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 between 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 regional approach to meeting the region’s unique socioeconomic challenges in a globalizing world. The ESCAP office is located in Bangkok, Thailand. Please visit the ESCAP website at www.unescap.org for further information.

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

Cover credit: Shutterstock (hfzimages)

The material is available online at:
www.unescap.org/resources/reci-asia-pacific-regional-report

This publication has been issued without formal editing.
Enhancing Regional Economic Cooperation and Integration in Asia and the Pacific

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 remains great potential to deepen integration across the region.

The adoption of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) has created a new impetus for re-strategizing 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 SDGs 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 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, there are wide variations in overall economic integration. 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 delivered unprecedented economic growth and reduced extreme poverty in the region. Despite all the progress, inequality is growing.

ESCAP 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 multi-sectoral platform for the region, which is now geared for regional implementation of SDGs. 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 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 SDGs 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 to growth for
countries at different stages of development, address transboundary SDGs and bolster the means of implementation, such as trade and finance. Likewise, utilizing the framework offered by the SDGs to progressively guide RECI would promote balanced and sustainable infrastructure to service small, low-income and geographically disadvantaged countries.

This report is to inform how the region can most effectively pursue these goals. It examines in detail the challenges and opportunities across the four pillars which underpin regional integration. It also provides policy options for more immediate progress as well as recommendations on how to best lay the foundations for the long-term integration in the region.

The report underscores that to deliver the best results for the region all four pillars of RECI need to be simultaneously developed in an integrated manner. A main objective 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 multi-sectoral regional approach to RECI will be integral to its success.

The obstacles to achieving an integrated Asia-Pacific region are substantial and require continuous efforts - 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 Communication Technology (ICT), as well as promoting regional cooperation in trade, financing and shared vulnerabilities, RECI offers enormous potential to generate trade, growth and employment, improve social outcomes and manage environmental risks and shared vulnerabilities. This offers the possibility to develop RECI as a critical enabler of the 2030 Agenda for Sustainable Development in Asia and the Pacific.

The Bangkok Declaration 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 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. In 2001-2005, North America and Western Europe represented 46.3 per cent of world GDP, compared to 27.1 per cent for Asia and the Pacific. But in 2011-2015 the two regions had a similar share of the world GDP: 36.3 per cent for North America and Western Europe and 36.1 per cent for Asia and the Pacific. The emergence of protectionist sentiment in Europe and North America, as indicated, for instance, by the 2016 vote in the United Kingdom 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.

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 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 fast, 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 boosting economic growth throughout Asia and the Pacific.

RECI 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 (SDGs), particularly Goal 8. The large investment in transport, energy and ICT infrastructure required by RECI also contributes directly to Goals 7 and 9. 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 much progress on most, if not all, of the SDGs.

The relationship between RECI and the 2030 Agenda is bi-directional. Not only can RECI support the attainment of the SDGs, but the SDGs have also a vital role to play to guide 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 giving high priority to address 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 labor). Tremendous growth in trade of goods has already contributed to considerable progress in the region and offers significant potential for further enhancement through RECI. However, its expansion is impeded by high bilateral trade costs within the region. The most important costs are non-tariff barriers, regulatory and procedural burdens, and high transport costs, which together can account for as much as 60 to 90 per cent
Through cooperation on labor migration policies, a high risk of exploitation and abuse of migrant workers can favor irregular migration. Irregular migration entails the mismatch between demand and supply of migrant laborers, which promotes orderly migration do not favor an easy matching of origin. There is a plethora of overlapping and often inconsistent regulatory frameworks in trade, investment or transport, known as the 'noodle bowl'. Contrary to their intention to open market access, multiple preferential trade agreements 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 addressed with trade facilitation measures. For instance, ESCAP member States adopted a Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific. 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 both in inflows into the region and between countries within the region. More recently, Asia-Pacific countries are quickly gaining 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 will 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 its importance from a social perspective, labor market integration is lagging behind other forms of integration. Mechanisms to promote orderly migration do not favor an easy matching between demand and supply of migrant laborers, which can favor irregular migration. Irregular migration entails a high risk of exploitation and abuse of migrant workers. Through cooperation on labor 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 harmonised regional qualification frameworks that support job-matching and the creation of regional labor 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 both within and between countries are insufficiently developed, 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 to 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 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.

A particularly important initiative that could support further moves towards enhanced RECI in the Asia-Pacific region is China’s Belt and Road Initiative (BRI). The BRI 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 an uncoordinated and fragmented
nature of projects that leads to higher 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 due to lack of resources, appropriate institutional mechanisms, and/or differences in legal and regulatory regimes. Finally, most infrastructure networks are domestically-centered, with cost-benefit analyses typically assessed from a domestic return-on-investment perspective, thereby discounting the regional public good value heavily.

Strong regional political will and agreed regional visions of 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, they must be considered holistically, which may yield significant cost and time savings. For instance, the costs for deploying terrestrial fibre networks can be significantly reduced if the works take place 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 ensuring a fair distribution of costs and benefits among stakeholders. This could be done with an effective and credible compensation mechanism for affected groups and countries.

**Financial Cooperation**

A number of regional cooperation initiatives exist in the region to improve macroeconomic and financial surveillance, provide emergency liquidity support, and protect economies from excessive financial market and capital flow volatility. Prominent examples include: ASEAN+3’s Economic Review and Policy Dialogue and Chiang Mai Initiative Multilateralisation; the Eurasian Economic Community’s Anti-Crisis Fund; the Reserve Bank of India’s Framework on Currency Swap Arrangements for SAARC members; 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, there have been initiatives 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 aims to work towards common standards of 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 Sustainable Development Agenda. Different measures can be adopted to enhance funding and financing of infrastructure investments. Funding can be improved through mechanisms to improve cost recovery, higher efficiency operating infrastructure facilities, or more efficient fiscal management. Financing can be improved through deepening financial markets, favoring efficient financial intermediaries through competition in the financial sector, and strengthening financial institutions and regulations. Mechanisms such as public-private partnerships may contribute to a significant boost in infrastructure investments. The establishment of dedicated financing mechanisms of cross-border projects could also contribute to raise their priority level while serving as coordination platform among the involved countries.

Notwithstanding the importance of financing for infrastructure development, countries in the region, by and large, have poor 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 have an average tax-to-GDP ratio of only 17.6 per cent over 2012-2014, and only seven economies (four of which are resource rich) have tax-to-GDP rates above 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 policy makers, tax administrators, and relevant regional and subregional organizations to enhance cooperation on tax matters.

**Shared Vulnerabilities**

Asia-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 over half a trillion dollars’ worth of damage. 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
achieving seamless connectivity. Achieving seamless connectivity, however, would be demanding 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 addressed in an effective manner to continue to move forward towards shared prosperity, the essence of the SDGs.

Improved coordination, mutual recognition or harmonization of regulatory frameworks can be achieved through an inclusive regional intergovernmental platform such as ESCAP. ESCAP’s multi-disciplinary, cross-sectoral technical expertise positions the organization to simultaneously accelerate progress across all four pillars of RECI and bring together member States, subregional organisations and other relevant institutions working on RECI. It can draw on its longstanding 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 progress RECI across the region, ESCAP should continue the process of incorporating and formalising RECI into its own work program 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 Energy, ICT and Transport Committees. Similarly, the commission session could also include a recurring segment on RECI to engage member States and subregional organisations in a dialogue on how to prioritise and progress key RECI initiatives.

Way Forward for RECI in the Asia-Pacific

Exploiting the many synergies between the SDGs and RECI should certainly be a major consideration in moving forward. This will require that both be 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 to several SDGs. This in turn would require seamless connectivity in transport, energy, and ICT, which also contribute directly to several SDGs. Leveraging existing as well as new regional cooperation initiatives to boost physical infrastructure investments, as well as pursuing intergovernmental facilitation agreements and action to simplify regulations will be critical to achieving seamless connectivity.
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 Tateno. 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.

