally.

<sup>9</sup> The Pacific Alliance is a Latin American trade bloc consisting of the following Latin American countries bordering the Pacific Ocean: Chile, Colombia, Mexico, and Peru.



The key features of IDB's RPG projects is that they are multisectoral and involve a competitive allocation of funds and annual invitations for project proposals in a bottom-up and demand-driven process that contrasts with the traditional regional technical cooperation usually attached to IDB lending operations. It is a full competition with very strict internal mechanisms and external advisors to select the best projects.

A brief outline of components of the IDB's RPG execution structure then followed. This comprises the *Steering Committee*, which makes a proposal to the bank with a minimum of three countries committing to the project). Then come the *Executing Agencies*, mostly national governments, and the *Project Coordinator*. IDB plays a key role in helping design, monitor, and evaluate projects. It is now looking for *Strategic Partners*, which could be donors or other parties interested in opening up RPG projects in their countries.

The most important feature is that RPGs cannot be structured independently of the other development instruments at IDB's disposal. In most cases, RPG projects are linked to national loans, capacity building, and network of policy dialogues, thus generally a complex set of instruments is involved in provision. In most cases, they play a strategic role.

Examples of RPG provision include (i) a pool of individual loans the bank uses to support single windows in the Latin American countries, (ii) efforts to pool different national capacities to create a larger RPG, and (iii) creating a system for public hospitals in Central America to buy pharmaceuticals at discount.

For a development bank to implement these projects, lots of technicalities, especially on how one goes from theory and conceptual framework to execution, need to be addressed. The projects have a minimum of 3 years of operation to achieve some sense of security when countries go through different cycles. Also vital are strong commitment requirements on the national ministries—such as on the type of resources, counterparts, and actors included in governance. This is very different from traditional technical cooperation, which does not usually require so much country commitment. Here, it secures a coordination mechanism that requires investment of a lot of national capital to produce the good in question.

*The experience of Latin America and the Caribbean illustrates the importance of sequencing and innovations for collective action to promote regional cooperation and facilitate regional public good provision.*

Mr. Estevadeordal concluded by mentioning the Regional Public Goods Cooperation Database project. This research project that takes a macro view has been completed with help from American University and can be accessed for free from the web once it is open to the public. As not all RPGs go through legal treaties and agreements, they collected 34 years of data from all treaties, agreements, and laws recorded across different data sets—mostly from 30,000 to 40,000 bilateral and plurilateral agreements. He said that while the database, which is organized by function and sector, is still under construction, it will be an interesting data set to learn from. Many agreements are actually done by hand, so they had to apply machine learning tools to extract information from the agreement and to identify the sector.

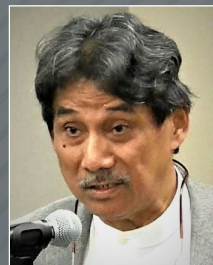
On why IDB defines RPGs as having participation of a minimum of three countries, the IDB speaker said the bank needs to create an incentive for a higher standard in which three countries are very committed to working together.

Mr. Kurnianto commented, meanwhile, that when donor assistance is decreasing and need for RPGs increasing, it is important to remind member countries of the benefits of such projects. The benefits may sometimes be forgotten when only national interests are considered, and this leads to a decrease in donor assistance.



# SESSION 6-1:

## Regional Mechanisms and the Role of Multilateral Development Banks in Provision of Regional Public Goods



### MODERATOR

**Matthias Helble**

Co-Chair, Research Department,  
ADBI

PAPER 6: Resilience of Trade  
Systems as a Regional Public Good  
Presenters

**Arun Jacob**

United Nations Economic and  
Social Commission for Asia and the  
Pacific

**Ali Kharrazi**

International Institute for Applied  
Systems Analysis

### DISCUSSANT

**Allya P. Koesoema**

Institut Teknologi Bandung,  
Indonesia

PAPER 7: Formation, Provision, and  
Sustainability of Regional Public  
Goods: The Role of Informal and  
Sub-national Actors and Structures  
Presenters

**Allya P Koesoema**

Institut Teknologi Bandung,  
Indonesia

**Irawan Koesoema**

PT BITA Enarcon Engineering

### DISCUSSANT

**Arun Jacob**

ESCAP

**T**his session provided insights into the role of policies to encourage resilience in agriculture supply chains, which are increasingly subject to shocks from climate change and rising pollution. The role of local communities in providing and sustaining public goods was also discussed.

