



# ENHANCING REGIONAL ECONOMIC COOPERATION AND INTEGRATION IN ASIA AND THE PACIFIC

ESCAP is the regional development arm of the United Nations and serves as the main economic and social development centre for the United Nations in Asia and the Pacific. Its mandate is to foster cooperation among its 53 members and 9 associate members. ESCAP provides the strategic link between global and country-level programmes and issues. It supports Governments of countries in the region in consolidating regional positions and advocates a regional approach to meeting the region's unique socioeconomic challenges in a globalizing world. The ESCAP office is in Bangkok. Please visit the ESCAP website at [www.unescap.org](http://www.unescap.org) for further information.



The darker area of the map represents the members and associate members of ESCAP.

# ENHANCING REGIONAL ECONOMIC COOPERATION AND INTEGRATION IN ASIA AND THE PACIFIC

# ENHANCING REGIONAL ECONOMIC COOPERATION AND INTEGRATION IN ASIA AND THE PACIFIC

United Nations publication  
Copyright © United Nations 2017  
All rights reserved  
Printed in Bangkok  
ST/ESCAP/2781

The report is available online at:  
[www.unescap.org/resources/reci-asia-pacific-regional-report](http://www.unescap.org/resources/reci-asia-pacific-regional-report).

Cover credit: Shutterstock (hfizimages)

This publication may be reproduced in whole or in part for educational or non-profit purposes without special permission from the copyright holder, provided that the source is acknowledged. The ESCAP Publications Office would appreciate receiving a copy of any publication that uses this publication as a source.

No use may be made of this publication for resale or any other commercial purpose whatsoever without prior permission. Applications for such permission, with a statement of the purpose and extent of reproduction, should be addressed to the Secretary of the Publications Board, United Nations, New York.

# FOREWORD



The countries of Asia and the Pacific have worked steadily to enhance regional integration over several decades to unlock the benefits of shared prosperity, stability and sustainability. Yet, progress has been uneven and the region's overall integration is still at a formative stage. East Asia is the most integrated, South-East Asia ranks second, followed by South Asia, Central Asia and the Pacific. There is still great potential to deepen integration across the region.

The adoption of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals has created a new impetus for restructurizing the region's integration. Greater regional economic cooperation and integration (RECI) can offer solutions to the pervasive problems of poverty and inequality facing the Asia-Pacific region that are at the core of the 2030 Agenda. As several of the Goals are transboundary in nature, effective action requires a regional approach, drawing on regional cooperation and cross-border solutions to complex challenges, such as climate change, disaster risk reduction, ecosystem and natural resource management, and sustainable energy. The emergence of large-scale and ambitious regional integration plans, such as the Eurasia Initiative and the Belt and Road Initiative, which propose economic corridors connecting the Asia-Pacific region to Europe and Africa, has further highlighted the region's desire for a future based on deeper integration.

Subregional integration has progressed in different phases over the last several decades, influenced by changing ideas and attitudes towards globalization. Within the region, wide variations in overall economic integration persist. Trade and investment liberalization across several economies has gained momentum, as the potential of globalization to bolster economic progress and raise living standards has been increasingly recognized. These policies have resulted in unprecedented economic growth and reduced extreme poverty in the region. Despite the progress, inequality is increasing.

The Economic Commission for Asia and the Pacific, as the leading intergovernmental organization in the region and the largest of the five United Nations regional commissions is well positioned to drive a transition to a more integrated and connected Asia and the Pacific. ESCAP provides an inclusive and multisectoral platform for the region, which is now geared for regional implementation of the 2030 Agenda for Sustainable Development. Through this platform, ESCAP works with member States to forge region-wide agreements on infrastructure, promotes harmonization of cross-border standards and provides technical assistance. As part of its broad-based strategy, ESCAP has committed itself to work with member States to advance RECI through four pillars: (a) moving towards the formation of an integrated market, (b) development of seamless connectivity in the region, (c) enhancing financial cooperation, and (d) increasing economic cooperation to address shared vulnerabilities and risks. By advancing the four RECI pillars simultaneously, there is great scope to accelerate progress towards the achievement of the Sustainable Development Goals in the Asia-Pacific region. Both initiatives, if implemented in a

coherent manner, are by their nature mutually reinforcing. Deepening RECI can promote inclusive and sustainable approaches for achieving growth for countries at different stages of development, address transboundary Sustainable Development Goals and bolster the means of implementation, such as through trade and finance. Correspondingly, using the framework offered by the Goals to progressively guide RECI would promote balanced and sustainable infrastructure to service small, low-income and geographically disadvantaged countries.

The present report aims to inform how the region can most effectively pursue these objectives. It examines in detail the challenges and opportunities across the four pillars that underpin regional integration. It also provides policy options for more immediate progress and recommendations on how to best lay the foundations for long-term integration in the region.

The report underscores that to deliver the best results for the region, the four pillars of RECI need to be simultaneously developed in an integrated manner. One of the key objectives of RECI is to expand trade and investment through better market integration, which, in turn, requires seamless connectivity in transport, energy, and information and communications technology. Developing this infrastructure requires adequate financial resources, deep and connected financial markets and stable financial and economic conditions. Therefore, a coordinated multisectoral regional approach to RECI is integral to its success.

The obstacles to achieving an integrated Asia-Pacific region are substantial and require the following: continuous efforts aimed at developing trust and political will, building regional governance, harmonizing complex regulatory frameworks and funding infrastructure. Working together, we can overcome these challenges and realize the full potential of an integrated Asia-Pacific region.



Shamshad Akhtar  
Under-Secretary-General of the United Nations and  
Executive Secretary, United Nations Economic and  
Social Commission for Asia and the Pacific

# EXECUTIVE SUMMARY

Further developing and deepening regional economic cooperation and integration (RECI) in the Asia-Pacific region can offer solutions to emerging challenges, such as quelling protectionist tendencies, mitigating rising inequalities, and addressing environmental degradation. Through enhancing regional connectivity for energy, transport and information and communications technology (ICT), and promoting regional cooperation in trade, financing and shared vulnerabilities, RECI offers enormous potential in generating trade, growth and employment, improving social outcomes and managing environmental risks and shared vulnerabilities. This presents the possibility to develop RECI as a critical enabler of the 2030 Agenda for Sustainable Development in Asia and the Pacific.

The Bangkok Declaration on Regional Economic Cooperation and Integration in Asia and the Pacific, adopted at the first Ministerial Conference on Regional Economic Cooperation and Integration in December 2013, sets an agenda for RECI in the Asia-Pacific region consisting of four elements: (a) moving towards the formation of an integrated market; (b) development of seamless connectivity in the region; (c) enhancing financial cooperation; and (d) increasing economic cooperation to address shared vulnerabilities and risks. This report presents the views of the ESCAP secretariat on how to advance the RECI agenda in the region to support the implementation of the Bangkok Declaration.

Enhancing RECI is important because the region's traditional export markets have decreased in importance since the 2008 global financial and economic crisis. During the period 2001–2005, North America and the European Union (EU) represented 61.5 per cent of world gross domestic product (GDP), compared to 27.1 per cent for Asia and the Pacific but 10 years later, during the period in 2011–2015, the share of Asia and the Pacific increased to 36.1 per cent while that of North America and the EU dropped to 47.9 per cent.. The emergence of protectionist sentiment in Europe and North America, as indicated, for instance, by the 2016 vote in the United Kingdom of Great Britain and Northern Ireland to leave the European Union or the withdrawal of the United States of America from the proposed Trans-Pacific Partnership in 2017, is another reason why the region should consider enhancing RECI.

The Bangkok Declaration pointed to the enormous opportunities that RECI offers to the region in the context

of economic uncertainties after the global financial and economic crisis of 2008. It also emphasized that with the rising economic prominence of the Asia-Pacific region in the world economy, the promotion of intraregional trade within Asia and the Pacific can provide enormous opportunities for supporting economic growth and employment creation in the region.

With a combined GDP of US\$27.25 trillion that is growing rapidly, Asia and the Pacific is well on its way to becoming the most important market in the world, opening possibilities for further expansion of trade and investment within the region. This could contribute to job creation, poverty reduction and the boosting of economic growth throughout the region.

Regional economic cooperation and integration can also support the implementation of the 2030 Agenda by generating large opportunities for enhancing employment and incomes across the region. These opportunities can directly support the achievement of some of the Sustainable Development Goals, particularly Goal 8: promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. The large investment in transport, energy and ICT infrastructure required by RECI also contributes directly to Goal 7: ensure access to affordable, reliable and modern energy for all and Goal 9: build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. Moreover, the favourable impact of RECI on economic growth across the region can contribute to the mobilization of much needed public resources, which without would be difficult for low-income countries to make significant progress in achieving most, if not all, of the Goals.

The relationship between RECI and the 2030 Agenda is bidirectional. RECI can support the attainment of the Sustainable Development Goals, while the Goals will likely play a vital role in guiding the implementation of RECI. This can happen, for instance, by ensuring that infrastructure projects have favourable social and environmental, as well as economic, impacts. Ensuring that infrastructure projects connect small, low-income and geographically distant countries with the main markets of the region and placing high priority on dealing with transboundary vulnerabilities and risks are other ways in which the 2030 Agenda can inform how RECI can be most effectively implemented.



## Market integration

Market integration is a fundamental aspect of RECI, as it implies a larger production and/or consumption space with easier movement of outputs and factors of production (goods and services, capital and labour). Rapid growth in merchandise trade has contributed to considerable economic progress in the region, and it can be further enhanced through RECI. However, the expansion of merchandise trade is being impeded by high bilateral trade costs within the region. The largest costs are associated with non-tariff barriers, regulatory and procedural burdens, and high transport costs, which together can account for as much as 60 to 90 per cent of total trade costs.

An additional impediment to market integration is the existence of multiple regional trade agreements and complexities arising from complying with different rules of origin. There is a plethora of overlapping and often inconsistent regulatory frameworks related to trade, investment or transport, known as the “noodle bowl”. Contrary to their intention to open market access, multiple preferential trade agreements tend to create inefficiencies and lead to higher transaction costs. The noodle bowl effect can be minimized through improved coordination, mutual recognition or harmonization of regulatory frameworks.

Hidden forms of protectionism, such as regulatory and procedural border processes, can be tackled through trade facilitation measures. For instance, ESCAP member States adopted the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific in May 2016. Similarly, common investment regimes should replace and not add to the existing noodle bowls of international investment regimes that mirror the noodle bowl of preferential trade agreements. Special economic zones can also play a role by providing essential infrastructure, but they need to be carefully managed and regulated to ensure that they provide linkages with the economy at large and are socially and environmentally sustainable.

The region is a major global destination for investment, which is reflected by the inflows into the region and between countries within the region. More recently, Asia-Pacific countries have quickly gained global prominence as major outward investors as well. In 2015, investment outflows from developing Asian economies reached \$323 billion, representing 30 per cent of global foreign direct investment (FDI) flows. However, the noodle bowl of multiple investment agreements, which are not always aligned with sustainable development principles, are adversely

affecting further increases in FDI flows. Countries need to promote regional investment regimes in a manner that better balances investor rights with host country development needs. This would enable countries to not only attract more FDI to contribute to sustainable development, but also to achieve better market integration.

Despite its positive evolution and importance from a social perspective, labour market integration is lagging behind other forms of integration. Mechanisms to promote orderly migration fail to match the demand and supply of migrant workers. This results in irregular migration, which entails a high risk of exploitation and abuse of migrant workers. Through cooperation on labour migration policies, migrant workers can be fairly treated and contribute to host country development processes, for example, by spurring technology transfer and innovation. To enable such positive spillover effects, inclusive regulatory frameworks should be in place. These could include the development of harmonized regional qualification frameworks that support job-matching and the creation of regional labour markets. The development of common procedures for the payment of social benefits across borders also deserves policy attention.

## Seamless connectivity

Infrastructure connectivity encompassing transport, energy and ICT links within and between countries is underdeveloped in Asia and the Pacific, especially in countries with special needs. The focus of RECI on seamless connectivity aims to develop connectivity that enables the freer movement of people, goods, energy and information. The current state of infrastructure in several countries of the region is below par compared with similar countries in other regions. This disproportionately affects the poor and rural people and impedes poverty reduction efforts. Infrastructure gaps also hamper economic growth by limiting economic diversification, movement of goods, people-to-people contacts, access to energy and the development of global value chains.

Seamless connectivity encompasses both “hard” and “soft” infrastructure. Soft infrastructure includes legal, regulatory, procedural, and other supporting policy frameworks, as well as human and institutional capacities, while hard infrastructure relates to physical networks, such as roads, railways or ports.



## Financial cooperation

A particularly important initiative that could support further moves towards enhanced RECI in the Asia-Pacific region is China's Belt and Road initiative. The initiative aims at enhancing seamless connectivity through a multimodal network that connects road and rail routes with seaports, expands energy networks through oil and gas pipelines and regional power grids, and extends ICT fibre optic links from China to Europe through Central Asia. Building this infrastructure and establishing economic corridors is essential for the region to make significant progress in other components of RECI, such as promoting trade and investment flows.

Beyond sector-specific constraints, a number of challenges are common to the three connectivity sectors, most of which relate to lack of planning and coordination. First, most cross-border connectivity projects are typically negotiated bilaterally between parties. This results in projects that are fragmented, not well-coordinated and, consequently, burdened with high transaction costs. Second, regional infrastructure projects invariably involve asymmetric costs and benefits across countries and groups of people, which entails large externalities and thus need fair compensation. Third, careful planning and coordination are often absent because of a lack of resources, appropriate institutional mechanisms, and/or differences in legal and regulatory regimes. Finally, as most infrastructure networks are domestically centred, with cost-benefit analyses typically assessed from a domestic return-on-investment perspective, the regional public good value associated with the projects is heavily discounted.

Strong regional political will and agreed regional visions among countries are critical for establishing effective, region-wide planning and coordination mechanisms for regional connectivity. To expand the existing physical networks of transport, energy and ICT, these factors must be considered holistically, which may yield significant cost and time savings. For instance, the costs of deploying terrestrial fibre networks can be significantly reduced if the work is undertaken along major roads, railways, power transmission lines, pipelines or waterways. Furthermore, regionally accepted, transparent and fair rules and regulations need to be put in place for internalizing and monetizing asymmetric costs and to ensure the fair distribution of costs and benefits among stakeholders. This could be done with an effective and credible compensation mechanism for affected groups and countries.

There are a number of regional cooperation initiatives in Asia and the Pacific aimed at improving macroeconomic and financial surveillance, providing emergency liquidity support and protecting economies from excessive financial market and capital flow volatility. Prominent examples include the ASEAN+3 Economic Review and Policy Dialogue, the Chiang Mai Initiative Multilateralisation, the Eurasian Economic Community Anti-Crisis Fund, the Reserve Bank of India Framework on Currency Swap Arrangements for SAARC member countries and several bilateral swap arrangements offered by the Bank of China to partner central banks in the region. Initiatives to foster the development of local currency bond markets, such as the Asian Bond Fund and the Asian Bond Markets Initiative, also aim at preserving macroeconomic and financial stability by reducing risks arising from currency and maturity mismatches.

In addition, initiatives have been undertaken to integrate capital markets, such as the ASEAN+3 Bond Market Forum, which seeks to harmonize and standardize market practices, regulations and clearing and settlement procedures of cross-border bond transactions. Similarly, the South Asian Federation of Exchanges is striving to set common standards for listing, trading, clearing, settlement and investors' protection.

Financial cooperation needs to be enhanced to support the development of infrastructure in the region. Infrastructure development is fundamental to the 2030 Agenda for Sustainable Development. Different measures can be adopted to enhance funding and financing of infrastructure investments. Funding can be improved through mechanisms to enhance cost recovery, higher efficiency operating infrastructure facilities, or more efficient fiscal management. Financing can be improved through deepening financial markets, favouring efficient financial intermediaries through competition in the financial sector, and strengthening financial institutions and regulations. Mechanisms, such as public-private partnerships (PPPs) may help to significantly boost infrastructure investments. The establishment of dedicated financing mechanisms of cross-border projects could also help to raise their priority level while serving as a coordination platform among the involved countries.

Notwithstanding the importance of financing for infrastructure development, countries in the region, by and large, have limited capacity to mobilize internal

resources. Without effective mobilization and allocation of financial resources, achieving the 2030 Agenda will remain an insurmountable challenge. The region's developing economies had an average tax-to-GDP ratio of only 17.6 per cent over the period 2012-2014, and only seven economies (four of which are resource rich) had tax-to-GDP rates that exceed 20 per cent. Regional cooperation can be effective in boosting capacities of developing countries in Asia and the Pacific to improve the effectiveness of their tax and public spending policies for sustainable development. For this purpose, ESCAP, as an inclusive intergovernmental organization in Asia and the Pacific, could provide a broad-based platform for policymakers, tax administrators, and relevant regional and subregional organizations to enhance cooperation on tax matters.

### Shared vulnerabilities

Asia and the Pacific is the most disaster-prone region in the world. In the last decade 1,624 disasters were reported, which affected 1.4 billion people of whom 400,000 lost their lives and caused damages that exceeded more than over half a trillion dollars. Over the years, the damage has been increasing as a proportion of GDP, from 0.16 per cent in the 1970s to 0.37 per cent in the 2000s. The most frequent disasters are floods and storms, while earthquakes and tsunamis are the deadliest.

Climate change brings additional transboundary and multisectoral risks, exacerbating the existing risks posed by natural disasters. It affects agriculture, livelihoods and infrastructure. Through its contribution to sea level rise and storm surges, climate change has particularly acute impacts on small island developing States and low-lying coastal areas.

Food security is a persistent problem facing millions of people across the region. Much progress has been made to reduce the number of undernourished people, but the region is still home to 65 per cent of the undernourished people in the world. Subregional cooperation on food security by regional organizations such as the Association of Southeast Asian Nations (ASEAN) and the South Asian Association for Regional Cooperation (SAARC), has taken effective measures to combat food insecurity, including, among others, food security reserves, integrated subregional strategies and initiatives to combat the spread of transboundary animal and plant diseases.

Tackling the region's shared vulnerabilities requires enhanced cooperation to manage transboundary hazards, especially those induced by climate change, such as cyclones, floods or droughts. The key principles to reduce shared Asia-Pacific vulnerabilities and risks are (a) risk prevention and mitigation, (b) monitoring and early warning, (c) understanding better the sectoral impacts of natural disasters, and (d) developing a regional action plan for multi-hazard early warning systems.

### Way forward for RECI in the Asia-Pacific

Exploiting the many synergies between the 2030 Agenda for Sustainable Development and RECI should certainly be a major consideration in moving forward. This requires that both are pursued in an integrated manner within multilateral frameworks to maximize the coherence and coordination between them. For instance, expanding trade and investment through market integration is a major objective of RECI, and can positively contribute towards the achievement of several of the Sustainable Development Goals. This, in turn, would require seamless connectivity in transport, energy, and ICT, which also contribute directly to the achievement of several of the Goals. Leveraging existing and new regional cooperation initiatives to boost physical infrastructure investments, as well as pursuing intergovernmental facilitation agreements and action to simplify regulations is critical for achieving seamless connectivity. However seamless connectivity, also is difficult to achieve without adequate financial resources, deep and connected financial markets and stable financial and economic conditions. Similarly, vulnerabilities emanating from transboundary environment and disaster risks need to be dealt with in an effective manner to continue to move forward towards attaining shared prosperity, the essence of the Sustainable Development Goals.

Improved coordination, mutual recognition and harmonization of regulatory frameworks can be achieved through an inclusive regional intergovernmental platform, such as ESCAP. The Commission's multidisciplinary, cross-sectoral technical expertise positions the organization to simultaneously accelerate progress across all four pillars of RECI and bring together member States, subregional organizations and other relevant institutions working on RECI. It can draw on its long-standing normative and research work on the constituent elements of RECI to forge regional

agreements, better understand the costs and benefits of RECI, develop cross-sectoral synergies and connect RECI to global initiatives and frameworks for action on sustainable development, financing for development and climate change.

To advance RECI across the region, ESCAP should continue the process of incorporating and formalizing RECI into its own work programme and into the work of its intergovernmental committees. Among other options, it should consider instituting a cross-sectoral task force on seamless connectivity that serves the Commission's Committee on Energy, Committee on Information and Communications Technology, Science, Technology and Innovation and Committee on Transport. Similarly, the Commission session could also include a recurring segment on RECI to engage member States and subregional organizations in a dialogue on how to prioritize and advance key RECI initiatives.

# ACKNOWLEDGEMENTS

This report was prepared under the overall direction and guidance of Shamshad Akhtar, Under-Secretary-General of the United Nations and Executive Secretary of the Economic and Social Commission for Asia and the Pacific. Hongjoo Hahm, Deputy Executive Secretary for Programmes, and Kaveh Zahedi, Deputy Executive Secretary for Sustainable Development, provided valuable advice and comments. The report was coordinated by a core team under the direction of Hamza Ali Malik, Officer-in-Charge, Macroeconomic Policy and Financing for Development Division, which included Shuvojit Banerjee, Alberto Isgut, Oliver Paddison, Jose Antonio Pedrosa Garcia, Gabriela Spaizmann, and Yusuke Tatenno. Heather Taylor and Michael Williamson from the Office of the Executive Secretary provided key contributions. Rita Nangia was the lead consultant to ESCAP in preparing the study. The manuscript was edited by Alan Cooper.

Other ESCAP staff who contributed substantively to the report include: Laura Altinger, Alper Aras, Zheng Jian and Mathieu Verougstraete of the Macroeconomic Policy and Financing for Development Division; Susan F. Stone (Director), Witada Anukoonwattaka, Yann Duval, Soo Hyun Kim, Mia Mikic, Rajan S. Ratna, and Chorthip Utoktham of the Trade, Investment and Innovation Division; Hongpeng Liu (Director, a.i.), Kohji Iwakami and Sean Ratka of the Energy Division; Yuwei Li (Director) of the Transport Division; Tiziana Bonapace (Director), Syed T. Ahmed, Sung Eun Kim, Jeremy Marand, Siope Vakataki Ofa, Atsuko Okuda, and Sanjay Kumar Srivastava of the Information and Communications Technology and Disaster Risk Reduction Division; Nagesh Kumar (Director) and Paul Tacon of the Social Development Division; and Stefanos Fotiou (Director) and Katinka Weinberger of the Environment and Development Division.

# CONTENTS

Foreword .....	v
Executive summary .....	vii
Acknowledgements .....	xii
Acronyms .....	xv
1. Why Asia and the Pacific needs to enhance regional economic cooperation and integration .....	1
2. Assessing regional economic cooperation and integration: where does Asia and the Pacific stand? ....	4
Broad insights from existing regional economic cooperation and integration initiatives	
in Asia and the Pacific .....	7
3. Removing obstacles for greater market integration .....	9
Liberalizing and facilitating trade towards market integration for goods and services .....	9
Foreign direct investment and regional investment regimes .....	13
Cross-border mobility of labour .....	15
Recommendations .....	17
4. Seamless connectivity .....	20
The importance of enhancing connectivity in Asia and the Pacific .....	21
Transport connectivity .....	22
Energy connectivity .....	25
Information and communications technology .....	29
Common challenges .....	32
Recommendations .....	33
5. Financial markets and public resource management cooperation .....	36
The financial landscape of Asia and the Pacific .....	36
Arrangements to ensure financial stability .....	40
Cooperation on capital market development .....	41
Financing investments in infrastructure .....	42
Tax cooperation .....	44
Suggestions to move forward .....	48
6. Shared vulnerabilities .....	52
Natural disasters and shared vulnerabilities .....	52
Climate change and shared vulnerabilities .....	54
Food security and shared vulnerabilities .....	55
Shared vulnerabilities: main challenges .....	57
Recommendations .....	57
7. The way forward for regional economic cooperation and integration in Asia and the Pacific .....	60
Annex I. Overarching regional economic cooperation and investment initiatives in Asia and the Pacific	64
Annex II. Financial development in Asia and the Pacific.....	67
Annex III. Sequencing approach to financial market development .....	68
References .....	69

## FIGURES

Figure 3.1	Asia's noodle bowl .....	12
Figure 3.2	Implementation of trade facilitation and paperless measures .....	13
Figure 3.3	Foreign direct investment inflows to and outflows from the Asia-Pacific region, 1990-2015 ..	14
Figure 3.4	Intraregional greenfield foreign direct investment inflows in the Asia-Pacific region and their share in total greenfield foreign direct investment inflows, and major destinations .....	15
Figure 3.5	Evolution of migration in Asia and the Pacific .....	16
Figure 3.6	Main countries of migration, origin and destination, 2015 .....	16
Figure 4.1	Quality of transport infrastructure in Asia and the Pacific .....	23
Figure 4.2	Transport connectivity initiatives .....	24
Figure 4.3	Asia super grid proposal .....	27
Figure 4.4	Fixed broadband subscriptions per 100 inhabitants (average) by region, 2000-2015 .....	29
Figure 4.5	Perception of quality of regulation and fixed broadband connectivity, 2014 .....	30
Figure 4.6	E-commerce versus fixed broadband access, 2015 .....	31
Figure 5.1	Institutional investors structure as percentage of GDP, 2014 .....	37
Figure 5.2	Indicators of financial development in Asia and the Pacific (median by subregion) .....	38
Figure 5.3	Financial exclusion, population without accounts, 2014 .....	39
Figure 5.4	Size of government and corporate bonds, as percentage of GDP, June 2016 .....	41
Figure 5.5	Importance of public-private partnerships by sector over time and by country .....	44
Figure 5.6	Tax composition and revenue in selected Asia-Pacific countries, percentage of GDP .....	45
Figure 5.7	Participation of Asia-Pacific countries in global and regional tax forums .....	47
Figure 6.1	Rising economic damages, 1970-2013 .....	52
Figure 6.2	Major disasters and sectoral impacts in Asia and the Pacific .....	53

## TABLES

Table 1.1	Gross domestic product (in current billions of dollars) .....	2
Table 2.1	Regional integration across major regions in the world .....	5
Table 2.2	National policies and regional economic cooperation .....	6
Table 2.3	Geography and connectivity .....	6
Table 3.1	Intraregional trade in the Asia-Pacific region .....	10
Table 3.2	Estimates of tariff-equivalent costs of trade in Asia and the Pacific .....	11
Table 4.1	Selected connectivity indicators of Asia and the Pacific .....	21
Table 4.2	Connectivity deficit in Asia and the Pacific .....	22
Table 5.1	Demand for infrastructure financing in Asia and the Pacific .....	40
Table 5.2	Types of tax incentives and their prevalence .....	46

## BOXES

Box 2.1	Association of Southeast Asian Nations .....	4
---------	--	---



# ACRONYMS

ACIA	ASEAN Comprehensive Investment Agreement
ADB	Asian Development Bank
AEC	ASEAN Economic Community
AHN	Asian Highway Network
AIIB	Asian Infrastructure Development Bank
ASEAN	Association of Southeast Asian Nations
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BIS	Bank for International Settlements
CAREC	Central Asia Regional Economic Cooperation
ECO	Economic Cooperation Organization
ESCAP	United Nations, Economic and Social Commission for Asia and the Pacific
EAEU	Eurasian Economic Union
EU	European Union
FDI	foreign direct investment
FAO	United Nations Food and Agriculture Organization
GDP	gross domestic product
GMS	Greater Mekong Subregion
IEA	International Energy Agency
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
ITU	International Telecommunication Union
PIF	Pacific Islands Forum
PPP	public-private partnership
OECD	Organisation for Economic Co-operation and Development
RCEP	Regional Comprehensive Economic Partnership
RECI	Regional economic cooperation and integration
SAARC	South Asian Association of Regional Cooperation
SMEs	small and medium enterprises
SPECA	United Nations Special Programme for the Economies of Central Asia
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNISDR	The United Nations Office for Disaster Risk Reduction
VAT	value-added tax
WTO	World Trade Organization
WEF	World Economic Forum



# CHAPTER 1

## WHY ASIA AND THE PACIFIC NEEDS TO ENHANCE RECI

At the first Ministerial Conference on Regional Economic Cooperation and Integration (RECI), held in December 2013, ministers, senior policymakers, representatives of member States, and associate members of the Economic and Social Commission for Asia and the Pacific (ESCAP) adopted the Bangkok Declaration on Regional Economic Cooperation and Integration. In this declaration, an agenda is set for RECI in the Asia-Pacific region, which consists of four elements: (a) moving towards the formation of an integrated market; (b) development of seamless connectivity in the region; (c) enhancing financial cooperation; and (d) increasing economic cooperation to address shared vulnerabilities and risks.

Thus envisaged, RECI is a multidimensional concept and a process that facilitates shared prosperity through the following:

- (a) Economic integration, which is reflected in an increased flow of goods, services, capital and people;
- (b) Supporting the development and strengthening of country institutions through exchanges of information, technical assistance and capacity-building;
- (c) Helping countries coordinate policies and institutional arrangements.

Fostering RECI is a central goal of the United Nations regional commissions, in addition to the implementation of the 2030 Agenda for Sustainable Development. The present report presents views of the ESCAP secretariat on how to advance the RECI agenda in the region to support the implementation of the Bangkok Declaration. It draws from the deliberations of four working groups composed of experts from across the Asia-Pacific region, covering each of the four elements of the RECI agenda.

Regarding the first component of RECI, the level of economic integration is relatively low on average in the Asia-Pacific region, but there is a wide variation across its subregions, with East and South-East Asia being the most integrated. This variation reflects traditional aspects of integration, such as contiguous borders, historical roots and ties, common languages, and geography. However these are enabling, and not determining factors for regional economic integration.

In particular, the expansion of global value chains and cross-border investment flows, supported by appropriate national trade and commercial policies, can provide enormous opportunities for countries in the region to transcend constraints to their development based on geography or small domestic markets. A major goal of RECI is to make such opportunities available to all countries in the Asia-Pacific region.

An important motivation for pursuing RECI in the region is the persistent sluggish economic growth in the region's main markets, North America and the European Union (EU), as a consequence of the global financial and economic crisis of 2008. Indeed, the significance of these markets for the region has diminished considerably since the early 2000s. As shown in table 1.1, the combined GDP of North America and EU over the period 2001–2005 was more than twice as large as the GDP of the ESCAP member States, but over the period 2011–2015 the gap in favour of North America and the EU was reduced to only about a third.

The relatively diminished global economic importance of North America and the EU and the rise of the Asia-Pacific region are also noticeable when looking at shares of global GDP. During the period 2001–2005, North America and the EU represented as much as 61.5 per cent of world GDP, compared with 27.1 per cent for Asia and the Pacific. However, over the period 2011–2015, GDP of North America and the EU dropped to 47.9 per cent of the world GDP, while that of Asia and the Pacific increased to 36.1 per cent. Within Asia and the Pacific, the performance of its developing countries has been particularly remarkable. Between 2001–2005 and 2011–2015, these countries almost doubled their share in world GDP, from 14.1 per cent to 26.8 per cent. Their increased share in world GDP, of 12.7 percentage points, is comparable to the decreased share in world GDP of North America and EU, of 13.5 percentage points.

The emergence of protectionist sentiment in Europe and North America, as indicated, for instance, by the 2016 vote in the United Kingdom of Great Britain and Northern Ireland to leave the European Union or the withdrawal of the United States from the proposed Trans-Pacific Partnership in 2017, is another reason why the region should consider enhancing RECI.

In the light of these fundamental changes in the global economy, the Bangkok Declaration points to the enormous opportunities that RECI offers for the region:<sup>1</sup>

“(I)the context of economic uncertainties after the global financial and economic crisis and with the rising economic prominence of the Asia- Pacific region in the world economy, the promotion of intraregional trade within Asia and the Pacific can provide enormous opportunities to support economic growth and employment creation in the region.”

With a combined GDP of \$27.25 trillion and growing at a significantly more rapid rate than the rest of the world, Asia and the Pacific is well on its way to becoming the most important market in the world, opening possibilities for further expansion of trade and investment within the region. This could contribute to job creation, poverty reduction and the higher economic growth throughout Asia and the Pacific.

Regional economic cooperation and integration has been implemented in the region through a number of initiatives and subregional organizations, including, among them, the Association of Southeast Asian Nations (ASEAN), the South Asian Association of Regional Cooperation (SAARC), the Pacific Islands Forum (PIF) and the Eurasian Economic Union (EAEU). A particularly important new RECI initiative is China-led Belt and Road Initiative (also known as “One Belt, One Road”). This initiative aims to promote a multimodal network by connecting road and rail routes with seaports, expanding energy networks through oil and gas pipelines and regional power grids, while extending ITC fibre optic links from China through Central Asia to

ultimately reach Europe. As such, it focuses heavily on the “seamless connectivity” component of RECI, particularly on transport, energy and information and communications technology (ICT) infrastructure. Building such infrastructure is essential for the region to make significant progress in other components of RECI. For instance, without suitable roads linking neighbouring countries in the region, the costs of trade can be prohibitive.

The great potential of RECI to generate income and employment opportunities makes it a critical enabler of the 2030 Agenda for Sustainable Development in Asia and the Pacific. Increasing income and employment can contribute directly to several targets of the Sustainable Development Goals (such as target 8.1: sustain per capita economic growth). The large investment in transport, energy and ICT infrastructure required by RECI can also contribute directly to a number of targets, including: 7.b (by 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries); and 9.1 (develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure). RECI can also contribute to targets related to Goal 17 on the means of implementation, including target 17.11 (significantly increase the exports of developing countries) and 17.1 (strengthen domestic resource mobilization). Finally, the RECI pillar on shared vulnerabilities aims at enhancing cooperation to address targets, such as 1.5 (by 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters).

TABLE 1.1: Gross domestic product (in current billions of dollars)

Subregion	USD, billions			Percentage of world GDP		
	2001-2005	2006-2010	2011-2015	2001-2005	2006-2010	2011-2015
ESCAP member States	10,736	18,025	27,256	27.1	30.1	36.1
Developed countries	5,135	6,166	6,997	12.9	10.3	9.3
Developing countries	5,601	11,859	20,259	14.1	19.8	26.8
North America and European Union	24,395	33,213	36,219	61.5	55.5	47.9
North America	12,612	15,950	18,519	31.8	26.7	24.5
European Union	11,783	17,263	17,700	29.7	28.9	23.4
World	39,680	59,833	75,538			

Source: ESCAP based on data from United Nations Statistics Division, National Accounts Main Aggregates Database (accessed 20 February 2017).

Notes: Gross domestic product (GDP) at current prices in U.S. dollars. North America includes Canada and the United States of America. The European Union includes its 28 member States at the time of writing: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and United Kingdom of Great Britain and Northern Ireland.

The relationship between RECI and the 2030 Agenda is bidirectional. Not only can RECI support the attainment of the Sustainable Development goals, but the 2030 Agenda has a vital role to play in guiding the implementation of RECI. This can happen, for instance, by making certain that infrastructure projects have favourable social and environmental and economic impacts. Ensuring that infrastructure projects connect small, low-income and geographically distant countries with the main markets of the region and giving high priority to deal with transboundary vulnerabilities and risks are other ways in which the 2030 Agenda can inform how RECI can be most effectively implemented.

Effectively pursuing the 2030 Agenda requires a fundamental rethink in development policies and frameworks, as it requires a transition from “growth-centric” development to one that incorporates social and environmental considerations in an integrated manner. Such a conceptual transition needs to be complemented by a reinvigorated spirit of multilateralism and cooperation in the Asia-Pacific region. Thus, RECI and the 2030 Agenda should be pursued in an integrated manner so as to maximize coherence and coordination among policies and reforms that are required for them to be successfully implemented. As the most comprehensive multilateral platform for promoting cooperation with the objective to achieve inclusive and sustainable economic and social development in Asia and the Pacific, ESCAP is committed to support its members for that purpose.

In line with the Sustainable Development Goals framework, to deepen RECI in the Asia-Pacific region potential social risks that may arise must be mitigated. These risks include, for example, health and employment concerns, trafficking of persons and illicit goods, and social dislocation resulting from loss of land and changing communities. Negative outcomes can be mitigated or avoided if a people-centred approach is used, especially by adhering to fundamental human rights principles and wide-ranging, multisectoral and multilateral consultations with affected stakeholders and communities.

The remainder of the report is organized as follows: Chapter 2 provides a succinct assessment of the state of RECI in Asia and the Pacific. The following chapters evaluate the progress, discuss challenges, and provide recommendations for the way forward in each of the four areas of RECI: market integration (Chapter 3), seamless connectivity (Chapter 4), financial cooperation (Chapter 5), and shared vulnerabilities (Chapter 6). Chapter 7 concludes and summarizes the main policy recommendations to enhance RECI in Asia and the Pacific

## ENDNOTES

<sup>1</sup> See ESCAP resolution 70/1.