Other ESCAP staff who contributed substantively to the report include: 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** ........................................................................................................................................ iii

**Executive Summary** ........................................................................................................................ v

**Acknowledgements** ........................................................................................................................... ix

**Acronyms** ........................................................................................................................................... xii

1. **Why Asia and the Pacific needs to enhance RECI** .............................................................................. 1

2. **Assessing RECI: where does the region stand?** ............................................................................... 4
   - Broad insights from existing RECI 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** .................................................................................................................. 19
   - The importance of enhancing connectivity in Asia and the Pacific ............................................ 20
   - Transport connectivity ................................................................................................................. 21
   - Energy connectivity ..................................................................................................................... 24
   - Information and communication technology ............................................................................... 28
   - Common challenges .................................................................................................................... 31
   - Recommendations ..................................................................................................................... 32

5. **Financial markets and public resource management cooperation** ................................................ 35
   - The financial landscape of Asia and the Pacific ............................................................................ 35
   - Arrangements to ensure financial stability .................................................................................... 39
   - Cooperation on capital market development .............................................................................. 40
   - Financing investments in infrastructure ....................................................................................... 41
   - Tax cooperation ........................................................................................................................... 44
   - Suggestions to move forward ....................................................................................................... 47

6. **Shared vulnerabilities** .................................................................................................................. 51
   - Natural disasters and shared vulnerabilities ................................................................................. 51
   - Climate change and shared vulnerabilities .................................................................................... 54
   - Food security and shared vulnerabilities ....................................................................................... 55
   - Shared vulnerabilities: main challenges ....................................................................................... 56
   - Recommendations ..................................................................................................................... 57

7. **The way forward for RECI in Asia and the Pacific** ......................................................................... 22

    **Annex I. Overarching RECI initiatives in Asia and the Pacific** .................................................. 62

    **Annex II. Financial development in Asia and the Pacific** .......................................................... 66

    **Annex III. Sequencing approach to financial market development** ......................................... 67

**References** ........................................................................................................................................... 68
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAAA</td>
<td>Addis Ababa Action Agenda</td>
</tr>
<tr>
<td>ABMI</td>
<td>Asian Bond Market Initiative</td>
</tr>
<tr>
<td>ACF</td>
<td>Anti-Crisis Fund</td>
</tr>
<tr>
<td>ACIA</td>
<td>ASEAN Comprehensive Investment Agreement</td>
</tr>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>AEC</td>
<td>ASEAN Economic Community</td>
</tr>
<tr>
<td>AHN</td>
<td>Asian Highway Network</td>
</tr>
<tr>
<td>AIIB</td>
<td>Asian Infrastructure Development Bank</td>
</tr>
<tr>
<td>AMRO</td>
<td>ASEAN+3 Macroeconomic Research Office</td>
</tr>
<tr>
<td>AP3F</td>
<td>Asia-Pacific Project Preparation Facility</td>
</tr>
<tr>
<td>AP-IS</td>
<td>Asia-Pacific Information Superhighway</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
</tr>
<tr>
<td>ASP</td>
<td>Asian Surveillance Process</td>
</tr>
<tr>
<td>ASFPC</td>
<td>Association of Financial Supervisors of Pacific Countries</td>
</tr>
<tr>
<td>ASR</td>
<td>Asian Surveillance Report</td>
</tr>
<tr>
<td>ATAF</td>
<td>African Tax Administration Forum</td>
</tr>
<tr>
<td>BSAs</td>
<td>bilateral swap agreements</td>
</tr>
<tr>
<td>BRI</td>
<td>Belt and Road Initiative</td>
</tr>
<tr>
<td>CAREC</td>
<td>Central Asia Regional Economic Cooperation</td>
</tr>
<tr>
<td>CIAT</td>
<td>Inter-American Center of Tax Administrations</td>
</tr>
<tr>
<td>CMI</td>
<td>Chiang Mai Initiative</td>
</tr>
<tr>
<td>CMIM</td>
<td>Chiang Mai Initiative Multilateralization</td>
</tr>
<tr>
<td>ECO</td>
<td>Economic Cooperation Organization</td>
</tr>
<tr>
<td>EFSD</td>
<td>Eurasian Fund for Stabilization and Development</td>
</tr>
<tr>
<td>EPS</td>
<td>Employment Permit System</td>
</tr>
<tr>
<td>ERPD</td>
<td>Economic Review and Policy Dialogue</td>
</tr>
<tr>
<td>EurAsEC</td>
<td>Eurasian Economic Community</td>
</tr>
<tr>
<td>ESCAP</td>
<td>United Nations, Economic and Social Commission for Asia and the Pacific</td>
</tr>
<tr>
<td>EAEU</td>
<td>Eurasian Economic Union</td>
</tr>
<tr>
<td>ENEA</td>
<td>East and North-East Asia</td>
</tr>
<tr>
<td>ETI</td>
<td>enabling trade index</td>
</tr>
<tr>
<td>FDI</td>
<td>foreign direct investment</td>
</tr>
<tr>
<td>FAO</td>
<td>United Nations Food and Agriculture Organization</td>
</tr>
<tr>
<td>FTTH</td>
<td>fibre to the home</td>
</tr>
<tr>
<td>GDP</td>
<td>gross domestic product</td>
</tr>
<tr>
<td>GEI</td>
<td>global energy interconnection</td>
</tr>
<tr>
<td>GEIDCO</td>
<td>Global Energy Interconnection Development Cooperation Organization</td>
</tr>
<tr>
<td>GLOFs</td>
<td>glacial lake outburst floods</td>
</tr>
<tr>
<td>GMS</td>
<td>Greater Mekong Subregion</td>
</tr>
<tr>
<td>GVC</td>
<td>global value chains</td>
</tr>
<tr>
<td>HVDC</td>
<td>high voltage direct current</td>
</tr>
<tr>
<td>IIAs</td>
<td>international investment agreements</td>
</tr>
<tr>
<td>ICT</td>
<td>information and communications technology</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>IN-MHEWS</td>
<td>International Network on multi-hazard early warning system</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>INSTC</td>
<td>International North-South Transport Corridor</td>
</tr>
<tr>
<td>IOTA</td>
<td>Intra-European Organization of Tax Administrations</td>
</tr>
<tr>
<td>IPPC</td>
<td>Intergovernmental Panel on Climate Change</td>
</tr>
<tr>
<td>ITU</td>
<td>International Telecommunication Union</td>
</tr>
<tr>
<td>LCBM</td>
<td>local corporate bond market</td>
</tr>
<tr>
<td>LPI</td>
<td>logistics performance index</td>
</tr>
<tr>
<td>LNG</td>
<td>liquefied natural gas</td>
</tr>
<tr>
<td>IXPs</td>
<td>Internet exchange points</td>
</tr>
<tr>
<td>NCA</td>
<td>North and Central Asia</td>
</tr>
<tr>
<td>NDB</td>
<td>New Development Bank</td>
</tr>
<tr>
<td>NTM</td>
<td>non-tariff measures</td>
</tr>
<tr>
<td>PIASA</td>
<td>Pacific Islands Air Services Agreement</td>
</tr>
<tr>
<td>PIF</td>
<td>Pacific Islands Forum</td>
</tr>
<tr>
<td>PiTAA</td>
<td>Pacific Islands Tax Administrator’s Association</td>
</tr>
<tr>
<td>PPP</td>
<td>public-private partnership</td>
</tr>
<tr>
<td>PTA</td>
<td>preferential trade agreement</td>
</tr>
<tr>
<td>ODA</td>
<td>official development assistance</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>RCDC</td>
<td>Regional Cooperation Dialogue Platform</td>
</tr>
<tr>
<td>RCEP</td>
<td>Regional Comprehensive Economic Partnership</td>
</tr>
<tr>
<td>RECI</td>
<td>Regional economic cooperation and integration</td>
</tr>
<tr>
<td>SAARC</td>
<td>South Asian Association of Regional Cooperation</td>
</tr>
<tr>
<td>SDGs</td>
<td>Sustainable Development Goals</td>
</tr>
<tr>
<td>SCADA</td>
<td>Supervisory Control and Data Acquisition</td>
</tr>
<tr>
<td>SEA</td>
<td>South East Asia</td>
</tr>
<tr>
<td>SGATAR</td>
<td>Study Group on Tax Administration and Research</td>
</tr>
<tr>
<td>SFB</td>
<td>SAARC Food Bank</td>
</tr>
<tr>
<td>SMEs</td>
<td>small and medium-sized enterprises</td>
</tr>
<tr>
<td>SPECA</td>
<td>United Nations Special Programme for the Economies of Central Asia</td>
</tr>
<tr>
<td>SPREP</td>
<td>Secretariat of the Pacific Regional Environmental Programme</td>
</tr>
<tr>
<td>STRI</td>
<td>service trade restrictiveness index</td>
</tr>
<tr>
<td>TAPI</td>
<td>Turkmenistan-Afghanistan-Pakistan-India gas pipeline</td>
</tr>
<tr>
<td>TAR</td>
<td>Trans-Asian Highway</td>
</tr>
<tr>
<td>TPP</td>
<td>Trans Pacific Partnership</td>
</tr>
<tr>
<td>TFA</td>
<td>Trade Facilitation Agreement</td>
</tr>
<tr>
<td>UPU</td>
<td>Universal Postal Union</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
</tr>
<tr>
<td>UNISDR</td>
<td>The United Nations Office for Disaster Risk Reduction</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
<tr>
<td>WEF</td>
<td>World Economic Forum</td>
</tr>
</tbody>
</table>