The first presentation looked at the resilience of production and trade systems in food and agriculture as a regional public good. Agriculture systems in Asia and the Pacific are facing increasingly complex risks driven by climate change, degradation of soil quality, and decreasing agriculture yields due to worsening pollution. When these risks materialize as shocks or disruption of production centers of critical commodities, such as staple food crops or key agriculture products, the resilience of these trade systems is put to the test.

Resilience is defined as a critical system property of how a system responds to a shock or a crisis and redundancy in trade networks suggests greater resilience. The study explored trends in resilience of 74 major staple food and agriculture commodities produced in Asia and the Pacific since the 1990s. Initial findings indicate that 73% of these trade networks have seen a loss of redundancy and therefore have weakened their long-term resilience.

Mr. Jacob highlighted policies that strengthen resilience, which include developing the ability of production and trade networks to adapt, absorb, and transform in response to shocks, and to anticipate risk. In terms of policy, a regional mechanism is needed to monitor both risk and investments in redundancy, such as agricultural production facilities, to tackle concerns about climate change and natural hazards. In addition, countries can consider how to integrate strategic provisions within trade agreements, such as preferential trade agreements, to ensure trade networks gain resilience. Regional development banks such as ADB and regional



economic communities like ASEAN may consider how to incorporate resilience building when considering the structure of trade policies and regional integration efforts. For instance, resilience can be added in regional cooperation and integration strategies, including subregional programs. This may involve technical assistance to incorporate resilience capacities in trade policies to address supply disruptions. As an emerging area of study, more research on resilience properties of other critical commodities and the development of suitable indicators is needed to guide resilient sectoral and trade policies.

The second presentation highlighted the role of subnational and community actors in providing and sustaining critical public goods. Incentives may conflict between local and national governments and between community members, private and public sectors, and international actors. Local informal networks, such as border communities, may play a stronger role based on a minimal investment needed for impactful RPGs, modularity of investment, subnational imbalance or conflict between stakeholders, and the evolution of formal structures.

*The strengths of multilateral development banks build on effective coordination and their role as an honest broker with their accumulated social capital from member countries and local communities.*

Mr. and Ms. Koesoema presented three case studies to illustrate the findings. The first case required the rebuilding of 60 to 70 schools in Banda Aceh, Indonesia destroyed by the 2004 tsunami. Besides the communities affected, insurgents who would normally aim to destroy these schools were included in their planning and provision. This approach successfully delivered all the school structures.

The second case featured the installation of seismographs in about 70 locations in Indonesia through funding from the Japan International Cooperation Agency. Motivated by the tsunami, this would benefit other countries in the region. To promote sustainability, border communities in Malaysia and Papua New Guinea were included in a disaster risk reduction system. And the third case featured the GMS disease surveillance system, which was started with community involvement and has expanded into a formal regional system.

Border communities act as intermediaries through which the needs of multiple countries can be matched, linking provision and impact more closely. This way, cross-border commonalities can be fleshed out to improve information exchange and identify needs. These factors contribute to sustainability and the growth of these RPGs into more formal structures. Finally, multilateral development banks can help by providing the research and frameworks to facilitate growth and the involvement of nonstate and subnational actors in RPG formation. They can also help disseminate knowledge about successful models and how to customize these models between countries.