## CHAPTER 2

# ASSESSING RECI – WHERE DOES ASIA AND THE PACIFIC STAND?

Regional economic cooperation and integration has two components: regional economic integration and regional economic cooperation. The first component is a process that facilitates shared prosperity through the freer flow of goods, services, capital and people between two or more countries, and includes steps taken to facilitate the coordination of policies and institutional arrangements across these countries. Complementing the first component, the second one aims at supporting development processes and strengthening countries' institutions through exchanges of information, technical assistance and capacity-building activities. Such institutional development is desirable in its own right, but it is also necessary for countries to be able to take better advantage of regional integration processes. In addition, RECI is a multidimensional concept that includes in addition to the integration of markets for goods, services, capital and labour, seamless infrastructure connectivity, financial cooperation, and economic and technical cooperation to address shared vulnerabilities and risks.

The Asia-Pacific region's approach to RECI has been pragmatic and flexible, following a gradual, incremental, multitrack, and multi-speed process; the implementation of RECI has been undertaken through a number of subregional organizations.<sup>1</sup> Among the

existing organizations, those covering North and North-East and South-East Asia, particularly, ASEAN and ASEAN plus Three (ASEAN+3), have been the most successful. In box 2.1, progress of ASEAN with regard to subregional cooperation is outlined. The region's approach to RECI has had many advantages, including avoiding a costly and restrictive bureaucracy and respecting countries' differing needs and sensitivities. Nevertheless, it has inadvertently led to many, often overlapping, bilateral and plurilateral arrangements in terms of membership or functional areas, which have been compounded by the lack of coordination and consultation among various regional and subregional programmes and initiatives. For instance, in the area of trade, the so-called "noodle bowl" of preferential trading arrangements has led to higher transaction costs because of lack of clarity on which agreements are most accommodative for exporters, particularly for small and medium enterprises (SMEs). Similarly, the plethora of infrastructure agreements and frameworks that have been finalized under various bilateral and subregional initiatives have increased regulatory burdens and transaction costs. Consequently, these initiatives run the risk of further slowing already uneven and fragmented RECI progress across subregions by increasing transaction costs for businesses and economies.

### Box 2.1: Association of Southeast Asian Nations

The Association of Southeast Asian Nations (ASEAN) is among the first successful regional collaborative initiatives. It was formed through a declaration in 1967 with five founding members: Indonesia, Thailand, Malaysia, the Philippines and Singapore. Membership was later expanded to include five more countries: Brunei Darussalam (1984), Viet Nam (1995), the Lao People's Democratic Republic and Myanmar (1997), and Cambodia (1999). ASEAN has a broad economic cooperation and integration agenda that cuts across virtually all functional areas, including trade and investment, infrastructure, money and finance, regional public goods and security. It is a formal organization of regional member countries and meets at the summit level. In recent years ASEAN has entered into even broader regional partnerships by affiliating with China, Japan and the Republic of Korea in connection with the ASEAN+3 heads of State forum.

What began as a modest initiative for economic and security cooperation has over time become one of the most successful experiments in the developing world, one based on the principles of openness and gradualism. The ASEAN Charter in 2008 through a simple five-article declaration, with the aim of creating an ASEAN Economic Community (AEC) as a single market by 2015. Under the charter a Committee of Permanent Representatives was also set up to guide and support the ASEAN secretariat, located in Jakarta. ASEAN has cooperation programmes in almost all fields, but in order to prepare for AEC in 2015, several important steps were taken, including preparation of a plan for ASEAN connectivity, acceleration of trade and other liberalization steps, and establishment of the ASEAN Infrastructure Funds with contributions from shareholders totalling close to \$500 million.



Using a composite measure of economic integration, table 2.1 shows that Africa is the only region that is less integrated than Asia and the Pacific.<sup>2</sup> RECI has not only developed in an uncoordinated manner in the Asia-Pacific region, it has also progressed unevenly across subregions. Table 2.1 illustrates the wide variation in integration across the Asia-Pacific subregions. East Asia is the most integrated (0.50) followed by South-East Asia (0.38), while Central Asia and South Asia (0.11) along with the Pacific (0.02) have the lowest levels of integration, both within the Asia-Pacific region and across all subregions measured. If Australia and New Zealand are included in the Pacific composite index, integration rises to 0.23 and the subregion becomes the third highest integrated subregion in the Asia-Pacific region. The scores disaggregated by component in the composite index reveal that integration is primarily driven by trade and investment and cross-border mobility (not by the monetary-financial dimension). Among the subregions, there is wide variation. East Asia ranks first in trade and investment, while the Pacific records the lowest value in trade. Both East Asia and South-East Asia have roughly the same levels of monetary and financial integration (0.22 and 0.21

respectively), while the other subregions have hardly integrated in this area – with the (implicit) exception of Australia and New Zealand. Mobility of people across borders is also highest in East Asia (slightly lower than in Western Europe), and lowest in the Pacific, but in this component, some subregions have considerably higher levels of integration.

Variations in economic integration across the subregions reflect differences in connectivity, which is often shaped by geographical characteristics (table 2.2). Given that 80 per cent of global merchandise trade is routed through sea, countries and subregions located near seaports and shipping lines disproportionately benefit from potentially higher regional economic integration. In Asia and the Pacific, East Asia is the most sea-linked subregion, while adverse geography has dragged down both regional and global integration in Central Asia and the Pacific. Improvements in air connectivity can supplement sea-links, especially with regard to movement of time-sensitive, low-weight, high-value merchandise. In addition to this, enhanced air connectivity can better facilitate the movement of people – for tourism, business and migration.

TABLE 2.1: Regional integration across major regions in the world

Regions	Composite Regional Integration Index	Trade and investment	Monetary and financial	Cross-border mobility
Asia-Pacific	0.28	0.26	0.15	0.42
Europe	0.41	0.46	0.35	0.43
Americas	0.31	0.32	0.13	0.48
Africa	0.17	0.07	0.01	0.42
Subregions				
Western Europe	0.89	1.00	1.00	0.68
North America	0.62	0.65	0.31	0.90
South America	0.27	0.28	0.06	0.46
Western Africa	0.25	0.12	0.01	0.60
East Asia	0.50	0.68	0.22	0.62
South-East Asia	0.38	0.42	0.21	0.50
South Asia	0.11	0.08	0.01	0.24
Central Asia	0.11	0.09	0.01	0.23
The Pacific	0.02	0.04	0.01	0.02
Pacific and Oceania	0.23	0.12	0.09	0.47

Source: Madhur (2016), based on Naeher (2015).

*Note:* East Asia here includes: China; Japan; Mongolia; Republic of Korea; Hong Kong, China; Macau, China; and Taiwan, Province of China. South-East Asia excludes Timor-Leste; Central Asia includes: Armenia; Azerbaijan; Georgia; Kazakhstan; Kyrgyzstan; Tajikistan; Turkmenistan; Uzbekistan. South Asia includes: Afghanistan; Bangladesh; Bhutan; India; Maldives; Nepal; Pakistan; and Sri Lanka. The Pacific includes: Fiji; Kiribati; Marshall Islands; Federated States of Micronesia; Nauru; Palau; Papua New Guinea; Samoa; Solomon Islands; Timor-Leste; Tonga; Tuvalu; Vanuatu; and Cook Island. The Pacific and Oceania includes the addition of Australia and New Zealand to this group.

In conjunction with geographical barriers and connectivity, the policies that countries implement can play an important role. For example, policies can be set to exploit favourable geographical locations or mitigate less advantageous geographical features. To illustrate this, four composite indices have been selected to assess the role of national policies for regional and subregional integration (table 2.3). The first three measures, the Enabling Trade Index, the Services Trade Restrictiveness Index, and the Logistics Performance Index, reflect a country or subregion's policy openness "at-the-border". The fourth measure, the Ease of Doing Business Index, reflects openness to trade and conducting business "behind-the-border". As table 2.3 shows, East Asia and South-East Asia have the most enabling policy environment, while lacklustre pursuit of outward-oriented policies has held back South Asia from achieving significant integration outcomes. Despite relatively open external economic policies, integration in Central Asia and the Pacific has, been significantly hindered by geography.

As this section has shown, integration is the outcome of a combination between geographical characteristics such as having access to sea routes and connectivity, such as air or maritime traffic, and the regulatory environment, such as trade openness. Each country has a different combination. In principle, some may have more desirable combinations, for example, with regard to location or country size. However, that does not mean policymaking has no room to manoeuvre. On the contrary; as the geographical dimension is exogenous, a suboptimal endowment in that area stresses the importance of taking action in the others. To do so, it is necessary to keep in mind that specific policies may disproportionately favour integration in specific dimensions, for example, a better performance in the logistics index would be more relevant for trade in goods than for financial integration. To gain a deep understanding of countries' experiences with RECI policies and their corresponding results, cooperation among countries is particularly useful. In this vein, the next section summarizes lessons learned from RECI organizations.

TABLE 2.2: National policies and regional economic integration

Subregion	Enabling Trade Index 2014	Logistics Performance Index (2014)	Service Trade Restrictiveness Index (overall)	Doing Business Index (2015)
East Asia	4.4	3.6	35.0	64.6
South-East Asia	4.1	3.1	48.1	61.8
South Asia	3.6	3.0	58.7	53.6
Central Asia	3.9	2.5	19.4	59.6
The Pacific	..	..	..	56.4
Pacific and Oceania	4.9	3.8	18.7	74.5

Source: ESCAP, based on Madhur (2016), UNCTAD (2017), World Bank (2017a,b,c).

Note: Data weighted by country populations to arrive at groups indices. Regional averages do not cover all countries given limitation of data availability.

TABLE 2.3: Geography and connectivity

Subregion	Liner Shipping Connectivity Index (2016)	Air Connectivity Index (2007)
East and North Asia	158.6	9
South-East Asia	35.1	3.1
South and South West Asia	41.7	2.8
North and Central Asia	41.7	3.2
The Pacific	7.3	4.6
Pacific and Oceania	23.4	2.0

Source: ESCAP based on Madhur (2016), UNCTAD (2017), World Bank (2017b), Arvis and Shepherd (2011).

Note: Data weighted by country populations and then added by subregion. Not all countries due to lack of data.

## Broad insights from existing regional economic cooperation and integration initiatives in Asia and the Pacific

Reflecting upon the experiences of existing RECI organizations is key to furthering progress in the implementation of implementation, at the subregional and regional levels. The insights gained from such an exercise will prove critical to effectively harnessing the potential benefits of RECI for the 2030 Agenda. Recognizing this, the following section provides a broad set of insights and recommendations that are based on an analysis of the experiences of existing RECI organizations.

*The progress and sustainability of RECI initiatives have been difficult to predict and guarantee.* Subregional RECI initiatives in the Asia-Pacific region, and in other parts of the world, have progressed in different phases and waves over the last several decades, influenced by, among other factors, changing ideas and attitudes towards globalization. Implementation of trade and investment liberalization measures in several economies of the region since the 1980s has led to unprecedented economic growth and a significant reduction in extreme poverty. However, as progress in poverty reduction has slowed and inequalities have risen, trade protectionist sentiments across the globe have grown. Nevertheless, regional cooperation and integration remain critical for dealing with the complex environmental, economic and social challenges our societies face today. In the Asia-Pacific region, these challenges include, among others, demographic shifts, an expanding middle class and rapid urbanization. Explicitly linking RECI with the 2030 Agenda for Sustainable Development would enable the Asia-Pacific region to rearticulate the benefits of economic integration and cooperation. It would also lead to the introduction of credible policy measures to address the concerns of vulnerable groups and countries.

*The existence of overlapping organizations has been costly in terms of political, human, and financial resources.* The establishment of multiple, overlapping arrangements has not only resulted in higher transaction costs for businesses, but it has also placed a heavy burden on government agencies entrusted with managing them. The diversion of scarce technical and governance resources for that purpose has been particularly problematic for small and low-income developing countries. Moving forward on RECI requires a gradual streamlining and consolidation of overlapping and inconsistent agreements related to trade, investment and transport. The overarching goal should be the establishment of a set of homogeneous

regulatory frameworks that encompasses all countries in the region in these sectors.

*Failure to delegate has led to suboptimal outcomes.* Governments in the Asia-Pacific region have been reluctant to delegate decision-making powers to regional or subregional intergovernmental bodies. While this approach offers some benefits, in terms of autonomy and flexibility, a decision-making process built entirely on consensus is time-consuming and costly. This decision-making environment has contributed to the suboptimal proliferation of bilateral solutions mentioned above. It has also made the vision and objectives of RECI rest disproportionately on the political leadership of the participating countries. Thus, changes in political leadership have often resulted in setbacks in cooperation and integration processes as priorities have changed. To accelerate progress in RECI, and especially to rearticulate it as a key tool for the attainment of the Sustainable Development Goals, further reflection and discussion are required on how to strike the right balance between consensus-based intergovernmental processes and delegated decision-making to regional secretariats or intergovernmental bodies.

*Ownership remains weak.* A stronger political will and vision is needed. The success of RECI at the region-wide level requires a long-term vision, strong political will and collective ownership, all of which should be backed by generous financial resources. For that purpose, it is important that RECI initiatives are integrated into national development agendas and that they receive wide governmental support beyond specific line ministries. Furthermore, the development of successful national coalitions for RECI also requires broad-based support from communities, businesses, civil society organizations, academics, and think tanks.

*Project preparation and coordination remains weak.* Maximizing synergies between RECI and the 2030 Agenda requires the strengthening of investments in infrastructure, such as energy, transport, and ICT, and ample financial and technical resources for the preparation of projects, plans, programmes and implementation strategies. However, the availability of such resources, especially in the public sector, is limited in most economies. In addition, leveraging the synergies between RECI and the 2030 Agenda requires that projects with potentially the most favourable economic, social and environmental impacts at the regional level are prioritized for implementation.

The evaluation of such projects, some of which could encompass more than one sector, is a complex task. As the overall complexity of regional infrastructure projects is exponentially greater than national projects, effective partnerships that include governments, international financial institutions, pertinent regional and international organizations and various national stakeholders must be forged.

*Integrated approaches to infrastructure development are currently nonexistent.* There are synergies waiting to be explored in regional infrastructure projects. For example, transmission lines for the power sector, ICT networks and transport corridors can be planned in an integrated way so as to improve overall connectivity and trade facilitation in the most efficient and optimum manner. Regional projects continue, however, to be prepared within sector frameworks, thus limiting their cross-sectoral impacts. Therefore, infrastructure project development needs to not only be cross-sectoral, but it also must take into account economic, social and environmental factors

*The gains from RECI need to be fairly distributed.* To effectively harness RECI as an important means of implementation of the 2030 Agenda requires that countries are not only aware of the mutual gains associated with RECI, but that costs and benefits among the countries involved in RECI initiatives are distributed fairly.

In conclusion, regional cooperation and integration will deliver the most benefits to the region if the above-mentioned challenges are overcome. Moreover, coordinated efforts to develop and harmonize policy actions are needed. In particular, policy action must prioritize the following four areas: (a) the creation of an integrated Asian and Pacific market for goods, services, capital and labour; (b) the development of seamless infrastructure connectivity; (c) the promotion of financial cooperation; and (d) mutual cooperation on transboundary vulnerabilities and risks. To better facilitate action in these areas, the following chapters provide a detailed analysis of the most recent trends and outline the proposed future policy agenda in each of these respective areas.

## ENDNOTES

<sup>1</sup> See annex I for an overview of existing RECI initiatives and arrangements in the Asia-Pacific region.

<sup>2</sup> The composite measure was constructed using the following variables: trade and investment; monetary and financial integration; and cross-border mobility of people. For a full definition of the index and explanation of the indices please see Naeher (2015).

## CHAPTER 3

# REMOVING OBSTACLES TO GREATER MARKET INTEGRATION

As outlined in the previous chapter, integration among countries is the outcome of a combination of economic and geographical characteristics, connectivity, and the regulatory environment. To boost integration, cooperation is vital. In order to gain a deeper understanding of policy measures that promote integration, and preclude those that hamper it, this chapter contains analyses of the main dimensions of integration.

Generally, integration is understood to be the process of evolving towards less fragmented production and/or consumption space. It implies easier mobility of factors of production, such as capital and labour, and freer movement of the outputs of production (goods and services). Market integration favours efficiency. It tends to be associated with less room for information asymmetries or price differentials. It is also inclined towards the dissemination of specific technologies. Under market-led mechanisms for price determination, market integration leads to price convergence for goods, services and factors of production. However, the limit of such convergence in market economies with free competition is determined by structural (and geographic) differences, such as transport or other transaction costs. Broadly, market integration can be enhanced by the harmonization, coordination or mutual recognition of policies, rules and regulations.

Historically, integration has been higher among neighbouring countries. Advances in technology and reductions in transport and transaction costs, have allowed for the expansion of the geographical scope of integration. In the past few decades, almost all the economies of the region have globalized to varying degrees and, as a consequence, the economies in Asia and the Pacific are increasingly connected through trade and investment. In that regard, RECI and other cooperation and integration initiatives can help further increase trade and cross-country flows of foreign direct investment (FDI). For instance, the Eurasia and the Belt and Road initiatives can facilitate access to global and regional value chains, leading to more trade, and the channelling of the (high) savings in the region to countries with investment opportunities that offer higher returns.

The resulting additional opportunities for employment and income generation from enhancing

trade and investment flows suggests that RECI has great potential to contribute towards the achievement of the Sustainable Development Goals. However, the impact of RECI on sustainable development also depends on the type of trade and investment that is nurtured, for example, integration can also make it easier to trade prohibited goods or raise the volume of illegal financial flows. To the extent possible, RECI – as a force behind market integration – should focus on enabling access to regional value chains so that all countries, especially those with special needs, can benefit from the region's vibrant economy. More opportunities, along with convergence of regulatory frameworks, would reduce the potential for undesired manifestations emanating from RECI.

This chapter contains a discussion on the trends associated with integration in the Asia-Pacific region, and an analysis of their driving factors and possible obstacles, and provides key policy recommendations for addressing those obstacles.

### Liberalizing and facilitating trade towards market integration for goods and services

Development in Asia and the Pacific has been largely based on trade-led growth, which has offered strong support to regional economies – both in terms of economic activity and job generation. As the largest trading region in the world, Asia and the Pacific accounted for 38 per cent of global exports and 35 per cent of global imports in 2015 compared to 7.8 and 7.2 per cent in 1970, respectively. The East and North-East Asia subregion has historically propelled the region's trade performance, accounting for more than 60 per cent of total Asia-Pacific trade with the rest of the world. Despite slowing growth in recent years, China has remained the main force behind the dominant position of East and North-East Asia in regional trade. In 2015 China accounted for 53.7 per cent of the subregion's exports and 48.1 per cent of the subregion's imports.

The rising dynamism of the Asia-Pacific region's developing countries combined with the integration of the region's economies into global value chains is the driving force behind the growing importance of the region in international trade. Such factors, as productivity growth, relatively low wages and

availability of a large and diverse labour force in the region's economies, ample investment resources and advanced technological capabilities have supported integration of the Asia-Pacific region into global value chains.. In addition to this, lower trade barriers and improved transport and ICT connectivity have reinforced entry into the global value chains and enabled the creation of the regional value chains and production networks.

The participation of the region's economies in global value chains and regional production networks has boosted intraregional trade, which now represents more than half of the region's total trade. However, the intensity of intraregional trade varies across subregions, with the highest levels in South-East Asia and the Pacific (which includes Australia and New Zealand) (table 3.1). The high intraregional trade intensity of South-East Asian economies reflects their participation in regional value chains and the benefits of ASEAN. In contrast, given their geographical characteristics, economies in the Pacific are interconnected through Australia and New Zealand, and depend heavily on their preferential access to those markets. East and North-East Asia is the most important subregional trading partner for the other subregions of Asia and the Pacific, mainly because

of the prominence of China. South-East Asia is the second most important source of imports for the other subregions except North and Central Asia. In South and South-West Asia and North and Central Asia, there is limited intra-subregional trade, mainly because of limited complementarity of exports and relatively high trade costs.

The Asian and Pacific economies have become important exporters of global value chain products, whereas final demand for such products still largely comes from North America and Europe. However, the slow recovery in demand for such products in these developed markets has recently led to unprecedented weak trade growth for the Asian and Pacific economies. To offset this trend, the economies of Asia and the Pacific must develop alternative sources of growth by, for example, boosting domestic and regional demand. However, this is challenging for economically small countries and countries lacking large budgets to fuel government spending.

With regard to trade in commercial services, it should be noted that although the region remains a net importer, its share in global services trade continues to grow, with its share in global imports increasing from 29.5 to just below 33.0 per cent, and global exports

TABLE 3.1: Intraregional trade in the Asia-Pacific region

Subregion	Intraregional merchandise imports		Intraregional merchandise exports	
	As % of GDP	As % of total imports	As % of GDP	As % of total exports
East and North-East Asia				
1990	6.7	50.3	6.1	42.3
2000	7.9	53.8	7.3	44.3
2015	9.6	58.4	11.9	55.5
North and Central Asia				
1990	2.3	21.4	3.3	22.1
2000	4.4	30.3	8	21
2015	7.9	48.9	8.9	36.5
The Pacific				
1990	5.8	41.7	7.4	54.4
2000	8.7	48.4	10.3	60.6
2015	11.6	62.2	12.5	75.4
South and South-West Asia				
1990	3.6	33.3	2.4	29.5
2000	4.8	31.9	2.9	23.8
2015	9.7	44.3	4.2	29.5
South-East Asia				
1990	28.7	60.8	27.3	65.6
2000	37.1	61.7	41.5	59.6
2015	34.6	72.6	32.9	68.6

Source: ESCAP (2016c); IMF (2017).

Note: Intraregional is defined as imports or exports flows from or to the Asia-Pacific region.



increasing from 25.5 to 30.0 per cent from 2005 to 2015. Commercial services trade is largely supported by communications, construction, insurance, financial services, computer and information, royalties and licence fees, and cultural and recreational services. Transportation and travel follow with closely competing shares. While East and North-East Asia and South-East Asia are the region's major contributors to services trade, the share of South and South-West Asia is growing rapidly. At the country level, China, Japan, India and Singapore account for more than half of the region's services trade.

Regulatory obstacles can strongly affect services trade, which plays a key role in facilitating industrial and agricultural trade and countries' participation in value chains. While economies in the region have increased their participation in global services trade, based on incomplete data available, intraregional trade in services still lags behind intraregional trade in goods.

Regional and global trade patterns are strongly influenced by trade costs. Such costs include import tariffs, non-tariff or behind-the-border barriers, regulatory and procedural border burdens, and transport costs. Non-tariff measures are believed to pose a greater impediment to trade and be the cause of higher trade costs than tariffs – the traditional barriers to trade – in many sectors. The agricultural and food sectors are the most notably effected by such measures. This is particularly disadvantageous to developing countries, which typically have

comparative advantages in those sectors. Even small additional costs arising from import barriers, such as non-tariff measures, can harm the competitiveness of countries and their ability to participate in global value chains. However, measuring the exact magnitude of the impact of non-tariff measures on trade is highly complex, as these measures are heterogeneous and are often presented as a package of measures rather than a single measure, making cost comparison difficult. While it is critical that efforts are made to deal with non-tariff measure-based protectionism, more emphasis must be applied towards improving data availability on the impact and prevalence of non-tariff measures.

Nevertheless, the ESCAP-World Bank Trade Cost Database attempts to capture some of these broader issues, offering aggregate measures of trade costs. It points to a high variation of trade costs among Asia and the Pacific countries and subregions, with tariff-equivalent costs ranging from 51 per cent to as much as 368 per cent (table 3.2), which makes trade integration opportunities very uneven. As table 3.2 indicates, East and North-East Asian economies typically have the lowest trade costs in the region, while the Pacific island developing economies have the highest overall costs because of geographical constraints. Similarly, North and Central Asian economies trade costs are about three times higher than those of a sample of representative East Asian economies despite significant progress made in reducing trade costs since 1996.

TABLE 3.2: Estimates of tariff-equivalent costs of trade in Asia and the Pacific

Region	ASEAN-4	East Asia-3	North and Central Asia	Pacific Islands	SAARC-4	AUS_NZL	EU-3
ASEAN-4	76						
East Asia-3	75	51					
North and Central Asia	351	177	121				
Pacific Islands	175	174	368	133			
SAARC-4	128	125	282	317	114		
AUS_NZL	101	89	338	73	142	54	
EU-3	108	85	152	211	114	109	43
USA	85	63	180	163	109	100	67

Source: ESCAP based on Asia-Pacific Research and Training Network on Trade (2016).

Note: ASEAN-4=Indonesia, Malaysia, the Philippines and Thailand; AUS-NLZ = Australia and New Zealand; East Asia-3=China, Japan and the Republic of Korea; EU-3=Germany, France and the United Kingdom; Pacific islands=Fiji and Papua New Guinea; North and Central Asia-4=Georgia, Kazakhstan, Kyrgyzstan and the Russian Federation; and SAARC-4=Bangladesh, India, Pakistan and Sri Lanka. \*Trade costs shown are tariff equivalents calculated as trade weighted average trade costs of countries in each subregion with the three largest developed economies (Germany, Japan and the United States of America).

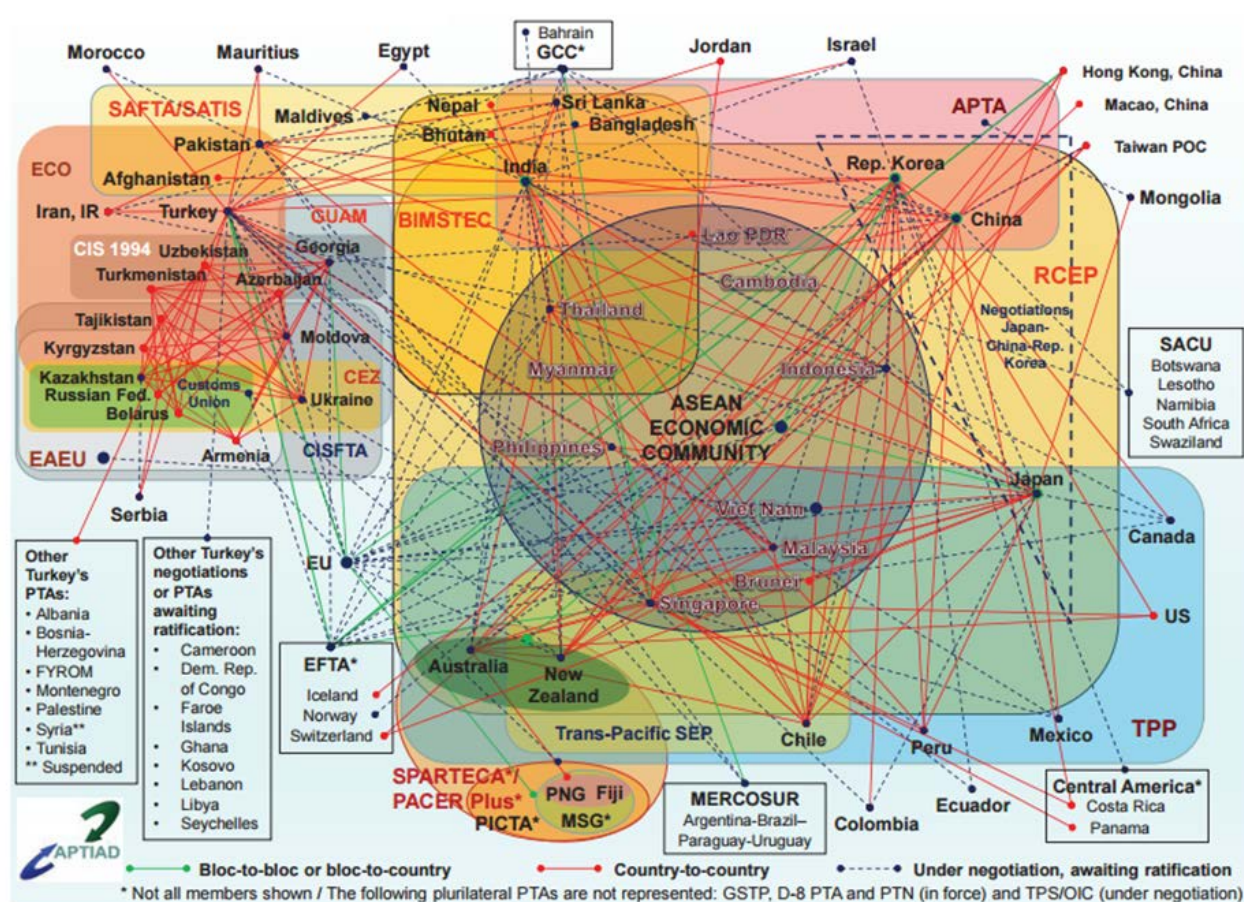
A number of steps and policies have been taken to reduce trade costs, with the Asian and Pacific economies increasingly using bilateral and plurilateral preferential trade agreements over the past two decades. As of 2016 the Asian and Pacific economies were involved in 169, or 63 per cent, of the total 267 preferential trade agreements in force globally at that time.

Overreliance on preferential trade agreements has led to a multiplicity of overlapping preferential trade agreements, which is often referred to as “Asia’s Noodle Bowl” (figure 3.1). While each individual agreement on its own may be reducing tariffs with the objective to improve market access for its partners, the large number of overlapping and multiple agreements associated with different trade rules may end up increasing transaction costs for businesses, especially for SMEs. Hence, consolidation of preferential trade agreements to reduce their number and complexity would be beneficial

for private sector entities engaging in international commerce.

As high trade costs act as an obstacle to trade expansion, governments in the region are increasingly considering facilitation and paperless trade to complement and strengthen access to markets opened through preferential trade agreement--driven trade liberalization. Region-wide implementation of cross-border paperless trade could bring export gains of as much as \$257 billion annually, reduce the time required to export by 44 per cent and cut trade costs by 31 per cent.<sup>1</sup> Similarly, the full implementation of the WTO Trade Facilitation Agreement, which came into force on 22 February 2017, could reduce trade costs in the region by up to 17 per cent. Nevertheless, as figure 3.2 reveals, significant progress in the implementation of the agreement and electronic trade document exchange mechanisms has only been made in East and North-East Asia and South East Asia, with the other subregions considerably lagging behind.

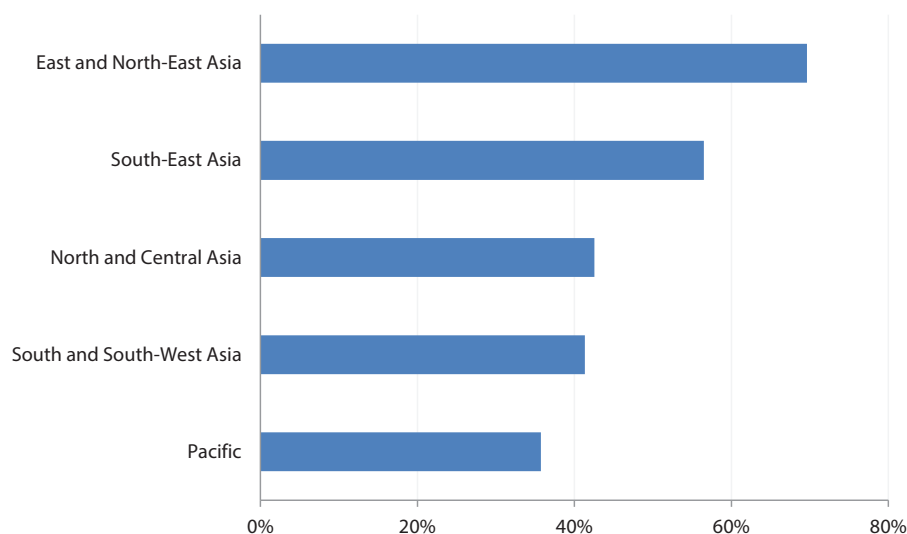
FIGURE 3.1: Asia’s noodle bowl



Source: ESCAP (2016c).

Note: The United States withdrew from the Trans-Pacific Partnership in January 2017.

FIGURE 3.2: Implementation of trade facilitation and paperless trade measures



Source: United Nations, Joint United Nations Regional Commissions (2015).

Recognizing this, ESCAP has supported the development of the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific with the objective to provide the region with a new tool and “digital” complement for better implementation of the WTO Trade Facilitation Agreement. Open for signature since October 2016, the Framework Agreement also supports the development of cross-border e-commerce and builds upon existing international standards and bilateral and subregional initiatives.<sup>2</sup>

At the same time that the region has witnessed a proliferation of preferential trade agreements, Asia-Pacific countries have also been involved in negotiating economic or comprehensive partnership agreements, such as the Trans-Pacific Partnership and the Regional Comprehensive Economic Partnership, which include commitments to liberalize investment, competition policy and/or government procurement. These types of megaregional agreements offer great potential in harmonizing trade rules among large groups of countries and consolidate multiple overlapping rules of origin under different trade agreements. They also expose the complexities of plurilateralism, which do not necessarily provide the best avenue to meet the development aspirations small developing economies would like to pursue through trade.

In summary, trade of goods, and to certain degree of commercial services, has contributed greatly to

growth in the Asia-Pacific region through access to global value chains, which has significantly supported intraregional trade. The risk is, however, that the proliferation of trade agreements with complex trade rules may not be enabling trade, especially with regard to investment flows, as discussed in the next section. Similarly, renewed protectionist measures can prevent the most vulnerable countries of the region from benefiting from the same opportunity of boosting their economies on the back of trade. To tackle these risks, efforts may be put in further facilitating trade, by, for example, instituting paperless trade and streamlining the noodle bowl.

### Foreign direct investment and regional investment regimes

The Asia-Pacific region has become a major destination and source of investment flows, which has served to further boost regional integration. Inflows and outflows of foreign direct investment from and to the region have steadily increased, despite some dips emanating from global shocks (figure 3.3). In 2015, the region received 32 per cent, or \$559 billion, of the total global FDI inflows and was responsible for 30 per cent, or \$435 billion, of global FDI outflows. Within the region, East and North-East Asia has been the major source of both inward and outward FDI growth.

Two patterns can be identified with regard to the composition of FDI in recent years. First, the region experienced a significant increase in greenfield FDI inflows to high value-added industries in the manufacturing and service sectors over the last decade, although the size of these inflows was small. The sectors in which the inflows were directed included alternative/renewable energy, communications, business services, health care and biotechnology, although the size of these FDI inflow remained small. These industries have also received much more stable greenfield FDI inflows when compared with top industries, such as coal/oil/natural gas, real estate, metals and financial services.

Second, South-South FDI flows have increased considerably in recent years. They have tended to have been directed towards the immediate geographic region of the source country.<sup>3</sup> Illustrating the prominence South-South FDI has gained within the region's economies, the share of intraregional greenfield FDI inflows in total greenfield FDI inflows to the Asia-Pacific region has continuously increased, accounting for 48 per cent in 2016. China has become the biggest intraregional investor in the region followed by Japan and the Republic of Korea, each respectively accounting for 24, 18 and 12 per cent of intraregional greenfield FDI investments over the period 2014–2016; while China and ASEAN have become the most attractive destinations for intraregional greenfield FDI (figure 3.4).

Despite steady and strong FDI growth in the Asia-Pacific region since 2000, a number of direct and indirect obstacles still hinder increased intraregional

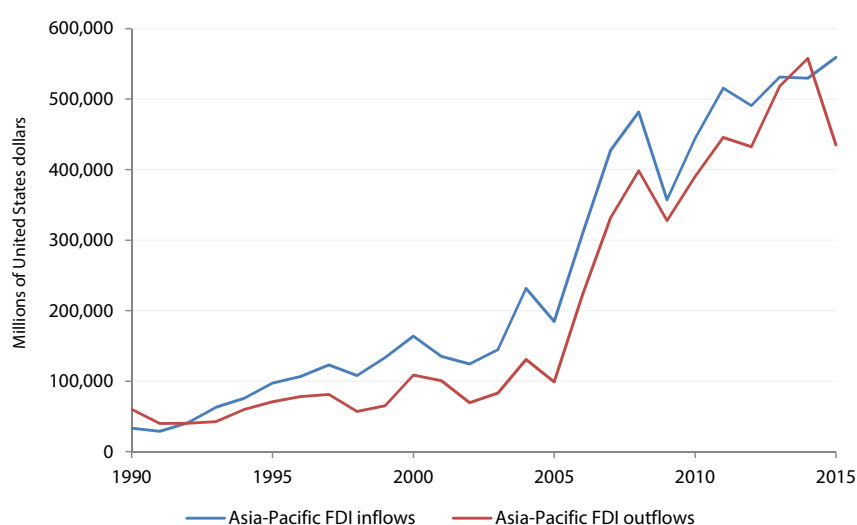
FDI and regional integration. Among these challenges are multiple and overlapping international investment agreements), poor business environments and barriers to trade.

Because, there is no global governance mechanism, such as a coherent multilateral investment framework, investment promotion and protection has been undertaken primarily through international investment agreements, either in the form of bilateral or subregional investment treaties or as investment chapters in bilateral or regional trade agreements.<sup>4</sup> As in trade, a proliferation in international investment agreements in recent years has resulted in overlapping and duplication among the treaties in a number of areas. Thus, there is need to consolidate and streamline these agreements in order to improve transparency and clarity in international investment rules and thereby help boost regional integration.