$ United States dollars, unless otherwise noted
CHAPTER 1
WHY ASIA AND THE PACIFIC NEEDS TO ENHANCE RECI

At the first Ministerial Conference on Regional Economic Cooperation and Integration (RECI) in December 2013, ministers, senior policy makers, representatives of member States, and associate members of United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) adopted the Bangkok Declaration. The Bangkok Declaration 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.

Thus envisaged, RECI is both a multidimensional concept and a process that facilitates shared prosperity through

(a) economic integration, which is reflected in an increased flow of goods, services, capital and people;

(b) by supporting the development and strengthening of country institutions through exchanges of information, technical assistance and capacity building; and

(c) by 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. This 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. The report 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.

The first component of RECI, economic integration, is relatively high in the Asia-Pacific region as a whole, similar to that of the Americas, but lower than in Europe. However, there is a wide variation across its subregions, with East and South-East Asia being the most integrated. Such variation reflects traditional drivers 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 throughout the Asia-Pacific region.

An important motivation for pursuing RECI in the region is given by persistent sluggish economic growth in major advanced economies of North America and Western Europe 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 ESCAP member States in the period 2001-2005 represented 58.4 per cent of the GDP of North America and Western Europe combined. In the period 2011-2015, however, this figure increased to 99.4 per cent.

The relatively diminished global economic importance of North America and Western Europe and the rise of the Asia-Pacific region is also noticeable when looking at shares of global GDP. In 2001-2005, North America and Western Europe represented 46.3 per cent of world GDP, compared to 27.1 per cent for Asia and the Pacific. But in 2011-2015 the two regions had a similar share of the world GDP: 36.3 per cent for North America and Western Europe and 36.1 per cent for Asia and the Pacific. The emergence of protectionist sentiment in Europe and North America, as indicated, for instance, by the 2016 vote in the United Kingdom to leave the European Union or the withdrawal of the United States from the proposed Trans-Pacific Partnership (TPP) in 2017, is another reason why the region should consider enhancing RECI.

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

"(I)n 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, slightly below the combined GDP of North America and Western Europe, but growing significantly faster, 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 boosting economic growth throughout Asia and the Pacific.

RECI has been implemented in the region through a number of initiatives and subregional organizations, including 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’s Belt and Road Initiative (BRI), also known as “One Belt, One Road”. The BRI aims to promote a multimodal network, through connecting road and rail routes with seaports, expanding energy networks through oil and gas pipelines and regional power grids, while extending ICT fibre optic links from China through Central Asia to ultimately reach Europe. As such, the BRI places a strong emphasis on the ‘seamless connectivity’ component of RECI, particularly on transport, energy and Information and Communication 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 enormous 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 (SDGs), such as target 8.1 (“Sustain per capita economic growth”). The large investments in transport, energy and ICT infrastructure required by RECI can also contribute directly to further 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 SDG 17 on the means of implementation, including 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”).

The relationship between RECI and the 2030 Agenda is bi-directional. Not only can RECI support the attainment of the SDGs, but SDGs have also a vital role to play to guide 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 giving high priority to address transboundary vulnerabilities and risks are other ways in which the 2030 Agenda can inform how RECI can be most effectively implemented.

Table 1.1: Gross domestic Product (in current $ billions)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) ESCAP Member States</td>
<td>10,736</td>
<td>18,025</td>
<td>27,256</td>
</tr>
<tr>
<td>(2) North America and Western Europe</td>
<td>18,385</td>
<td>24,291</td>
<td>27,432</td>
</tr>
<tr>
<td>(3) World</td>
<td>39,648</td>
<td>59,833</td>
<td>75,538</td>
</tr>
</tbody>
</table>

Memo items:

| over (2) [per cent] | 58.4 | 74.2 | 99.4 |
| over (3) [per cent] | 46.3 | 40.6 | 36.3 |
| over (3) [per cent] | 27.1 | 30.1 | 36.1 |

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 their success. As the most comprehensive multilateral platform for promoting cooperation 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 SDG framework, in deepening RECI in the Asia-Pacific region we must also ensure that we mitigate any potential social risks that may arise. These risks include, for example, health and employment concerns, trafficking of persons and illicit goods, and social dislocation due to loss of land and changing communities. Negative outcomes can be mitigated or avoided if a people-centred approach is used, especially through adhering to fundamental human rights principles and wide-ranging, multi-sectoral and multi-lateral consultation 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

1 See preambular paragraph 11 of ESCAP (2014b).
CHAPTER 2
ASSESSING RECI—WHERE DOES THE REGION STAND?

RECI has two components: regional economic integration and regional economic cooperation. The first component is a process that facilitates shared prosperity through a freer flow of goods, services, capital and people between two or more countries, and includes steps towards the coordination of policies and institutional arrangements across these countries. Complementing the first, the second component 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 not only the integration of markets for goods, services, capital and labour, but also 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, multi-track, and multi-speed process; and RECI implementation has taken place through a number of subregional organizations. Among existing organizations, those covering North and North-East and South-East Asia, particularly, the Association of Southeast Asian Nations (ASEAN) and ASEAN Plus Three (ASEAN+3), have been the most successful. Box 1 outlines ASEAN’s progress in subregional cooperation. 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 amongst various regional and subregional programs and initiatives. For instance, in the area of trade, the so-called “noodle bowl” of preferential trading arrangements has led to higher transaction costs due to a lack of clarity on which agreements are most convenient for exporters, particularly for small and medium enterprises. Similarly, the plethora of infrastructure agreements and frameworks that have been finalized under various bilateral and subregional initiatives has 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 1: ASEAN