During the open forum, one comment on the first paper noted that besides single-product networks, related production networks may be relevant to the analysis, particularly those that are product substitutes or complements. Product substitutes imply that supply risks are mitigated, while complements suggest a

break in the supply chain. Another commenter noted that making the distinction between centralized and decentralized networks could be a better approach to tackling a tradeoff between efficiency (implying specialization and centralization) and redundancy of supply—i.e., efficient networks are less resilient. On the proper approach to promote trade resilience, Mr. Jacob noted that changing the trade structure and addressing risks to supply, such as by climate-proofing production facilities, are both relevant. The analysis could also be expanded to include industries such as manufacturing and services.



Session 6-1 panelists also discussed resilience in agricultural trade networks.

On the second presentation, it was suggested that the study could contribute to emerging literature on participatory approaches to public policy processes. In addition, efforts at including subnational actors in public goods provision are being applied in other initiatives, such as Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area. And cooperation between cities is being pursued in areas such as improving pollution abatement. In clarifying which parties are accountable for implementation of public goods provision within a community, Mr. and Ms. Koesoema noted that usually these are local government agencies. They also agreed that the study could be improved by including information on how the approach differs from usual government processes, how to harness local participation, and how to address both market and government failure. Finally, impact evaluations could benefit from information about the level of engagement by the community and the impact of projects.



# SESSION 6-2:

## Regional Mechanisms and the Role of Multilateral Development Banks in Provision of Regional Public Goods (Policy Panel 3)

### MODERATOR

**Yasuyuki Sawada**

Chief Economist and Director General, ADB

### LEAD PRESENTER

**Scott Barrett**

Columbia University, Presentation on a Regional Mechanism Design for Different Types of Public and Club Goods

### POLICY PANEL 3:

**Guntram Wolff**

Bruegel (online)

**Aladdin D. Rillo**

Deputy Secretary-General, ASEAN

**Adriyanto**

Director for Macroeconomic Policy, Fiscal Policy Agency, Ministry of Finance, Indonesia

**Cyn-Young Park**

Director, ADB

**Ursula Stiegler**

GIZ



In his presentation on a regional mechanism design for different types of public goods, Mr. Barrett started with two stories of the World Bank's RPG provisions. The first was in reducing the incidence of river blindness which the World Bank initiated in 1974. The program started off with 11 countries and was a success when extended to 30 in 1995. In 2014, the goal changed to elimination in 31 countries.

The second story had its origins in the 1980s and efforts of some people associated with the Food and Agriculture Organization of the United Nations to eradicate rinderpest, a cattle disease in Africa. They had approached the World Bank, which declined to get involved, saying that eradication was not feasible. The plan went ahead and in 2010 the disease was declared eradicated. Mr. Barrett noted how many other opportunities have been missed because people thought something could not happen. These two examples may be useful when ADB is wondering about what RPGs to cover.

Mr. Barrett pointed to different kinds of RPGs and said the idea that a single mechanism or institutional arrangement exists to coordinate them is a nonstarter. Each one is going to have its own special features and apparatus suited to a particular problem. He also highlighted that countries are not good at voluntary contributions and supplying of public goods, but they are very good at coordinating.

One of the greatest successes of international cooperation is the protection of the ozone layer. In a basic linear public goods game or (the "prisoner's dilemma" game), there is a tendency for countries to go in the direction where none is providing the public good. What the Montreal Protocol did was take the context of global trade in substances that depleted the ozone layer. The objective of the agreement was to reduce both the production and the consumption of these substances. Trade was



Session 6-2 panelists talked about regional mechanisms for regional public good provision.

the focus of the Montreal Protocol from the very beginning. An important element of the agreement was the ban on trade in the chlorofluorocarbons and products containing them. The design or mechanism of the agreement totally transformed the game by reducing the benefits from free-riding.

Strategic thinking is required in the design of institutions to overcome the incentives to free-ride. Moreover, it is important to be open to the idea of second best policies, where optimal conditions cannot be achieved. This is because of sovereignty, in other words, there is not a “world government” or “regional government” that can assume national powers to achieve optimal conditions.