South-East Asia is the only subregion with a subregional level investment agreement, namely the ASEAN Comprehensive Investment Agreement. However, even under the agreement, individual ASEAN members continue to maintain national investment laws and bilateral investment treaties with each other and with external partners. Consequently, by adding to existing treaty layers, the agreement could lead to an even more complex network of international obligations.<sup>5</sup>

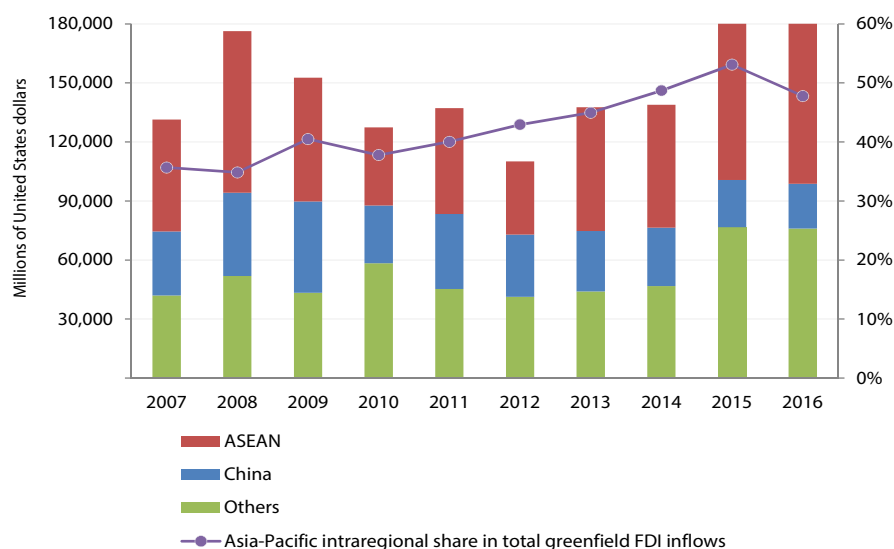
Attempts to establish common investment regimes in other subregions, such as South Asia through SAARC and Central Asia through the Eurasian Economic Union,

FIGURE 3.3: Foreign direct investment inflows to and outflows from the Asia-Pacific region, 1990–2015



Source: ESCAP calculation based on UNCTAD (2016).

FIGURE 3.4: Intraregional greenfield foreign direct investment inflows in the Asia-Pacific region and their share in total greenfield foreign direct investment inflows, and major estimations, 2007-2016



Source: ESCAP, based on Financial Times (2017).

are ongoing but face political obstacles. In particular, as FDI involves the presence of foreigners who own local assets and operate in local markets in direct competition with domestic companies, policies to promote and attract FDI are often politically sensitive and face opposition, leading to the backtracking or delay of much-needed economic reforms.<sup>6</sup>

The lack of an effective investment and business climate in many economies of the region has also hindered intraregional FDI.<sup>7</sup> Although improvements have been made in most countries in terms of FDI liberalization, a number of obstacles remain, including excessive red tape; lack of effective investment facilitation and aftercare, in particular at the local government level; absence of required labour skills, infrastructure and technological capabilities for more advanced forms of FDI; and corruption and other obstacles related to ineffective law enforcement.<sup>8,9</sup> This explains the need for many investor home countries to seek international investment agreements with host countries that emphasize investor protection. Recently, however, calls have grown for more balanced international investment agreements that also recognize host country development needs and the right of governments to regulate for development purposes.<sup>10</sup>

Finally, FDI is linked to the establishment and development of global and regional value chains, which have been instrumental in enhancing market integration

in the region, particularly in East Asia and South-East Asia.<sup>11</sup> Thus, obstacles to effective cross-border trade, including the lack of effective trade facilitation, are also obstacles to FDI.

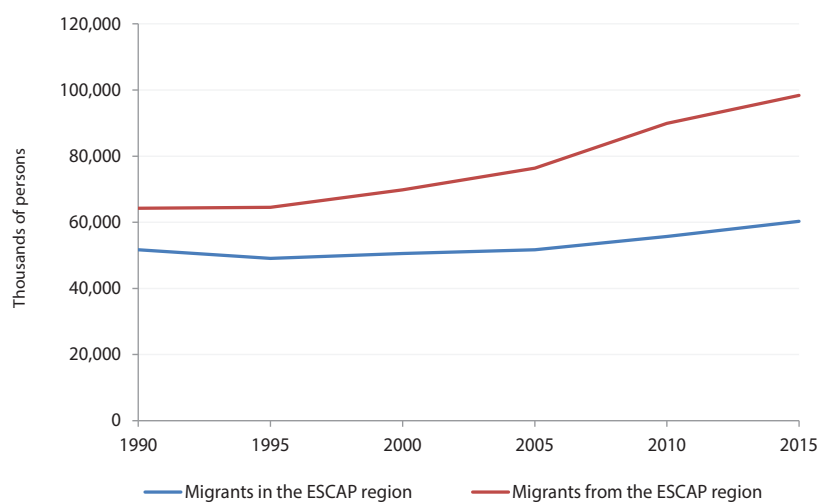
### Cross-border mobility of labour

Labour market integration remains much lower than levels of integration for intraregional trade and investment. The region has a large population of migrants from labour-surplus countries, the majority of whom find jobs in construction and domestic work. Of the estimated 231.5 million migrants in the world in 2013, about 59.3 million were in countries in the Asia-Pacific region (25.6 per cent). This represents a notable increase of 7 million (11.8 per cent) from a comparable figure in 1990 (figure 3.5).

Major countries involved in migration of labour in the region are Australia, Brunei Darussalam, China, India, the Islamic Republic of Iran, Japan, Kazakhstan, Malaysia, Pakistan, the Republic of Korea, the Russian Federation, Singapore and Thailand, some of which have experienced important structural transformations over the last few decades (figure 3.6). For instance, the foreign worker population of Singapore rose from 21,000 in 1970 (3 per cent of the workforce) to more than one million (35 per cent) in 2010.

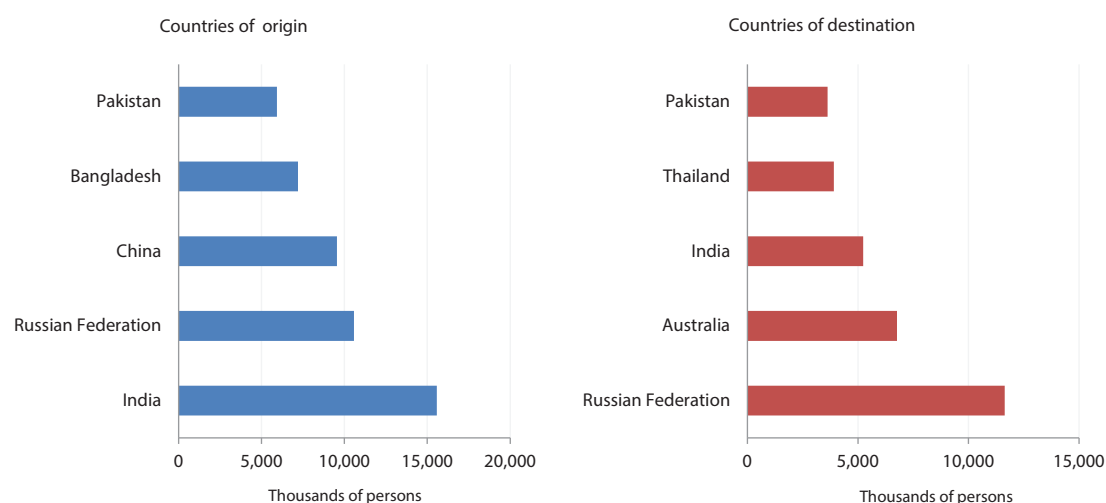


FIGURE 3.5: Evolution of migration in Asia and the Pacific, 1990-2015



Source: Asia-Pacific RCM Thematic Working Group on International Migration including Human Trafficking (2015).

FIGURE 3.6: Main countries of migration, origin and destination, 2015



Source: Asia-Pacific RCM Thematic Working Group on International Migration including Human Trafficking (2015).

Remittances have been the main benefit of labour migration, as they provide much-needed resources for origin countries to finance current account deficits, smooth households' consumption, alleviate poverty and catalyse investment in SMEs. Asia and the Pacific hosts some of the most important remittance corridors in the world, from the Russian Federation to Central Asian countries, from Australia and New Zealand to their Pacific neighbours, and from Thailand to other South-East Asian countries. Similarly, several economies in the region, such as Bangladesh, India, Pakistan and the Philippines, receive large remittances through the

migration of members of their labour force, mostly low-skilled workers, to countries in the Middle East, such as Saudi Arabia and the United Arab Emirates.

International migration has the potential to yield a net benefit to migrants and their families, as well as to countries of origin and destination countries. However, harnessing these benefits require concerted efforts and cooperation initiatives among and between countries in the Asia-Pacific region aimed at addressing political, technical, and socially embedded perceptions of migrants.



Politically, cross-border mobility of labour touches on a core aspect of State sovereignty, namely the right of States to choose who is allowed to enter or reside in their territory. Moreover, migration is often seen as a threat to a country's national security and cultural identity. For these reasons, countries are hesitant to sign international conventions on the protection of migrant workers, and are reluctant to enter any agreement that may be interpreted as a commitment to opening their borders.

In recent years, there have been some positive policy improvements related to labour market integration. Notably, the Treaty on the Eurasian Economic Union led to the creation of a single labour market through the right to access employment and social protection systems, which rationalized and regularized long-standing labour migration flows between the countries involved.<sup>12</sup> Similarly, the ASEAN Economic Community has liberalized mobility of selected classes of skilled workers through mutual recognition of degrees in specific professions. Most migrants, however, have low skills, so only a small share of the migrants in ASEAN member countries have been affected by this policy. Furthermore, labour migration in ASEAN remains largely irregular, which limits the impact of this policy.

A key obstacle to migration is that the mechanisms to promote orderly migration existing in many countries do not favour an easy matching between demand and supply of migrant labour. When vacancies for migrant labour in destination countries cannot be filled because of legal restrictions to migration, the likely outcome is irregular migration. This type of migration can occur without crossing a border illegally. Migrants may hold an irregular status because (a) they entered a country without authorization, (b) they entered legally but are staying or working without authorization, or (c) they entered a country and were authorized to work, but their employment violates regulations, such as those concerning the employer, the duration or type of work, or the hours worked.<sup>13</sup>

Irregular migration is problematic on a number of accounts, as it entails a high risk of exploitation and abuse of migrant workers, who face multiple vulnerabilities at the workplace. Thus, migrants are often not treated in the same way as local workers with regard to remuneration and labour standards.

When countries understand and allow labour migration as part of their national policies, migrant workers can be fairly treated and contribute to host country development processes, for instance by

spurring technology transfer and innovation. To take advantage of such positive spillover effects, inclusive regulatory frameworks need to be in place. For example, in the Republic of Korea, the Employment Permit System ensures that migrant workers are covered under Korean Labor Law, including those pertaining to working hours and minimum wage. Migrant workers recruited under the Employment Permit System enjoy all basic labour rights, including the right to join trade unions, freedom from forced labour, freedom to bargain collectively and non-discriminatory treatment.

In addition to the political challenges, labour market integration involves significant technical adjustments across a wide range of policy areas. For example, differences in educational systems make it difficult to certify that migrant workers have the required qualifications for specific jobs. Similarly, ensuring that migrant workers are able to pay into social protection systems and enjoy the benefits of those systems, particularly with regard to acquired rights, such as pensions, technical cooperation and agreements on such issues is required between countries that may have very different systems.

Finally, public perceptions of migrants, especially low-skilled migrants, are often negative. This is typically driven, by, for example, press coverage that tends to highlight issues of illegality, both with regard to migrants' status and to illegal acts carried out by migrants, and by debates that focus on the perceived negative economic effects of migration, such as migrants "taking" jobs from national workers. Even if this is not the case and low-skilled migrants generally complement national workers and add value to national economies, negative perceptions of migrants tend to prevent governments of key destination countries from discussing opening labour markets to migrant workers.

## Recommendations

*Understanding and curtailling protectionism.* Much better measurement of the level and an assessment of the impact of non-tariff and behind-the-border regulatory measures are necessary in order to more effectively deal with what is recorded as rising trade costs, especially for smaller and vulnerable countries and traders. Current assessment estimates that the tariff equivalents of these non-tariff measures range between 50 and 350 per cent across the region's economies. To effectively deal with these obstacles to market access, ESCAP can assist countries to prioritize the areas for cooperation to better manage non-tariff

measures. For example, mutual recognition agreements and conformity assessment procedures, harmonization of standards in selected sectors, such as agriculture and processed food, green goods, textiles and certain sectors in services, such as education and health may serve as effective instruments for broader region-wide cooperation. In this regard, work on better measurement, impact assessment and ultimately streamlining and potentially harmonizing, where appropriate, non-tariff measures would support trade and investment liberalization for developing and countries with special needs.

*Consolidating trade agreements.* Contrary to their intention to improve market access, multiple preferential trade agreements and complexities arising from compliance with the rules of origin they impose for using the tariff preferences often form impediments to producers and traders. Furthermore, they can divert trade away from the economies not involved in the trade agreements. ESCAP needs to advocate moving towards the adoption of a simpler but more development-friendly framework of rules of origin, which could be exemplified by a re-energized and expanded Asia-Pacific Trade Agreement.

*Promoting trade facilitation and paperless trade.* ESCAP has long been actively involved in the simplification of trade procedures. Recently, following four years of consultations and negotiations, ESCAP member States adopted the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific. The first of its kind, the new regional United Nations treaty is complementary to the WTO Trade Facilitation Agreement and builds on the growing number of bilateral and subregional initiatives in this area. It has been open to all ESCAP member States since the end of 2016 and will enter into force after five member States have ratified it. The implementation of this Agreement has the potential to cut intraregional trade costs and enable countries to reap the benefits associated with cross-border paperless trade, estimated to be as high as \$257 billion in increased exports opportunities.

*Better utilizing existing regional platforms.* Regional platforms, such as the ESCAP Committee on Trade and Investment can support countries in the region in developing cooperative solutions for trade and investment promotion, as well as to enhance stakeholder capacities and expertise. These regional platforms should also be better utilized in building the capacity of developing countries in the region to forge alliances and voice joint actions in defense of multilateral options. For example, fostering agreement

on the least developed country-wide Duty Free Quota Free Rules of Origin and lifting the absorptive capacity of least developed countries for trade, technology and investment through regional Aid for Trade are examples of possible ways for seeking cooperative solutions. This would not only promote regional integration but it would serve to enhance compliance with Sustainable Development Goal 17 – the means of implementation of the 2030 Agenda, which calls for providing technical assistance and review and monitoring, including data collection and analysis.

*Supporting countries' efforts to develop regional investment regimes that would better balance investor rights with host country development needs.* This would enable countries to not only attract more FDI of higher quality that contribute to sustainable development, but it would also help them to gain better market integration, which, in turn, would attract FDI as open markets and borders are clearly an important determinant of such investments. Consequently, a virtuous cycle of FDI and market integration with clear development dividends. However, this requires political will. In particular, common investment regimes should replace and not add to the existing noodle bowls of international investment agreements that mirror the noodle bowl of preferential trade agreements.

*Promoting processes of labour market integration aiming to enhance coverage across skill levels sectors.* It is also important to target guarantees of equal pay and working conditions between migrant and domestic workers, and ensure migrant workers' access to social protection measures when they are available. To support such processes, it is important to consider ways to align regional qualification frameworks to support job-matching and the creation of regional labour markets. The development of common procedures for the payment of social benefits across borders also deserves consideration.

## ENDNOTES

<sup>1</sup> ESCAP (2015a).

<sup>2</sup> ESCAP resolution 74/2.

<sup>3</sup> UNCTAD (2015).

<sup>4</sup> At the global level, there are 2,324 bilateral investment treaties and 297 treaties with investment provisions in force as of January 2017. The corresponding figures for Asia and the Pacific are 968 bilateral investment treaties and 148 treaties with investment provisions.

<sup>5</sup> OECD (2014b).

<sup>6</sup> Hoekman and Saggi (1999).

<sup>7</sup> Bénassy-Quéré, Coupet and Mayer (2007).

<sup>8</sup> 'Aftercare' refers to government support to, for example, retain investment and ensure it has a local economic impact. See United Nations (2007).

<sup>9</sup> There are numerous studies on the obstacles to FDI. One relevant example is Drabek and Payne (2002).

<sup>10</sup> ESCAP (2009).

<sup>11</sup> See WTO and IDE JETRO (2011).

<sup>12</sup> The treaty was signed on 29 May 2014 by the leaders of Belarus, Kazakhstan and the Russian Federation. It came into force on 1 January 2015.

<sup>13</sup> For example, migrants from the Commonwealth of Independent States can enter the Russian Federation freely on a visa-free regime. However, they become irregular once the permitted period of legal stay expires.

# CHAPTER 4

## SEAMLESS CONNECTIVITY

Promoting seamless connectivity, comprising transport, energy and ICT connectivity, is a central pillar of RECI. Seamless connectivity across these three sectors is critical for enhancing trade and people-to-people contacts; as well as for enabling the emergence of the digital economy and provide access to more diverse, more secure and lower carbon energy sources across the region.

Throughout history, different phases of globalization and development have been tied to innovations in infrastructure connectivity. Infrastructure affects overall economic development through three different channels. First, investment in infrastructure increase aggregate demand. Large infrastructure investment packages are used to spur growth and reconstruction efforts, not only within countries but also on a regional basis. Second, improved infrastructure reduces transport costs and thus enhances trade and competitiveness across the countries. Finally, infrastructure contributes to productivity growth.

Infrastructure encompasses both “soft” and “hard” infrastructure. Soft infrastructure refers to legal, regulatory, procedural, and other supporting policy frameworks, as well as to human and institutional capacities, while hard infrastructure relates to physical networks, such as roads, railways or ports. In the energy sector, for example, transmission lines and power plants represent hard infrastructure, while regulatory frameworks, tariff policies, power-trading agreements (grid codes, settlement codes, security, planning and maintenance, among others), and harmonization of rules and regulations fall under the soft aspect of infrastructure. A third element that should be considered is the services that are enabled by investments in infrastructure. Without such services, which include distribution, transport, marketing, logistics, finance, and insurance, infrastructure networks would not add value and not spur growth.

Connectivity therefore plays an important role in enabling countries to expand their markets, optimize exchanges, and strengthen collaboration in support of sustainable development and shared prosperity. It does this by reducing the economic distance between two or more production places, even though the geographical distance remains the same. Regional connectivity is defined in this chapter as a network of regional infrastructure that facilitates the flow

of goods, services, people, and knowledge in a cost and time effective way. In the case of transport and communication connectivity, regional infrastructure consists of bundles of networks across multimodal systems to connect, for instance, urban and industrial hubs, or coastal and hinterland regions, with alternative cross-border routes. Similarly, regional infrastructure for energy enables energy trade across the region to meet the goal of sustainable energy for all in an affordable and environmentally sustainable manner. It should be noted, though, that while regional infrastructure is built on national infrastructure connectivity, it would not necessarily lead to growth and development when large areas or social groups within an economy lack access to connectivity.

Connectivity also plays a central role in the achievement of the Sustainable Development Goals, both directly and indirectly, but careful guidance is required to ensure that the potential negative impacts are minimized.<sup>1</sup> For instance, investment in energy connectivity contributes directly to Goal 7, which calls for improved access to energy services and a move to cleaner sources of energy to meet growing energy demand. Transport and ICT also contribute directly to Goal 9 with regard to building resilient infrastructure. Transport enables the implementation of nearly all the Goals through connectivity-access impacts. In addition, a number of Sustainable Development Goal targets are directly linked to transport, including those related to Goal 3 on health, Goal 7 on energy, Goal 8 on decent work and economic growth, Goal 9 on resilient infrastructure, Goal 11 on sustainable cities, Goal 12 on sustainable consumption and production and Goal 14 on oceans, seas and marine resources. However, the most important contribution of seamless transport, energy and ICT connectivity is indirect. By facilitating access to electricity, the efficient transport of goods and services, and the development of a knowledge society, seamless connectivity in the region will play a fundamental role in the attainment of most of the Goals.

This chapter reviews national connectivity in terms of availability and quality and examines challenges that policymakers and the private sector faces in providing regional infrastructure. It also extracts lessons for a regional strategy for seamless connectivity encompassing transport and logistics, energy, and information and communications technology.

## The importance of enhancing connectivity in the Asia-Pacific region

The impressive record of economic growth and poverty reduction in many economies of Asia and the Pacific is underpinned largely by getting goods to markets through infrastructure connectivity between countries in the region and in the rest of the world. Many countries have invested heavily in infrastructure connectivity. For example, the 1994 Human Development Report concluded that infrastructure investment was an important factor behind the superior growth performance of East Asia to that of sub-Saharan Africa.<sup>2</sup> It is the oldest and the most decisive determinant of international trade patterns and hence adequate quantity and reliability of infrastructure connectivity play a key role in the trade competitiveness of regions. It also instrumental with regard to the 2030 Agenda for Sustainable Development: not only in terms of specific goals and targets, but for its spillover impacts on other aspects of development. For instance, though data on rural road access are limited, studies have found that there are significant links between rural transport

access and other important factors, such as maternal mortality.

Overall levels of infrastructure provision vary widely across countries in the region. There are also wide variations in the quality of existing infrastructure. Using data from the Global Competitiveness Report, countries are scored from 1 to 7, with 1 representing poor infrastructure conditions and 7 indicating the best. Some Asian economies have been very successful in building and maintaining high-quality infrastructure, with Singapore and Hong Kong, China at the top of the global infrastructure rankings. Even emerging economies, such as China, Malaysia and Thailand, rank in the top half, above the global average score of 4. On the other hand, despite some remarkable success stories, providing adequate transport, reliable energy or communication services in many countries has proved to be a major challenge.

Table 4.1, which provides information on key infrastructure connectivity indicators for the region, shows that there are large variations across the five

TABLE 4.1: Selected connectivity indicators of Asia and the Pacific

Indicators	East and North-East Asia	North and Central Asia	The Pacific	South and South-West Asia	South-East Asia
Total power capacity (GWH)					
1990	4,872	955	539	850	457
2014	11,638	1,217	1,137	2,858	1,507
Electricity Production per capita (KWh)					
1990	1,208	6,170	9,138	373	357
2013	4,569	5,772	10,539	1,028	1,290
Household electricity consumption per capita (KWh)					
1990	169	559	2,378	58	75
2013	674	807	2,622	206	348
Road density (Km per SQ KM of land area)					
2000	186	58	110	621	232
2011	400	69	112	831	..
Railway density (Km per SQ KM of land area)					
1990	6.9	..	1.3	14.0	..
2014	8.1	5.5	..	15.2	4.7
Port Container Traffic (in TEU - Million \$ GDP)					
2000	9.71	1.22	9.95	7.91	54.23
2013	14.9	2.03	6.27	7.98	35.43
Mobile subscribers per 100 population					
2000	12.5	1.9	33	1.4	4.2
2014	94.7	140.3	108.3	76.7	124.5
Internet users per 100 population					
2000	5.6	1.5	35.3	0.7	2.6
2014	53.0	60.3	66.4	19.0	28.7

Source: ESCAP (2016e).

subregions. Within every subregion and even within individual countries large differences in infrastructure connectivity between urban and rural areas or in coastal versus inland areas exist. In some areas the infrastructure access rates are similar to the rates for sub-Saharan countries. Districts with very low access to infrastructure, for example, can be found in relatively prosperous Indian states and vice versa.<sup>3</sup> Similarly, high access rates for one type of infrastructure service coexist with low or non-existent services for other types of infrastructure. Connectivity and access also differ depending on the income levels, as there are locational differences in quality and availability of infrastructure.

The main challenge in connecting populations nationally is not only related to investment; there are also problems pertaining to land availability and displacement, state capability and resources needed to plan connectivity holistically. Table 4.2 provides data on the scale of the connectivity deficit nationally throughout the region. In terms of energy access, more than 400 million people are without electricity in the region. In many countries, even those with access face overall poor quality of supply with frequent power cuts. Similarly, 540 million people in the region do not have access to transport infrastructure.

TABLE 4.2: Connectivity deficit in Asia and the Pacific

Indicators	East and North-East Asia	North and Central Asia	The Pacific	South and South-West Asia	South-East Asia
Population with no access to electricity (million)					
1990	84.6	..	5.7	775.4	193.0
2013	19.3	..	8.0	355.0	121.0
Population with no access to improved water sources (million)					
1990	389.6	22.6	3.1	335.5	126.1
2014	98.4	16.2	4.7	183.4	72.8
Population with no access to sanitation (million)					
1990	615.7	50.3	4.8	932.9	232.8
2014	377.3	45.9	7.7	1017.4	189.8

Source: ESCAP (2016e).

## Transport connectivity

Transport connectivity is important for development because it connects individuals to opportunities, enlarges markets for goods and services, and strengthens people-to-people contact. However, as markets become integrated, economic and social disparities can increase between regions and within a country that is well-integrated and among those that are not.<sup>4</sup> In that regard, regional transport and logistics infrastructure can enable lagging areas to develop by providing them with trade and service-related opportunities, particularly to areas that are located closer to the core areas of a neighbouring country than the one in their own country. Thus, transport and logistics connectivity can play an important role in development not only at the national level but also at the subregional and regional levels.

Investment in infrastructure connectivity at the national level to support global production networks has increased significantly in recent decades in the Asia-Pacific region to the extent that China, India and the Russian Federation are among the five countries with

the largest rail networks in the world. Railway freight in the region has expanded from 4.3 trillion ton-kilometres to 5.8 trillion ton-kilometres over the period 1990-2012, with the largest increase being in the East and North-East Asian subregion, where it has more than doubled from 1.1 to 2.5 trillion ton-kilometres during the same period. Similarly, in line with the significant increase in vehicles in the region, the overall road density has increased over the past two decades, but so has the percentage of paved roads.

Notwithstanding those increases, there are no universal indicators for determining standards of access to transport and the quality of such access. While proxy variables, such as the density of road network or percentage of paved roads, provide indicative information on the state of transport development, they do not make it possible to accurately assess, for instance, the quality of road networks. Surveys, such as those undertaken by the World Economic Forum (WEF), have examined perceptions of the quality of road networks, while micro studies have examined access to all-weather roads. However, such data are not collected regularly. For instance, the World Bank, which last updated its Rural Access Index in 2010, found

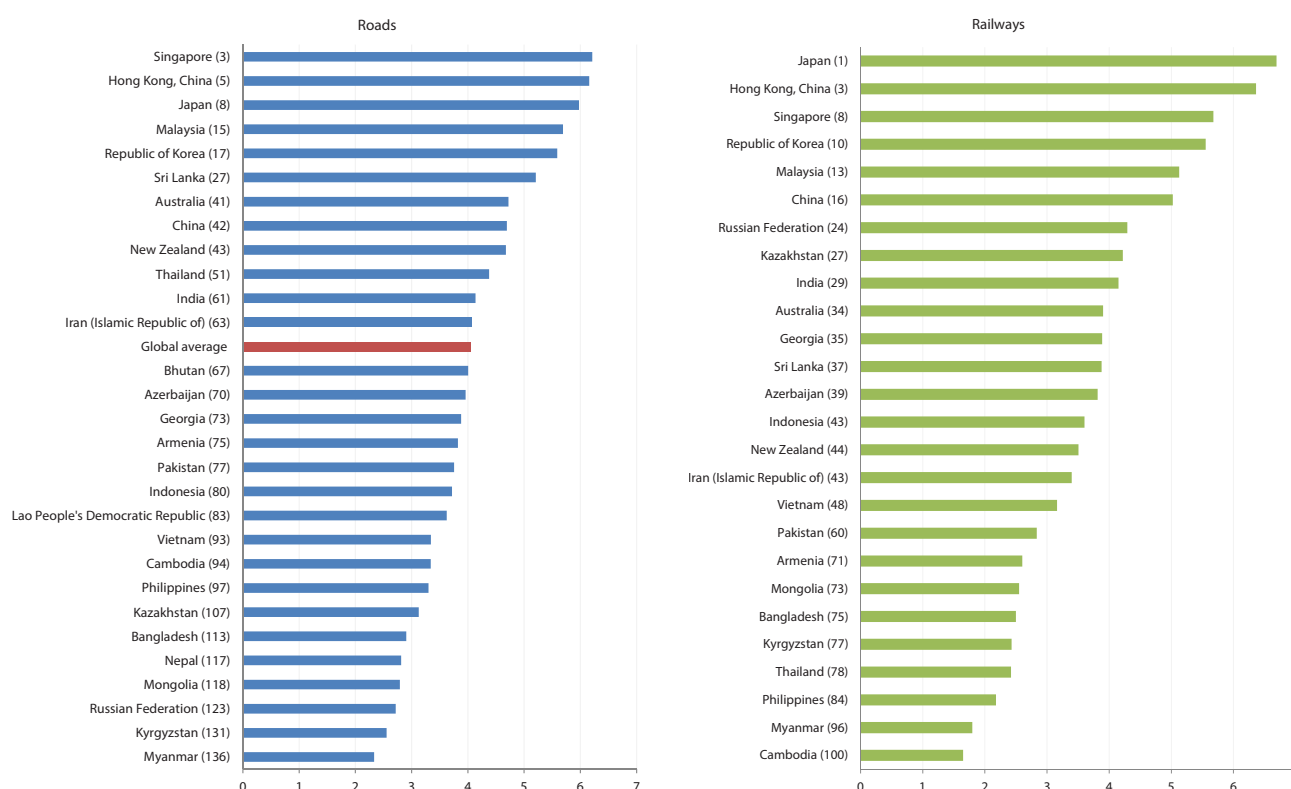
that notwithstanding significant progress, about 600 million rural inhabitants in the world still do not have access to all weather roads. Specifically, in Asia and the Pacific, South and South-West Asia accounts for three quarters of the region's deficit in access to all weather roads. WEF has found that while road and rail network of India is among the largest in the world, it ranks sixty-first in terms of road quality and twenty-ninth in terms of quality of its rail network globally (figure 4.1).

The overall quality and quantity of national transport networks have an important bearing on the cost of logistics, which is an important factor in determining the competitiveness of any economy. Such costs remain high in many countries in the region. In the United States, logistics costs account for 8.3 per cent of GDP, as compared with 18 per cent of GDP in China and Thailand, 19 per cent in Viet Nam, and 24 per cent in Indonesia. Because transport cost is a substantial part of those high logistics costs, greater efforts to improve the quality of existing infrastructure can be very cost effective.<sup>5</sup>

Just as connectivity has increased within countries in the Asia-Pacific region, it has also improved within the subregions. For instance, in the North and Central Asian subregion, the Russian Federation has good transport connectivity and East-West corridors have been developing rapidly supported by Chinese investments. In addition, a number of transport and economic corridors have been developing under the Central Asia Regional Economic Cooperation programme of the Asian Development Bank (ADB), which has mobilized \$27 billion to support subregional connectivity in trade, transport, and energy. Moreover, this subregion is likely to benefit significantly from additional infrastructure investment associated with China's Belt and Road Initiative.

In East and North-East Asia, cross-border transport connectivity has benefited, particularly from the expansion of Chinese exports to the world market and their effects on the structure and dynamics of intraregional commodities and capital flows. As a result, maritime transport has grown rapidly in the subregion which is now home to four of the world's top five container ports. It also remains fundamental for

FIGURE 4.1: Quality of transport infrastructure in Asia and the Pacific



Source: ESCAP, based on World Economic Forum (2017).

Notes: Quality of roads and railroads infrastructure index 1-7 (1=poor, 7=best). The numbers in brackets represent the country position in the world ranking.



the Pacific islands, facilitating more than 90 per cent of the subregion's trade and the delivery of crucial services, such as health care and education to outer island dwellers. To improve air transport connectivity, the Pacific island countries adopted the Pacific Islands Air Services Agreement in 1998, which provides a multilateral basis for liberalizing air services in the subregion.

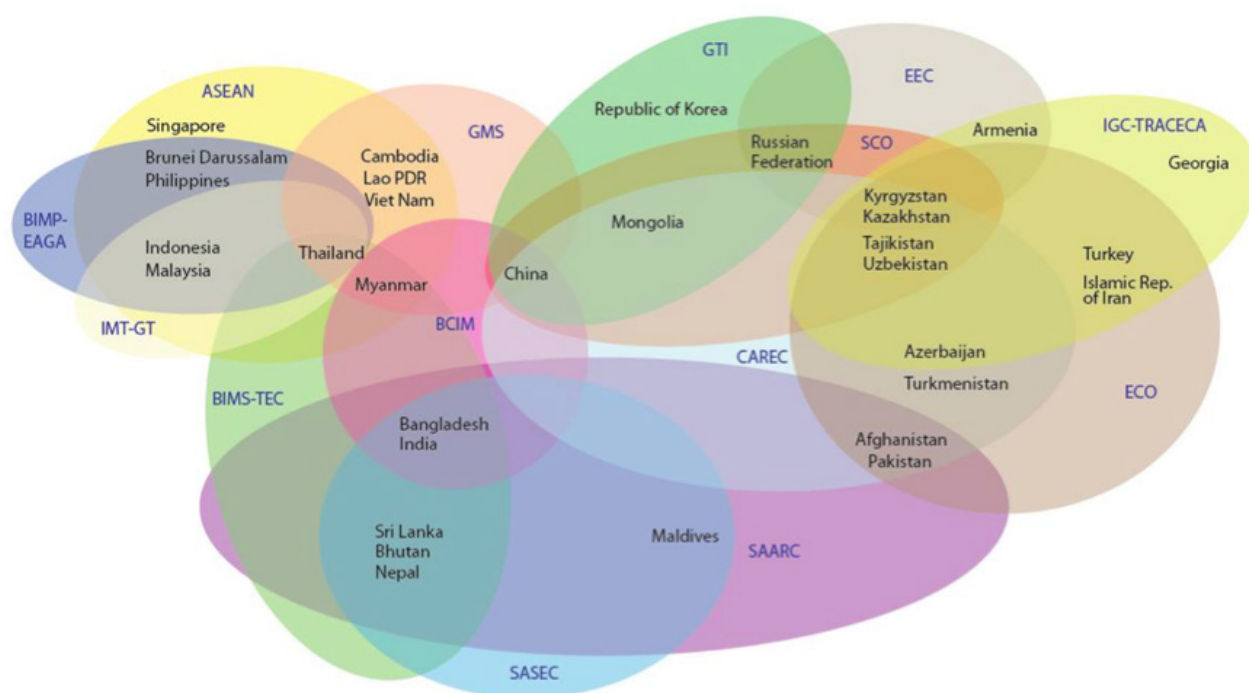
Many initiatives support transport connectivity within the Asia-Pacific region (figure 4.2). In South and South-West Asia, some examples are corridors identified under the SAARC Regional Multimodal Transport Study, the Bangladesh–China–India–Myanmar Forum for Regional Cooperation and the International North–South Transport Corridor, which connects India with the Islamic Republic of Iran, Central Asian countries and the Russian Federation. Similarly, transport connectivity is included in the mandates of subregional initiatives in South-East Asia. For instance, the Greater Mekong Subregion (GMS) has completed several East–West and North–South corridors to improve connectivity, while ASEAN connectivity is an integral part of the ASEAN strategy. The Master Plan for ASEAN Connectivity aims to connect physical infrastructure, institutions and people primarily through the construction of physical transport networks, including ports and waterways, and railway links to China, but also through institutional

agreements covering transport and trade facilitation, agreements on multimodal transport, single shipping and aviation markets.

Yet, challenges remain in all subregions in providing greater connectivity, particularly in ensuring that cost-effective transport is available. For instance, although East and North-East Asia is one of the world's most vibrant subregions, its intraregional and logistics network is still not sufficiently integrated. Similarly, the smaller and more isolated islands in the Pacific still lack affordable access to regular maritime transport to integrate their markets with neighbouring archipelagos.

At the region-wide level, the ESCAP initiative to develop the Asian Highway Network and the Trans-Asian Railway to provide connectivity through road and rail networks, respectively, can be traced back to the late 1950s and early 1960s. However, to date, only 32 per cent of the Asian Highway Network, which spans 143,000 km of roads passing through 32 member States, reaches the two highest categories of road class, while 11,500 km still need to be upgraded to meet minimum standards and the poor quality of several segments is affecting usability. Similarly, the Trans-Asian Railway covers 117,500 km of railway lines and serves 28 member States, but it has 10,500 km of missing links, which prevent the network from functioning as a continuous system. While

FIGURE 4.2: Transport connectivity initiatives



Source: ESCAP.

these missing links can be bridged by transshipments to trucks or by developing inland container depots and dry ports with rail connections, shippers are often resistant to using rail because of longer time periods and the higher costs associated with transshipment.