ASEAN is amongst 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), 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 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. A simple five-article declaration adopted the ASEAN Charter in 2008, with the aim of creating an ASEAN Economic Community (AEC) as a single market by 2015. The charter also created a Committee of Permanent Representatives to guide and support the ASEAN Secretariat, located in Jakarta, Indonesia. ASEAN has cooperation programs in almost all fields but in order to prepare for the AEC in 2015, several important steps were taken including preparing a plan for ASEAN connectivity, accelerating trade and other liberalization steps, and setting up the ASEAN Infrastructure Fund with shareholders’ total contribution of nearly $500 million.
Using a composite measure of economic integration, table 2.1 below shows that only Africa is less integrated than Asia and the Pacific. Furthermore, not only RECI has developed in an uncoordinated manner in the Asia-Pacific region, but it has also progressed unevenly across subregions. Table 2.1 also illustrates the wide variation in integration across the Asia-Pacific subregions. East Asia is the most integrated [0.50] followed by Southeast Asia [0.38]; while Central Asia and South Asia [0.11 respectively] 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). Looking at subregion there is wide variation. East Asia ranks first in trade and investment, while the Pacific has 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. People’s mobility across borders is also highest in East Asia (slightly lower than in Western Europe), and lowest in the Pacific, but in this component there are several subregions that 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 best 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, however, especially for the 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>
<thead>
<tr>
<th>Regions</th>
<th>Composite Regional Integration Index</th>
<th>Trade and investment</th>
<th>Monetary and financial</th>
<th>Cross-border mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia-Pacific</td>
<td>0.28</td>
<td>0.26</td>
<td>0.15</td>
<td>0.42</td>
</tr>
<tr>
<td>Europe</td>
<td>0.41</td>
<td>0.46</td>
<td>0.35</td>
<td>0.43</td>
</tr>
<tr>
<td>Americas</td>
<td>0.31</td>
<td>0.32</td>
<td>0.13</td>
<td>0.48</td>
</tr>
<tr>
<td>Africa</td>
<td>0.17</td>
<td>0.07</td>
<td>0.01</td>
<td>0.42</td>
</tr>
<tr>
<td>Subregions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western Europe</td>
<td>0.89</td>
<td>1.00</td>
<td>1.00</td>
<td>0.68</td>
</tr>
<tr>
<td>North America</td>
<td>0.62</td>
<td>0.65</td>
<td>0.31</td>
<td>0.90</td>
</tr>
<tr>
<td>South America</td>
<td>0.27</td>
<td>0.28</td>
<td>0.06</td>
<td>0.46</td>
</tr>
<tr>
<td>Western Africa</td>
<td>0.25</td>
<td>0.12</td>
<td>0.01</td>
<td>0.60</td>
</tr>
<tr>
<td>East Asia</td>
<td>0.50</td>
<td>0.68</td>
<td>0.22</td>
<td>0.62</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>0.38</td>
<td>0.42</td>
<td>0.21</td>
<td>0.50</td>
</tr>
<tr>
<td>South Asia</td>
<td>0.11</td>
<td>0.08</td>
<td>0.01</td>
<td>0.24</td>
</tr>
<tr>
<td>Central Asia</td>
<td>0.11</td>
<td>0.09</td>
<td>0.01</td>
<td>0.23</td>
</tr>
<tr>
<td>The Pacific</td>
<td>0.02</td>
<td>0.04</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>Pacific and Oceania</td>
<td>..</td>
<td>0.12</td>
<td>0.09</td>
<td>0.47</td>
</tr>
</tbody>
</table>


Note: East Asia here includes People’s Republic of China; Hong Kong, China; Japan; Republic of Korea; Macau, China; Mongolia; Taipei, China; South Asia includes only Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka. The Pacific includes Cook Islands, Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu and Vanuatu. 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, e.g. they can favour taking advantage of a favourable geographical location or mitigate less advantageous geographical features. To illustrate this, four composite indices are selected to assess the role of national policies for regional/subregional integration (Table 2.3). The first three measures, the Enabling Trade Index (ETI), the Services Trade Restrictiveness Index (STRI), and the Logistics Performance Index (LPI), 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 do business ‘behind-the-border’. As Table 2.3 shows, East Asia and Southeast Asia have the most enabling policy environment, while South Asia’s lacklustre pursuit of outward-oriented policies has held the subregion back from achieving significant integration outcomes. Despite relatively open external economic policies, both integration in Central Asia and the Pacific has, however, been significantly hindered by geography.

As this section has shown, integration is the outcome of a combination between geographical characteristics (e.g. having access to sea routes), connectivity (e.g. air or maritime traffic), and the regulatory environment (e.g. trade openness). Each country has a different combination. In principle, some may have more desirable combinations, e.g. with regards to location or country size. However, that does not mean policymaking has no room for manoeuvre. On the contrary; as the geographical dimension is exogenous, a sub-optimal endowment in that area stresses the importance of taking action in the others. To do so, it is important to keep in mind that specific policies may disproportionately favour integration in specific dimensions (e.g. 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 learnt from RECI organizations.

### TABLE 2.2: National policies and regional economic integration

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia</td>
<td>4.4</td>
<td>3.6</td>
<td>35.0</td>
<td>64.6</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>4.1</td>
<td>3.1</td>
<td>48.1</td>
<td>61.8</td>
</tr>
<tr>
<td>South Asia</td>
<td>3.6</td>
<td>3.0</td>
<td>58.7</td>
<td>53.6</td>
</tr>
<tr>
<td>Central Asia</td>
<td>3.9</td>
<td>2.5</td>
<td>19.4</td>
<td>59.6</td>
</tr>
<tr>
<td>The Pacific</td>
<td>..</td>
<td>..</td>
<td>..</td>
<td>56.4</td>
</tr>
<tr>
<td>Pacific and Oceania</td>
<td>4.9</td>
<td>3.8</td>
<td>18.7</td>
<td>74.5</td>
</tr>
</tbody>
</table>

Source: ESCAP, based on 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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>East and North Asia</td>
<td>158.6</td>
<td>9</td>
</tr>
<tr>
<td>South East Asia</td>
<td>35.1</td>
<td>3.1</td>
</tr>
<tr>
<td>South and South West Asia</td>
<td>41.7</td>
<td>2.8</td>
</tr>
<tr>
<td>North and Central Asia</td>
<td>41.7</td>
<td>3.2</td>
</tr>
<tr>
<td>The Pacific</td>
<td>7.3</td>
<td>4.6</td>
</tr>
<tr>
<td>Pacific and Oceania</td>
<td>23.4</td>
<td>2.0</td>
</tr>
</tbody>
</table>


Note: Data weighted by country populations and then added by subregion. Not all countries due to lack of data.
Broad insights from existing RECI initiatives in Asia and the Pacific

Reflecting upon the experiences of existing RECI organizations is key to furthering progress on RECI implementation, both at a subregional and regional level. 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 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 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 significant reduction in extreme poverty in the region. 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 to addressing 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 would enable the Asia-Pacific region to re-articulate the benefits of economic integration and cooperation, while also introducing credible policy measures to address concerns of vulnerable groups and countries.

The existence of overlapping organizations has been costly in terms of political, human, and financial resources. The existence 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 in charge of 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 will require a gradual streamlining and consolidation of overlapping and inconsistent agreements in sectors such as trade, investment and transport. The overarching goal should be the establishment of a set of homogeneous regulatory frameworks that encompasses all countries of the region in these sectors.

Lack of delegation has led to suboptimal outcomes. National 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 has led to a proliferation of bilateral solutions that are often suboptimal. 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 tended to create setbacks in cooperation and integration processes as priorities have changed. To achieve RECI progress on the sustainable development goals, further reflection and discussion are required on how to strike the right balance between consensus-based inter-governmental 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 be 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 SDGs will require strengthening of both. Investments in infrastructure such as energy, transport, and ICT require ample financial and technical resources for the preparation of projects, plans, programs, 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 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 partnership between governments, international financial institutions, pertinent regional and international organizations and various national stakeholders must be forged.

Integrated approaches to infrastructure development are currently missing. 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. Thus, infrastructure project development needs to not only be cross-sectoral, but they also must ensure that holistically address economic, social and environmental considerations.

The gains from RECI need to be fairly distributed among members. 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 also that there is a fair distribution of costs and benefits among the members of RECI initiatives.

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

ENDNOTES

1 See Annex I for overview of existing RECI initiatives and arrangements in the Asia-Pacific region.

2 The composite measure was constructed using on the following variables: trade and investment, monetary and financial integration, and cross-border mobility of peoples. 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 last chapter outlined, 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 and a number of relevant lessons have been learnt. In order to gain a deeper understanding of policy measures that promote integration, and preclude those that hamper it, this chapter analyses the main dimensions of integration.

Generally, integration is understood as the process of evolving towards less fragmented production and/or consumption space. It implies easier mobility of factors of production such as capital and/or labour, as well as freer movement of the outputs of production (goods and services). Market integration favours efficiency, and it tends to be associated with less room for information asymmetries or price differentials, and also favours 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 will be determined by structural (and geographic) differences such as transport or other transaction costs. Broadly, market integration can be enhanced by harmonization, coordination or mutual recognition of policies, rules and regulations (e.g. standards, reduction of tariffs, etc.) which are aimed at reducing those non-structural features that constitute bottlenecks.