Discussions followed on policy considerations, including regional mechanisms.

Mr. Wolff suggested that public goods should not be regarded only as provided by government or through governmental corporations, and then driven only by governments and intergovernmental institutions such as ADB, noted one panelist. Nonstate actors usually matter for public goods provision and this represents a fundamental shift over the last 30 years. Actors, even including multinational companies, are increasingly nonstate actors play important roles in the provision of public goods.

Mr. Rillo identified four important lessons in understanding how the provision of RPGs in ASEAN has been promoted over the years. First, the presence of the common purpose and long-term commitment to pursue development played an important role in the way ASEAN provided RPGs. Also, of note was the importance of inspired political leadership. Third, the uniqueness of ASEAN in making flexible arrangements must also be recognized. And finally, it is important to acknowledge the importance of private sector participation in effective RPG provision.

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*There is no one-size-fits-all mechanism for regional public good provision and case-specific circumstances and conditions should be considered.*

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*Multilateral development banks can help increase regional public good provision via reducing knowledge and financing gaps as well as playing the role of an honest broker to enhance mutual trust and facilitate regional cooperation for the provision of regional public goods.*

Mr. Adriyanto suggested that the foremost role of a multilateral development bank is as an evaluator and it should provide analytical advice on the provision of RPGs. The Organisation for Economic Co-operation and Development's Automatic Exchange of Information initiative was cited as a good example. Multilateral development banks can implement this type of initiative for RPGs. The banks can provide member countries with support when international policy coordination is needed among countries in a region, helping them establish what they should do and exploring what the banks can do. Second, multilateral development banks should serve as collaborators, coordinating not only for policies but also to ensure that RPGs are adequately funded. The third role is guardianship. As a guardian, a multilateral development bank can ensure that national policies are consistent with agreements and the role of a guardian could imply that the banks can store knowledge associated with the implementation of the RPG.

The stages or dynamics of public goods need to be visible. For instance, national defense is a nation public good, but it could become an RPG in coming years, as seen in Afghanistan where the scope of national defense is not confined to national agencies. Many national public goods can be RPGs, or even a global public good, and they require robust policies in which multilateral development banks play a role. The panelist also emphasized that policies should cater to a region's specific needs.

Meanwhile, the discussion of RPGs, and the role of multilateral development banks in their provision, is becoming more relevant, noted Ms. Park. This is because several transnational development challenges have emerged in the region—challenges beyond national borders that some cannot tackle due to resource constraints and coordination issues—and the banks mainly assist developing countries. ADB finances many areas of RPGs, especially because some are lacking in the weakest link countries. ADB can try to help build capacity through knowledge generation and sharing, which can help provide best-shot RPGs in some areas. ADB can also work as an honest broker or facilitator to bring some solutions to the table in cases where there is a coordination failure.

Ms. Park added that public agency may be the last resort but not necessarily always the interventionist, especially in areas where the market works. The responsibilities of providing development assistance, versus filling in gaps for RPGs, needs to be differentiated. As such, multilateral development banks need to be a bit more careful in their definitions about what public goods are and what exactly constitutes RPGs. Another point made by the panelist was that thought needs to be given to the most efficient way of providing certain types of RPGs, along with some guiding principles about the priority areas. Also deserving attention are the most efficient ways of allocating resources to deal with regional problems at minimum cost but maximum gain.

Ms. Stiegler noted that the 2030 Agenda for Sustainable Development is a new basis for the prioritization and an opportunity to improve efforts at provision and protection of global and regional public goods. Multilateral development banks should address not only the low-hanging fruit, but also infrastructure provision, which has been a traditional RPG area. Moreover, thought is needed about the more complex challenges contained in the 2030 Agenda and their interconnectedness, which is made explicit in the SDGs.