Other regional initiatives aimed at enhancing regional connectivity include the single economic space of the Eurasian Economic Union (EEU), which allows for the free movement of vehicles, goods and people for transport.

Some countries are also expanding and improving their networks through the construction of new rail tracks and double tracking or electric signaling. Chinese investment in railway infrastructure under the Belt and Road Initiative has the potential to provide impetus to regional transport connectivity. However, the region as a whole has yet to realize the full potential of railway connectivity, for which governments and financing institutions need to be encouraged to increase investment in the sector.

In addition to physical networks, to attain connectivity, soft infrastructure is also required. In that regard, there are many overlapping arrangements within the Asia-Pacific region, including more than 400 bilateral agreements and 30 subregional agreements on international land transport, mostly pertaining to road transport. Unfortunately, the majority of the agreements provide different legal conditions and operational regimes for intercountry transport, to the extent that these agreements are increasing regional fragmentation in operational connectivity and are impeding the creation of seamless region-wide connectivity. Complicating matters is that some countries in the region are contracting parties to different legal regimes covering geographically overlapping territories and establishing different and sometimes inconsistent rules related to transport operations. These challenges need to be overcome to enable efficient and effective connectivity within the Asia-Pacific region.

The principal challenges faced in achieving region-wide seamless transport connectivity are summarized as follows:

- Missing railway links between subregions are significant obstacles for the expansion of this energy-efficient and environmentally friendly mode of transport and its integration into an intermodal transport system.
- There are many substandard roads in the regional transport network, which impede intercountry movements.
- Costly and time-consuming transloading of goods at border crossings and the lack of common legal frameworks and different technical standards, such as break of gauge, train length and axle loads and braking systems operational rules and regulatory measures.
- Road transport suffers from lack of legal arrangements, different vehicle weight and dimension norms, emission controls, traffic rules and regulations, as well as regulatory control measures. Lengthy repeated inspections and complicated formalities lead to significant delays at border crossings.
- Diversified agreements are increasing regional fragmentation in operational connectivity. The majority of the agreements provide different legal conditions and operational regimes for intercountry transport. This is impeding the creation of a seamless region-wide connectivity.
- Participation of public-private partnerships (PPPs) in the formulation and implementation of transport connectivity is limited.

### Energy connectivity

The region accounts for almost half of the world's energy consumption, which is largely derived from fossil fuels, such as coal, oil and gas. The strong growth in population and GDP in the region will underpin continued energy demand growth. Energy use is projected to nearly double from 2010 to 2035. At the same time, many economies are hampered by the underprovision of energy, with insufficient supplies or interruptions in the power sector being a common challenge for many developing countries. More than 400 million inhabitants in the region, of which the majority of them live in South Asia, are still not connected to electricity. As the region seeks to expand the supply of energy while ensuring its affordability and security, the Paris Agreement on Climate Change also requires continuous efforts to reduce energy sector greenhouse gas emissions by switching to low or zero carbon sources and enhancing energy efficiency.

The Sustainable Development Goals include Goal 7 which aims to ensure access to affordable, reliable, sustainable and modern energy for all by 2030. This Goal is significant because of its links to the achievement of other SDGs, as between the provision of energy and addressing sustainability concerns from energy use impacts efforts to address poverty, climate change, health, education and environmental damage. Some of these links are direct, for example energy is a key

input into industrial development, transportation, and communication networks, while others are indirect, as in the case of the delivery of effective health care services.

The region has significant differences in the distribution of energy, in terms of both fossil and renewable energy resources, with surpluses in some countries and deficits in others. The region as a whole has adequate energy resources to meet its large and growing demand, but most of its conventional energy resources are highly concentrated in five countries that account for over 85 per cent of the total regional energy resources.

Connecting resources such as gas, hydropower, solar and wind to centres of population and consumption requires energy connectivity infrastructure, principally electricity transmission lines and gas pipelines. To further energy integration processes in the region, it will be useful to establish region-wide energy frameworks, for instance to promote the integration of transmission lines and develop a common power grid for the electric power sector or to set up a regional grid for natural gas. Advances in renewable energy technology such as solar and wind are unlocking new power generation opportunities in solar and wind resource-rich areas of the region. Technology advancements in transmission technology such as High Voltage Direct Current (HVDC) are reducing the cost of transmitting electricity across large distances, thus enhancing the technical and economic feasibility of cross-border power trading. Establishing cross-border energy connections in both electricity and gas infrastructure, which yields high net benefits for parties, has long been pursued in the region but has often proceeded at a slow rate.<sup>6</sup>

Enhancing regional energy connectivity, if properly guided, can support the SDGs and offer solutions to many national energy challenges, including the move to a low carbon energy system. In addition to linking dispersed supply and demand centres, power grid integration in particular can play a role in raising the contribution of renewables to electricity generation. Renewable energy technologies, given their variable and only partly controllable output need to be connected to larger or multi-country grids to achieve high penetrations and fully harness their benefits. Cross-border grid interconnections can effectively provide energy markets with spatial arbitrage, bringing electricity with a low marginal cost to meet demand in an adjoining country or region. Creating larger demand pools with more diverse generation sources can lower system peak demand, reduce costs and increase reliability for all consumers. For many countries sharing

long borders, such as in South-East Asia, accessing electricity in the neighbouring country via cross border grid connection can provide a lower cost alternative for rural electrification than extending the national grid.

As newly installed generation capacity is increasingly geared towards low carbon energy, power grid interconnection can play a long-term role as enabling infrastructure for the low carbon electricity, serving diverse loads including the nascent electric transportation sector. The trading of gas via cross-border pipelines can help generating export revenues for supplier countries, while diversifying the energy mix, improving local air quality and supporting decarbonisation efforts in destination countries.<sup>7</sup>

Unlike the transport sector, efforts for building energy infrastructure have remained confined to national economies, partly because in the past self-reliance rather than connectivity used to be seen as the main way to ensure energy security. However, in view of rapidly rising energy demand and with climate concerns on the rise, governments of the region are starting to see regional connectivity and integration as the most appropriate framework to enhance energy security.

Although there are several energy connectivity initiatives in the Asia-Pacific region, most of them are largely cross-border projects carried out on bilateral basis. The Greater Mekong Subregion (GMS) is perhaps the most advanced of all subregional programs in terms of harmonization of power policies and technical standards. Thus, in terms of subregional market creation, the region lags behind other developing regions, including Africa or Central America where power pools and market integration are at a more advanced stage.

In terms of subregional energy connectivity, the ASEAN and GMS programs in South-East Asia are among the most advanced in the region. For instance, the ASEAN Plan of Action for Energy Cooperation 2010-2015 served to advance cooperation towards energy security, with six of the 16 planned interconnections under the ASEAN Power Grid and 12 bilateral gas pipeline interconnections having been commissioned. The ASEAN region has also progressed well in institutional development for energy connectivity, through the work of the Forum of Heads of ASEAN Power Utilities and Authorities, the ASEAN Council on Petroleum, the ASEAN Forum on Coal, the Energy Efficiency and Conservation Sub-sector Network and the New and Renewable Sources of Energy Subsector Network. Moreover, expanding energy connectivity in terms of power grids between ASEAN and both China and India is commercially and financially viable provided that political will exists, and supportive policies and greater

harmonization of regulation and standards ensue to foster the development of such infrastructure.<sup>8</sup>

The GMS has been successful in promoting energy trade amongst its economies and in creating harmonized policy and institutional mechanisms for the power sector. GMS is in the process of selecting the host country for the regional Power Coordination Centre, a permanent institution owned by all GMS countries for enhancing regional power trade and implementing regional power interconnection initiatives.

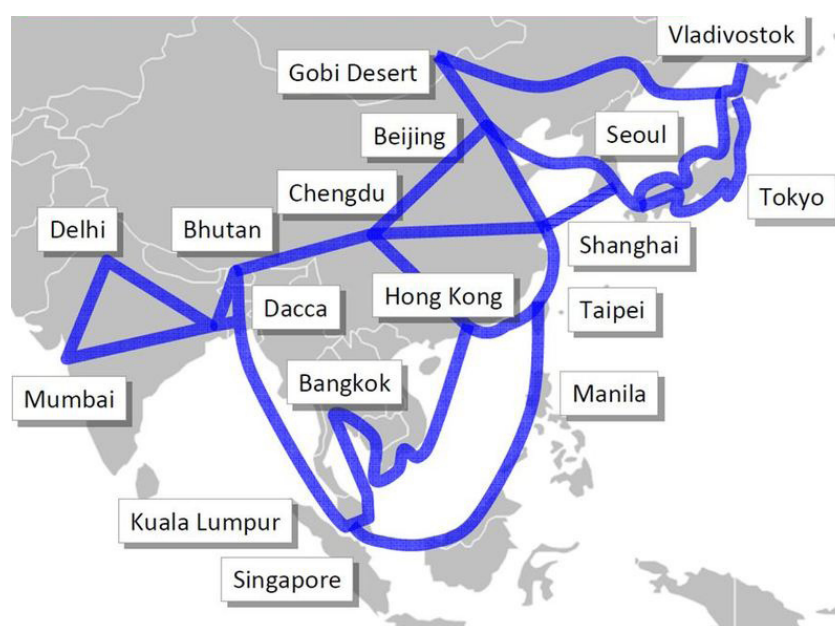
In Central Asia, an Energy Work Plan for regional energy trade initiatives has been developed and administered by CAREC. The plan identifies five main regional energy corridors for broader regional energy integration: (i) Central Asia-East Asia; (ii) Central Asia-South Asia; (iii) Intra-Central Asia; (iv) Central Asia-Russian Federation; and (v) Central Asia-European Union. Additional projects are also happening further afield, with Armenia planning to synchronize its national power grid with that of Georgia through transmission line developments to enable a tripling of electricity trade between the two countries by 2018. CAREC Ministers have also endorsed an energy strategy that provides the framework for energy cooperation, primarily to ensure energy security through a balanced development of the region's energy infrastructure and institutions and stronger integration of the region's energy markets. Similarly, the treaty of the Eurasian Economic Union explicitly mandates gradual creation

of common markets for oil and petroleum products, gas and electricity.

In South and South-West Asia, the ultimate objective is to create a SAARC Market for Electricity, which could build on projects such as CASA-1000 powerline project, which is expected to lead to the set-up of the Central Asia-South Asia Regional Electricity Market.<sup>9</sup> SAARC interconnections already exist between some of its member States, such as Bhutan, Nepal and India, which currently imports hydropower from Bhutan and has 14 transmission interconnections along the Nepal-India border to facilitate the exchange of hydropower. There are also further proposals for an electricity interconnection between India and Bangladesh and also between India and Sri Lanka, while Iran currently trades electricity with Pakistan.

In contrast, inter-governmental frameworks for an integrated energy network are somewhat limited in East and North-East Asia, as most subregional cooperation remains bilateral and limited to small-scale projects linking the Russian Federation, China, Mongolia and Democratic People's Republic of Korea. However, various ideas for additional energy connectivity have been proposed in the subregion, including the Gobitec and Asian Super Grid proposals supported by the Japan Renewable Energy Foundation (figure 4.3). Other proposals aim to harness the potential for renewable energy in Mongolia and the Russian Federation to supply electricity to the entire ENEA subregion.

FIGURE 4.3: Asia super grid proposal



Source: Mathews (2016).

While the Russian Federation has been a major exporter of oil and gas to Europe, it has only recently started to develop infrastructure to transport gas to China and to the entire ENEA region. Similarly, China has been expanding its reach into the hydrocarbon reserves of Myanmar in recent years and has been operating in Turkmenistan since 2002.

In the Pacific, access to energy is low while reliance on imported petroleum is high, which makes the subregion vulnerable to oil price volatility and creates difficulties for fiscal management. Given their small size and geographical dispersion, Pacific island countries could benefit from joint procurement of petroleum products. To reduce reliance on imported fuel, these countries have plans to develop low-carbon and renewable sources of energy, especially for electricity generation. While hydropower and small-scale biofuels are emerging as attractive alternatives, solar is the most practical option, especially to meet the energy and electrification needs of rural and outer island communities.<sup>10</sup>

There is a risk that the current low oil prices will reduce incentives for investment in renewable energy in the Pacific and elsewhere in the region. However, investment decisions in renewable energy globally are increasingly driven less by the price of oil and more by the declining cost of the renewable generation technologies. While oil prices over \$100 per barrel were necessary to bring wind and solar generation to grid parity in the past, this is no longer the case, especially in remote locations in the Pacific where the landed cost of refined product includes high shipping costs. Indeed, as a consequence of low oil prices, countries in Asia and the Pacific, such as India and Indonesia, have reduced oil subsidies. Countries can also raise carbon taxes to prevent prices to consumers from falling significantly and use the additional fiscal revenue to support further investment in renewable energy.

Inter-subregional energy connectivity has also been progressing in the Asia-Pacific region through initiatives such as the Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline, the already mentioned Central Asia-South Asia Regional Electricity Market, and natural gas pipelines connecting the Russian Federation and Tajikistan with China. There are proposals to enhance gas trading in the region, especially between South Asia, Central Asia and Iran, and with the rising prominence of LNG in global gas trade, several LNG import terminal hubs have been proposed to act as regional re-export facilities.

The China-led Belt and Road Initiative (BRI) provides a further opportunity to strengthen energy connectivity along its six proposed economic corridors. In addition, the State Grid of China Corporation and the Global Energy Interconnection Development Cooperation Organization (GEIDCO) are promoting global energy interconnection (GEI) initiatives based on low emissions and renewable energy. The BRI, coupled with the GEI and the initiatives on transboundary power trade mentioned above offer great potential for the development of the region's renewable energy.

Importantly, the BRI could contribute to the development of a more standardized approach towards transboundary energy trade and connectivity, which would be a significant improvement over the current framework, in which infrastructure development projects for transboundary energy trade and connectivity are developed and negotiated independently and without coordination.<sup>11</sup>

The principal challenges faced in achieving region-wide seamless energy connectivity are summarised as follows:

- Policymakers and private sector energy experts cite as a key barrier the issue of political trust among potential or current energy trading countries. Energy security issues are of prime importance to the political leadership and efforts for building energy infrastructure have remained confined to national economies. This is partly because for over half a century, energy was seen as too important an issue for national economies: self-reliance rather than connectivity was seen to enhance energy security. It was believed that national energy security would be compromised with regional energy trade that creates import dependency on neighboring countries. The political and policy mind-set was thus against regional energy connectivity until very recently.
- Enhancing national and regional energy security through energy interdependence, as opposed to energy independence, must become the goal. Technology, regulatory, and financial barriers can be effectively overcome through consensus building, however for this collaboration to evolve, an innovative energy cooperation mechanism in the region which also involves different stakeholders including government, private sector, industry and financing institutions would be essential. With climate concerns on the rise and the adoption of the Paris Agreement, as well as rapidly rising energy demand, governments of the Asia-Pacific region see regional connectivity and integration as the appropriate framework to enhance energy security.



- Asia's dynamism stems from its intricate web of regional supply chains and global production networks. For the last four decades, the Asia-Pacific region has transformed itself into a global manufacturing hub; this has been possible due to success in connecting to global production networks and supply chains largely driven by advances in information technology, declining transport costs and falling trade barriers across countries. Unlike the global production networks that created a positive force for reinforcing the bottom-up market integration process, many more efforts are needed to connect the energy markets of Asia and the Pacific region. Trade and investments in regional energy networks remain low, aside from some cross-border investments, even though there are beneficial opportunities waiting to be tapped.

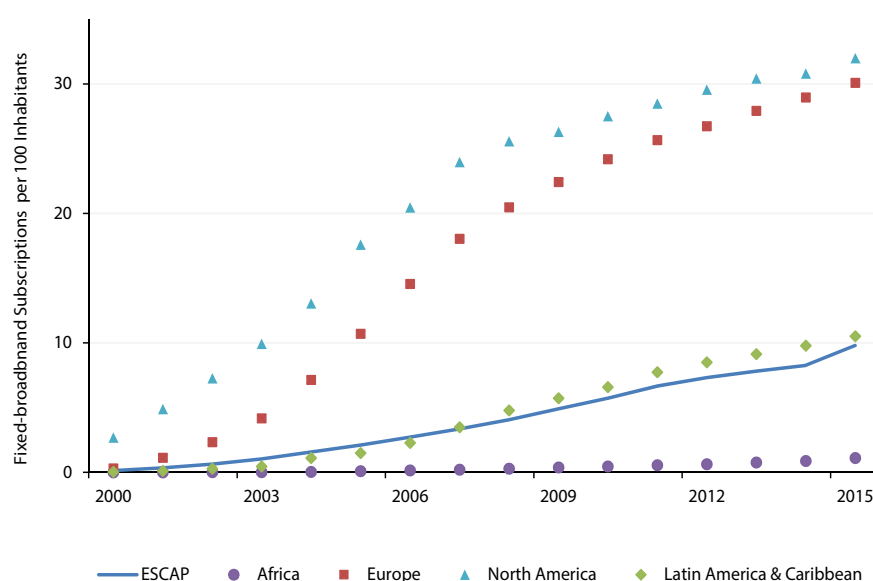
- A number of factors are responsible for this disconnect. Energy networks are capital-intensive and, given their large sunk costs, they present major challenges in financing and maintenance, especially when these are subject to different legal and regulatory regimes. When energy markets are dominated by state ownership, investments from private sources are difficult to attract because of the lack of creditworthiness of state enterprises and opaque governance structures. In the current situation, even if subregional support is present, cross-border projects have large transaction costs and it takes an extended period for any project idea to move from the drawing board to secure multiple approvals and reach actual implementation.

- Finally, there are large positive and negative externalities inherent in energy connectivity. Invariably, there are problems in measurement of the costs and benefits, and in designing policy regimes that can fully address these externalities. Balancing the gains with overall costs among different groups of stakeholders needs a robust institutional mechanism. The energy integration process is not limited to just the creation of physical links across borders; it requires a series of policies and regulations for facilitating different types of flows inherent in the process. The subregional energy integration programmes generally show a lack of consensus in defining a comprehensive model of integration.

### Information and communications technology (ICT)

In addition to enabling better communications, ICT is playing an increasingly more important role as an accelerator of sustainable development: It is critical in efforts to enhance economic efficiencies, expand delivery of social services, strengthen disaster risk management, and make the use of resources more sustainable. The successful rollout of mobile telephony in the region, which reached a penetration rate of 89 mobile phone subscriptions per 100 inhabitants in 2015, has been made possible by rapid technological progress, resulting in affordable devices and services, which in most cases were accompanied by a reasonably favourable regulatory environment.

FIGURE 4.4: Fixed broadband subscriptions per 100 inhabitants (average) by region, 2000-2015



Source: ESCAP, based on ITU (2016b).

However, tapping the full potential of ICT in the region is being held back by the availability and affordability of broadband Internet (figure 4.4). The Asia-Pacific region has one of the widest gaps in fixed broadband connectivity, with some countries being world leaders in broadband adoption and others recording the lowest broadband penetration globally.<sup>12</sup>

In terms of bandwidth availability per user, the digital divide has increased significantly between 2009 and 2013, with bandwidth availability widely increasing sharply in advance countries and growing slowly in poorer economies. Analysis conducted by ESCAP reveals that in 2015, 75 per cent of the fixed broadband subscriptions were registered in East and North-East Asia alone, even though the subregion accounts for only 36 per cent of the total population of the Asia-Pacific region.<sup>13,14</sup> Of even more concern is that 20 economies in the region have less than a 2-per cent fixed broadband penetration rate, while leading economies, such as the Republic of Korea, Japan and Hong Kong, China scored more than 30 per cent for the same indicator, with signs of a widening gulf between low-income and high-income countries over subsequent years.

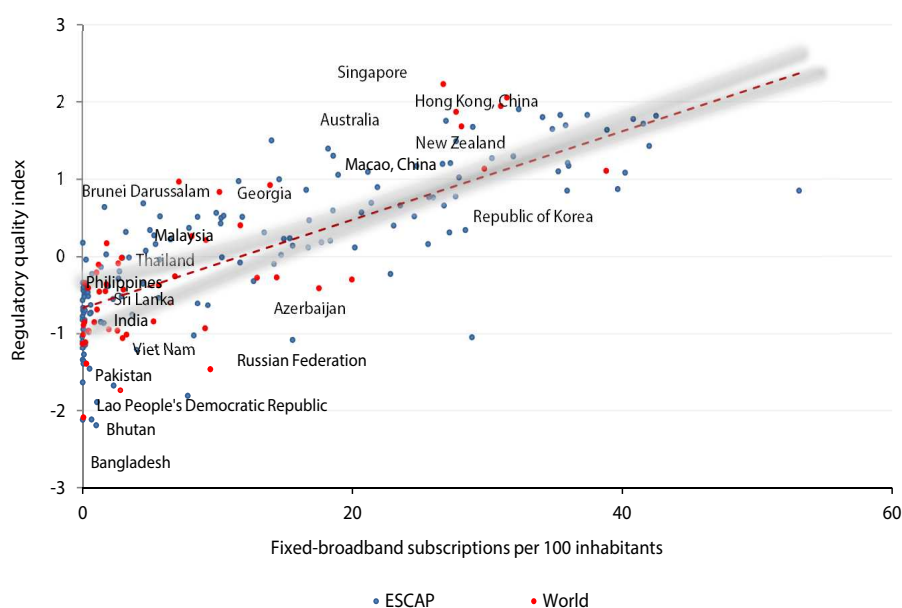
Based on ESCAP analyses, the main causes of the digital divide originate from lack of investment in resilient ICT infrastructure; limited availability of international bandwidth; ineffective Internet traffic and network management; lack of conducive and enabling regulations for investment; and lack of capacity and

awareness among policymakers and regulators.<sup>15</sup> Subsequently, investment in a resilient infrastructure and efficient management of Internet traffic play an important role in determining the supply and price of international bandwidth. In addition, the emergence of new technologies would help to bridge the divide.<sup>16,17</sup>

The current terrestrial networks of fibre-optic cables in developing countries in Asia and the Pacific are typically constrained by limited access to international transit. Furthermore, the developing countries' backhaul networks are usually poorly meshed and follow a "river system" pattern in which networks spread from submarine landing stations and thin out into countries' hinterlands.<sup>18</sup> This "river" system poses a significant challenge in network resilience, as a point of failure in upstream cables could affect the entire downstream of end users. A limited number of fibre interconnections and international gateways across countries limit the availability of total and per-capita international bandwidth. Landlocked countries are particularly affected as they rely on a few outdated terrestrial connections and on neighbouring countries to connect to regional and global cable systems. The availability and affordability of bandwidth could be improved through efforts to interconnect national fibre-optic backbone networks with those of neighbouring countries and with regional and global fibre optic networks.

The regulatory environment is another element that affects broadband expansion. Governments need to

FIGURE 4.5: Perception of quality of regulation and fixed broadband connectivity, 2014

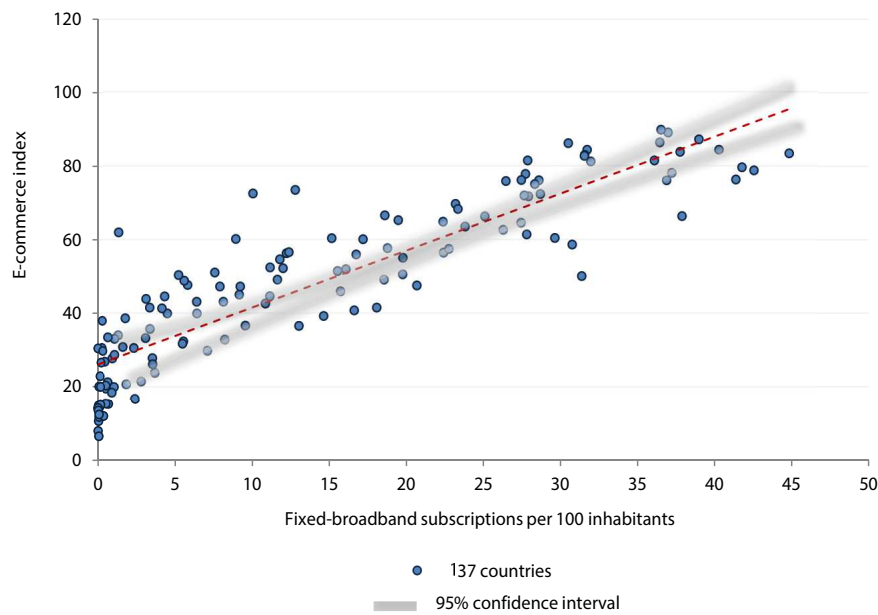


Source: ESCAP based on ITU (2016b) and World Bank (2016e).

Note: Estimates for regulatory quality ranges between -2 and +2 (-2=poor, +2=best).



FIGURE 4.6: E commerce versus fixed broadband access, 2015



Source: ESCAP estimates, ITU (2016a; 2016b) and UNCTAD (2016).

establish stable, supportive and predictable regulatory policies that encourage private sector investment in bankable ICT infrastructure projects. Effective regulation and fixed broadband growth has been found to be correlated in an ESCAP study, in addition to ecommerce development (see figures 4.5 and 4.6). Using a cross-section of averages between 2000 and 2015 for countries in the world with available data on investment and access, a study by the United Nations Conference on Trade and Development (UNCTAD) also shows a positive relationship between investments and fixed broadband and mobile broadband subscriptions, demonstrating the critical role that investments play in increasing access to ICT. The positive correlation coefficient (0.87) is statistically significant ( $p < 0.01$ ) for fixed broadband subscriptions.

One of the key underlying components of access and affordability to broadband Internet is the total amount of available international Internet bandwidth (measured in Mbit/s), which measures the volume of Internet traffic that can travel from one country to another (akin to the width of highways in road transport). As local Internet service providers operating under transit agreements with international bandwidth providers pay more than their European counterparts to access the global Internet, wholesale prices in the developing economies are higher than those of advanced economies of the region. ESCAP landlocked developing countries tend to be among the most adversely affected by high international transit prices. High prices for wholesale capacity can also be attributed to suboptimal regulatory

frameworks, which result in the following: control of key transmission facilities by incumbent operators; lack of appropriate Internet exchange points; and lack of alternative transit routes to enhance competition at the regional level and improve network efficiency.<sup>19</sup>

As the Asia-Pacific region is reputed to be the most disaster-affected region in the world, a critical element for advancing cross-border seamless ICT connectivity is infrastructure that is able to withstand system-wide shocks and quickly recover and continue to provide a minimum level of operational services. Because ICT underpins the functioning of effective information management systems and resilience building at all stages of the disaster cycle, e-resilience must therefore become an integral part of seamless regional connectivity.

Strengthening ICT connectivity could bring multiple socioeconomic benefits, including through enabling entrepreneurship, innovation and economic growth, and facilitating the provision of services in an efficient and effective manner. Indeed, ICT is a “meta- infrastructure” because of its wide-ranging applications in education, finance, commerce, governance and welfare, among other sectors, and its potential to serve as a development accelerator, while supporting other infrastructure, such as trade, transport and energy connectivity.

In this regard, the ESCAP-led initiative for the Asia-Pacific Information Superhighway aims to increase the availability and affordability of broadband Internet

across the region by strengthening its underlying infrastructure and developing an enabling Internet ecosystem.

The principal challenges faced in achieving region-wide seamless ICT connectivity are summarised as follows:

- There is an expanding and accelerating digital divide, both among and within countries especially in access to fixed broadband. As ICT is a meta-infrastructure that supports all sectors as a development accelerator, a widening broadband divide, if unaddressed, will have extensive negative impacts on the development of the digital society and economy and the attainment of inclusive and sustainable development in the coming years.
- Infrastructure gaps, particularly transboundary connectivity between neighbouring countries, a limited enabling policy and regulatory environment and lack of financing mechanisms are major hindrances to expanding national and regional connectivity, which, in turn, would help to close the broadband divide and expand opportunities for inclusive and sustainable development. Building resilience is a development imperative in the region because of its disproportionate share of economic damage and losses resulting from disasters.<sup>20</sup> As disasters roll back development gains, any repeated reconstruction of ICT infrastructure adds significant financial strain, especially on least developed countries, landlocked developing countries and small island developing States. Enhancing disaster preparedness and resilience in ICT networks and applications would not only protect ICT assets, but it would also ensure uninterrupted ICT services for disaster response and recovery.
- It is important to take advantage of the interlinkages, interdependencies and synergies across different types of infrastructure. For instance, about 80 per cent of the costs for deploying terrestrial fibre networks is associated with digging, trenching and laying down the conduits through which fibre is subsequently threaded, deploying fibre-optics during planned major works to other infrastructure, such as roads and pipelines, can significantly reduce cumulative costs while revenue is augmented and diversified from the resulting digital traffic.<sup>21</sup>

## Common challenges

Despite the diversity of issues facing each of the three connectivity areas, there are a series of common challenges experienced by all. These are summarized below:

- *Bottom-up process.* Most of the cross-border connectivity projects in the region have been negotiated bilaterally between parties. Although such projects are effective in meeting bilateral objectives, their fragmented nature is not conducive to achieving the seamless connectivity that the region needs to successfully implement the 2030 Agenda for Sustainable Development. In addition, the plethora of agreements and frameworks that have been finalized under various bilateral and subregional initiatives have led to a noodle bowl of infrastructure-related agreements which, similarly to the “noodle bowl” of trade agreements, has increased regulatory burdens and transaction costs.
- *Asymmetric costs and benefits, externalities and compensation mechanisms.* Regional infrastructure projects invariably involve asymmetric costs and benefits across countries and groups of people. For example, transit countries tend to bear disproportionately larger costs, while the benefits of lower trade and transport costs accrue to consumers and manufacturers of products. Similarly, most infrastructure networks are space-specific and involve large externalities. Such issues pose a challenge in implementing infrastructure projects. Therefore, regionally accepted, transparent and fair rules and regulations need to be put in place for internalizing and monetizing asymmetric costs and to ensure the fair distribution of costs and benefits among stakeholders. Moreover, to suitably compensate affected groups and countries, an effective and credible compensation mechanism, supported by a robust institutional arrangement, needs to be developed.
- *Planning, coordination, and cross-sectoral infrastructure synergies.* As part of the effort to expand the existing physical networks of transport, energy and ICT, and ensure seamless connectivity, it would be lucrative to consider them as a system, as this would result in significant cost and time savings. For instance, the costs to deploy terrestrial fibre networks, most of which are associated with digging, trenching and laying down conduits, can be significantly reduced if the work takes place along major roads, railways, power transmission lines, pipelines or waterways.

In general, building connectivity networks requires careful planning and coordination, which are often absent because of a lack of limited resources and appropriate institutional mechanisms. The challenges associated with planning and coordination are more pronounced when the countries involved have different legal and regulatory regimes.

- *Regional vision and political will.* Most infrastructure networks require lumpy government investments that are capital intensive and are of little use unless their construction is completed and well maintained. They are thus domestically driven, with cost-benefit analysis typically assessed from a domestic return-on-investment perspective, with the regional public good value heavily discounted or left out. For example, with regard to ICT, prior to the creation of the Asia-Pacific Information Superhighway, there was no regional cooperation framework for seamless ICT connectivity. Therefore, along with careful planning and coordination, strong political will at the regional level, and a shared vision of governments in the region are critical for setting up effective, region-wide coordination mechanisms for infrastructure development.

- *Financing.* The building blocks of regional seamless connectivity are supported by the national infrastructure development in each country of the region. Thus, lack of adequate financing resources to undertake needed infrastructure projects at the national level in different sectors is a major challenge. This is discussed in detail in chapter 5 on financial cooperation.

## Recommendations

To further move towards the objective of seamless connectivity, the following recommendations are suggested:

### Transport connectivity

Intergovernmental agreements must be used to enhance the delivery capability of the region's infrastructure networks and services. This calls for integrated planning, development and operation of transport and logistics networks that are well-connected within national boundaries, and simultaneously linked across borders and steps to improve productivity and efficiency of transport systems, in terms of cost, convenience, load factor and transit time demand. There is need to implement existing common regional strategies and frameworks and action-oriented and priority-based intergovernmental development programmes. Proposed amendments to the Asian

Highway and Tran-Asian Railway Network agreements that encourage co-deployment of fibre optic cables with transport infrastructure would enhance the cost effectiveness of infrastructure projects.

Technical standards and operational rules need to be harmonized. As with corridors, connectivity would benefit from harmonization of technical standards and operational rules. As a first step, systems and common technical standards to facilitate interoperability need to be developed. In the absence of international standards, regional harmonization is required in order to set regional standards and operational rules.

In advancing regional connectivity, it is important to take advantage of new possibilities arising from modern technologies, such as intelligent transport systems. For this purpose, it is necessary to establish an enabling cooperative framework to improve the quality and ease the delivery of services, clearances at border crossings, usage-based maintenance of assets, traffic monitoring, and public safety.

Cooperation should be reinforced by focusing on solution-oriented policies and actions. Support is needed in creating a broad partnership platform on seamless and sustainable transport connectivity between the public and private sectors. This would facilitate the development of approaches to better integrate the three dimensions of sustainable development (economic, environmental and social) to promote regional transport connectivity in a more sustainable manner.

### Energy

Barriers to energy trade need to be addressed through the removal of legal, regulatory and technical hurdles. Despite the many benefits from energy resource sharing, a number of countries have explicit and implicit restrictions on exports and imports of energy goods and services, and these must be lifted.

It is important to promote sufficient levels of technical and regulatory standardization to facilitate greater interconnectivity and the eventual development of an integrated power grid.

To promote competitive energy market structures, it is necessary to rationalize the State's role and implement measures to improve the investment climate to attract new investment, improve efficiency and adopt new technologies.

To facilitate transboundary power trade, a regional mechanism can be developed to streamline contracts, increase the availability of financing, reduce risk, and accelerate project development through the building of

mutual trust among parties. A broad regional agreement and strong institutional arrangements are critical for monitoring and ensuring that benefits are realized and creating neutral institutions to regulate project implementation and benefits.

Finally, it is important to build on existing political support to promote further regional energy connectivity. In that regard, there is a need to formalize and consolidate declarations and intentions at the subregional level in the form of an Asia-Pacific Energy Charter. This would help to nurture long-term commitments from member States and provide increased comfort and confidence to the private sector and institutional investors.

### **Information and communications technology**

Recognizing the above-mentioned connectivity deficits, ESCAP member States initiated the Asia-Pacific Information Superhighway initiative in 2015. This programme aims to increase the availability, resilience and affordability of broadband Internet across Asia and the Pacific by strengthening the underlying Internet infrastructure in the region through four pillars: (a) physical infrastructure development; (b) Internet traffic and network management; (c) promoting e-resilience; and (d) broadband for all.

Under the Asia-Pacific Information Superhighway initiative, it is recognized that investment in ICT infrastructure is critical to improving ICT connectivity and lessening the digital divide. Towards this end, the ESCAP Committee on Information and Communications Technology and Science, Technology and Innovation, at its first session, endorsed the implementation of the master plan and regional cooperation framework document of the Asia-Pacific Information Superhighway, including the financing mechanisms, as a regional platform for narrowing the digital divide, achieving the Sustainable Development Goals and promoting integrated infrastructure development in other sectors, such as trade, transport and energy, and recommended expanded support for the initiative.

In addition, at the policy level, there is need to ensure that national, subregional and regional policies and regulations on ICT are aligned with the goals of the 2030 Agenda for Sustainable Development and implemented so that ICT can contribute meaningfully and to its full potential in the achievement of the Goals. Within this policy framework, given the disaster-prone nature of the region, there is also need to give the integration of e-resilience principles much higher priority in existing and future ICT infrastructure investment projects.

Development and implementation of regional connectivity projects requires a significant amount of time and cost, which are typically spent on negotiations and the acquisition of rights of way and other administrative work. While a similar national project, whether it be in transport, energy or ICT, may face similar challenges, a regional project poses additional challenges as multiple countries are involved and a delay and disagreement in one country might affect the other countries. Co-deployment of infrastructure can reduce the bottlenecks and accelerate the pace of planning and deployment, particularly in landlocked developing countries. Leveraging existing regional connectivity agreements in which cross-border connectivity has already been agreed to, such as the Intergovernmental Agreement on the Asian Highway, the International Agreement on the Trans-Asian Railway Network or the Intergovernmental Agreement on Dry Port, could be an efficient way to deploy cables and networks more rapidly in a cost-efficient manner that would also bring diversified and augmented sources of revenue-generation.

A regional connectivity initiative could benefit from a regional agreement, framework and consensus that sets out principles, objectives, cooperation and implementation modalities. Such a regional template would reduce the time and cost associated with negotiations and consultations for a regional, subregional and bilateral connectivity initiative. It would also help harmonize policies and regulations where necessary. For example, in both the Master Plan for the Asia-Pacific Information Superhighway and the Regional Cooperation Framework, open access and competition are promoted as principles to narrow the digital divide and achieve inclusive and sustainable development in Asia and the Pacific. Both documents also provide implementation modalities, a governance structure and options for financing mechanisms.