Historically, integration has been higher among neighbouring countries, ceteris paribus. Advances in technology and reductions in transport and transaction costs, however, have expanded the geographical scope of integration. In the last few decades, nearly all economies of the region have globalized to various degrees and now, economies in Asia and the Pacific are increasingly connected through trade and investment. Arguably, these are the main drivers of integration, and therefore they have been identified as key means of implementation to achieve the Agenda 2030. Furthermore, RECI and other cooperation /integration initiatives can provide a demand boost for trade and foreign direct investments (FDI) – e.g. from China and other countries along BRI corridors due to re-allocation of productive capacity. Among others, this facilitates getting access to Global and Regional Value Chains (G/RVCs) or channelling the (high) savings in the region toward those countries with investment opportunities that offer higher returns.

These RECI-enhancing factors illustrate the great potential of RECI to reinforce and facilitate the achievement of the SDGs. However, the impact of RECI on sustainable development will also depend on the type of trade and investment that is nurtured (e.g. 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 driver of market integration - should focus on enabling access to regional value chains so that all countries, and especially those with special needs, can benefit from the region’s vibrant economy. More opportunities, along with convergence of regulatory frameworks, will reduce the potential for undesired manifestations of RECI.

This chapter describes the trends of integration in the Asia-Pacific region, and subsequently analyses their driving factors, as well as possible obstacles, and suggest 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, the Asia-Pacific region 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. East and North-East Asia (ENEA) has driven the region’s trade performance, accounting for over 60 per cent of total Asia-Pacific trade with the world. Despite slowing growth more recently, China has remained the main force behind the dominant position of ENEA in regional trade, accounting for 14 and 10 per cent of the subregion’s exports and imports respectively.

The rising dynamism of the Asia-Pacific region’s developing countries combined with the integration of the region’s economies into global value chains (GCVs) have driven the growing importance of the region in international trade. Factors such as productivity growth,
relatively lower wages and availability of a large and diverse labour force in the region’s economies, ample investment resources and advanced technological capabilities supported integration of the Asia-Pacific region into the GVCs. In addition to this, lower trade barriers and improved transport and ICT connectivity have also reinforced entry into GVCs and enabled creation of the regional value chains and production networks.

The participation of the region’s economies in GVCs 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). High intraregional trade intensity of South-East Asian economies reflects their participation in regional value chains and the benefits of Association of Southeast Asian Nations (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 regional trading partner for all the other subregions of Asia and the Pacific, mainly due to the prominence of China. South-East Asia is the second most important source of imports for all 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 GVCs products, whereas final demand for such products still largely comes from North America and Europe. However, slow recovery in final demand in these developed markets has more recently caused unprecedented weak trade growth for the Asian and Pacific economies. To mediate this, these economies must begin to seek alternative sources of growth, such as domestic and regional demand, however, this will be challenging for economically small countries and those without large budgets to fuel government spending.

With regards to trade in commercial services, 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 increasing from 25.5 to 30.0 per cent from 2005 to 2015. Commercial services trade is largely driven by communications, construction, insurance, financial services, computer and information,

### TABLE 3.1: Intraregional trade in the Asia-Pacific region

<table>
<thead>
<tr>
<th>Subregion</th>
<th>Intraregional Merchandise Imports</th>
<th>Intraregional Merchandise Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>As % of GDP</td>
<td>As % of total imports</td>
</tr>
<tr>
<td>East and North-East Asia</td>
<td>1990 6.7</td>
<td>50.3</td>
</tr>
<tr>
<td></td>
<td>2000 7.9</td>
<td>53.8</td>
</tr>
<tr>
<td></td>
<td>2015 9.6</td>
<td>58.4</td>
</tr>
<tr>
<td>North and Central Asia</td>
<td>1990 2.3</td>
<td>21.4</td>
</tr>
<tr>
<td></td>
<td>2000 4.4</td>
<td>30.3</td>
</tr>
<tr>
<td></td>
<td>2015 7.9</td>
<td>48.9</td>
</tr>
<tr>
<td>The Pacific</td>
<td>1990 5.8</td>
<td>41.7</td>
</tr>
<tr>
<td></td>
<td>2000 8.7</td>
<td>48.4</td>
</tr>
<tr>
<td></td>
<td>2015 11.6</td>
<td>62.2</td>
</tr>
<tr>
<td>South and South-West Asia</td>
<td>1990 3.6</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>2000 4.8</td>
<td>31.9</td>
</tr>
<tr>
<td></td>
<td>2015 9.7</td>
<td>44.3</td>
</tr>
<tr>
<td>South East Asia</td>
<td>1990 28.7</td>
<td>60.8</td>
</tr>
<tr>
<td></td>
<td>2000 37.1</td>
<td>61.7</td>
</tr>
<tr>
<td></td>
<td>2015 34.6</td>
<td>72.6</td>
</tr>
</tbody>
</table>

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

Note: Intraregional is defined as imports or exports flows from or to the Asia-Pacific region.
royalties and license 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 major contributors to services trade, the share of South and South-West Asia is growing fast. At a country level, China, Japan, India and Singapore account for more than half of the region’s services trade.

Regulatory obstacles are particularly important for services trade, which play a key role in facilitating industrial and agricultural trade, as well as 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 (NTMs) are now believed to pose a greater impediment to trade as well as the cause of higher trade costs than tariffs – the traditional barriers to trade – in many sectors. Most notably affected are the agricultural and food sectors. This is particularly disadvantageous to developing countries, which typically have comparative advantages in those sectors. Even small additional costs arising from barriers to import, such as NTMs, can harm the competitiveness of countries and their ability to participate in GVCs. However, measuring the exact magnitude of the impact of NTMs on trade is highly complex, as NTMs are heterogeneous and often appear as a package of measures rather than a single measure, making cost comparison tricky. While it is vital to address the issue of NTM-based protectionism, more efforts still need to be invested to improve data availability on the impact and prevalence of NTMs.

Nevertheless, 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 shows, 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 due to geographical constraints. Likewise, 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 to reduce trade costs since 1996.

A number of steps and policies have been promoted to reduce trade costs, with the Asian and Pacific economies increasingly utilizing bilateral and plurilateral preferential trade agreements (PTAs) in the last two decades. Illustrating this, as of 2016 the Asian and Pacific economies were involved in 169, or 63 per cent, of the total of 267 PTAs in force globally at that time.

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

<table>
<thead>
<tr>
<th>Region</th>
<th>ASEAN-4</th>
<th>East Asia-3</th>
<th>NCA</th>
<th>Pacific Islands</th>
<th>SAARC-4</th>
<th>AUS_NZL</th>
<th>EU-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASAEN-4</td>
<td>76</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Asia-3</td>
<td>75</td>
<td>51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCA</td>
<td>351</td>
<td>177</td>
<td>121</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific Islands</td>
<td>175</td>
<td>174</td>
<td>368</td>
<td>133</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAARC-4</td>
<td>128</td>
<td>125</td>
<td>282</td>
<td>317</td>
<td>114</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUS_NZL</td>
<td>101</td>
<td>89</td>
<td>338</td>
<td>73</td>
<td>142</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>EU-3</td>
<td>108</td>
<td>85</td>
<td>152</td>
<td>211</td>
<td>114</td>
<td>109</td>
<td>43</td>
</tr>
<tr>
<td>USA</td>
<td>85</td>
<td>63</td>
<td>180</td>
<td>163</td>
<td>109</td>
<td>100</td>
<td>67</td>
</tr>
</tbody>
</table>


Note: ASEAN-4 = Indonesia, Malaysia, the Philippines and Thailand; AUS-NZL = 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).
Overreliance on PTAs has led to a multiplicity of overlapping PTAs, often referred to as “Asia’s Noodle Bowl” (figure 3.1). While each individual agreement on its own may be reducing tariffs aiming to improve market access for partners involved, the large number of overlapping and multiple agreements associated with different trade rules may end up increasing transaction costs for business, especially for Small and Medium Enterprises (SMEs). Hence, a consolidation of PTAs 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 looking towards trade facilitation and paperless trade to complement and strengthen access to markets opened through PTA-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. Likewise, the full implementation of the WTO Trade Facilitation Agreement (TFA), 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 both TFA and electronic trade document exchange mechanisms has only been made in East and North-East Asia and South East Asia, while all other subregions are considerably lagging behind.