Multilateral development banks can have a role fostering debate on RPGs and directing attention to strengthening the efforts. Regarding knowledge generation and speaking about complex challenges, it is important that multilateral





Session 6–2 panelists talked about the role of multilateral development banks in regional public good provision.

development banks concentrate more on how different topics can be addressed on a cross-sector basis instead of focusing on individual sectors. Ms. Stiegler noted that the banks have done a lot of work in this area, but there is more room for improvement, which means working with other UN or international agencies that have specialist expertise.

Multilateral development banks should not only think of RPGs or global public goods as a single or additional sector theme, but see them as a transverse issue and a cross-cutting theme to be streamlined through the whole institution. To strengthen the international coherence of multilateral development banks' work, we should think of them as a system and foster cooperation in the international development arena. One way to do this would be to stress more clearly the comparative advantage of the banks together as a group of banks, but allow their comparative advantages to be acknowledged and compared. We should also be mindful of other actors, such as in the private sector.

A series of questions and comments followed.

One participant commented on the difficulty of grasping the concept of RPGs. For example, it is not clear whether every activity under regional cooperation and integration should be considered an RPG. Since the definition of RPGs is so broad, it is difficult to neatly assign regional cooperation and integration activities to one particular RPG classification. Mr. Barrett noted that the definition of RPGs needs to be taken quite seriously because of their critical role in the development of the region.

The importance in the multilateral development banks stimulating and driving the agenda on RPG provision was also emphasized. National policy-making systems typically tend only to concentrate on the relevant country. They do not necessarily consider regional issues or understand them. ADB can be a champion of regional cooperation and integration by showing the benefits of RPGs.

On the priorities in RPG provision, a participant noted that work done to understand global priorities through SDGs should not be forgotten, along with the related context, as Ms. Stiegler argued. As such, GIZ's effort to map RPGs with SDGs may be a good framework to start thinking about priorities for RPG interventions in Asia and the Pacific. Guidance for the prioritization of public goods can start from what is really needed in the region. Just as in the ASEAN Economic Community, a guide to the highest regional priorities comes from looking to regional organizations, whose priorities are reflected in their objectives and activities.

*The provision of regional public goods can be bolstered by other institutions offering different scopes of benefits, complementing regional institutions.*

In ASEAN, meanwhile, Mr. Rillo noted that a series of consultations helps the community to identify priorities. However, it is more important to make sure they are implemented among the array of initiatives on issues of value for ASEAN. He emphasized that the same can apply to RPGs: the priority issues are already more or less well known. It is very important to identify critical projects, to make sure that they are implemented, and to achieve credible results.

Mr. Sawada ended the session with the following remarks:

- One lesson is that we can change structure of the game to achieve better provision of RPG. For example, the prisoner's dilemma game to a coordination game through negotiation, as seen in successful cases of RPG provision noted in presentations by Scott Barrett.
- There is no one-size-fits-all mechanism. More emphasis needs to be put on sector-specific, region-specific case studies of RPGs to identify the mechanism. By doing so, the costs and benefits of different examples can be evaluated properly.
- Demand is increasing for RPGs in climate change, disaster resilience, and health. Promoting health security seems to be particularly important in the region, so we can learn from experiences in Europe and the United States.
- Multilateral development banks can play a critical role in setting an enabling institutional environment, with correct incentives as well as the provision of financing options and knowledge. Close consideration about the division of labor and cooperation among countries and multilateral development banks is important to maximize the synergetic impacts of RPG provision.





## **Toward Optimal Provision of Regional Public Goods in Asia and the Pacific**

### *Conference Highlights*

This publication presents highlights of a conference that gathered leading academics, policymakers, and international organizations to discuss the theory, practice, and policy considerations of regional public goods. Jointly organized by the Asian Development Bank Economic Research and Regional Cooperation Department and the Asian Development Bank Institute, the conference brought together Asia's policymakers in order to consider and develop new ways of regional policy cooperation to deal with the region's common challenges.

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ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 67 members—48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.



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