Despite the challenges, bottlenecks and additional complexities of regional connectivity initiatives, certain actions and measures could increase the likelihood of securing investment and financing and successful implementation. As Asia and the Pacific is a disaster-prone region, integrating disaster risks and disaster risk mitigation into a regional connectivity initiative from the planning phase would build e-resilience and increase the quality and investment attractiveness of projects. The integration of resilience in infrastructure is a development objective articulated in 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction and other internationally agreed development frameworks.

## ENDNOTES

- <sup>1</sup> This includes the development of climate friendly infrastructure, minimizing the environmental and social disruption of infrastructure connectivity projects and mitigating risks from enhanced transport connectivity such as the spread of infectious diseases.
- <sup>2</sup> United Nations Development Programme (1994).
- <sup>3</sup> As per Human Development Report for Mumbai, overall HDI varies between 0.96 and 0.05 for the best and the worst municipal ward and 40 per cent of population is under poverty line. See UNDP (2010).
- <sup>4</sup> Lagging regions are usually located either in the hinterland or in a peripheral part of a country and are therefore not well connected to the rest of the country or, for that matter, to other countries.
- <sup>5</sup> See Xianghui (2016) for a recent study on logistics cost in Thailand.
- <sup>6</sup> The under construction CASA 1000 electricity grid connection between Central Asia and South Asia has been under development since the 1990's. The TAPI gas pipeline has had a similarly long gestation period.
- <sup>7</sup> In particular, where this allows for a coal to gas shift in the power generation sector and where fugitive emissions from gas infrastructure are well managed.
- <sup>8</sup> Yanfei and Chang (2014).
- <sup>9</sup> CASAREM will initially include Kyrgyzstan and Tajikistan in Central Asia (exporters) and Afghanistan and Pakistan in South Asia (importers), but other countries would be able to join the initiative as energy trade expands.
- <sup>10</sup> Secretariat of the Pacific Regional Environmental Programme (2011).
- <sup>11</sup> At the time of writing, 13 MOUs, 2 cooperation protocols, and 19 bilateral agreements have been signed under the BRI in the area of energy.
- <sup>12</sup> ESCAP (2014a).
- <sup>13</sup> ESCAP (2016d).
- <sup>14</sup> Population of East and North-East Asia is 1,618,778, while the population of the ESCAP region is 4,454,285, according to ESCAP (2016a).
- <sup>15</sup> ESCAP (2016d).
- <sup>16</sup> ESCAP and National Information Society Agency (2015).
- <sup>17</sup> For more information on the missing links among ESCAP countries on terrestrial and submarine fibre optic cables, please see the interactive transmission maps available from [www.unescap.org/our-work/ict-disaster-risk-reduction/asia-pacific-information-superhighway/asia-pacific-information-superhighway-maps](http://www.unescap.org/our-work/ict-disaster-risk-reduction/asia-pacific-information-superhighway/asia-pacific-information-superhighway-maps).
- <sup>18</sup> OECD (2014a).
- <sup>19</sup> See for example, Asia Pacific Carriers' Coalition (2012).
- <sup>20</sup> Network diversity allows for options for alternative mediums of communication traffic through meshed architecture, namely that there is more than one route to take from a source to its destination. This is essentially the same principle behind the Internet, creating a highly networked environment with multiple routes for communications traffic. Redundancy provides fail-safe options such that if one critical infrastructure point were to fail, there would be "back-up" options or an identified way to quickly bring such infrastructure back "online" or "up and running" again.
- <sup>21</sup> ESCAP (2014a).

## CHAPTER 5

# FINANCIAL MARKET AND PUBLIC RESOURCE MANAGEMENT COOPERATION

Increases in the availability and quality of financial services and improvements in the management of public resources can be very effective in supporting sustainable development in Asia and the Pacific. In the Bangkok Declaration on Regional Economic Cooperation and Integration in Asia and the Pacific emphasis is placed on regional cooperation in such areas as (a) equipping countries with tools to cope with financial volatility and ensure financial stability through, among other things, cooperative arrangements for the provision of liquidity support; (b) strengthening national financial markets and establishing linkages among them; and (c) effectively mobilizing resources across and within countries.

Since the Asian financial and economic crisis of 1997-1998, financial policies and the regulatory and institutional architecture in the Asia-Pacific region have steadily improved through financial cooperation. For instance, regional arrangements, such as the ASEAN+3 liquidity facility, the Chiang Mai Initiative Multilateralisation, and the Asian Bond Market Initiative, respectively, offer liquidity support and promote local currency bond markets to minimize risks arising from currency or maturity mismatches. Many other subregional and bilateral arrangements between central banks or finance ministries contribute to a regional financial safety net and policy coordination.

Over the years, financial integration has expanded in the Asia-Pacific region, although at a slower pace in comparison to the rate in other regions, such as North America or Western Europe. The continued development of the financial markets in Asia and the Pacific has resulted in increases in cross-border flows and transactions, leading to a higher degree of convergence in interest rates. In this regard, South-East Asia is the most advanced subregion, as ASEAN finance ministers and central bankers have agreed on an action plan for financial market integration as part of the ASEAN Economic Community initiative.

Regional financial development calls for greater diversification of financial markets and the effective management of liability risk. In addition, financial intermediation must be more inclusive and capable of arranging financing to meet the large and growing

demands associated with the development of sustainable infrastructure.

The region, with foreign exchange reserves representing 60 per cent of the global reserves and savings accounting for almost 50 per cent of the global savings, has the potential to build a strong financial and investor base from which it can leverage private capital. To effectively do this, deeper capital markets, the development of the institutional investors' segment, and an enabling policy environment are required.

The region's inability to adequately tap opportunities presented by high global and regional liquidity has been accompanied by constraints in public resource mobilization and management. Despite having large tax potential, most countries continue to exhibit low levels of tax-to-GDP ratios. Many of them also provide generous subsidies, irrespective of their economic rationale and environmental consequences, and user charges applicable to those with the ability to pay them are rarely used, which makes sustainable consumption and production more difficult. Therefore, there is phenomenal scope for mobilizing and spending public resources more effectively, and regional cooperation could be very fruitful for sharing the best tax and public resource management policies and practices.

### The financial landscape of Asia and the Pacific

The financial landscape in the Asia-Pacific region is characterized by a significant degree of diversity. National financial systems range from a few large, diversified, thriving and well-regulated financial hubs that are globally integrated to a number of middle-sized emerging markets and a large number of countries with smaller, weaker and isolated financial markets.<sup>1</sup> Despite significant progress made recently by some countries in developing their capital markets, in most countries financial intermediation is predominantly bank-based and their capital markets are shallow and lack liquidity. In most countries, financial innovation, including venture capital, plays only a limited role in corporate financing.

Traditionally, banks have had a dominating role in the region's financial systems and have tended to focus



on the traditional bank businesses of deposit taking and consumer lending to households and companies. In many countries banks used to play an important role in financing economic development, export promotion, and public investment projects, and in some of the region's largest countries, including China and India, more than half of banking assets are State-owned. While direct government ownership and explicit and implicit guarantees have played a useful developmental role, they have also supported unprofitable businesses. In all, the region's banks still need to realize their full potential to contribute to the development of competitive and efficient financial systems.

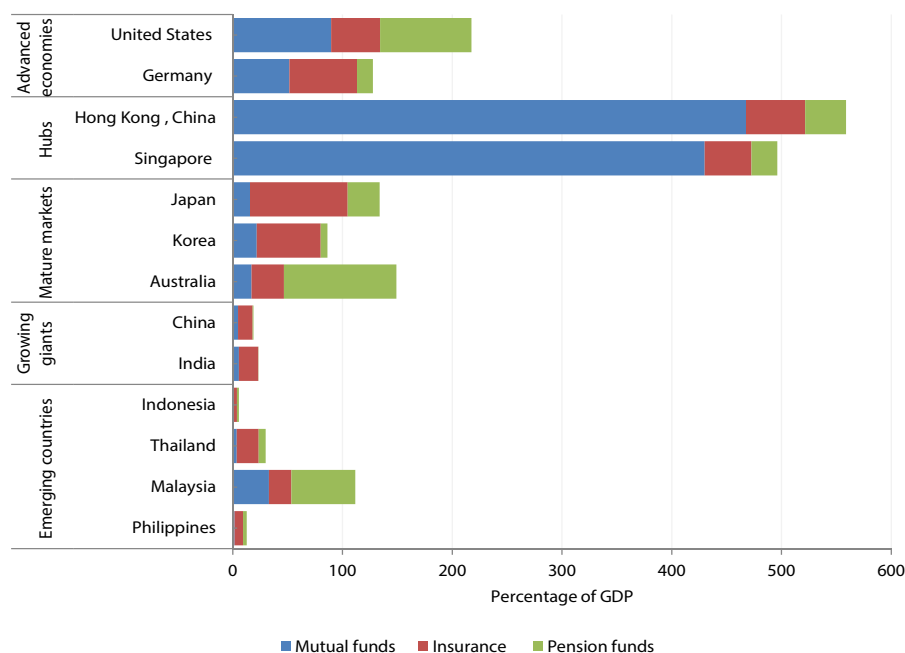
Despite the dominant role of banks in the development of the region's financial systems, capital markets have expanded significantly over the last two decades. The region's equity market capitalization amounted to \$23 trillion in 2016, which represents more than one third of global market capitalization.<sup>2</sup> Although Asian stock markets are becoming an increasingly important source of funding for the region, their full potential remains to be harnessed, especially in developing countries.<sup>3</sup>

As for the supply side of the capital markets, it is

estimated that about 24 per cent of the world's total assets under management are from Asia and the Pacific. The distribution of these funds is as follows: insurance companies (54 per cent); pensions (25 per cent); and sovereign wealth funds and other funds (21 per cent).<sup>4</sup> The size of the institutional investors differs widely across economies. The largest ones are in Singapore and Hong Kong, China, although more than 50 per cent of their assets are derived from foreign capital inflows. Conversely, the asset size of institutional investors in Indonesia and the Philippines is about 6 per cent and 13 per cent of GDP, respectively (figure 5.1).

In general, the Asia-Pacific region has been relatively successful in developing its financial markets. In East and North-East Asia, the value of the International Monetary Fund index of financial markets depth, which captures the importance of stock and bond markets as a share of GDP, trebled from 0.22 in 1995 to 0.70 in 2014 (figure 5.2).<sup>5</sup> For South East Asia, growth in the depth of the financial markets was even higher – although it started from a lower base: from 0.05 in 1995 to 0.25 in 2014. The North and Central Asia subregion also progressed in this regard, although from an even lower starting point, from 0.02 in 1995 to 0.09 in 2014.

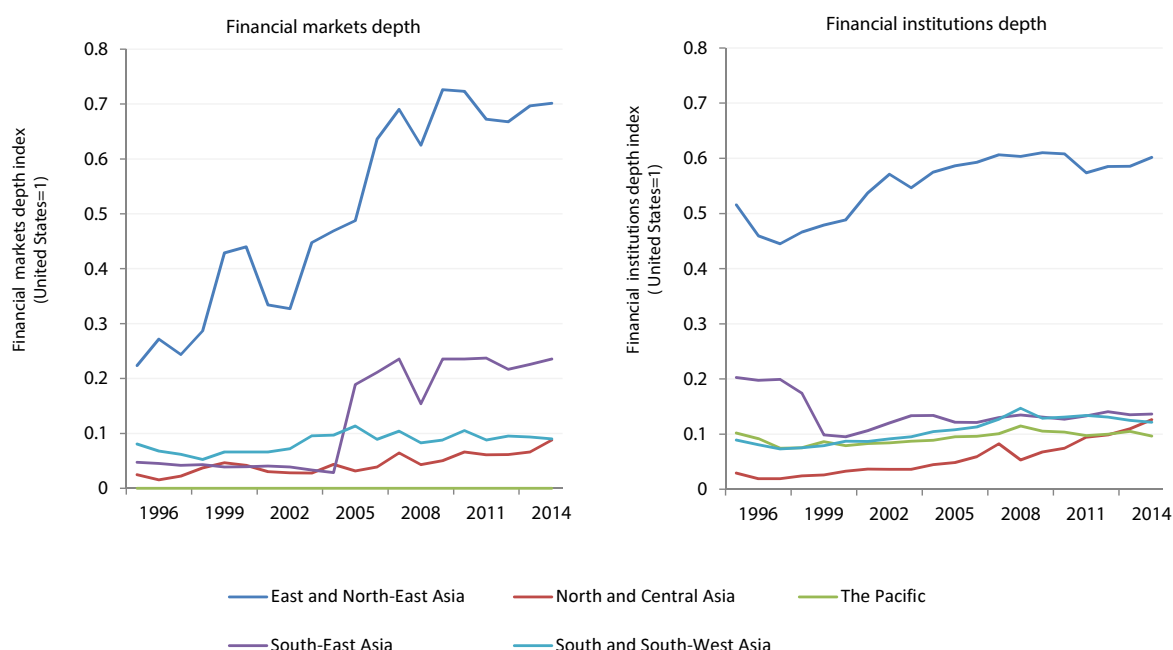
FIGURE 5.1: Institutional investors structure as percentage of GDP, 2014



Source: World Bank (2016), BIS (2016), IMF (2016) and Security Industry and Financial Markets Association (2016).



FIGURE 5.2: Indicators of financial development in Asia and the Pacific (medians by subregion)



Source: Author's calculations based on data from Svirydzienka (2016)..

Note: The financial markets depth index is an aggregate of five indicators: (i) Stock market capitalization to GDP, (ii) Stocks traded to GDP, (iii) International debt securities of government to GDP, (iv) Total debt securities of financial corporations to GDP, and (v) Total debt securities of nonfinancial corporations to GDP. The financial institutions depth index is an aggregate of four indicators: (i) Private-sector credit to GDP, (ii) Pension fund assets to GDP, (iii) Mutual fund assets to GDP, and (iv) Insurance premiums, life and non-life to GDP. The two indexes are normalized so that a value of one represents the level of financial market depth or financial institutions depth of the United States.

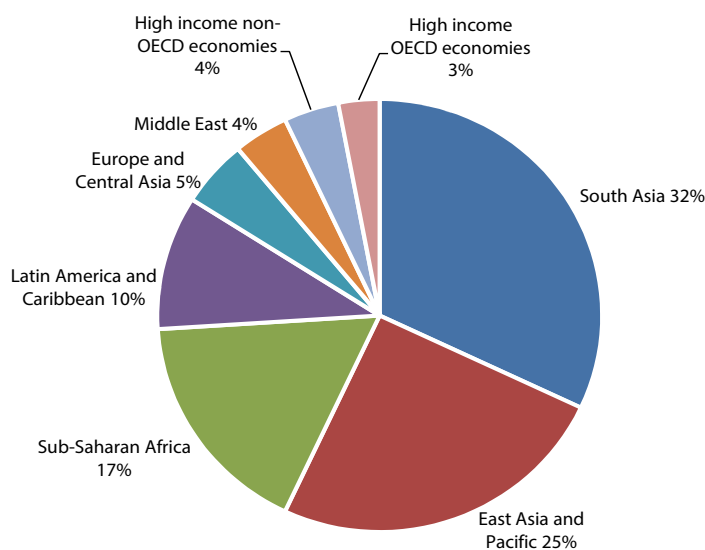
In contrast, progress in increasing the depth of the financial institutions has been more subdued. The financial institutions depth index, which captures the importance of bank credit, pension fund assets, mutual fund assets and insurance premiums, increased from 0.52 in 1995 to only 0.60 in 2014 in East and North-East Asia, while it decreased from 0.20 to 0.13 during the same period in South-East Asia. This decrease is attributed to a marked disintermediation process resulting from the Asian financial crisis. Similar to the financial markets depth index, North-Central Asia experienced strong growth starting from a low base (from 0.03 in 1995 to 0.13 in 2014). See Annex II for details on the value of the indexes of financial markets and financial institutions depth of individual countries of the region. It is also important to keep in mind that the development of capital markets is an incremental process and depends on the current development stage of individual countries (Annex III).

The low depth of most of the region's financial markets is accompanied by lack of financial market diversification, which hinders their potential to serve economy-wide investment requirements. In that regard,

it will be important for financial regulators to focus on sustainable financing. This will require a shift in the intermediation process to deepen financial inclusion, channel credit to underserved sectors and promote green financing, which are further discussed below.

**Financial Inclusion:** There is substantial potential as financial inclusion is low – 57.8 per cent of the adult population in 2014 had no bank account. Variability is also great in this regard, with South-East Asia having the lowest level of inclusion and East and North Asia having the highest level of inclusion (figure 5.3). Three countries in the region, China, India, and Indonesia, account for 38 per cent of the world's unbanked population. In 2014, the data on account ownership indicates a wide variation in financial penetration. The figures ranged from 1.8 per cent in Turkmenistan to 99.5 per cent in New Zealand. Lack of financial inclusion also indicates the existence of barriers to SMEs financing. Compared to their peers in other regions, the most recent data show that only 27 per cent of firms in South Asia and 27.9 per cent in South East Asia have access to credit lines, compared to 44.6 per cent in Latin America.<sup>6</sup>

FIGURE 5.3: Financial exclusion – population without accounts, 2014



Source: ESCAP, based on World Bank (2016b).

*Infrastructure Finance:* The need for infrastructure investment is exceptionally high in Asia (table 5.1) because of the growing infrastructure deficits that are exacerbated by demographic and urbanization pressures, vast requirements of emerging megaplans for regional connectivity and the 2030 Agenda. Governments can opt for different modes of infrastructure financing: public, private, domestic and external sources. Typically, the majority of projects have been financed through the government budget, given the public nature and limited profitability of infrastructure projects. However, private finance has contributed significantly to infrastructure development in the region, in particular through PPP arrangements for large energy and transport projects. The private sector has invested considerably in telecommunications in line with the gradual liberalization of the industry. Private investment has been more limited in less profitable sectors, such as water and sanitation, although their operation and management can still be delegated to private companies. External assistance, through concessional loans and grants, has also been used by developing countries to help overcome their infrastructure financing challenges. Such assistance would continue to be vital for the poorest countries, as they have limited alternative sources.

With regard to private infrastructure financing, the banking sector has traditionally played a major role, which is being increasingly complemented by capital markets. Mobilizing resources from institutional

investors, such as pension funds, insurance companies or sovereign wealth funds, presents a significant opportunity because the long-term nature of infrastructure projects matches the long-term liabilities of these investors. Such potential varies across countries because of differences in the investor base and the assets' risk profile. For capital markets to play a greater role in infrastructure financing, domestic markets must be deepened. Similarly, capital market integration must be encouraged to further mobilize foreign capital for infrastructure. However, to further integrate the capital markets, additional efforts must be devoted to harmonizing (or at least establishing mutual recognition of legal and regulatory frameworks), and standardizing administrative procedures through greater interoperability of trading and settlement platforms.

*Green financing.* To finance the decarbonization agenda, large scaling-up of finance from the current levels is required. Low-carbon projects are financed through banks, project developers, utilities or governments; yet these projects have typically long-term investment horizons and are perceived as risky, which commands a higher cost of capital.<sup>7</sup> This is compounded by poorly developed financial and insurance markets and regulatory restrictions on long-term bank lending, which reduces the pool of low-cost capital available for infrastructure investment, especially in countries with special needs.

TABLE 5.1: Demand for infrastructure financing in Asia and the Pacific

Various estimates	Time horizon	Area of focus	Annual investments (\$ billion)	Total investments (\$ trillion)
McKinsey (2013)	2014-2030	Global estimates	3,200-3,700	57- 67
OECD (2006)	2010-2030	Global estimates	2,650	71
Kennedy & Corfee <sup>a</sup> (2012)	2020-2030	Global estimates	2,680-3,200	..
World Economic Forum (2013)	2010-2030	Global estimates	3,340-3,480	66-70
Global Commission on Economy and Climate <sup>b</sup> (2012)	2015-2030	Global estimates	5,800-7,100	89-93
ADB (2010)	2010-2020	Developing Asia Pacific	850	8.5
G-20 MDB Task Force (2011)		Developing countries	1,000-1,500	..
McKinsey (2014)	2014-2030	ASEAN-5	..	3.4
World Economic Forum (2013)	2010-2030	Developing countries	1,250-1,500	..
Fay, et (2011)	2010-2020	Developing countries	900-1,100	..
Amar Bhattacharya & Romani (2013)		Developing countries	1,800-2,300	..
Ruiz-Nunez and Wei (2015)	2014-2020	Developing Countries	836	..
A. Bhattacharya & Holt (forthcoming)		Developing Countries	3,000	..

Source: Nangia (2016)

Note: a) Sustainable infrastructure and includes low carbon choices. b) Includes greening of infrastructure.

### Arrangements to ensure financial stability

The main pillars to ensure financial stability are (a) economic surveillance and monitoring and (b) short-term liquidity support. Asia and the Pacific has made progress in these two areas but the advancements have been limited to a few subregions. With respect to (a):

- The ASEAN Surveillance Process was the first formal institutional mechanism. Introduced in 1998, it provides a peer review of economic surveillance and monitoring in the annual ASEAN Surveillance Report. This serves as the main input for annual policy discussions of ASEAN finance ministers.
- The Economic Review and Policy Dialogue, introduced in May 2000, is the regional economic surveillance forum of the ASEAN+3 finance ministers and central bank governors. It encompasses a review of global, regional, and national economic conditions, monitoring of regional capital flows and currency markets, identification of macroeconomic and financial risks and policies to reduce such risks. It also aims to strengthen banking and financial system conditions and provides an Asian voice in the effort to reform the international financial system. In April 2011, the ASEAN+3 authorities established the ASEAN+3 Macroeconomic Research Office a unit in charge of regional economic surveillance.
- In the Pacific, the Association of Financial Supervisors of Pacific Countries, established in

2002, meets regularly to discuss supervisory and surveillance-related developments.

- In North and Central Asia, the Eurasian Economic Community launched the Anti-Crisis Fund in 2009, as a regional financial arrangement to help member countries address the global financial crisis. In 2015, it was transformed into the Eurasian Fund for Stabilization and Development, which supports members' adjustment programmes while overseeing surveillance mechanisms.

With regard to short-term liquidity support, ASEAN established the ASEAN Swap Arrangement in 1997 to deal with balance-of-payment difficulties. Over the years, its size has been raised from \$100 million to \$2 billion.<sup>8</sup> Subsequently, The Chiang Mai Initiative started as a network of bilateral swap agreements, combining the ASEAN Swap Arrangement with a number of bilateral swap agreements between different ASEAN+3 member countries. In 2010, the Chiang Mai Initiative Multilateralisation pooled this network of bilateral swap agreements into a single reserve pooling arrangement of \$240 billion. Crisis-affected members are eligible for short-term liquidity support from the Chiang Mai Initiative Multilateralisation up to 30 per cent of their quota, but to access the remaining 70 per cent of their quota, they need to be under an IMF arrangement. Access to funds through the Chiang Mai Initiative Multilateralisation is linked to an IMF arrangement because of countries' limited capacity to formulate and enforce effective adjustment programmes during crises.

Examples of other sizeable swap arrangements in the region are the \$2 billion Framework on Currency Swap Arrangements for SAARC Members, established in 2012 by the Reserve Bank of India; the China-led \$230 billion bilateral swap agreement for more than thirty countries, which became effective in 2009; and the Eurasian Economic Community-led Eurasian Fund for Stabilization and Development, of about \$8.5 billion, which offers financial credits and investment loans.

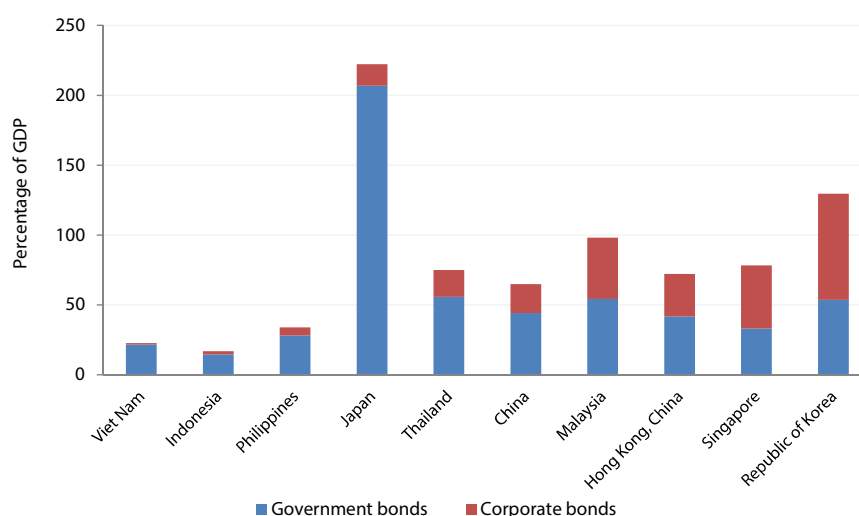
### Cooperation on capital market development

To advance capital market cooperation, a number of initiatives have been undertaken. Most notable is the Asian Bond Fund, introduced in June 2003 by the Executive's Meeting of East Asia Pacific Central Banks, and the Asian Bond Market Initiative, launched by ASEAN+3 in August 2013. The Asian Bond Fund-I called for purchases by central banks of sovereign and quasi-sovereign United States dollar-denominated bonds issued by eight of the 11 members of the Executive's Meeting of East Asia Pacific Central Banks using their foreign exchange reserves.<sup>9,10</sup> The eight members selected represent countries with emerging economies. To facilitate investments by public and private sector entities, Asian Bond Fund-II was set up for purchases of \$2 billion in local currency-denominated sovereign and quasi-sovereign bonds and the listing of local currency exchange-traded bond funds on stock markets, including exchanges in Malaysia, Singapore and Hong Kong, China.

The Asian Bond Market Initiative aimed at creating robust primary and secondary markets through bond market infrastructure development and improving market access to a diverse issuer and investor base. As of the first quarter of 2016, the size of the local currency bond market of the emerging East Asian countries (China; Hong Kong, China; Indonesia; Malaysia; Philippines, Republic of Korea; Singapore, Thailand and Viet Nam) stood at \$9.6 trillion, representing a 20.4 per cent annual increase over the first quarter of 2015. This market remains dominated by government bonds, which accounted for a 61.7 per cent share of the region's aggregate bond stock at the first quarter of 2016.<sup>11</sup> Domestic financial markets in most economies, however, are relatively underdeveloped in terms of size, liquidity and maturity, which impede the channelling of long-term savings to long-term investments. In particular few countries have a developed corporate bond market as illustrated in figure 5.4. In 2008, the finance ministers of ASEAN+3 agreed on the Asian Bond Market Initiative New Road Map, which has further promoted the issuance of local currency bonds, facilitated the demand for local currency bonds, and improved infrastructure and regulatory frameworks.

ASEAN+3 is currently working on integrating markets through the ASEAN+3 Bond Market Forum, which seeks to harmonize and standardize market practices, regulations, and clearing and settlement procedures related to cross-border bond transactions. As part of its ASEAN Economic Community project, the ASEAN Capital Market Forum, which is comprised of capital market regulators, has focused on the harmonization of rules

FIGURE 5.4: Size of government and local corporate bonds, as a percentage of gross domestic product, June 2016



Source: ADB(2016)

and regulations and fostering integration of the region's capital markets under the ASEAN Economic Community Blueprint 2015 through ASEAN capital market disclosure standards for cross-border offerings of securities. Given the different size and pace of capital market reforms, only a few ASEAN countries have moved to adopt the cross-listing of stocks through the ASEAN Trading Link. Among the ones that have adopted the cross-listing of stocks are Malaysia, Singapore and Thailand.

The South Asian Federation of Exchanges, established in 2000, aims to set common standards of listing, trading, clearing, settlement and investors' protection, and to encourage cross-border listings and securities trading. In North and Central Asia, the Eurasian Economic Community, with support from Kazakhstan and the Russian Federation, the countries with the more developed capital markets in the subregion, is promoting increased capital market integration. In the Pacific Islands, capital market development is very limited. In 2000, the Suva Stock Exchange was renamed the South Pacific Stock Exchange and launched an electronic trading platform, with a view to becoming a regional exchange.

Capital controls and lack of foreign exchange hedging instruments is another area that requires work as part of the process to develop financial markets in the region. Although progressive capital account liberalization has eased market access to foreign investors, in several countries there are restrictions for non-residents to hold and trade domestic securities in several countries. For example, India has restrictions on foreign investment in rupee-denominated bonds,<sup>12</sup> and Thailand only grants approval to foreign entities to issue baht-denominated bonds on the condition that they keep the proceeds in baht and use them in the country.

To enable larger international allocations from institutional investors, hedging instruments, such as interest and currency swaps, are needed, and some initiatives have been launched for this purpose. For example, the Reserve Bank of India has been working with the Securities and Exchange Board of India to allow non-resident institutional investors to hedge currency risk with exchange-traded currency futures. At the international level, the Currency Exchange Fund was created to provide hedging against currency and interest rate mismatches in frontier and less liquid emerging markets. Its services cover about 70 currencies, including 17 in Asia. However, the price of these hedging instruments is sometimes prohibitive, especially for illiquid and underdeveloped markets. Given the importance of hedging instruments, efforts are needed to develop regional derivative markets, especially to cover currencies of underdeveloped countries in the region.

## Financing investments in infrastructure

The 2030 Agenda for Sustainable Development puts infrastructure development at its core with at least 12 of the 17 Sustainable Development Goals having a direct infrastructure link. In Asia and the Pacific, some economies, such as Malaysia, Singapore and Hong Kong, China, have built and maintained high-quality infrastructure and countries such as China and, Japan have infrastructure stock estimated at, respectively, 76 per cent and 179 per cent of GDP, compared to 64 percent in the United States and 58 per cent in Canada.<sup>13</sup> However, most countries have invested in infrastructure less than what is deemed necessary to support their competitiveness and quality of life.

With regard to financing the development of sustainable infrastructure, the following challenges are noteworthy in Asia and the Pacific:

- Infrastructure deficits for both new investments and for upgrading the existing stock are large. Infrastructure needs in Asia have been estimated at around \$1.6 trillion per year, on average, for the period 2016–2030. This is 60 per cent higher than the yearly spending during the previous 15 years.<sup>14</sup> The resulting infrastructure gap, the difference between the needs and historical spending, is estimated to be very large by 2030 for some countries: about \$1.3 trillion for Indonesia and \$500 billion for India.<sup>15</sup>
- Infrastructure gaps are much larger if the cost of regional infrastructure connectivity and growing urban population's demands are factored in properly — the urban population in Asia and the Pacific is expected to grow by 0.7 million people every week until 2050.
- Targeted inclusive infrastructure development is a complex, but critical element of the 2030 Agenda. For example, Sustainable Development Goal 7 calls for universal access to electricity, which involves broadening coverage to around half a billion people in the region who still have no access to electricity, and Goal 6 calls for universal availability and management of water and sanitation at a time when one out of ten rural residents live without access to safe drinking water.<sup>16,17</sup> The unbalanced development of ICT infrastructure in the region has also created a digital divide, with millions of people excluded from opportunities related to modern technologies.
- The development of climate friendly infrastructure and overcoming congestion and air pollution require technologically advanced and innovative solutions and structures. This is becoming imperative as Asia and the Pacific is responsible for more than half of the global greenhouse gas emissions.<sup>18,19</sup>

- Given that Asia and the Pacific is the most disaster-prone region in the world, infrastructure development should be more resilient.<sup>20</sup> Resilient infrastructure can reduce the impact of natural disasters, ensure that essential services remain operational during and after disasters, and limit reconstruction needs.

- Poor availability of risk capital and long-term finance are considerable constraints. With the exception of a few countries, most are unable to raise resources in financial markets to finance their infrastructure development. Related constraints include shallow financial markets, uncertain macroeconomic policy and regulatory environments, lack of viable project pipelines, and challenges to improve the process of project selection so that funding is prioritized.

To tackle these challenges, governments need to deal with funding and financing issues. Funding and financing are sometimes used interchangeably, but the distinction is important. Funding basically refers to who is paying for the infrastructure services while financing involves the repayment of the capital or money invested, often with interest. Regarding funding, the basic alternatives are (a) through national, state or local budgets; (b) to be paid for by consumers through a stream of user charges; (c) through external grants by donor agencies or private corporations, although this is usually a limited source; and (d) through commercial revenue generated from a public asset such as real estate development.

With regards to funding through government budgets, policymakers could significantly increase the resources available to fund infrastructure by streamlining tax systems to increase the tax base, raising tax rates for higher income brackets, and improving compliance. For most countries in the region, improving compliance is the highest priority. In addition, improving expenditure management, for instance, by curbing non-developmental expenditure, such as across-the-board subsidies, could free up vital resources. Improving the efficiency of public spending in infrastructure could also lead to significant savings, of the magnitude of 15 to 35 per cent, according to different studies. This could be achieved by enhancing project selection, ensuring adequate maintenance, reforming State-owned enterprises and optimizing the use of infrastructure assets.

In many economies in the region, a large proportion of infrastructure is financed by the public sector, with only 20 per cent financed by the private sector

and a very small percentage by official development agencies.<sup>21</sup> However, heavy reliance on public financing of infrastructure is problematic for governments facing fiscal constraints and an unsustainable debt position.

With regards to infrastructure financing, the main sources in Asia have been loans from commercial banks, multilateral development banks and other financial institutions. In that regard, new regional development banks, such as the Asian Infrastructure Investment Bank (AIIB), have increased the pool of available resources in the region for infrastructure financing... However, credit, country and project exposure limits often pose problems for the financing of large projects.

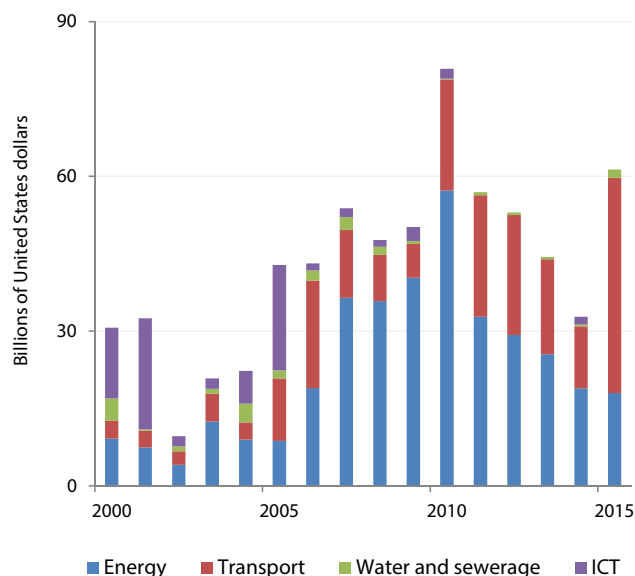
Governments usually involve the private sector through PPPs in order to circumvent limited public budgets and borrowing capacity. Over the last 15 years, private companies invested about \$650 billion in Asian developing countries, 54 per cent went to projects related to energy, 33 per cent to projects related to transport, 10 per cent to projects related to ICT and 3 per cent to projects related to water and sewerage (figure 5.5). However, their distribution has been very uneven, and for small developing countries, financing infrastructure investment through PPPs is still a challenge. Indeed, 75 per cent of the region's PPP investment was concentrated in five major countries: India, China, the Russian Federation, Turkey and Indonesia.

It is also important to keep in mind that the private cost of capital is usually more expensive than public financing as the private sector requires returns commensurate to the risk taken. As a result, private partners in PPP projects often require credit enhancement mechanisms and/or guarantees to cover political and economic risks. In all PPP projects need to create sufficient additional value to offset the higher financing and transaction costs. A related point is that PPPs are most promising as a source of financing in revenue-generating sectors, such as energy or transport, from which user charges can be used to repay the investment.

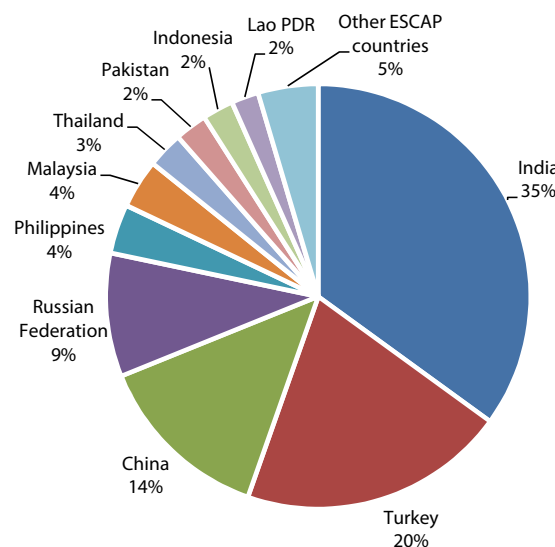
Whereas PPPs cannot fill all infrastructure gaps, this mechanism may contribute to a significant share of infrastructure investments. For example, the private sector has financed about 50 per cent of investment in power generation assets in South-East Asia over the period 2000-2013.<sup>22</sup> Similarly, in transport, the private sector contribution accounted for an impressive 34 per cent of total investment in roads and highways in India in the 11th Plan (2007-2012).<sup>23</sup> In addition, PPPs are not just about financing. Other benefits that make PPPs an attractive option are efficiency gains, risk transfers and life-cycle cost optimization.