Recognizing this, ESCAP supported the development of the Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific to provide the region with a new tool and “digital” complement for better implementation of the WTO TFA. Open for signature since October 2016, the Framework Agreement will also support the development of cross-border e-commerce as well as build upon existing international standards and bilateral and subregional initiatives.

At the same time that the region has witnessed a

---

**FIGURE 3.1: Asia’s noodle bowl**

Source: ESCAP (2016c).

Note: The United States of America withdrew from the TPP in January 2017
proliferation of PTAs, countries in the region have also been involved in negotiating economic or comprehensive partnership agreements, such as the Trans Pacific Partnership (TPP) and the Regional Comprehensive Economic Partnership (RCEP) which include commitments to liberalize investment, competition policy, and/or government procurement. These types of mega-regional agreements offer great potential to harmonize trade rules among large groups of countries and consolidate multiple overlapping rules of origin under different trade agreements. They also expose complexities of plurilateralism which do not necessarily provide the best avenue to meet development aspirations which small developing economies would like to pursue through trade.

In summary, trade of goods, and to certain degree of commercial services, has been a great contributor to growth in the Asia-Pacific region, e.g. through access to GVCs, which has greatly supported intraregional trade. The risk is, however, that the proliferation of trade agreements with complex trade rules might not be enabling trade, especially in investment flows as the next section discusses. 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 (e.g. paperless) and streamlining the noodle bowl.

**Foreign direct investment and regional investment regimes**

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

Two patterns can be identified with regards to the composition of FDI in recent years. First, the region has seen a significant increase in greenfield FDI inflows to high value added industries in the manufacturing and service sectors over the last decade. These include alternative/renewable energy, communications, business services, healthcare and biotechnology, although the size of these FDI inflow is still small. These industries also received much more stable greenfield FDI inflows when compared with top industries such as coal/oil/natural gas, real estate, metals, financial services.

Second, South-South FDI flows have considerably grown in recent years, and they have tended to be directed towards the immediate...
Illustrating the prominence South-South FDI has gained within the region’s economies, the share of intraregional 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, 12 per cent of intraregional greenfield FDI investments for 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 others, these challenges include multiple and overlapping international investment agreements (IIAs), poor business environments, as well as barriers to trade.

The lack of a global governance mechanism, such as a coherent multilateral investment framework, has resulted investment promotion and protection occurring primarily through IIAs, either in the form of bilateral or subregional investment treaties or as investment chapters in bilateral or regional trade agreements. As in trade, a proliferation in IIAs in recent years has resulted in these agreements overlapping and duplicating themselves in a number of areas. Thus, there is a 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 (ACIA). However, even under ACIA individual ASEAN members continue to maintain national investment laws and bilateral investment treaties, both with each other and with external partners. Consequently, by adding to existing treaty layers, ACIA could lead to an even more complex network of international obligations, prone to overlap and inconsistency.

Attempts to establish common investment regimes in other subregions, such as South Asia through SAARC and Central Asia through the Eurasian Economic Union, 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 backtracking or delaying much needed economic reforms.

The lack of an effective investment and business climate in many economies of the region has also hindered intraregional FDI. 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 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 an ineffective law enforcement. This explains the need

FIGURE 3.3: FDI inflows and outflows to the Asia-Pacific region, 1990-2015

Source: ESCAP calculation based on UNCTAD (2016).
for many investor home countries to seek IIAs with host
countries that emphasize investor protection. Recently,
however, calls have grown for more balanced IIAs that
also recognize host country development needs and
the right of governments to regulate for development
purposes.\textsuperscript{10}

Finally, FDI is linked to the establishment and
development of global and regional value chains which
have been to market integration in the region, particularly
in East Asia and South-East Asia.\textsuperscript{11} Thus, obstacles
to effective cross-border trade, including the lack of
effective trade facilitation, are also obstacles to FDI.

\section*{Cross-border mobility of labour}

Labour market integration remains much lower than
levels 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, around 59.3
million were found in countries of the Asia-Pacific region
(25.6 per cent). This represents a notable increase of 7
million (11.8 per cent) compared to 1990 (figure 3.5).

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

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 or catalyse
investment in SMES. Asia and the Pacific hosts some
of the most important remittance corridors in the
world, including those from Russia to Central Asian
countries, from Australia and New Zealand to their
Pacific neighbours, and from Thailand to South-
East Asian countries. Similarly, several economies
of the region such as Bangladesh, India, Pakistan
and Philippines, receive large remittances through
migration of their labour, mostly low-skilled
workers, to Middle-East countries such as Saudi
Arabia and the United Arab Emirates.

International migration has the potential to yield
a net benefit to migrants and their families, and
to countries of origin and destination countries. However, harness these benefits require concerted
efforts and cooperation initiatives among and
between countries in the Asia-Pacific region to
address 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 countries’ national security and cultural identity. For these reasons, countries are hesitant to sign international conventions on the protection of migrant workers, and are cautious 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 in 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 longstanding labour migration flows between the countries involved. Likewise, the ASEAN Economic Community has liberalised mobility of selected classes of skilled workers through mutual recognition of degrees in specific professions. Most migrants have low skills, however, so only a small share of ASEAN migration has been affected. 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 due to legal restrictions to migration, the likely outcome is irregular migration. Irregular migration can arise without illegal border-crossing, though. Migrants may be in 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.\textsuperscript{13}

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 regards to remuneration and labour standards.

When countries understand and allow labour migration as a national policy, migrant workers can be fairly treated and contribute to host country development processes, for instance by spurring technology transfer and innovation. To enable such positive spillover effects, inclusive regulatory frameworks should be in place. For example, in the Republic of Korea, the Employment Permit System (EPS) ensures that migrant workers are covered under Korean Labor Law, including working hours and minimum wage. Migrant workers recruited under the EPS 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 these systems – particularly with regards to acquired rights such as pensions – on their return to countries of origin requires technical cooperation and agreement on such issues between member States who may have very different systems.

Finally, public perceptions of migrants, especially low-skilled migrants, are often negative. This is typically driven, inter alia, by press coverage that tends to highlight issues of illegality, both with regards to migrants’ status and to illegal acts carried out by migrants, as well as by debates which 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 curtailing Protectionism.** Much better measurement of level and assessment of 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 the tariff equivalents of these NTMs to range between 50 and 350 per cent across region’s economies. To effectively deal with these market access obstacles, 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, harmonisation of standards etc. in selected sectors (for example, agriculture and processed food, green goods, textiles, certain sectors in services like education, health etc.), 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.

**Consolidation of Trade Agreements.** Contrary to their intention to improve market access, multiple preferential trade agreements and complexities arising from the compliance with Rules of Origin they impose for utilizing 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 adoption of a simpler but more development friendly framework of Rules of Origin which could be exemplified by the reenergized and expanded Asia-Pacific Trade Agreement.

**Promoting Trade Facilitation and Paperless Trade.** ESCAP has long been actively involved in the simplification of trade procedures. Most recently, following four years of consultations and negotiations, ESCAP member States adopted a 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 upon a growing number of bilateral and subregional initiatives in this area. It is 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 a potential of cutting intraregional trade costs and reaping the benefits associated with cross-border paperless trade, estimated at up to $257 billion in increased exports opportunities.

The next step would be to better utilize existing regional platforms (Committee on Trade and Investment of ESCAP is one of several) to develop cooperative solutions for trade and investment promotion and enhance stakeholder capacities and expertise. These regional platforms should be also better utilized in building the capacity of developing countries in the region to forge alliances and voice their joint actions in defence of multilateral options when these are clearly favouring their development prospects. 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 of seeking cooperative solutions. This would not only promote regional integration but will serve to enhance compliance with SDG 17 – the means of implementation of Agenda 2030 which calls for providing technical assistance and review and monitoring, including data collection and analysis.