FIGURE 5.5: Importance of public-private partnerships by sector over time and by country



Source: World Bank (2016c)



## Tax cooperation

Addressing the financing requirements of sustainable infrastructure development is only one aspect of the 2030 Agenda for Sustainable Development. Effective pursuit of the entire 2030 Agenda is daunting for the Asia-Pacific developing countries. The United Nations Sustainable Development Network estimates that incremental spending of at least \$1.4 trillion would be required per year by low-income countries alone. Half of this additional amount, about 2.5 per cent of the GDP of these countries, must be mobilized through public revenue enhancement.

The Asia-Pacific region, which as a whole has one of the world's lowest tax revenue levels, is particularly ill-prepared for this task. In recent years, total tax revenue averaged 17.6 per cent of GDP in the region, compared to the developing country average of 21.3 per cent and developed country average of 26.4 per cent.<sup>24,25</sup> This level only surpasses those for the Middle East and North Africa, where non-tax resource revenues have more than compensated for low tax revenues. Moreover, the region average of 17.6 per cent conceals the vast differences between countries. The regional average comes down to only 15.6 per cent if developed countries and the Central Asia subregion are excluded. Figure 5.6 shows that for 19 of 25 developing Asia-Pacific countries, the tax-to-GDP ratio is less than 20 per cent. In addition, the tax

mix in the Asia-Pacific region is biased towards indirect taxes. Direct taxes account for only 37.6 per cent of the total tax revenue in the region, compared to 55.8 per cent for the Organisation for Economic Co-operation and Development (OECD) countries. This difference is not surprising because indirect taxes, such as value-added tax (VAT) or excise taxes, typically pose smaller tax administration challenges for developing countries compared to direct taxes. However, this is not entirely desirable because indirect taxes tend to be more regressive.

At the same time, public revenue mobilization, especially taxation, is increasingly becoming a cross-border issue in line with the gradual deepening of regional economic integration and globalization. The misuse of tax treaties and tax heavens along with trade-based tax evasion and fraud are becoming significant drains on public revenue for all countries. OECD estimates that the global revenue losses from such activities are between \$100 billion and \$240 billion annually.<sup>26</sup>

The greater cross-border mobility of capital and production also creates strong tax competition pressure on countries to attract foreign investment and penetrate export markets, especially in developing countries where costly tax incentives are often provided to compensate for weak market institutions and an unfavourable business environment.



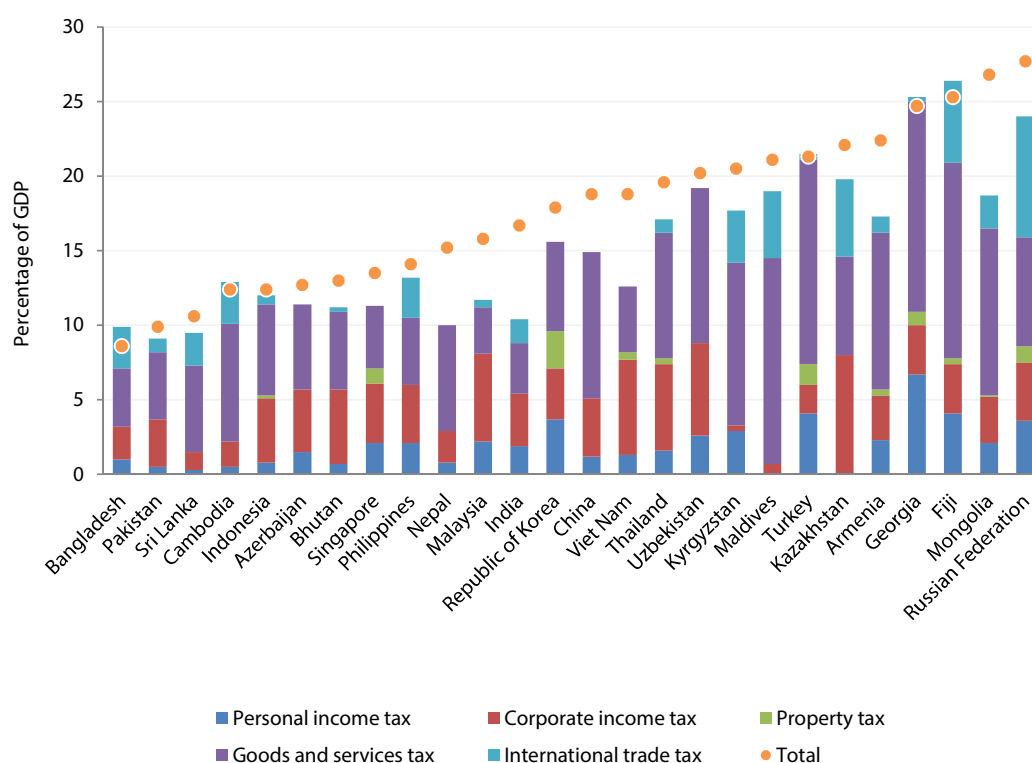
Data show that tax incentives are generally more prevalent in the Asia-Pacific region compared to other regions. Results of a survey indicated that seven countries in South Asia and 92 per cent of the 12 surveyed East Asia and Pacific countries also provided such incentives (figure 5.6).<sup>27</sup> This compares with 75 per cent in Eastern Europe, Latin America and the Caribbean, Middle-East and North Africa, only 60 per cent in sub-Saharan Africa, and 21 per cent in OECD countries. South Asia also stands out in terms of providing VAT exemptions or reductions. East Asia and the Pacific, meanwhile, rank high in the use of reduced tax rates, investment allowances and tax credits, and research and development tax incentives.

Corporate income taxes have also come under pressure. While declining corporate tax rates is a worldwide phenomenon, the problem seems to be exacerbated in Asia and the Pacific as countries expand tax incentives and cut rates in an attempt to attract foreign investment. Unlike other regions, corporate

tax reform in Asia and the Pacific has been both rate-reducing and base-reducing.<sup>28</sup> A study based on 14 Asia-Pacific countries found support for the hypothesis that countries in the region compete with each other in setting their corporate tax rates.<sup>29</sup> A recent KPMG study has warned that the paucity of coordination and harmonization on tax matters in the ASEAN region, especially in the light of the ASEAN Economic Community, could result in continued tax competition, which would have adverse effects on tax bases in the region.<sup>30,31</sup>

For all the challenges originating from the internationalization of taxation, effective regional and global tax cooperation and joint actions by all stakeholders is a precondition for any viable solution. Cooperation can also be an important catalyst for national efforts to enhance public revenue mobilization and deploy conducive tax and spending policies through broad knowledge exchange, policy debate, peer learning and targeted technical assistance and capacity-building activities.

FIGURE 5.6: Tax composition and revenues in selected Asia-Pacific countries, percentage of gross domestic product



Source: ESCAP, based on IMF (2017) and national sources.

Notes: 2014 or latest available year. Differences between the 'total' and the sum may arise from gaps in data and definitional issues. For instance, countries such as India and Viet Nam have various goods and sales taxes in addition to standard VAT, as well as excise taxes that are not captured under 'indirect tax'.

A particularly important area where tax cooperation can be useful is to address the financial implications of the region's very rapid urbanization. The unprecedented speed and dominance of megacities in the Asia-Pacific region has put enormous fiscal pressure on governments, especially municipal governments. Sustainable urbanization requires public investments in urban infrastructure and public services in the scale of trillions of dollars, yet municipal governments of the region are often ill-equipped to meet the challenge. Almost all Asian countries suffer from serious vertical imbalances, with subnational governments' expenditure well-exceeding their revenues. The growing investment needs, in particular the fiscal expansion in the aftermath of the 2008 global financial and economic crisis, has further exhausted the credit potential of many subnational governments and led to the accumulation of local government debt at a very rapid rate in a number of cases, threatening to destabilize the whole financial system.

The challenge of fiscal consolidation for municipal governments is that there is no panacea, especially in the context of developing countries. Property tax revenue, for instance, is often able to shoulder the bulk of the financing burdens of municipal governments in developed countries, but, on average, it only achieves a fraction of the revenue potential in developing countries because of capacity and institutional constraints, a weak tax culture and lack of a mature property registration and market in the first place. Asia-Pacific cities therefore need to explore a diversified mix of revenue mobilization vehicles, including property taxes, local business or income taxes and service charges, as well as more innovative solutions, such as land value capture and transport/fuel taxes. Providing greater policy space for municipal governments in local fiscal

governance while enhancing their accountability on this front would be a desirable direction moving forward.

Against this background, tax cooperation at global and regional levels has been gaining momentum. At the global level, as part of the Addis Ababa Action Agenda, adopted at the Third International Conference on Financing for Development in July 2015, countries committed themselves to scale up international tax cooperation, and welcomed new initiatives by international organizations and country groupings to combat cross-border tax evasion, improve the transparency of international taxation, and enhance policy coordination across countries. The Agenda also stressed the importance of fostering cooperation in tax matters and taking into account the different policy priorities and capacity constraints of developing countries.

At the regional level, Latin America, Africa and Europe have been at the forefront in the areas of regional tax policy coordination, knowledge exchange, and capacity support through region-wide tax cooperation organizations, such as the African Tax Administration Forum, the Inter-American Center of Tax Administrations and the Intra-European Organisation of Tax Administrations. These organizations not only provide a central platform for regional tax cooperation but they also play a significant role in supporting their respective regions' engagements in international tax cooperation and reforms through coordinated regional positions and inputs and targeted implementation support that takes into account the local context.

In contrast, the Asia-Pacific region still lacks a broad-based region-wide platform for cooperation on tax and public finance issues. While certain relatively

TABLE 5.2: Types of tax incentives and their prevalence

Region	Number of countries surveyed	Tax holiday/ exemption	Reduced tax rate	Investment allowance/ tax credit	R&D tax incentives	Super deductions	Free Zones/ SEZ/ EPZ/ Free Port	Discretionary process
East Asia and Pacific	12	92%	75%	67%	83%	33%	92%	83%
Eastern Europe and Central Asia	16	88%	38%	25%	31%	0%	100%	38%
Latin America and Caribbean	25	88%	32%	52%	12%	4%	72%	40%
Middle East and North Africa	15	80%	40%	13%	0%	0%	80%	40%
OECD	33	21%	36%	64%	76%	21%	67%	33%
South Asia	7	100%	43%	71%	29%	71%	71%	43%
Sub-Saharan Africa	45	78%	62%	78%	11%	18%	64%	82%

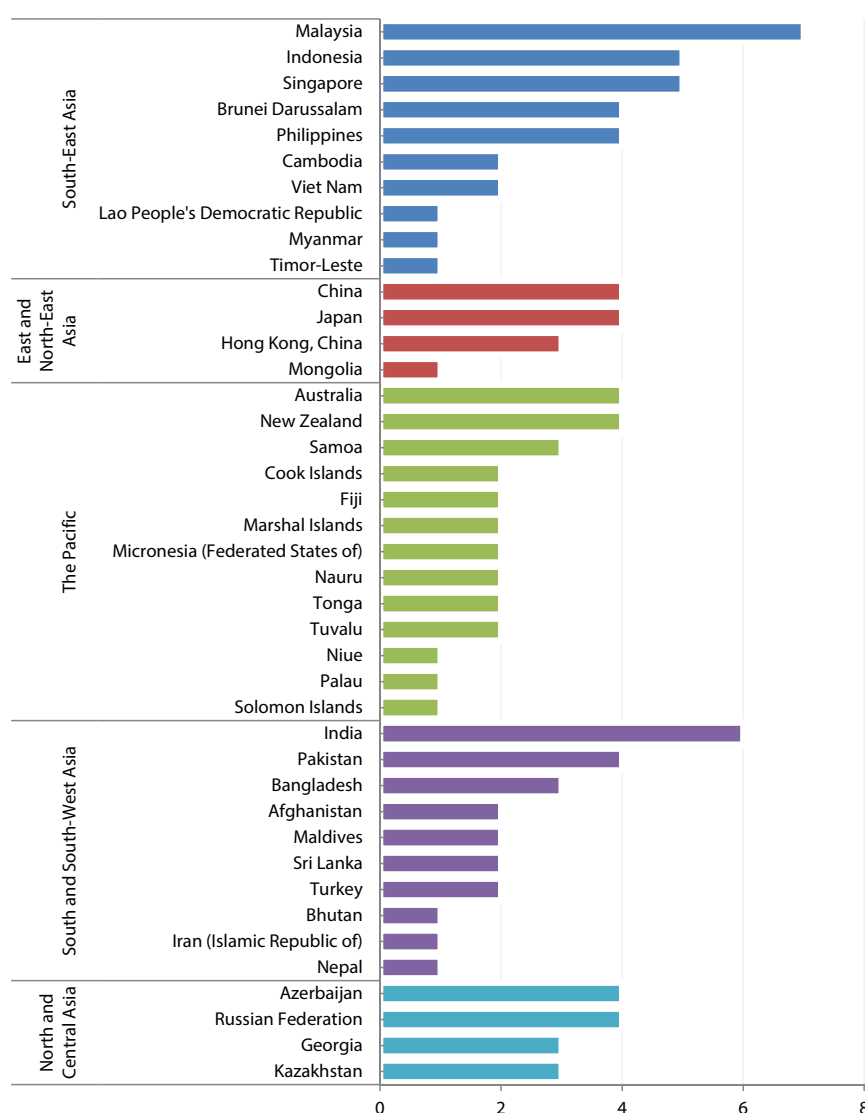
Source: Sebastian (2013).

successful subregional forums, such as the Study Group on Asian Tax Administration and Research and the Pacific Islands Tax Administrators' Association, have been established, their coverage and capacities remain limited. In particular, the region's least developed and smaller developing members are not adequately represented in global and regional tax cooperation mechanisms (figure 5.7).

Limited inclusive and region-wide cooperation and capacity support has prevented Asia and the Pacific

from engaging proactively and making substantial contributions to the ongoing global tax cooperation and reform initiatives. Compared to other developing regions with broader-based, more institutionalized and better financed region-wide forums, Asia and the Pacific, especially its developing countries that are not part of OECD or G20, has largely remained passive in international tax norm-setting processes and negotiations. With regard to those negotiations, for the most part, they have lacked an united voice and opportunities to provide well-developed regional inputs.

FIGURE 5.7: Participation of Asia-Pacific countries in global and regional tax forums



Source: ESCAP estimations based on official websites of major global and regional tax forums.

## Suggestions to move forward

The centrality of finance as a critical mean of implementing the 2030 Agenda for Sustainable Development combined with its scarcity makes it even more important that the RECI and 2030 Agenda are pursued in a synergic and complementary manner. In this vein, a necessary first step is to strengthen coordination in the region to ensure financial and macroeconomic stability so that a resilient platform for economies to raise the necessary financial resources in support of the 2030 Agenda can be provided.

*Short-term liquidity.* Regional financial safety nets offer short term liquidity over and above the IMF emergency lending programs. Few principal elements need to be kept in perspective in judging the efficacy of these facilities, and deliberating on underlying concerns and pertinent questions:

- Are these facilities operationally flexible and can they safeguard or prevent short term risks associated with financial market volatility in general and/or volatility in capital flows in particular, along with significant fluctuations in exchange rates?
- How can cooperation be strengthened to effectively manage these risks, particularly with regards to monetary and exchange rate policies and implementation of macroprudential policies and capital flow measures?
- Should the existing facilities not be backed by a more robust framework of regional surveillance, supported by regionally harmonized and enforceable macroprudential policy frameworks?
- Will the fragmentation of subregional facilities and frameworks and procedural differences render the region wide crisis management difficult?
- The Chiang Mai Initiative Multilateralisation is reliant on IMF support beyond the 30 per cent quota of liquidity. With that in mind, how swiftly can surveillance reports be developed by CMIM and, if IMF recommends its standard conditionalities, how can it be ensured that the assessment in those surveillance reports complement IMF conditionalities and emergency support?
- Finally, there remains concern regarding the ability of subregional surveillance and coordination given the procedural and policy uncertainty on how to access resources which has yet to be tested in emergency situations.<sup>32</sup> In addition, there is a need in the region to develop capacities to formulate and monitor conditionalities associated with emergency lending.

*Capital market cooperation.* To channel the abundant savings available in Asia and the Pacific, which are mostly flowing to more mature economies outside the region, domestic financial markets and institutions need to be developed further. Currently, most financial markets in the region are dominated by banks. Therefore, one key consideration is to develop local currency bond and securities markets. For this purpose both the demand and supply side need to be strengthened by facilitating market access to a diverse issuer and investor base. In this context, development of domestic institutional investors with long-time horizons, such as insurance companies, pension funds and asset management companies, is particularly important.

Similarly, financial market infrastructure needs to be enhanced in order to regulate the issuing and trading of bonds and securities, payment systems, central securities depositories, and cross-border clearing and settlement systems. A well-functioning financial infrastructure is essential for trades to be executed rapidly and safely, thereby contributing to the liquidity of the market. It also contributes to building confidence among issuers and investors in the integrity and fairness of the price discovery process, which are essential for encouraging their participation in the market. At the same time, different standards and requirements may prevent investors from credibly assessing investment opportunities across multiple countries. Therefore, adoption of harmonized regulations, corporate governance and financial products are needed to facilitate the trading of securities across countries, laying the groundwork for the development of a regional financial market at a later stage.

The economies in the region, with the exception of Japan, the Republic of Korea, Singapore and Hong Kong, China, impose foreign exchange restrictions, which does not bode well for regional financial cooperation efforts. While such restrictions help mitigate vulnerabilities stemming from capital outflows, they have negative effects, resulting in a low level of investments by non-resident institutional investors and cross border transactions, which adversely affects capital market development in the countries where they have been imposed. Thus, countries in the region should gradually accelerate their capital account liberalization efforts, while developing appropriate macro-prudential policies to preserve financial stability amid increasing volumes of cross border transactions.

*Financing infrastructure development.* Given the scale of infrastructure investment requirements, financing sources in addition to the public sector need to be identified. While the banking sector has traditionally played a major financing role, capital markets should

complement these resources by providing an alternative intermediation mechanism between investors and project developers. Thus, the development of domestic financial markets and institutions and linking them through cooperative efforts, are needed to facilitate financing of high-priority, bankable infrastructure projects with an appropriate mix of debt and equity.

Countries should also tap new financing sources. For instance, AIIB, which became operational in 2016, has significantly increased the infrastructure financing available to developing Asian economies. Similarly, the New Development Bank provides another source of financing for the region. Multilateral initiatives have also burgeoned to support infrastructure project preparation. Examples include: the Global Infrastructure Facility, led by the World Bank Group, and the ADB Asia-Pacific Project Preparation Facility.

The process for infrastructure project selection needs to be improved so that funding is prioritized for projects that make the most contributions to (a) seamless connectivity in the region; and (b) the implementation of the 2030 Agenda by ensuring that infrastructure development is inclusive, climate-friendly and resilient. For this purpose, a regional viewpoint and a multisectoral focus are necessary. A regional viewpoint would take into account each project in the context of the development needs of the region as a whole. Such an approach would prioritize projects that build “missing links”, for instance in regional railway networks, to enhance the functionality and usefulness of such networks. A multisectoral approach would carefully weigh the economic, social and environmental gains and losses of each project in order to select those that bring the most benefits to the three dimensions of sustainable development.

Thus, efforts should be made to support developing countries in building practical tools to conduct analyses that incorporate the three dimensions of sustainable development and quantify positive and negative externalities. In this context, the streamlining of project selection processes would require consistent guidelines across funding agencies, donors, and governments. Effectively engaging multiple stakeholders in consultations for both the selection of new projects and for the monitoring and evaluation of existing projects would be necessary as well.

Cross-border projects often receive a lower priority than national ones, which have a lower risk profile and a shorter gestation time. They are, however, critical for achieving regional connectivity. The establishment of dedicated financing mechanisms for these projects

could help to raise their priority level while serving as coordination platform among the involved countries. These mechanisms could take different forms, such as a project preparation facility exclusively for cross-border projects or loan-grant blending instruments improving their financial viability.

To circumvent limited public budgets and borrowing capacities, governments can also consider involving the private sector through PPPs to close the infrastructure financing gaps. To attract PPP investments, governments need to create an enabling environment characterized by, among other things, a coherent policy orientation, including priorities and expected timelines for projects to be developed under a PPP mechanism, and a clear legal and regulatory framework. In this context, it is important to ensure that risks are properly allocated between the public and private partners. PPP contracts can entail long-term budgetary commitments and contingent liabilities, such as those related to public guarantees. Hence, care is needed to ensure that PPP contracts are not a drain on the public purse over the entire period and do not threaten fiscal stability in the long run.

Public-private projects are complex and may require skills that are not available internally. Therefore, to make the most of the PPP mechanism, regional cooperation is critical, as countries need to learn from each other’s successes and failures. In particular, stepping-up capacity-building efforts is required to ensure that PPPs become an effective instrument for delivering infrastructure services. This would also reduce the expertise asymmetry between the private and public sectors when PPP contracts are negotiated. Building governments’ capacities to undertake PPP projects is critical for the structuring of projects that will maximize positive development impacts, allocate risks adequately, and ensure the quality of services to be provided. Such capacity can be efficiently built through regional cooperation and a network of experts.

Countries not only need to take the necessary steps that facilitate higher volumes of investments for sustainable development; they also should enhance the quality of those investments. For that purpose, countries should promote financial inclusion and provide greater policy space for municipal governments in local fiscal governance, while enhancing their accountability. In that regard, and as mentioned above, Asia-Pacific cities need to explore a diversified mix of revenue mobilization vehicles, including property taxes, local business or income taxes, service charges and come up with more innovative solutions, such as land value capture and transport/fuel taxes.

To scale up financing for sustainable development, the following strategies should be envisaged: designing differential approaches for different country contexts based on using public finance to leverage other capital sources; creating a conducive policy and regulatory environment that provides appropriate incentives; tapping capital markets through green bonds and securitization; and targeting support to the most vulnerable countries. Multilateral development banks are well positioned to mobilize additional low-carbon and adaptation finance, drawing on their ability to leverage money from the global capital markets and through blending and co-financing activities. They also provide risk management instruments that should be scaled-up. Credit guarantees, political risk insurance and contingency recovery grants can play a critical role in enabling private investments in the context of political uncertainty, or to back private equity and debt financing in countries with more challenging investment environments.

*Tax cooperation.* There is considerable scope to improve domestic resource mobilization as underlined by the low tax-to-GDP ratios in Asia and the Pacific. However, raising tax-to-GDP ratios is a complex task. It must be based on a broad social contract linking the responsibility of paying taxes with accountable public expenditure that delivers on economic, social and environmental outcomes, and it needs to be achieved through appropriately sequenced and paced reforms to rationalize tax structures, enhance tax administration capacities and improve legislation and transparency.

To facilitate the achievement of these objectives, the Asia-Pacific region needs to develop a regional approach and vision with regard to public finance strategies and policies. This calls for the rethinking and recalibration of existing policies and practices in the context of sustainable development principles and the regions' challenges and priorities, such as rapid urbanization and widening inequality. Moreover, the vision should leverage on the region's own policy lessons and experiences and take into account the local institutional, cultural and historical context. Such an approach would also support national efforts to enhance public revenue and to implement suitable tax and spending policies for sustainable development.

For this purpose, an inclusive and region-wide platform, such as the one provided by ESCAP, can be considered. Examples of the areas that such a platform could focus on include:

- Broad regional policy debate, knowledge exchange, peer learning and targeted technical

assistance and capacity-building activities for the prioritization of public finance as a key pillar of the regional implementation strategy for the 2030 Agenda for Sustainable Development;

- Dedicated and focused research on forward-looking tax and public expenditure policies and on pragmatic policy design, keeping in view the Asia-Pacific context;
- Strengthen the region's participation in international tax cooperation and norm-setting processes, through substantive and coordinated regional positions and inputs;
- Provide a mechanism for better synergy of policy advisory and capacity-building efforts by international organizations and development partners on a voluntary basis.

## ENDNOTES

- <sup>1</sup> One dimension of financial system development is deposits as share of GDP. According to 2014 data from World Bank (2016a), two economies, Japan and Hong Kong, China, exceed 200 per cent. A few countries, including Australia, Malaysia, Republic of Korea, Singapore and Thailand, are around 100 per cent, the next 10 countries were between 50 and 70 percent, and the remaining 22 countries were below 50 per cent.
- <sup>2</sup> See World Federation of Exchanges (2017).
- <sup>3</sup> One possible reason is the perception that pricing of Asian stocks is more idiosyncratic in nature, based on speculative activity rather than economic and corporate fundamentals.
- <sup>4</sup> See WEF (2014).
- <sup>5</sup> The figures are normalized so that a value of 1 represents the value of the index for the United States in a given year.
- <sup>6</sup> See World Bank (2017e) Years differ by country.
- <sup>7</sup> See Kidney, Guiliani and Sonerub (2017).
- <sup>8</sup> At the time ASEAN was composed of Indonesia, Malaysia, Philippines, Singapore and Thailand, the association's founding members.
- <sup>9</sup> The members of Executive's Meeting of Asia-Pacific Central Banks are the central banks of nine East Asian economies (China; Indonesia; Japan; Republic of Korea; Malaysia; Philippines; Singapore; Thailand and China; Hong Kong) plus Australia and New Zealand.
- <sup>10</sup> See Kidney, Guiliani and Sonerub (2017).
- <sup>11</sup> See ADB (2016).
- <sup>12</sup> See Patnaik, et al (2013).
- <sup>13</sup> McKinsey Global Institute (2013). Infrastructure productivity: How to save \$1 trillion a year. January 2013.
- <sup>14</sup> *Ibid.*
- <sup>15</sup> *Ibid.*
- <sup>16</sup> IEA (2016).
- <sup>17</sup> ESCAP (2015c).
- <sup>18</sup> United Nations, Department of Economic and Social Affairs (2015).
- <sup>19</sup> See ESCAP (2015c).
- <sup>20</sup> ESCAP (2015a).
- <sup>21</sup> Inderst (2016).
- <sup>22</sup> See Annex of IEA (2014) for historical investment data and World Bank (2016c) for private investments.
- <sup>23</sup> PwC (2011).
- <sup>24</sup> Three years average between 2012 and 2014, or the latest three years, where data is available.
- <sup>25</sup> The figure excludes social contribution, which is normally considered as part of overall tax revenue in OECD countries. Given that social contribution levels in Asia-Pacific developing countries are significantly lower, separating it from taxes would allow us to better evaluate tax performance of the countries.
- <sup>26</sup> OECD (2016).
- <sup>27</sup> Sebastian (2013).
- <sup>28</sup> Keen and Simone (2004).
- <sup>29</sup> Cheng, Huang and Regis (2012).
- <sup>30</sup> KPMG (2014).
- <sup>31</sup> For an earlier study on ASEAN tax competition see Chia and Whalley (1995).
- <sup>32</sup> Chang (2016).



# CHAPTER 6

## SHARED VULNERABILITIES

Despite the diversity among Asia-Pacific countries in terms of population, socioeconomic development and geography, many of them share vulnerabilities and risks. Among them are transboundary natural disasters, scarcity of natural resources, food security and climate change. Shared vulnerabilities and risks to socioeconomic development and environmental sustainability have been heightened with the increased interdependencies among countries that regional integration brings. In this context, it is essential to recognize the value of regional cooperation mechanisms, and to realize their implementation, which includes sharing of best practices, experiences and expertise.

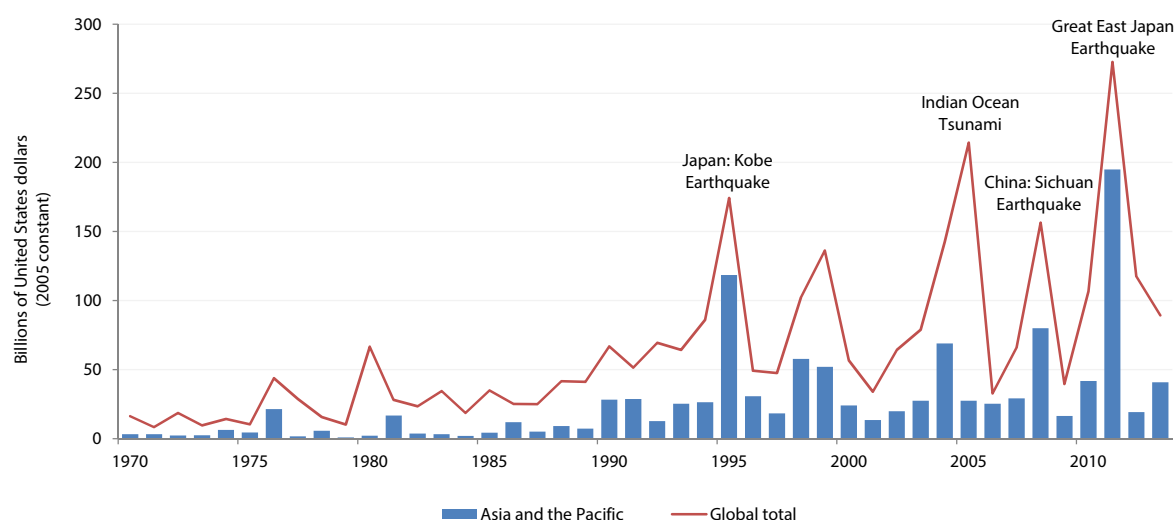
One of the core elements of the 2030 Agenda is addressing risks and vulnerabilities. Disaster risk reduction is a cross-cutting issue that is interlinked with several of the Sustainable Development Goals. Disaster risk reduction is directly relevant for achieving the specific targets of ending poverty in all its forms everywhere (Goal 1) and making cities and human settlements inclusive, safe, resilient and sustainable (Goal 11), while building resilience is mainstreamed in many sector-related Goals, such as Goal 2 on resilient agriculture and Goal 9 on resilient infrastructure. Goal 12 focuses on sustainable consumption and production targeting resource efficiency, whereas Goal 2 is about ending hunger, achieving food security and adequate

nutrition for all, and promoting sustainable and resilient agriculture. Goal 13 on climate mitigation and adaptation included the need to strengthen resilience and adaptive capacity to climate-related hazards and natural disasters.

### Natural disasters and shared vulnerabilities

Many countries in Asia and the Pacific share vulnerabilities to environmental and disaster risks, arising, for instance, from seismically active fault lines that cross many national borders, ocean basins, which experience frequent cyclones, and many river basins with flood potential. As mentioned earlier, about 1.4 billion people were affected by the 1,625 reported disaster events occurred in the region over the last 10 years.<sup>1</sup> During that period, economic damage caused by disasters amounted to \$523 billion, or 45 per cent of the global total, 8 of the 10 largest disasters in terms of fatalities and 4 of the 10 largest in terms of overall economic damage, occurred in the region.<sup>2</sup> The economic losses are higher if lost income, increased cost of production and other financial losses suffered by businesses and households as a result of damages to assets and economic activity are taken into account (Figure 6.1).<sup>3</sup>

FIGURE 6.1: Rising economic damages, 1970-2013



Source: ESCAP, based on EM-DAT (2016).

In particular, disaster risks are increasing in urban areas. Cities, especially those with their large and growing populations, stressed environments and inadequate infrastructure, are highly vulnerable to natural disasters. The area subject to urban disaster risk is increasing, not only because of the rapid growth in the urban population, but also as a consequence of other contributing factors, such as the gradual erosion of ecological buffers. As cities are the centres of economic growth and account for large shares of national GDP, this heightens the risks to national economies.

While floods and storms, followed by earthquakes are the most frequent disasters in Asia and the Pacific, the region is also affected by multiple smaller scale but recurring events, also known as extensive risks (high-frequency, low-severity losses). Since 1970, 85 per cent of disasters in the region have been minor but recurrent. They have cumulatively affected 2.24 billion people and caused more than \$400 billion of damage by triggering ongoing erosion of development assets, such as local infrastructure, dwellings, schools, health facilities and roads.<sup>4</sup>

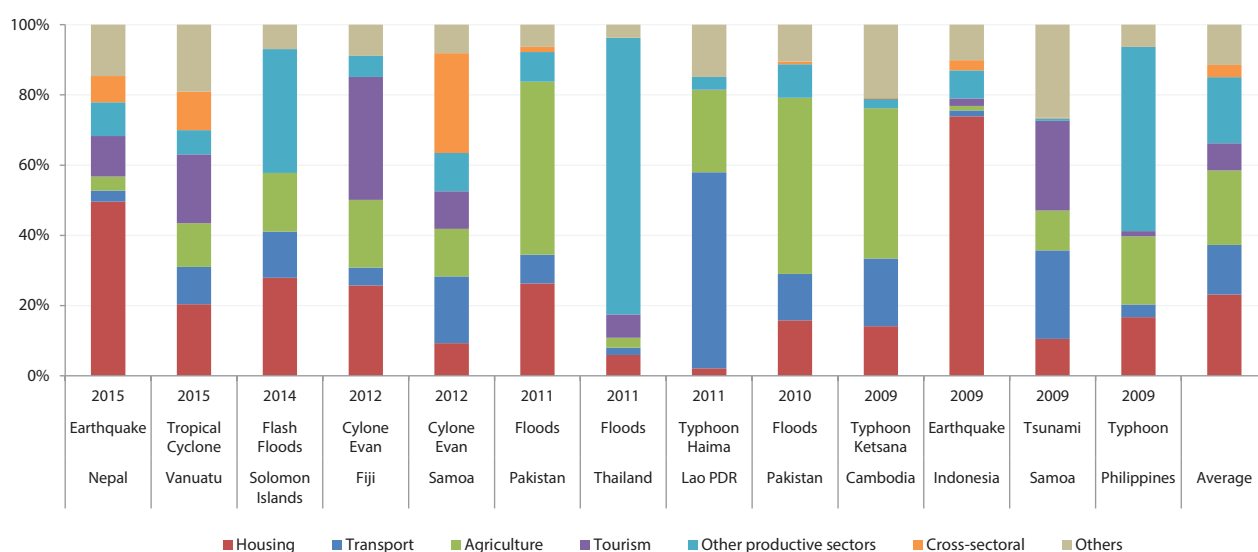
As extensive disaster risks are frequently associated with the ecological vulnerability of affected areas, more attention should concentrate on these risks to ensure sustainable development in the Asia-Pacific region. For intensive risks, hazards and exposure dominate the risk equation. On the other hand, extensive risk is closely associated with such factors as inequality

and poverty. As extensive risks cause the majority of morbidity and losses in developing countries, they can undo years of development efforts by negatively affecting economic and social gains. Consequently, they represent a particular challenge to the achievement of the Sustainable Development Goals, especially in areas and regions with widespread poverty and high social inequality.<sup>5</sup>

In terms of the after effects of disasters, houses and other major infrastructure are the development assets most seriously affected by earthquakes and floods. As indicated by figure 6.2, the range of major floods, droughts, cyclones and typhoons in the region since 2009 have had the worst sectoral impacts on the housing and agriculture sectors, respectively, resulting in 23 and 21 per cent of the total loss in these cases. Comparatively, over the same period, major disasters in the Asia-Pacific region resulted in a 14-per cent loss in the transport sector and a 7-per cent loss in the tourism sector.

The losses related to agriculture are particularly concerning for many countries of the region as more than 30 per cent of the labour force in Bangladesh, Bhutan, Cambodia, India, Indonesia, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Viet Nam is employed in the farm sector. Thus, the damages and losses are often incurred by poor, small and marginal farmers and by semi-rural communities without insurance and lacking the financial resources needed to regain lost livelihoods.

FIGURE 6.2: Major disasters and sectoral impacts in Asia and the Pacific



Source: ESCAP (2016b).

Notes: Others refer to commerce, industry, mining and finance.

While the damage and loss assessment figures discussed serve to underscore the severity of disaster impacts in the region, they nevertheless fail to take into account long-term costs. This is particularly the case when considering the long-term costs of disasters for smaller economies that do not have well diversified economic structures and face macroeconomic instability. With regard to less diversified economies, a recent study highlights that after disasters caused by cyclones national incomes decline relative to their pre-disaster trends and that national incomes not recover within two decades after the disaster.<sup>6</sup> The largest event in the sample led to a reduction in long-term GDP of almost 30 per cent, compared to a “no disaster” counterfactual. In the Pacific small island developing States, it was found that after major cyclones the GDP per capita is likely to lag behind the “no disaster” counterfactual for many years.

Beyond the long-term costs of disasters, another area of particular concern is the transboundary nature of their impacts, especially those of hydrometeorological origin that are linked with river and ocean basins, climate, weather, and agroecosystems. For instance, in addition to numerous seasonal small-scale floods that affect the region every year, major floods have affected China, India, Pakistan and Thailand in the last decade, while snowmelt and glacial lake outburst floods in high mountains, combined with heavy monsoon rains, have led to flash floods and flooding in Pakistan, Kazakhstan and Tajikistan. Several of those large-scale floods have been transboundary, flowing across countries that share basins of rivers, such as the Amu Darya, Amur, Brahmaputra-Meghna, Ganges, Indus, Mekong, Salween, and Yenisey. Flooding in the Mekong river basin can affect downstream riparian countries – Cambodia, the Lao People’s Democratic Republic, Thailand and Viet Nam. With about 70 per cent of the total global rice export trade originating in South-East Asia, floods have a significant impact on local and global food supplies. In such situations, effective supply chain management becomes crucial to reduce shortages of rice and limit the increases in international prices.

In addition to flooding, the region is also highly vulnerable to droughts, which traverse river basins and large agroecological zones across national boundaries. Eighty per cent of the economic impacts of drought are shouldered by agriculture, thus prolonged droughts slow income growth in agriculture and in related agroprocessing activities, with knock-on effects on employment and incomes in other parts of the rural economy. Severe droughts can cause severe drinking water problems in dry land areas and also restrict industrial and municipal water withdrawals,

and lead to water scarcity and insecurity both in rural and urban areas. In extreme cases, drought has led to desertification, affecting about 1,400 million hectares of land across Asia, more than in any other region in the world.<sup>7</sup> This has serious implications for future agricultural production, particularly for activities that require large volumes of water.

Storms also affect the region, with 50 to 60 of the annual average of 86 tropical cyclones occurring in three Asia-Pacific ocean basins whose coastlines are shared by multiple countries. With each cyclone being able to travel to many countries, causing heavy rainfall and flooding until it finally makes landfall, the economic and social damages caused by these events are significant, as noted above.

In addition to the transboundary nature of major hazards, disaster risks are often shared through economic networks among countries. Increased cross-border flows of trade and investment raise the transmission possibility of disaster impacts to a much more extensive chain of countries. Furthermore, disasters in Asia and the Pacific can also affect the global economy by disrupting global production networks, given the strong participation by the region in those networks. For instance, Japanese automobile production was almost halved and electrical component production fell by 8.25 per cent as a result of the 2011 Tohoku Earthquake and Tsunami.<sup>8</sup> Three months after the disaster, because of shortages in components, automobile production dropped by 20 per cent in Thailand, 24 per cent in the Philippines, and 6 per cent in Indonesia.<sup>9</sup>

These shared vulnerabilities and risks have imposed a significant burden on the sustainable development of the region. Driven by climate variability and change, significant changes are occurring in the intensity, frequency, and geographical location of the hazards as well as in the complexity in the transboundary origins and impacts of disasters.

### Climate change and shared vulnerabilities

Climate change has exacerbated the intensity and incidence of hazards in many parts of the region. As climate change has transboundary and multisectoral impacts, the response to climate change has a strong interlinkage with RECI. However, the risks of disasters and climate change are not taken into account in the construction of infrastructure in the region.

The global commitment to address climate change is underpinned by the Paris Agreement, which aims to

limit global warming to “well below” 2 degrees Celsius; and by Sustainable Development Goal 13, which requires countries to take urgent action on climate change and its impacts. Reaching the 2 degrees Celsius target would require global emissions to decline by 40 to 70 per cent below 2010 levels by 2050. As the region accounts for more than half of the global greenhouse gas emissions, it must play a leading role in emissions reductions and move to a low-carbon development model if global emissions are to stabilize.

Climate change is the most critical collective threat to the survival of small island developing States. With the ocean comprising more than 99 per cent of their sovereign territories, and the majority of the island’s inhabitants are concentrated in coastal or low lying areas, Pacific countries are among the most exposed and vulnerable in the world to climate change. A sea level rise of half a meter, along with natural sea level variation and more frequent and severe storm surges, will result in serious coastal inundation, threatening the livelihoods, infrastructure, health, food, water and physical security of communities. Apart from extreme weather events, climate change is also adding pressure on fragile island systems by increasing average ocean and land temperatures, changes to the seasonality and the duration of rainfall.<sup>10</sup> For atoll States, such as Kiribati, the Marshall Islands and Tuvalu, which are less than one meter above sea level in most places, the threat is existential.<sup>11</sup>

With the acceleration of climate change consequences and the concomitant increase in the disaster risks, Pacific Island countries face development challenges that are large and difficult to tackle by themselves. Natural disasters, particularly tropical cyclones, cause major disruptions and put enormous pressure on governments to reconstruct and source the required finance. Identifying ways to manage risks and create opportunities to share or transfer disaster contingencies are thus essential.

Transboundary air pollution has been recognized as one of the most serious environmental challenges in East and North-East Asia because of a range of factors, including heavy consumption of fossil fuels, insufficient abatement technology applications and ineffective policy enforcement. In particular, the combination of meteorological and geographical factors, namely eastward or south-eastward winds during most seasons except summer, and the location of emission sources, significantly contributes to the scaling up of domestic air pollution into subregional air pollution. The long-range movement of dust and sandstorms has also contributed to severe environmental impacts in an area

covering Mongolia and China all the way to the Korean peninsula and Japan. Long-distance transport of dust aerosol particles links the biogeochemical cycles of land, atmosphere and ocean, and possibly even influences the global carbon cycle, thereby having a significant effect on regional radioactive balances and human health.

One of the best resources with which to address disaster and climate risks is a healthy natural environment supported by robust ecosystems. Unfortunately, much of this protection has been weakened by human-induced environmental degradation in the region. Disasters can then further damage the environment, raising the prospect of a downward spiral. Indeed, according to the Global Land Degradation Information System of the Food and Agriculture Organization of the United Nations (FAO), the ecosystems of 32 Asia-Pacific countries, are experiencing “medium” to “strong” degradation, which can exacerbate the impact of natural hazards, affecting their magnitude, frequency and timing.

### Food security and shared vulnerabilities

Over the last fifty years, Asia and the Pacific has made tremendous progress in reducing the proportion of undernourished people and in achieving food security. The number of people undernourished in Asia declined from 751 million in the period covering 1990-1992 to 552 million in the period covering 2011-2013 while the proportion of undernourished people decreased from 24.1 per cent to 13.5 per cent over the over the same two periods. This is an impressive achievement given that the population during the same periods grew by 988 million people, from 3.127 billion to 4.115 billion.<sup>12</sup>

Despite this progress, the region still faces persistent poverty and hunger, and remains home to about 65 per cent of the people that are suffering from hunger globally. The main obstacle to overcoming hunger is not an overall lack of food, but rather that many people are not consuming enough food. They are prevented from doing so by many factors, including, among them, poverty, natural disasters, conflict and war, poor access to resources, lack of employment opportunities, lack of education, underinvestment in agriculture and instability in the world food and financial systems. Given that countries in the region share many resources critical to the production and distribution of food, food security also has strong regional dimensions.

Food insecurity is a result of many factors, including, among them, supply-side constraints, inadequate demand because of poor income and inability to

physically access food because of remoteness. Analyses of the average dietary energy supply adequacy ratio also reveal that factors causing food insecurity across countries and regions vary significantly. They include rigid food trading regimes, inadequate domestic production, extremely high food waste throughout value chains and seemingly high food stockpiling, which reduces food available for human consumption.<sup>13</sup>

Interseasonal and annual food production variability continues to be a major factor that affects localized food insecurity of a large group of households in the majority of countries in Asia and the Pacific. Droughts, floods, excessive snowfall, and other natural disasters precipitate these production shortfalls. Weather anomalies, such as the El Niño phenomenon, have exacerbated the food production shortfalls. As such, regional multi-hazard monitoring and early warning have the potential to play a key role in preparing key stakeholders for and building their resilience to extreme weather events and natural disasters.

Further to this, rapid economic growth in Asia and the Pacific has put greater pressure on natural resources. With limited per capita endowments, the region is particularly vulnerable to disruptions associated with volatile energy and resource prices, land use changes and climate change. Notably, these disruptions are becoming increasingly interconnected.

The increasing use of natural resources at a rapid rate, generation of pollution and waste and ecosystem degradation could push countries in the region towards a catastrophic ecosystem collapse. Though natural systems have large absorption capacities, once tipping points are reached, they could suddenly crash, with devastating consequences for other economic and social systems. Building resilience to such vulnerabilities and risks entails addressing this nexus of converging threats.

This interconnected and complex scenario is forcing governments across the region to accept that it is no longer suffice to consider and address such challenges individually, but rather it is necessary to treat them as an interconnected system. Furthermore, they have shown how a single event that in isolation might seem manageable within national borders can provoke multiple and interrelated global shocks. The 2010 floods in Pakistan and the droughts in the Russian Federation together were translated by global financial and trade systems into higher food prices. Massive floods in Thailand in 2011 triggered a cascade of supply chain failures, bringing production to a halt in factories around the world.

A series of policy options are available for regional organizations to support national food security. ASEAN has a long history of striving towards greater regional cooperation in the area of food security. Two of its pioneering efforts were the ASEAN Framework Action Plan on Rural Development and Poverty Eradication and the ASEAN Action Plan on Social Safety Nets, which aimed to ensure the protection of the most vulnerable sections of the communities. Some projects implemented to achieve this objective include regional cooperation in human capital development, including capacity-building for employment promotion, manpower planning, skills training, social monitoring, and design of emergency social safety nets. The ASEAN Integrated Food Security (AIFS) Framework and the Strategic Plan of Action of Food Security in the ASEAN Region have provided an overarching framework for the region to comprehensively address food security by defining goals, objectives, guiding principles and the key components.

In the Colombo Statement on Food Security, issued during the fifteenth SAARC summit, held in Colombo on 2 and 3 August 2008, the Heads of State and Government recognized the importance of food security and the need to develop “people-centred” short to medium-term regional strategies and collaborative projects to increase food production, investment in agriculture and agro-based industries, agricultural research and prevention of soil health degradation, development and sharing of agricultural technologies, sharing of best practices in procurement and distribution, and management of the climatic and disease-related risks in agriculture. The subsequent special SAARC ministerial meeting of agriculture ministers recognized the need to develop a harmonized network for safe movement of agricultural commodities in the region and collaborate on human resource development and capacity-building in identified areas, namely integrated pest management, pest-risk analysis, integrated nutrient management, post-harvest technologies, biotechnology and bioresource management.

Strengthening regional food stocks has received heightened focus recently. The ASEAN Food Security Reserve, initially established with a rice reserve of 50,000 metric tons contributed by ASEAN member countries, has expanded to include ASEAN+3 countries with an earmarked stockpile of 787,000 tons. A three-tier system has been identified for releasing food stocks from the system: (a) receive rice on commercial contracts to meet supply-demand deficits; (b) obtain food stocks as a loan in an emergency; and (c) receive food stock free in severe cases. All three tiers have been used recently, indicating the reserve’s success. SAARC also



replaced its food security reserve with the SAARC Food Bank (SFB) at the fourteenth SAARC Summit, held in New Delhi on 3 and 4 April 2007. This summit also introduced new guidelines on withdrawals and negotiations and established definitions on food shortages and quality standards of grains. Operationalization of the SAARC Food Bank has been under discussion for the past few years.

The Pacific Island Leaders Forum agreed in 2008 that food security requires a coordinated multispectral approach and engagement of governments, national and regional organizations, international and multilateral organizations, the private sector, the food industry, farmers and fishermen, consumers and civil society.<sup>14</sup> The Summit endorsed the Pacific Food Security Framework for Action, which outlined seven themes: leadership and cooperation; regulatory frameworks, enforcement and compliance and public-private sector collaboration; enhanced and sustainable production, processing and trading of safe nutritious local food; protect infants and vulnerable groups; consumer empowerment and mobilizing partners; a food security information system; and enhancing land tenure systems and land-use policies, energy, transport, education and communication systems to underpin food security.

Regional organizations have developed innovative mechanisms for coordinating efforts to combat transboundary animal and plant diseases and sharing agricultural knowledge and research findings. Some example of these mechanisms are the ASEAN Integrated Food Security Framework, the SAARC Global Framework for Containment of the Priority Trans-boundary Animal Diseases and the exchange of scientific information on agricultural production and consumption through the Asia-Pacific Association of Agricultural Research Institutions.

### Shared vulnerabilities: main challenges

Improving the collective management of shared vulnerabilities and risks is a major challenge that needs to be dealt with through regional cooperation.

A key impediment is the lack of data and information sharing across countries on disaster occurrence and impacts and losses at the regional level. Sharing data and information with neighbours and riparian countries is sometimes limited. Absence of global and regional standards on disaster statistics makes a sound assessment of vulnerabilities and risks difficult. Such data, which should include information on transboundary river basin floods and slow-onset

disasters, such as droughts, are needed to estimate regional disaster risks and transboundary hazards, and strengthen early-warning systems.

Considering the large contingent liabilities associated with disasters, a second major challenge is to set aside sufficient resources to meet expected losses. This is particularly important to avoid disruptive impacts of disasters on poverty reduction and progress in implementing the 2030 Agenda for Sustainable Development. In addition, ex ante financing mechanisms and investment in disaster risk reduction are insufficient to significantly buffer economies from negative growth impacts.

Taking into account the low insurance penetration in the countries that are most vulnerable to disasters, another important challenge is to identify ways to manage risks and to create opportunities to share or transfer disaster contingencies. The challenge to build well-functioning risk-transfer systems is even greater in countries characterized by low levels of financial development.

Land-use planning and building authorities in many developing countries face difficulties in effectively integrating good disaster risk management practices into their policies and permits.

A number of regional cooperation mechanisms that deal with natural disasters, including those related to climate change, natural resources management, food security and economic shocks, have been set up, but they are at various stages of development. In most cases, these need to address more comprehensively shared vulnerabilities and risks and promote resilience building. Regional cooperation efforts to deal with shared vulnerabilities and risks should aim at providing optimal regional solutions by coordinating individual country responses in the most effective manner.

### Recommendations

Addressing the region's shared vulnerabilities is a task that is frequently beyond the concern of each individual country. It requires enhanced regional cooperation, particularly to address transboundary hazards such as river-basin floods and drought.

Risk prevention and mitigation would safeguard people and economic activity from the transboundary nature of disasters and other shared vulnerabilities and risks. Tackling complications created by natural disasters, the lack of natural resources, food security and climate change require regional cooperation



and regional solutions. With that in mind, ESCAP's intergovernmental platform has deliberated on the need to facilitate strategic partnerships, promote the pooling of resources and sharing expertise, innovative technology applications and resources for multi-hazard early warning systems in the region through South-South and regional cooperation.

While progress is underway to strengthen early warning for tsunami and tropical cyclones, significant gaps still exist with regard to other cross-border hazards despite scientific advances and their increased availability, particularly in the area of space technology applications. Regional cooperation, supported by ESCAP, can assist countries in the region to address other transboundary risks, such as basin floods, glacial lake outburst floods, flash floods, landslides, and sand and dust storms.

Significant gaps exist in understanding sectoral impacts of slow-onset disasters, such as drought and the El Niño phenomenon, making evidence-based policymaking a challenge. ESCAP, through its work in space application and multi-hazard early warning systems, is developing methodologies and guidelines for scenario-based impact outlooks on, for example, food security and social dimensions for slow-onset disasters that help build capacities of countries at high risk to address these disasters more effectively.

To help in efforts to achieve the disaster risk reduction and resilience-related Goals in the 2030 Agenda for Sustainable Development, the international network for multi-hazard early warning system, led by the United Nations in partnership with the World Bank and related development partners, is being established. ESCAP will lead the regional component of this network through a regional action plan. The ESCAP regional action plan envisages (a) strengthening the existing ESCAP/WMO Typhoon Committee and WMO/ESCAP Panel on Tropical Cyclones and extending the ESCAP and World Meteorological Organization (WMO) partnership to the Pacific through the Tropical Cyclone Committee; (b) deepening the partnership between ESCAP and the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization for effective end-to-end tsunami early warning systems in the Indian and Pacific Ocean basins; and (c) the establishment of a regional cooperation mechanism for early warning for transboundary river basin floods – to start with priority basins and a research network for glacial lake outburst floods, flash floods and landslides; and (d) partnering with the United Nations Environment Programme, the United Nations Convention

to Combat Desertification and WMO to enhance regional cooperation mechanisms for combating sand and dust storms. While addressing the unmet needs of more effective multi-hazard regional early warning, the action plan intends to facilitate the integration of vulnerability considerations into efforts to strengthen RECI to ensure that the developmental gains made through RECI are not reversed by unaddressed shared vulnerabilities.

Alongside traditional financing mechanisms, index-based, or parametric, insurance has the potential to increase the efficiency and effectiveness of disaster insurance, as it is based on a scientific and more transparent determination of payment. For small countries that may experience great difficulty in financially managing disaster impacts, transferring the risk through risk pooling could be an attractive strategy. In this case, regional cooperation is very worthwhile because it not only allows countries to transfer risks by pooling them across countries but also enables them to use this pool to purchase reinsurance at a much lower premium than what would have been the case had each country approached the market individually. Similar to other types of insurance, the insurance pool should be diverse enough to cover different risk exposures, thus enhancing the attractiveness of wider regional cooperation.

Regions can play a decisive role in food security in several ways, including, though, for example: (a) building integrated regional food markets to insure against localized food production shortfalls that a country alone may not be able to withstand; (b) coordinating policies and sharing information for sustainable food production; (c) managing transboundary resources better, thus minimizing potential impacts arising from climatic changes; and (d) pooling food security risks through innovative mechanisms.

Increased confidence in regional food markets can minimize run-on-the-mill price hikes that are often a result of panic buying because of shortfalls in local food production. Trade restrictions imposed on food trade during the 2007-2008 food crisis are often used by countries to argue for food self-sufficiency frequently at the expense of potential efficiency gains from the alternative use of precision land and other resources.

Confidence also needs to be built on the quality and safety of food by harmonizing sanitary and phytosanitary standards and certification mechanisms, simplifying and increasing the transparency of administrative procedures and documents and implementing them with more vigour.

Coordinating policies and sharing information can increase food production as it allows for greater use of comparative advantages based on regional differences in soil and climatic conditions suitable for the production of different varieties of plants and animals. This can also promote the use of better plant varieties, genetic resources and inputs available within larger geographic regions.

Opportunities to use better technology in agricultural production, reducing post-harvest losses and knowledge in food preparation and processing can also lead to improved food security outcomes.

Sharing information on production systems, technology and other information required for food production can be a fundamental force in re-establishing trust among countries on the regional food markets. Sharing knowledge on transboundary plant and animal diseases has become an essential component of agricultural policy because of the increased likelihood that diseases will spread in the current global production and consumption systems.

## ENDNOTES

<sup>1</sup> ESCAP (2016b).

<sup>2</sup> *Ibid.*

<sup>3</sup> These include the 2004 Indian Ocean Tsunami, the 2005 Kashmir Earthquake, the 2008 Cyclone Nargis, the 2008 Sichuan Earthquake and 2011 Great East Japan Earthquake.

<sup>4</sup> ESCAP (2016b, p.9).

<sup>5</sup> UNISDR (2015)

<sup>6</sup> Hsiang and Jina (2014).

<sup>7</sup> ESCAP (2016b). Asia-Pacific Disaster Report 2015: Disasters without Borders. Regional Resilience for Sustainable Development. p. 51. Available from [www.unescap.org/resources/asia-pacific-disaster-report-2015](http://www.unescap.org/resources/asia-pacific-disaster-report-2015).

<sup>8</sup> ESCAP (2013).

<sup>9</sup> *Ibid.*

<sup>10</sup> IPCC (2014).

<sup>11</sup> OECD and the World Bank (2016).

<sup>12</sup> FAO, IFAD and WFP. 2013. The State of Food Insecurity in the World 2013. The multiple dimensions of food security. Rome, FAO.

<sup>13</sup> The indicator expresses the dietary energy supply as a percentage of the average dietary energy requirement in each country. Each country's or region's average supply of calories for food consumption is normalized by the average dietary energy requirement estimated for its population to provide an index of adequacy of the food supply in terms of calories. Dietary energy supply is the total food supply available for human consumption, which is the sum of local production and imports, adjusted for stock changes, exports, food used for animal feed, in manufacturing processes, as seed and waste. Average dietary energy requirement is the average calorie requirements of a country or a region, which is conditioned by age, sex, and level of physical activity. See FAO (2014).

<sup>14</sup> The members of the forum include: Australia, Cook Islands, the Federated States of Micronesia, Fiji, Kiribati, the Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

## CHAPTER 7

# THE WAY FORWARD FOR RECI IN ASIA AND THE PACIFIC

The analysis in the present report has provided an in-depth background of RECI in Asia and the Pacific and has outlined the context, challenges and recommendations for its four constituent elements: (a) moving towards the formation of an integrated market; (b) development of seamless connectivity in the region; (c) enhancing financial cooperation; and (d) increasing economic cooperation to address shared vulnerabilities and risks. The main recommendations in each of these areas are summarized in this chapter, which concludes with an assessment of the next steps required to enhance RECI across the region.

### Market integration

The principal recommendation is to curtail protectionism, particularly in the form of non-tariff barriers and behind-the-border regulatory measures. These could be tackled through cooperation to mutually recognize regulatory sectoral measures, such as standards. To support trade and investment liberalization, it is also necessary to improve the measurement and impact assessment of non-tariff measures, with a view to streamlining and potentially harmonizing them.

Efforts to consolidate the “noodle bowl” of existing bilateral and multilateral trade agreements need to be undertaken. Although such agreements were intended to provide market access to their signatories, their rapid proliferation combined with the complexities arising from multiple rules of origin have imposed burdensome transaction costs and diverted trade away from the economies not involved in the agreements.

It is also important to continue to promote trade facilitation and paperless trade, including through the implementation of the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific, which was adopted by ESCAP member States in 2016.

Existing bilateral and multilateral international investment agreements have also created a “noodle bowl”, and efforts should be made to consolidate them. Streamlining such agreements and ensuring that they balance investor rights with host country development needs is critical for improving transparency and clarity in international investment rules, which would help

boost regional integration. Promoting processes of labour market integration and gradually enhancing coverage across skill levels and sectors would facilitate cross-border movements of people and improve the management of migration. To support such processes, it is important to develop harmonized regional qualification frameworks to facilitate job-matching and the creation of regional labour markets and common procedures for the payment of social benefits across borders.

### Seamless connectivity of transport, energy and information communications technology

Existing intergovernmental agreements and platforms must be better utilized to enhance the delivery capability of infrastructure networks and services. Most cross-border connectivity projects in the region have been negotiated bilaterally between parties, resulting in networks that have been developed in an uncoordinated and fragmented way over time. In this context, leveraging existing regional connectivity agreements, where they exist, or developing new ones, would be an efficient way to develop physical infrastructure facilities more rapidly in a cost efficient manner.

Co-development of physical networks of transport, energy and ICT can reduce costs and accelerate the pace of planning and implementation of projects, which if pursued individually would require a significant amount of time and cost for negotiations, acquisition of rights of way and other administrative procedures. For instance, significant cost and time savings would result from developing terrestrial fibre networks alongside the development of major roads, railways, power transmission lines, pipelines or waterways. This co-development arrangement would also bring diversified and augmented sources of revenue generation.

Harmonization of technical standards and operational rules is needed to support cross-border connectivity efforts. Regionally accepted, transparent and fair rules and regulations would be the first step towards facilitating cross-border interoperability. Regional cooperation in this respect could internalize and monetize asymmetric costs and ensure the fair distribution of costs and benefits among stakeholders. This could be done, for instance, with an effective and credible compensation mechanism for affected groups and countries.

A strong political will at the regional level and a shared vision among governments are critical for setting up effective, region-wide coordination mechanisms for infrastructure development. Strong institutional arrangements are also essential to monitor and ensure the realization of benefits from these investments.

Finally, there is need to ensure that national, subregional and regional policies and regulations for infrastructure connectivity are aligned with the goals of the 2030 Agenda for Sustainable Development. This can be done, for instance, by ensuring that infrastructure projects connect small, low-income and geographically distant countries with the main markets of the region, and by giving high priority to initiatives that address transboundary vulnerabilities and risks.

### Regional financial cooperation

The three principal actions related to finance recommended in the report are (a) to strengthen and broaden current regional frameworks for macroeconomic and financial surveillance and ensure availability of emergency lending; (b) to develop financial markets; and (c) to enhance the availability of financing for infrastructure projects, including through PPPs and the mobilization of domestic resources for the implementation of the 2030 Agenda.

Macroeconomic and financial surveillance, macroprudential policies and availability of emergency lending are important to effectively manage risks arising from excessive financial market and capital flow volatility. While it is desirable for countries to gradually liberalize their capital accounts, this needs to be accompanied by improvements in surveillance, macroprudential policies and availability of sufficient liquidity support to preserve financial stability.

Sound development of national and regional financial markets is necessary to facilitate the channelling of regional savings to long-term productive investments, such as development of seamless connectivity. This requires the development of a supportive financial market infrastructure, including effective regulations pertaining to issuing and trading of bonds and securities and harmonizing cross-border clearing and settlement systems. In addition, the development of domestic institutional investors with long-time horizons, such as insurance companies, pension funds and asset management companies, is necessary for boosting the demand side of emerging capital markets in the region.

Infrastructure development is a critical driver of the 2030 Agenda. For this purpose, proper guidelines need to be developed to improve the selection of infrastructure projects. For example to ensure that transport, energy and ICT links that connect small, low-income and geographically distant countries with the main markets of the region are prioritized. With regard to the financing of infrastructure projects, it is important to seek ways to leverage lending from multilateral development banks, including from the newly created Asian Infrastructure Investment Bank and the New Development Bank, and from national public sources to mobilize additional funding. It is also important to engage the private sector and make PPPs more effective through improvements in the business environment, including in legal and regulatory frameworks and by providing additional capacity-building to governments.

Domestic resource mobilization is a fundamental mean of implementation of the 2030 Agenda. This entails stronger national efforts to enhance public revenues and the implementation of suitable tax and spending policies that support sustainable development, including at the municipal level. To achieve this, countries need to set appropriately sequenced and paced reforms to rationalize tax structures, enhance tax administration capacity and improve legislation and transparency, which would also help to curb tax avoidance and evasion.

### Shared vulnerabilities and risks

Enhanced regional cooperation, especially when it is related to emerging areas of transboundary hazards, and implementing strategies to mitigate and prevent risks, would enable the region to better respond to shared vulnerabilities and safeguard people and economic activity from transboundary disasters and risks. Regional cooperation is needed to tackle complications created by natural disasters, lack of natural resources, food security and climate change. It is also critical for strengthening early warning systems for basin floods, glacial lake outburst floods, flash floods, landslides, sand and dust storms.

Evidence-based policymaking would help address the sectoral impacts of slow-onset disasters, such as droughts and El Niño-related events. To support the development of such policies, ESCAP has been developing methodologies and guidelines for scenario-based impact outlooks on food security and the social dimensions of slow-onset disasters. These scenarios

will help build country capacities to address disasters more effectively.

Regional cooperation can help ensure food security in Asia and the Pacific by (a) contributing towards the building of integrated regional food markets to insure against localized food production shortfalls that a country alone may not be able to withstand; (b) coordinating policies and sharing information for sustainable food production; (c) managing transboundary resources better, thus minimizing potential impacts arising from climatic changes; and (d) pooling food security risks through innovative mechanisms.

### Way forward

The recommendations detailed in this chapter for each of the four pillars of RECI propose a series of actions that may be realized with enhanced regional cooperation. Arising from the analysis in the report and these detailed recommendations, there are three broad opportunities for member States to seize in order to enhance RECI.

First, the Asia-Pacific region is characterized by a plethora of overlapping and often mutually inconsistent bilateral and plurilateral regulatory frameworks in such areas as trade preferences, investment protection, transport norms and trade facilitation. These “noodle bowls” create inefficiencies and added transaction costs. In order to facilitate trade and investment throughout the region, such “noodle bowls” should be simplified.

Second, new regional integration initiatives, including the Belt and Road Initiative and the Eurasia Initiative, can play an important role in boosting physical infrastructure investment throughout the region. However, to achieve the goal of seamless connectivity, such efforts need to be complemented with facilitation agreements and the simplification of regulations, including those pertaining to trade and investment. Furthermore, a significant boost in infrastructure investment requires the mobilization of additional financial resources, and that such investment be undertaken in a way that contributes to reduce vulnerabilities emanating from transboundary environmental and disaster risks. In the light of these relationships, it is necessary to move forward simultaneously in all four pillars of RECI

Third, a deeply interlinked and mutually supportive relationship exists between RECI and the 2030 Agenda.

On one hand, unleashing trade and investment within the Asia-Pacific region, a major objective of RECI, can generate enormous opportunities for increasing income and employment. These opportunities can directly and indirectly contribute to the achievement of the Sustainable Development Goals. On the other hand, the Goals play a vital role in guiding the implementation of RECI, for instance, by ensuring that infrastructure projects have favourable social, environmental and impacts. Other ways in which the 2030 Agenda can contribute to RECI are by ensuring that infrastructure projects connect small, low-income and geographically distant countries with the main markets of the region, and by giving high priority to initiatives that address transboundary vulnerabilities and risks. Aligning RECI with the 2030 Agenda would also enable the region to cultivate solutions for shared regional challenges, such as rapid urbanization, climate change, energy security and rising inequalities.

The Economic and Social Commission for Asia and the Pacific can play an overarching role in helping the region capitalize on these opportunities by leveraging its inclusive intergovernmental platform, its normative work and its multisectoral technical expertise in support of RECI. ESCAP is already working to strengthen the constituent pillars of RECI through its existing subprogrammes and intergovernmental committees in areas such as transport, ICT, energy, financing for development, trade and disaster risk reduction. It is also working with subregional cooperation organizations, including ASEAN, the Economic Cooperation Organization (ECO), PIF and SAARC, and is providing technical cooperation for the Belt and Road Initiative. Therefore, ESCAP is well positioned to accelerate progress across all four pillars of RECI simultaneously and bring together member States, subregional organizations and other institutions working on RECI on its platform. For this purpose, it can draw on its long-standing normative and research work on the constituent elements of RECI to forge regional agreements, undertake research to better understand the costs and benefits of RECI and develop cross-sectoral synergies. It can also facilitate connecting RECI to global initiatives and frameworks for actions related to sustainable development, financing for development and climate change.

To support member States in moving towards a more integrated Asia-Pacific region, ESCAP could continue the process of incorporating and formalizing RECI into its own work programme and into the work of its intergovernmental committees. In this regard, a number of options can be considered. These include

instituting a cross-sectoral task force on seamless connectivity that works under the Committee of Energy, the Committee on Information and Communications Technology, Science, Technology and Innovation and the Committee on Transport; and a recurring segment on RECI during the Commission session to engage member States and subregional organizations in a dialogue on how to prioritize and advance key RECI initiatives.

As Asia and the Pacific emerges as the most dynamic region of the world, the next phase of RECI in the region holds much promise to deliver shared prosperity and sustainable development for its member States and to increase their collective resilience to natural and man-made shocks. Overcoming the many challenges that stand in the way of achieving this vision requires learning from existing models of subregional cooperation, enhanced regional cooperation and agreements, and continuous efforts to build trust through mutual understanding and sharing of benefits.



## ANNEX I

### REGIONAL ECONOMIC COOPERATION AND INTEGRATION INITIATIVES IN ASIA AND THE PACIFIC

There are two kinds of RECI initiatives in the region. On one hand, overarching initiatives have extensive purview, are multipurpose, and usually cover a given geographical area. The South Asian Association of Regional Cooperation (SAARC), ASEAN, and the Pacific Islands Forum (PIF) are examples of overarching initiatives. These are usually intergovernmental and advisory in design. On the other hand, functional arrangements are for a specific purpose, activity or geographical area and have a much narrower focus. An example is the Regional Power Trading Committee of the Greater Mekong Subregion (GMS), which has the goal of creating an integrated market for the power sector in the GMS countries

#### Overarching regional groups in Asia and the Pacific<sup>1</sup>

**SAARC.** Launched in 1985, South Asian Association for Regional Cooperation (SAARC) was set up by seven nations: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. Afghanistan joined in 2007. Its secretariat is in Kathmandu. The SAARC charter laid out objectives and principles, as well as institutional and financial arrangements. Overall progress in integrating the subregion has been quite slow: intraregional trade in South Asia is the lowest in the region; totaling only one third of its potential. Trade in South Asia has traditionally been hindered by political tensions and high transport costs largely due to lack of adequate transport infrastructure and behind-the-border barriers. Investment in physical infrastructure to allow the seamless transportation of goods needs to be accompanied by strong political will to dismantle the numerous tariff and non-tariff barriers that continue to block trade.

The South Asian Association for Regional Cooperation adopted a programme of economic cooperation in 1991, and four years later created the SAARC Preferential Trading Arrangement. In 2004, the Agreement on South Asian Free Trade Area was established under SAARC, with the vision of implementing a borderless economic zone between 2006 and 2016. At the sixteenth SAARC Summit, held in Bhutan in 2010, SAARC adopted the SAARC Agreement on Trade in Services and created the \$300-million SAARC Development Fund with social, economic and infrastructure windows. SAARC activities include a finance ministers' mechanism, an eminent persons' group, an arbitration council and several technical committee meetings.

**Pacific Islands Forum.** The Pacific Islands Forum (PIF) was founded by seven countries – Australia, Cook Islands, Fiji, Nauru, New Zealand, Tonga and Western Samoa (now Samoa) – in 1971 as the South Pacific Forum. In 2000, the name was changed to the Pacific Islands Forum to better reflect the geographic location of its members in the north and south Pacific. The membership of the Forum has expanded over time and now includes 16 members, three associate members and a number of observers, including multilateral institutions,

United Nations agencies and island countries. The secretariat is in Suva. The Forum primarily focuses on policy advice programmes on economic governance covering issues related to trade and investment, money and finance, regional public goods and security. The Pacific subregion has been reasonably successful in articulating its concerns. One area of particular concern is climate change and its implications for the Pacific island countries.

The annual Forum meetings are chaired by the Head of Government of the host country, who remains as Chair of the Forum until the next meeting. Since 1989, it also has held post-forum dialogues with key dialogue partners at the ministerial level. The Forum has 17 dialogue partners: Canada, China, Cuba, the European Union, France, India, Indonesia, Italy, Japan, the Republic of Korea, Malaysia, Philippines, Spain, Thailand, Turkey, the United Kingdom and the United States.

In 2014, the Forum adopted the Framework for Pacific Regionalism, which represents a high-level commitment to pursue deeper regionalism. The Framework sets the vision, values, objectives and approaches related to achieving deeper regionalism and lays out a process for developing and prioritizing regional public policy. At the forty-sixth annual meeting in 2015, it was decided that the: SIDS Accelerated Modalities of Action (SAMOA) Pathway, the 2030 Agenda for Sustainable Development, and the Framework for Pacific Regionalism should be implemented in an integrated manner that promotes sustainability and enhances ownership by the Pacific countries themselves.

**Eurasian Economic Union.** Under the Treaty on the Eurasian Economic Union (EAEU), a customs union was established in 2015, comprised of Armenia, Belarus, Kazakhstan, Kyrgyzstan and the Russian Federation, with the object to upgrade and raise the competitiveness of and cooperation among the member countries. It basically was set up to promote economic cooperation and integration through the free movement of goods, services, capital and labour, and pursue coordinated, harmonized and a single policy in the sectors determined by the treaty and international agreements within the union.

The Eurasian Economic Union is one of the first institutional cooperation mechanisms in the Central Asian subregion that provides economic benefits, especially in that it allows for much-needed labour migration from the poorer Central Asian countries. In January 2015 the Russian Federation introduced regulations for labour migrants that gave citizens from EAEU member countries preferential access to its massive labour market. Thus, Kyrgyz workers have an advantage over migrants from Uzbekistan, for example. For non-member countries in the subregion, such as Tajikistan, the new regulations provide an incentive to join EAEU. Current provisions of EAEU promote a model of diversification based on the processing of local resources in which it is hoped that the industry will thrive in the much larger Russian Federation market through favourable entry measures

**Trilateral Summit.** Established in 2008, the Trilateral Summit is comprised of China, Japan and the Republic of Korea. Its activities include high-level meetings of political leaders in addition to other meetings to enhance mutual political trust, increase trade and investment and widen social and cultural exchanges. A secretariat for the Summit was set up in 2011 in Seoul after an agreement was signed and ratified by each of the three Governments. On the basis of equal participation, each Government is financially responsible for allocating one third the total operational budget. Because of political considerations, there are no formal, overarching institutional arrangements.<sup>2</sup> The three countries have joined other interregional arrangements such as ASEAN+3 and CAREC. They can potentially work together to deal with a number of issues, including those related to marine environment, climate change and transboundary air pollution.