Supporting countries’ efforts to develop regional investment regimes which would better balance investor rights with host country development needs. This will enable countries to not only attract more FDI of higher quality that contributes to sustainable development but also to achieve better market integration that, in turn, would attract FDI as open markets and borders are clearly an important determinant of FDI. This would set off 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 IIAs that mirror the noodle bowl of PTAs.

Promoting processes of labour market integration, aiming to enhance coverage across skill levels sectors. It is also important to aim at guaranteeing equal pay and working conditions between migrant and domestic workers, and ensuring their access to social protection measures when it is available. To support such processes, it is important to improve transparency towards possible alignment of 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

1 ESCAP (2015b).
2 ESCAP (2016g).
3 UNCTAD (2015).
4 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.
5 OECD (2014b).
6 Hoekman and Saggi (1999).
8 ‘Aftercare’ refers to government support to, for example, retain investment and ensure it has a local economic impact. See United Nations (2007).
9 There are numerous studies on the obstacles to FDI. One relevant example is Drabek and Payne (2002).
10 ESCAP (2009).
12 The Treaty was signed on 29 May 2014 by the leaders of Belarus, Kazakhstan and the Russian Federation, which came into force on 1 January 2015.
13 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 to enhance trade and people to people contacts; as well as to enable 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 impacts overall economic development through three different channels. First, investments in infrastructure increase aggregate demand. Large infrastructure investment packages have thus been 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 would be unable to spur growth.

Connectivity thus 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 so 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 flows 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 provides for energy trade across the region to meet the goal of sustainable energy for all in an affordable and environmentally sustainable manner. It should be noticed, though, that while regional infrastructure is built upon national infrastructure connectivity, it would not necessarily lead to growth and development when large areas or social groups within an economy have no access to connectivity.

Connectivity also plays a central role for the achievement of the Sustainable Development Goals, both directly and indirectly, but requires careful guidance to ensure that the potential negative impacts are minimised. For instance, investment in energy connectivity contributes directly to SDG 7, which calls for improved access to energy services and a move to cleaner sources of energy to meet the region’s growing energy demand. Transport and ICT also contribute directly to SDG 9 on building resilient infrastructure. Transport enables the implementation of nearly all the SDGs through connectivity-access impacts. In addition, there are a number of SDG targets directly linked to transport, including SDG 3 on health, SDG 7 on energy, SDG 8 on decent work and economic growth, SDG 9 on resilient infrastructure, SDG 11 on sustainable cities, SDG 12 on sustainable consumption and production and SDG 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 for the attainment of most of the SDGs.

This chapter reviews national connectivity in terms of availability and quality and examines challenges that policy makers and private sectors face in providing regional infrastructure. The chapter also extracts lessons for a regional strategy for seamless connectivity encompassing transport and logistics, energy, and information and communication technology.
The importance of enhancing connectivity in the Asia-Pacific region

The impressive record of economic growth and poverty reduction in many economies of the region is underpinned largely by getting goods to markets through infrastructure connectivity between countries in the region and the rest of the world. A large number of countries have invested heavily in infrastructure connectivity. For example, the 1994 World Development Report concluded that infrastructure investment was an important reason for East Asia’s superior growth performance over sub-Saharan Africa. Calderon and Serven (2004) estimated that infrastructure accounts for around one third of the differences in output per worker between Latin America and East Asia. Infrastructure 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 plays a major role in 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 found that there are significant associations between rural transport access and other important factors such as maternal mortality.

Overall levels of infrastructure provision vary a great deal 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 seen impressive success in building and maintaining high-quality infrastructure, with Hong Kong and Singapore at the top of the global infrastructure rankings. Even emerging economies such as Malaysia, China and Thailand rank in the top half, above a 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 provides information on key infrastructure connectivity indicators for the region. There are large variations across five subregions. Within every subregion and even within individual countries, there are large

### Table 4.1: Selected connectivity indicators of Asia and the Pacific

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

Source: ESCAP (2016f).
differences in infrastructure connectivity between urban and rural areas or in coastal versus inland areas. There are parts within a subregion where infrastructure access rates resemble sub-Saharan countries. Districts with very low access to infrastructure, for example, can be found in relatively prosperous Indian states and vice versa. Similarly, high access rates for one type of infrastructure services co-exist with low or non-existent services for other types of infrastructure. Connectivity and access also differ depending on the income levels since there are locational differences in quality and availability of infrastructure.

The main challenge to connect populations nationally is not only that of investment, but there are also problems of 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 over 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

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

Source: ESCAP (2016f).

### 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 integrate, economic and social disparities can increase between regions and within a country that are well-integrated and those that are not. In that regard, regional transport and logistics infrastructure can enable lagging regions to develop by providing them with trade and service related opportunities, particularly to those regions that are located closer to the core areas of a neighbouring country than its own domestic core. Thus transport and logistics connectivity can play an important role in development not only at the national 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 today 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 during 1990-2012, with the largest increase being in the East and Northeast 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 in the last two decades, as has the share of paved roads.

Notwithstanding these 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 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 is not
collected regularly. For instance, the World Bank which has last updated its Rural Access Index in 2010, found that notwithstanding significant progress, about 600 million rural people in the world still do not have access to all weather roads, with South and Southwest Asia accounting for three-quarters of the region’s access deficit. The WEF found that while India’s road and rail network are amongst the largest in the world, it ranks 61st in terms of road quality and 29th in terms of the quality of its rail network (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 of the region. While in the USA, logistics costs account for 8.3 per cent of GDP, they account for 18 per cent of GDP in China and Thailand, 19 per cent of GDP in Viet Nam, and 24 per cent in Indonesia. Because transport cost is a substantial part of these high logistics costs, greater efforts to improve the quality of existing infrastructure can have an important payoff.4

Just as connectivity has increased within countries in the Asia-Pacific region, it has also improved within its subregions. For instance, in the North and Central Asian subregion (NCA), 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 CAREC programme of the 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 China’s expansion of exports to the world market and its effects on the structure and dynamics of intra-regional commodities and capital flows. As a result, maritime transport has grown very fast in this subregion, which is now home to four of the world top five container ports. Maritime transport also remains fundamental

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


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.
for the Pacific islands, facilitating over 90 per cent of the subregion’s trade, as well as the delivery of crucial services – such as healthcare, employment, and education – to outer island dwellers. In order to improve air transport connectivity, the Pacific island countries have adopted the Pacific Islands Air Services Agreement (PIASA) in 1998, which provides a multilateral basis for liberalising their air services.

There are numerous initiatives for transport connectivity in the Asia-Pacific region (Figure 4.2). In South and South-West Asia, examples include corridors identified under the SAARC Regional Multimodal Transport Study, the Bangladesh–China–India–Myanmar Forum for Regional Cooperation (BCIM) and the International North-South Transport Corridor (INSTC) connecting 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 improving 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 building physical transport networks, including ports and waterways, as well as 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 to provide 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 intra-regional 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, notwithstanding multiple government initiatives to address the challenges of irregular and costly shipping services. These include the Central Pacific Shipping Commission by Kiribati, Nauru, Marshall Islands and Tuvalu.

At the region-wide level, ESCAP’s initiative for the Asian Highway Network (AHN) and the Trans-Asian Railway (TAR) 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 AHN, 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 TAR covers 117,500 km of railway lines and serves 28 member States, but has 10,500 km of missing links which prevent the network from functioning as a continuous system. While 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 times and transshipment higher costs.

Other regional initiatives aiming 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 signalling. Chinese investments in railway infrastructure under the Belt and Road Initiative have the potential to provide impetus to regional transport connectivity. However, the region as a whole has yet to realize its full potential, for which governments and financing institutions need to be encouraged to increase investment in the sector.

Besides physical networks, connectivity also needs soft infrastructure. In this regard, there are many overlapping arrangements within the Asia-Pacific region, including more than 400 bilateral agreements and over 30 subregional agreements on international land transport, mostly on road transport. Unfortunately, the majority of the agreements provide different legal conditions and operational regimes for inter-country 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 summarised as follows:

- Missing railway links between subregions are important 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 inter-country movements.
- Costly and time-consuming trans-loading of goods at border crossings with a lack of common legal frameworks and different technical standards (such as break of gauge, train length and axle loads, 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 region has more than 400 bilateral agreements and over 30 subregional agreements on international land transport, mostly on road transport. The majority of the agreements provide different legal conditions and operational regimes for inter-country transport. This is impeding the creation of a seamless region-wide connectivity.
- There is a lack of public-private and private-private interaction in the formulation and implementation of transport connectivity.