**East Asia Summit.** The East Asia Summit is a leaders forum for strategic dialogue that initially included ASEAN +3 (ASEAN member countries plus, China, Japan and the Republic of Korea). In 2005, it was expanded to include Australia, India and New Zealand. The Summit was formed through a declaration, and since then, 10 meetings have been held, back-to-back with ASEAN summits. Its activities focus on advancing regional economic cooperation in the areas of finance, trade, climate change and natural disaster management.

### Functional regional economic cooperation and integration arrangements and programmes

Functional groups have a narrow focus on specialized areas, usually with specific tasks or mandates. They function either independently or as part of overarching groups. The region has a very large number of such arrangements, often with overlapping memberships and specializations,<sup>3</sup> which results in a duplication of efforts and resources. Moreover, often the rules for harmonization are not standardized across subgroups, leading to long-term challenges for regional connectivity.

These groups usually operate within contiguous geographic areas and tend to adopt “bottom-up” processes. Their collective efforts contribute towards improving cross-border connectivity or dealing with problems that are localized. However, the overlapping membership of countries in the region to several of these groups is costly to Governments, particularly for countries with limited financial and human resources. For instance, some ASEAN members are also part of the Greater Mekong Subregion (GMS), the Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area, the Indonesia-Malaysia-Thailand Growth Triangle, the Mekong River Commission and the Southeast Asian Water Utilities Network, arrangements whose functions overlap with those of ASEAN. In addition, there are also cooperation programmes with other international institutions. Some of the functional RECI arrangements and programmes in the Asia-Pacific region are described below.

The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) was set up in 1997 through a declaration and currently includes Bangladesh, Bhutan, India, Myanmar Nepal, Thailand and Sri Lanka. Its activities are related to agriculture, counter-terrorism and transnational crime, climate change, fisheries, environment and disaster management, infrastructure (energy, transport and communications), public health, poverty alleviation, trade and investment, tourism, and technology. People-to-people contacts and cultural cooperation are also part of the BIMSTEC initiatives. Seven national think tanks in the subregion have joined together to be a part of the BIMSTEC Network of Policy Think Tanks. The structure of the initiative includes meetings at summit, ministerial and senior officials levels. Different sectors are led by individual countries and a secretariat was set up in Dhaka in December 2015. BIMSTEC has also been negotiating a comprehensive preferential trade agreement since 2004. These negotiations have yet to be concluded.

The Economic Cooperation Organization (ECO) was set up in 1985 with three founding members – the Islamic Republic of Iran, Pakistan, and Turkey – with the objective to promote economic, technical and cultural cooperation among its member States. ECO is the successor organization of the Regional Cooperation for Development, which operated from 1964 to 1979. It was expanded to include Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan in 1992. Its regional programmes and projects are related to trade and investment, infrastructure, agriculture, forestry, environment, disaster, and crime management.

The Central Asia Regional Economic Cooperation (CAREC) programme was launched in 1997. It consists of ten member countries, namely, Afghanistan, Azerbaijan, China, Kazakhstan, Kyrgyzstan, Mongolia, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan and six development partners. ADB acts as its secretariat. An objective of CAREC countries is to convert their land-locked region to a land-linked region. The economic and regional cooperation programme of CAREC is built around four pillars: improved logistics through better infrastructure connectivity; trade; investment and business development; regional public goods, including health, environmental and disaster risk management areas; and promotion of knowledge and capacity-building.

The Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area was set up in 1994 as an initiative to promote economic growth in poorer provinces and border areas of the four member countries, Brunei Darussalam, Indonesia, Malaysia and the Philippines. The private sector is intended to be the main growth and development driver for the programme whereas the public sector's role is to facilitate and support the activities. The initiative aims to promote cooperation in infrastructure, trade and investment, tourism, and managing environmental concerns. It operates through designated ministries in each country. Its structure includes annual senior officials and ministerial meetings.

The Greater Mekong Subregion is one of the oldest ADB regional cooperation programmes. Established in 1992 to promote growth and development through connectivity and closer economic linkages, it encompasses five countries, namely Cambodia, the Lao People's Democratic Republic, Myanmar, Thailand and Viet Nam, and the two South-Western Chinese provinces of Yunnan and Guangxi. The programme promotes three "C"s, connectivity, competitiveness and a sense of community. It has expanded to cover cross-border infrastructure projects and issues related to harmonizing rules and institutional mechanisms for regional power trade, transport facilitation single-window clearance systems, trade and investment facilitation, agriculture and tourism, environment, human development, and capacity-building.

The South Asia Cooperative Environment Program was set up in 1982. It exclusively focuses on environmental issues, namely those related to marine environment and coastal ecosystems, and establishing a regional oil-spill contingency plan. The programme includes SAARC members and the Maldives. Also of note, it organizes a coral reef task force and a South Asia biodiversity clearing-house mechanism.

The South Asia Subregional Economic Cooperation programme has a membership that is comprised of four members of SAARC, namely Bangladesh, Bhutan, India and Nepal. It focuses on infrastructure projects, trade and investment, money and finance, as well as regional public goods. It is comprised of six priority area working groups covering transport; tourism, trade and investment, private sector cooperation, energy and power, environment, and ICT. ADB supports its projects and programme of cooperation by providing technical assistance and financing.

The Shanghai Cooperation Organization (SCO), set up in 2001 with a membership consisting of four Central Asian countries, namely Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan, and China and the Russian Federation. In 2016, India and Pakistan were elevated from being observers to full members. Two countries currently have observer status with the organization, the Islamic Republic of Iran and Mongolia. The main focus of SCO is directed to security, energy and economic cooperation. The charter for SCO stresses mutual trust, good neighbourliness, and cooperation as a model for regional cooperation and security. It has a strong security agenda and promotes cooperation in addressing drug trafficking and organized crime. More recently, SCO has been promoting energy cooperation and connectivity.

There are five focused programmes of regional cooperation in the Pacific covering fisheries, the Pacific Islands Forum Fisheries Agency, the Pacific Regional Environment Programme, the Pacific Islands Applied Geoscience Commission, the Secretariat of the Pacific Community and the South Pacific Tourism Organisation. Most of these programmes have diverse memberships, depend heavily on donor funding and deal with regional public goods.

## ENDNOTES

<sup>1</sup> The coverage is not exhaustive. For a description of the Association of Southeast Asian Nations (ASEAN), please refer to Box 2.1 in page 4 of the report.

<sup>2</sup> There are still many historical grievances remaining from the colonial era and from the post-Second World War settlements among East and North-East Asian countries (Timmermann, 2008 and Yahuda, 2011).

<sup>3</sup> As per estimates of ADB, there are as many as 28 different functional groups within the ADB membership.

## ANNEX II

### FINANCIAL DEVELOPMENT IN ASIA AND THE PACIFIC

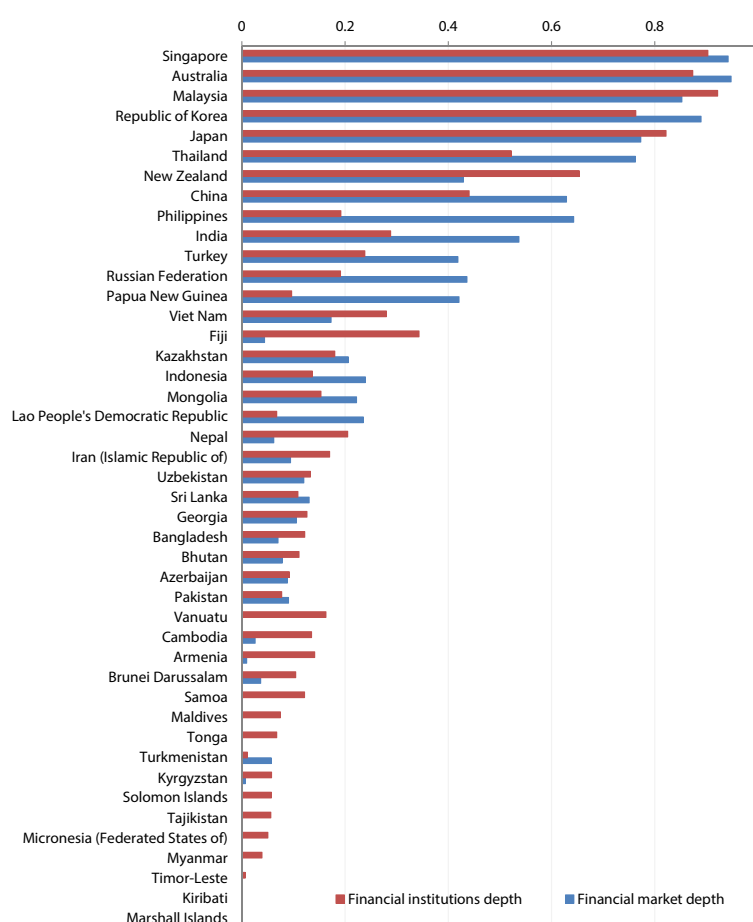
The figure below shows the values of the International Monetary Fund indexes of financial market depth and financial institutions depth for 44 ESCAP member States for which data was available in 2014. It allows us to distinguish four distinct groups. The first one is the group of financially developed countries, with an average value of the indices of financial market depth and financial institutions at 0.8 or more. This group includes Australia, Japan, Malaysia, Republic of Korea and Singapore. These countries have a relatively even level of development of their financial markets and financial institutions. A second group includes countries with intermediate levels of financial development, with an average for the two indices of between 0.3 and 0.7. It is interesting to note that the countries in this group, except for New Zealand, are characterized by a significant higher level of financial market development compared to financial institutions development.

The next group includes countries with an incipient level of financial development. The average of the two indices for

this group is between 0.10 and 0.30. The group includes 12 developing countries. Some countries in this group, including the Lao People's Democratic Republic and Papua New Guinea, have significantly higher level of development of their financial markets compared to financial institutions while the opposite is true of other countries, such as Fiji and Nepal.

The final group includes countries with a low level of financial development. Their average score for the two indices is less than 0.10. This group includes such countries as Azerbaijan, Bangladesh, Bhutan and Pakistan, in which the levels of development of their financial markets and financial institutions are similar, and other countries, such as Maldives, Samoa, Tonga and Vanuatu, which have only a limited development of their financial institutions. On average, the members of this group have a higher level of development with regard to their financial institutions (average of 0.07) as compared with their financial markets (average of 0.02).

FIGURE A2.1: Financial development in Asia and the Pacific, by country, 2014



Source: ESCAP based on Svirydzenka (2016).

*Note:* The financial markets depth index is an aggregate of five indicators: (a) Stock market capitalization to GDP; (b) stocks traded to GDP; (c) international debt securities of government to GDP; (d) total debt securities of financial corporations to GDP; and (e) total debt securities of nonfinancial corporations to GDP. The financial institutions depth index is an aggregate of four indicators: (a) private-sector credit to GDP; (b) pension fund assets to GDP; (c) mutual fund assets to GDP; and (d) insurance premiums, life and non-life to GDP. The two indices are normalized so that a value of one represents the level of financial market depth or financial institutions depth of the United States

### ANNEX III

## SEQUENCING APPROACH TO FINANCIAL MARKET DEVELOPMENT

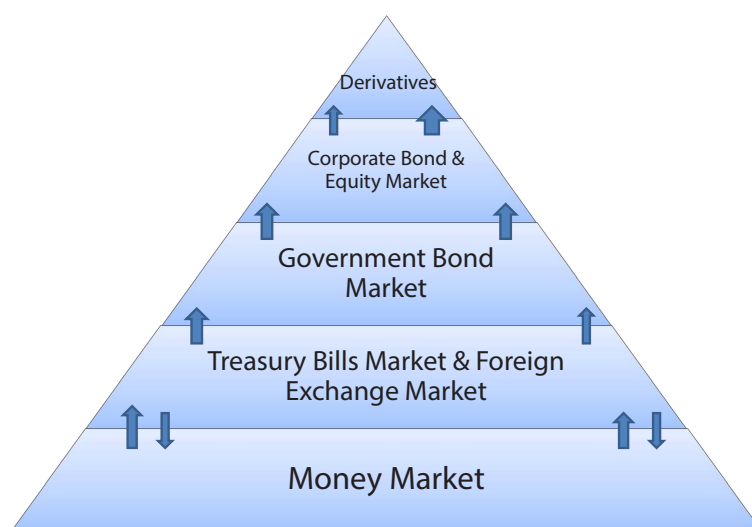
Capital markets are not developed overnight but through an incremental process, as described below. This process has been observed in the region in countries such as Viet Nam, Indonesia and the Philippines, where a government bond market was established before the corporate bond market. This incremental process means that each country should follow a strategy based on its current market development stage.

Typically, the money market, which trades very short-term debt securities usually issued by governments and financial institutions, is established before other segments because of its central role in price discovery and interest rate setting. Money markets are the medium through which central banks intervene and financial institutions manage their liquidity by lending and borrowing to and from each other. The foreign

exchange market shares a lot of similarities with the money market except that each transaction involves the exchange of local and foreign currency.

The different market segments are, however, interrelated. For instance, a liquid money market relies on adequate depth in government bonds as bonds are typically used as collateral in interbank lending (repurchasing agreements). A well-developed government bond market also works as a catalyst for establishing an appropriate bond market infrastructure, which facilitates the development of other fixed income markets, and the government bond yield curve serves as a price reference for corporate bonds. Finally, the development of derivative markets requires well-developed bond and equity markets, as they constitute the underlying assets of derivative instruments.

FIGURE A3.1: The hierarchical order of financial markets



Source: ESCAP.

# REFERENCES

- Arvis, Jean-Francis, Ben Shepherd (2011). The air connectivity index: measuring integration in the global transport network. Policy Research Working Paper, No. 5722. Washington D.C.: World Bank. Available from <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-5722>.
- Asian Development Bank (2016). Asian Bonds Online. Available from <https://asianbondsonline.adb.org/>. Accessed on 10 March 2016.
- Asia Pacific Carrier's Coalition (2012). APCC comments on TRAI's consultation (No.08/2012) on access facilitation charges and colocation charges at cable landing stations. 19 April 2012. Available from [www.asiapacificcarriers.org/sp/user/attach/2012-04-19\\_APCC%20Response%20to%20TRAI%20Consultation%20on%20CLS%20Charges%20190412%20FINAL.pdf](http://www.asiapacificcarriers.org/sp/user/attach/2012-04-19_APCC%20Response%20to%20TRAI%20Consultation%20on%20CLS%20Charges%20190412%20FINAL.pdf).
- Asia-Pacific RCM Thematic Working Group on International Migration including Human Trafficking (2015). *Asia-Pacific Migration Report 2015: Migrants' Contributions to Development*. Bangkok.
- Asia-Pacific Research and Training Network on Trade (2016). ESCAP-World Bank Trade Cost Database. Available from <http://artnet.unescap.org/databases.html#first>. Accessed on 10 May 2016.
- Bank for International Settlements (2016). Statistics. Available from [www.bis.org/statistics/](http://www.bis.org/statistics/). Accessed on 10 March 2016.
- Bénassy-Quéré, A., M. Coupet, and T. Mayer (2007). Institutional determinants of foreign direct investment. *World Economy*, vol. 30, No. 5 (May), pp.764-782.
- Chang, Junhong (2016). Keynote speech at the 6th Asia Research Forum CMIM-Asian Multilateralism and Cooperation. Beijing: 1 July. Available from [www.amro-asia.org/category/speeches/](http://www.amro-asia.org/category/speeches/).
- Chen, Y, W.H. Huang and P.J. Regis (2012). Do Asia and Pacific countries compete in corporate tax rates? *Journal of the Asia-Pacific Economy*, vol. 19, No.1 (December).
- Chia, Ngee Choon and John Whalley (1995). Patterns in investment incentives among developing countries", in *Fiscal Incentives for Investment and Innovation*. Anwar Shah, ed. New York: Oxford University Press.
- Drabek, Zdenek and Warren Payne (2002). The impact of transparency on foreign direct investment. *Journal of Economic Integration*, vol. 17 No. 4 (December), pp. 777-810.
- EM-DAT (2016). The International Disaster Database. Available from [www.emdat.be/](http://www.emdat.be/). Accessed on 03 April 2016.
- Financial Times (2017). Crossborder Investment Monitor. Available from [www.fdimarkets.com/](http://www.fdimarkets.com/). Accessed on 15 February 2017.
- Food and Agriculture Organization, International Fund for Agriculture Development and World Food Programme (2013). *The State of Food Insecurity in the World 2013: The Multiple Dimensions of Food Security*. Rome: FAO.
- Food and Agriculture Organization (2014). Advances in hunger measurement: traditional FAO methods and recent innovations. Working Paper Series ESS/ 14-02. Rome: FAO
- Hoekman, Bernard and Kamal Saggi (1999). Multilateral disciplines for investment-related policies. Policy Research Working Paper, No. 2138. Washington D.C.: World Bank. Available from <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-2138>.
- Hsiang, Solomon M. and Amir S. Jina. The causal effect of environmental catastrophe on long-run economic growth: evidence from 6,700 cyclones. NBER Working Paper, No. 20352, Cambridge, MA: National Bureau of Economic Research. Available from [www.nber.org/papers/w20352](http://www.nber.org/papers/w20352).
- Inderst, Georg (2016). Infrastructure investment, private finance and institutional investors: Asia from a global perspective. ADBI Working Paper Series, No. 555. Tokyo: Asian Development Bank Institute. Available from [www.adb.org/publications/infrastructure-investment-private-finance-and-institutional-investors-asia-global](http://www.adb.org/publications/infrastructure-investment-private-finance-and-institutional-investors-asia-global).



- Intergovernmental Panel on Climate Change (2014). *Climate Change 2014: Synthesis Report*. Geneva. Available from [www.ipcc.ch/report/ar5/syr/](http://www.ipcc.ch/report/ar5/syr/).
- International Telecommunication Union (2016a). ICT Development Index 2016. Available from [www.itu.int/net4/ITU-D/idi/2016/](http://www.itu.int/net4/ITU-D/idi/2016/). Accessed on 10 June 2015.
- International Telecommunication Union (2016b). World Telecommunications/ ICT Indicators Database. Available on [www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx](http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx). Accessed on 10 June 2015.
- International Energy Agency (2014). *World Energy Investment Outlook*. Paris. Available from [www.iea.org/publications/freepublications/publication/WEI02014.pdf](http://www.iea.org/publications/freepublications/publication/WEI02014.pdf).
- International Energy Agency (2016). World Energy Outlook: Energy Access Database. Available from [www.worldenergyoutlook.org/resources/energydevelopment/energyaccessdatabase/](http://www.worldenergyoutlook.org/resources/energydevelopment/energyaccessdatabase/). Accessed on 10 November 2016.
- International Monetary Fund (2016). IMF Data: Financial Soundness Indicators (FSIs). Available from <http://data.imf.org/>. Accessed on 10 March 2016.
- International Monetary Fund (2017). IMF Data: Government Financial Statistics. Available from [www.imf.org/external/pubs/ft/gfs/manual/gfs.htm](http://www.imf.org/external/pubs/ft/gfs/manual/gfs.htm).
- Swirzydzienka, K. (2016). Introducing a new broad-based index of financial development. IMF Working Paper 16/5. Washington D.C.: International Monetary Fund. Available from [www.imf.org/external/pubs/cat/longres.aspx?sk=43621.0](http://www.imf.org/external/pubs/cat/longres.aspx?sk=43621.0).
- Keen, Michael and Alejandro Simone (2004). Tax policy in developing countries: some lessons from the 1990s and some challenges ahead", in *Helping Countries Develop: The Role of Fiscal Policy*. Sanjeev Gupta, Benedict Clements and Gabriela Inchauste, eds. Washington D.C.: IMF.
- Kidney, S., D. Guiliani and B. Sonnerud (2017). Public sector agenda for stimulating private market development in green securitisation in Europe. Policy Paper. London: Centre for Climate Change Economics and Policy. Available from [www.cccep.ac.uk/publication/public-sector-agenda-for-stimulating-private-market-development-in-green-securitisation-in-europe/](http://www.cccep.ac.uk/publication/public-sector-agenda-for-stimulating-private-market-development-in-green-securitisation-in-europe/).
- KPMG (2014). *The ASEAN Economic Community 2015*. Available from [www.kpmg.com/SG/en/IssuesAndInsights/ArticlesPublications/Documents/Tax-Itax-The-ASEAN-Economic-Community-2015.pdf](http://www.kpmg.com/SG/en/IssuesAndInsights/ArticlesPublications/Documents/Tax-Itax-The-ASEAN-Economic-Community-2015.pdf).
- Madhur, Srinivasa (2016). Drivers and draggers of regional economic cooperation and integration in Asia and the Pacific. Bangkok. Available from [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2764934](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2764934).
- Mathews, John A. (2016). The Asian Super Grid. *The Asia-Pacific Journal*, vol. 10/48, No. 1 (November).
- McKinsey Global Institute (2016). *Bridging Global Infrastructure Gaps*. Available from [www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights](http://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights).
- Naeher, Dominik (2015). An empirical estimation of Asia's untapped regional integration potential using data envelopment analysis. ADB Economics Working Paper, No. 445. Manila: Asian Development Bank. Available from [www.adb.org/sites/default/files/publication/172903/ewp-445.pdf](http://www.adb.org/sites/default/files/publication/172903/ewp-445.pdf).
- Nangia, R. (2016). Financing Asian infrastructure, in *Managing Public Risks in Private Infrastructure*. Delhi. [forthcoming].
- The National Academy of Sciences, Engineering and Medicine (2016). *Attribution of Extreme Weather Events in the Context of Climate Change*. Washington D.C. Available from [www.nap.edu/catalog/21852/attribution-of-extreme-weather-events-in-the-context-of-climate-change](http://www.nap.edu/catalog/21852/attribution-of-extreme-weather-events-in-the-context-of-climate-change).
- OECD (2014a). International cables, gateways, backhaul and international exchange points. *OECD Digital Economy Papers*, No. 232. Paris. Available from [www.oecd-ilibrary.org/science-and-technology/international-cables-gateways-backhaul-and-international-exchange-points\\_5jz8m9jf3wkl-en](http://www.oecd-ilibrary.org/science-and-technology/international-cables-gateways-backhaul-and-international-exchange-points_5jz8m9jf3wkl-en).

- OECD (2014b). *Southeast Asia Investment Policy Perspectives*. Paris. Available from [www.oecd.org/daf/inv/investment-policy/Southeast-Asia-Investment-Policy-Perspectives-2014.pdf](http://www.oecd.org/daf/inv/investment-policy/Southeast-Asia-Investment-Policy-Perspectives-2014.pdf).
- OECD (2016). Base erosion and profit sharing (BEPS). Available from [www.oecd.org/tax/beps/](http://www.oecd.org/tax/beps/).
- OECD and World Bank (2016). *Climate and Disaster Resilience Financing in Small Island Developing States*. Available from [www.oecd-ilibrary.org/development/climate-and-disaster-resilience-financing-in-small-island-developing-states\\_9789264266919-en](http://www.oecd-ilibrary.org/development/climate-and-disaster-resilience-financing-in-small-island-developing-states_9789264266919-en).
- Secretariat of the Pacific Regional Environment Programme (2011). Report on the Summary of Outcomes and Proceedings from the Niue Pacific Climate Change Roundtable Meeting, 11 to 17 March 2011. Available from <https://www.pacificclimatechange.net/document/report-summary-outcomes-and-proceedings-niue-pacific-climate-change-roundtable-meeting-14>.
- Patnaik, Ila, et al (2013). Foreign investment in the Indian Government bond market. Working Paper, No. 126. New Delhi: National Institute of Public Finance and Policy. Available from [http://econpapers.repec.org/paper/npfpwpaper/13\\_2f126.htm](http://econpapers.repec.org/paper/npfpwpaper/13_2f126.htm).
- PwC (2012). *The Road Ahead: Highways PPP in India*. New Delhi. Available from [www.pwc.in/assets/pdfs/publications-2012/the-road-ahead-highways-ppp.pdf](http://www.pwc.in/assets/pdfs/publications-2012/the-road-ahead-highways-ppp.pdf).
- Sebastian, James (2013). Effectiveness of tax and non-tax incentives and investments: evidence and policy implications. Washington D.C.: Investment Climate Advisory Services of the World Bank. Available from <http://dx.doi.org/10.2139/ssrn.2401905>.
- Securities Industry and Financial Markets Association (2016). Statistics. Available from [www.sifma.org/research/statistics.aspx](http://www.sifma.org/research/statistics.aspx). Accessed on 10 March 2016.
- Timmermann, Martina (2008). Institutionalizing Northeast Asia: challenges and opportunities. In *Institutionalizing Northeast Asia: Regional Steps Towards Global Governance*. Martina Timmermann and Jitsuo Tsuchiyama, eds. Tokyo: United Nations University Press.
- United Nations (2014). *World Urbanization Prospects: The 2014 Revision - Highlights*. New York. Available from <http://esa.un.org/unpd/wup/Highlights/WUP2014-Highlights.pdf>.
- \_\_\_\_ (2015). *Trade Facilitation and Paperless Trade Implementation Survey 2015: Global Report*. Available from [www.unescap.org/resources/trade-facilitation-and-paperless-trade-implementation-global-reports](http://www.unescap.org/resources/trade-facilitation-and-paperless-trade-implementation-global-reports).
- \_\_\_\_ (2017). National Accounts Main Aggregates. Available from <https://unstats.un.org/unsd/snaama/>. Accessed on 29 January 2017.
- United Nations Conference on Trade and Development (2007). *Aftercare: A Core Function in Investment Promotion*. Geneva. Available from [http://unctad.org/en/Docs/iteipc20071\\_en.pdf](http://unctad.org/en/Docs/iteipc20071_en.pdf).
- \_\_\_\_ (2015). *World Investment Report 2015*. Available from [http://unctad.org/en/PublicationsLibrary/wir2015\\_en.pdf](http://unctad.org/en/PublicationsLibrary/wir2015_en.pdf).
- \_\_\_\_ (2016). *UNCTAD B2C E-Commerce Index 2016*. Geneva. Available from [http://unctad.org/en/PublicationsLibrary/tn\\_unctad\\_ict4d07\\_en.pdf](http://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d07_en.pdf).
- \_\_\_\_ (2017). UNCTADStat. Available from <http://unctadstat.unctad.org/>. Accessed 25 February 2017.
- United Nations Development Programme (1994). *Human Development Report 1994*. New York: Oxford University Press. Available from [http://hdr.undp.org/sites/default/files/reports/255/hdr\\_1994\\_en\\_complete\\_nostats.pdf](http://hdr.undp.org/sites/default/files/reports/255/hdr_1994_en_complete_nostats.pdf).
- \_\_\_\_ (2010). *Mumbai Human Development Report 2009*. New Delhi: Oxford University Press. Available from [www.mumbaikarsforsngp.com/docs/Mumbai\\_Human\\_Development\\_Report\\_2009.pdf](http://www.mumbaikarsforsngp.com/docs/Mumbai_Human_Development_Report_2009.pdf).
- The United Nations Office for Disaster Risk Reduction (2015). *Global Assessment Report on Disaster Risk Reduction 2015: Making Development Sustainable – The Future of Disaster Risk Management*. Geneva. Available from [www.unisdr.org/we/inform/gar](http://www.unisdr.org/we/inform/gar).
- United Nations, Department of Economic and Social Affairs (2015). International Migrants Stock 2015. Available from [www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml](http://www.un.org/en/development/desa/population/migration/data/estimates2/estimates15.shtml). Accessed on 10 June 2016.

- United Nations, Economic and Social Commission for Asia and the Pacific (2009). *Creating business and social value: the Asian way to integrate CSR into business strategies*. Studies in Trade and Investment, No. 68. Bangkok: United Nations. Available from [www.unescap.org/sites/default/files/P2-SocialValue.pdf](http://www.unescap.org/sites/default/files/P2-SocialValue.pdf).
- \_\_\_\_ (2013). *Building Resilience to Natural Disasters and Major Economic Crisis*. Bangkok. Available from [www.unescap.org/sites/default/files/ThemeStudy2013-full2.pdf](http://www.unescap.org/sites/default/files/ThemeStudy2013-full2.pdf).
- \_\_\_\_ (2014a). *Harnessing cross-sectoral infrastructure synergies*. Working Paper. Bangkok. Available from [www.unescap.org/resources/working-paper-harnessing-cross-sectoral-infrastructure-synergies](http://www.unescap.org/resources/working-paper-harnessing-cross-sectoral-infrastructure-synergies).
- \_\_\_\_ (2014b). *Implementation of the Bangkok Declaration on Regional on Regional Economic Cooperation and Integration*. 13 June 2014. E/ESCAP/RES/70/1.
- \_\_\_\_ (2015a). *Asia Pacific Trade and Investment Report 2015: Supporting Participation in Value Chains*. Sales No. E.15.II.F.15.
- \_\_\_\_ (2015b). *Secretariat discussion paper for the open-ended Working Group on the Asia-Pacific Information Superhighway*. Incheon. Available from [www.unescap.org/sites/default/files/AISH%20Working%20Group%20Discussion%20Paper.pdf](http://www.unescap.org/sites/default/files/AISH%20Working%20Group%20Discussion%20Paper.pdf).
- \_\_\_\_ (2015c). *Statistical Yearbook for Asia and the Pacific 2015: Did you Know?- Facts and Trends at the Outset of the 2030 Development Agenda*. Bangkok. Available from [www.unescap.org/stat/data/](http://www.unescap.org/stat/data/).
- \_\_\_\_ (2016a). *2016 ESCAP Population Data Sheet*. Bangkok. Available from [www.unescap.org/resources/2016-escap-population-data-sheet](http://www.unescap.org/resources/2016-escap-population-data-sheet).
- \_\_\_\_ (2016b). *Asia-Pacific Disaster Report 2015: Disaster Without Borders – Regional Resilience for Sustainable Development*. Sales No. E.15.II.F.13
- \_\_\_\_ (2016c). *Asia-Pacific Trade and Investment Report 2016: Recent Trends and Developments*. Sales No. E.16.II.F.23.
- \_\_\_\_ (2016d). *State of ICT in Asia and the Pacific 2016: Uncovering the Widening Broadband Divide*. Bangkok. Available from [www.unescap.org/resources/state-ict-asia-and-pacific-2016-uncovering-widening-broadband-divide](http://www.unescap.org/resources/state-ict-asia-and-pacific-2016-uncovering-widening-broadband-divide).
- \_\_\_\_ (2016e). *Statistics Division*. Available from [http://data.unescap.org/escap\\_stat/](http://data.unescap.org/escap_stat/). Accessed on 10 May 2016.
- \_\_\_\_ (2017a). *Asia-Pacific Information Superhighway Maps*. Available from [www.unescap.org/our-work/ict-disaster-risk-reduction/asia-pacific-information-superhighway/asia-pacific-information-superhighway-maps](http://www.unescap.org/our-work/ict-disaster-risk-reduction/asia-pacific-information-superhighway/asia-pacific-information-superhighway-maps).
- \_\_\_\_ (2017b). *Asia-Pacific Trade and Investment Agreement Database - APTIAD*. Available from [www.unescap.org/content/aptiad/](http://www.unescap.org/content/aptiad/) and <http://artnet.unescap.org/APTIAD/pillar.aspx>.
- United Nations, Economic and Social Commission for Asia and the Pacific and National Information Society Agency (2016). *Technical Report: A Pre-Feasibility Study on the Asia-Pacific Information Superhighway in the ASEAN Subregion – Conceptualization, International Traffic & Quality Analysis, Network Topology Design and Implementation Model*. Bangkok. Available from [www.unescap.org/sites/default/files/ASEAN%20report%20%5Bdraft%5D.pdf](http://www.unescap.org/sites/default/files/ASEAN%20report%20%5Bdraft%5D.pdf).
- United Nations, Joint United Nations Regional Commissions (2015). *Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific*. 24 May 2016. E/ESCAP/RES/74/2.
- World Bank (2016a). *Global Financial Development*. Database. Available from <http://data.worldbank.org/data-catalog/global-financial-development>. Accessed on 20 March 2016.
- \_\_\_\_ (2016b). *Global Findex*. Available on [www.worldbank.org/en/programs/globalindex](http://www.worldbank.org/en/programs/globalindex). Accessed on 10 November 2016.
- \_\_\_\_ (2016c). *Private Participation in Infrastructure Database*. Available from <https://ppi.worldbank.org/>. Accessed on 10 November 2016.

- \_\_\_\_ (2016d). *Systematic country diagnostic for eight small Pacific Island countries: priorities for ending poverty and boosting shared prosperity*. Washington D.C.
- \_\_\_\_ (2016e). Worldwide Governance Indicators. Available from <http://data.worldbank.org/data-catalog/worldwide-governance-indicators>.
- \_\_\_\_ (2017a). Doing Business. Available from <http://data.worldbank.org/data-catalog/doing-business-database>. Accessed on 10 January 2016.
- \_\_\_\_ (2017b). Logistic Performance Index. Available from <http://lpi.worldbank.org/>. Accessed on 10 January 2017.
- \_\_\_\_ (2017c). Services Trade Restrictions Database. Available from <http://data.worldbank.org/data-catalog/services-trade-restrictions>. Accessed on 10 January 2017.
- \_\_\_\_ (2017d). World Development Indicators. Available from <http://data.worldbank.org/data-catalog/world-development-indicators>. Accessed 25 February 2017.
- \_\_\_\_ (2017e). World Enterprise Survey. Available from [www.enterprisesurveys.org/data/exploretopics/finance#--1](http://www.enterprisesurveys.org/data/exploretopics/finance#--1). Accessed 25 February 2017.
- World Economic Forum (2014a). *Global Asset Model from Direct Investing by Institutional Investors*. Geneva. Available from <http://reports.weforum.org/direct-investing-by-institutional-investors/>.
- \_\_\_\_ (2014b). *Global Enabling Trade Report 2014*. Geneva. Available from [www.weforum.org/reports/global-enabling-trade-report-2014](http://www.weforum.org/reports/global-enabling-trade-report-2014).
- \_\_\_\_ (2017) World Data Atlas. Available from <https://knoema.com/atlas/sources/WEF>.
- World Federation of Exchanges (2017). Statistics. Available from [www.world-exchanges.org/home/index.php/statistics](http://www.world-exchanges.org/home/index.php/statistics). Accessed on 15 January 2017.
- World Trade Organization (2011). *Trade Patterns and Global Value Chains in East Asia: From Trade in Goods to Trade in Tasks*. Geneva. Available from [www.wto.org/english/res\\_e/booksp\\_e/stat\\_trade\\_pat\\_glob\\_val\\_chains\\_e.pdf](http://www.wto.org/english/res_e/booksp_e/stat_trade_pat_glob_val_chains_e.pdf).
- Xianghui, Liu (2016). The impact of logistics costs on the economic development: the case of Thailand. *Business and Public Administration Studies*, vol. 9, No. 1, pp. 37-42.
- Yahuda, Michael (2011). *The International Politics of the Asia-Pacific*. Abingdon: RoutledgeCurzon.
- Yanfei, Li. and Youngho Chang (2014). Infrastructure investments for power trade and transmission in ASEAN+2: costs, benefits, long-term contracts, and prioritised development. Economic Research Institute for ASEAN and East Asia (ERIA). ERIA Discussion Paper Series: ERIA-DP-2014-21. Available from [www.sciencedirect.com/science/article/pii/S0140988315002315](http://www.sciencedirect.com/science/article/pii/S0140988315002315).







Over the past three decades, ongoing regional economic cooperation and integration (RECI) efforts have benefited the Asia-Pacific region significantly by powering trade, investment and economic growth, and generating millions of jobs that contributed to reducing extreme poverty. More recently, RECI has assumed renewed significance amid threats to multilateralism arising from emerging protectionist sentiments and, as a result, of new opportunities offered by the all-encompassing 2030 Agenda for Sustainable Development.

The present report evaluates the state of RECI in Asia and the Pacific in each of its four pillars – market integration, seamless connectivity, financial cooperation, and cooperation to address shared vulnerabilities and risks. It also puts forward policy recommendations to overcome the challenges that countries in the region are facing in furthering the objectives of RECI.

The report emphasizes that RECI and the 2030 Agenda for Sustainable Development are mutually reinforcing processes: Not only can RECI bring about enormous opportunities for effectively pursuing several the Sustainable Development Goals but also the Goals can be used to guide the implementation of RECI, for instance, by ensuring that infrastructure projects have favourable social and environmental, as well as economic impacts.

In the area of market integration, the report recommends reducing non-tariff barriers and reaching multilateral agreements to streamline regulatory frameworks and agree on common standards. On seamless connectivity in the areas of transport, energy and ICT, the report recommends building on existing bilateral intergovernmental agreements and projects by developing multilateral agreements and making them coherent across the region as a whole. On regional financial cooperation, it recommends enhancing regional surveillance and crisis management capacity with the objectives to deepen financial markets, deliver innovative financing solutions for infrastructure development and improve domestic resource mobilization. It also recommends the deepening of regional cooperation on disaster risk reduction, particularly for transboundary disasters.