**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 with estimates that the region’s energy use will nearly double from 2010 to 2035. At the same time many economies are hampered by under-provision of energy, with insufficient supplies or interruptions in the power sector as common challenge for many developing countries. More than 400 million citizens, the majority of these 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.

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.

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.
Enhancing Regional Economic Cooperation and Integration in Asia and the Pacific

Network. Moreover, expanding energy connectivity in terms of power grids between ASEAN and both China and India (ASEAN+) 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.7

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.8 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

FIGURE 4.3: Asia super grid proposal
energy in Mongolia and the Russian Federation to supply electricity to the entire ENEA subregion.

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 its 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.

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.

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 Communication Technology (ICT)

Besides enabling better communications, ICT is playing an ever-more important role as an accelerator of sustainable development: it enhances economic efficiencies, expands delivery of social services, strengthens disaster risk management, and makes possible a more sustainable use of resources. 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 possible due to rapid technological progress resulting in affordable devices and services, which in most cases was accompanied by a reasonably favourable regulatory environment.

![Fixed broadband subscriptions per 100 inhabitants (average) by region, 2000-2015](image-url)

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

Source: ESCAP, based on ITU (2016b).
However, the development of the full potential of ICT in the region is still limited 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 while other countries have the lowest broadband penetration in the world.11

In terms of bandwidth availability per user, the digital divide has increased starkly between 2009 and 2013 (figure 4.5), with advanced economies experiencing sharp increases in bandwidth availability and much more limited growth in poorer economies. ESCAP’s analysis reveals that in 2015, 75% of the fixed broadband subscriptions are registered in East and North-East Asia alone, even though the subregion accounts for only 36 per cent of the total population of the ESCAP region.12,13 Of even more concern is that 20 countries in the region have less than 2 per cent fixed broadband penetration rates, while leading economies, such as the Republic of Korea, Japan and Hong Kong, China scored over 30% 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 digital divide originate from lack of investment in resilient ICT infrastructure; availability of international bandwidth; effective Internet traffic and network management; conducive and enabling regulations for investment; and lack of capacity and awareness among policy makers and regulators.14 Subsequently, investment in a resilient infrastructure as well as an 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 assist in bridging the divide.15,16

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, in the Asia-Pacific region, 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.17 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 further 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.

FIGURE 4.5: Perception on 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).
Another element which affects the broadband expansion is the quality of regulation. It is important that governments establish stable, supportive and predictable regulatory policies that encourage private sector investments in bankable ICT infrastructure projects. Quality regulation and fixed broadband growth has been found to be correlated in an ESCAP study, and so is the e-commerce 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, an UNCTAD study 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 even higher than those of advanced economies of the region. ESCAP landlocked developing countries tend to be among the worst affected by high international transit prices. High prices for wholesale capacity are also due to suboptimal regulatory frameworks that result in the control of key transmission facilities by incumbent operators, the lack of appropriate Internet Exchange Points (IXPs), and the lack of alternative transit routes to enhance competition at the regional level and improve network efficiency.18

The Asia-Pacific region is the most disaster-affected region in the world. Over the period 2005-2014 the Asia-Pacific region had 1,625 reported disaster events; with approximately 500,000 deaths, around 1.4 billion people affected, and US$523 billion worth of economic damage.19 Thus 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. As 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 socio-economic benefits, including through enabling entrepreneurship, innovation and economic growth, as well as facilitating the provision of services in an efficient and effective manner. Indeed, ICT is a “meta-infrastructure” due to its wide-ranging applications in education, finance, commerce, governance and welfare, among other sectors, and its potential to act 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 (AP-IS) 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 digital society and economy as well as 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 financing mechanisms are major hindrances in expanding national and regional connectivity addressing the broadband divide and expanding opportunities for inclusive and sustainable development. Building e-resilience is a development imperative in a region that bears a disproportionate share of economic damage and losses due to disasters. As disasters roll back development gains, any repeated reconstruction of ICT infrastructure adds significant financial strain especially on LDCs, LLDCs and SIDS. Enhancing disaster preparedness and resilience in ICT networks and applications will not only protect ICT assets but also ensure uninterrupted ICT services for disaster response and recovery.

- Taking advantage of the interlinkages, interdependencies and synergies across all kinds of infrastructure that the digital revolution is creating, cross-sectoral infrastructure synergies still remain untapped. Furthermore, around 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, pipelines, can significantly reduce cumulative costs while revenues are augmented and diversified from the resulting digital traffic.

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 so far have been negotiated bilaterally between parties. Although such projects are effective to meet bilateral objectives, their fragmented nature is not conducive to achieving the seamless connectivity that the region needs to meet 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 terms of 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 a 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. In order to expand the existing physical networks of transport, energy and ICT, and ensure seamless connectivity considering them as a system can result in significant cost and time savings. For instance, the costs for deploying 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, the building of connectivity networks requires careful planning and coordination, which are often absent due to lack of
resources and appropriate institutional mechanisms. The challenges of 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 complete and well maintained. They are thus domestically-driven, with cost-benefit analysis typically assessed from a domestic return-on-investment perspective, only, with the regional public good value heavily discounted or left out. For example, in ICT until the Asia-Pacific Information Superhighway was initiated very recently, there was no regional cooperation framework for seamless ICT connectivity. Therefore, along with careful planning and coordination, a strong political will at the regional level, and shared vision of national 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 driven 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 utilized to enhance the delivery capability of our infrastructure networks and services. This calls for integrated planning, development and operation of transport and logistics networks that are than well-connected within national boundaries, and simultaneously linked across borders; as well as steps to improve productivity and efficiency of transport systems, in terms of cost, convenience, load factor and transit time demand. There is a need to implement existing common regional strategies and frameworks, as well as action-oriented and priority-based intergovernmental development programmes. Proposed amendments to the Asian Highway and Trans-Asian Railway Network agreements that encourage co-deployment of fibre optic cables with transport infrastructure will increase enhance cost effectiveness of infrastructure projects.

Harmonization of technical standards and operational rules is needed. As with corridors, connectivity will benefit from harmonization of technical standards and operational rules. As a first step it will be necessary to develop systems and common technical standards to facilitate inter-operability. In the absence of international standards, regional harmonization will be needed to set up regional standards and operational rules.

Application of modern technology is essential to leverage the advantages of regional connectivity. This will, however, require thinking through an enabling cooperative framework, in particular in the field of intelligent transport systems (ITS) that can substantially improve quality and ease of delivery of services, clearances at border crossings, usage-based maintenance of assets, traffic monitoring, and public safety – to name but a few.

Reinforcing cooperation by focusing on solution-oriented policies and actions are critical. Support will be required to create a broad partnership platform on seamless and sustainable transport connectivity among the public and private sectors. This will 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**

Deal with barriers to energy trade through removal of legal, regulatory and technical hurdles and seek upfront political authorization. Despite many benefits of energy resource sharing, a number of countries have explicit and implicit restrictions on exports and imports of energy goods and services whose removal is critical upfront.

Promote sufficient levels of technical and regulatory standardization to facilitate deepening interconnectivity and the eventual development of an integrated power grid.

Promote competitive energy market structures through rationalization of the state’s role along with measures to improve investment climates to attract new investments, improve efficiency, and adopt new technologies.
Develop a regional mechanism to facilitate transboundary power trade through the streamlining of contracts, increasing the availability of financing, reducing risk, and accelerating project development through the building of mutual trust among parties and norm-setting. A broad regional agreement and strong institutional arrangements is critical to monitoring and ensuring the achievement of benefits, in addition to the creation of neutral institutions to regulate project implementation and benefits.

Build on the existing political support to promote regional energy connectivity. There is a need to formalize and consolidate declarations and intentions from the subregional level in the shape of an Asia-Pacific Energy Charter. This will help to nurture long-term commitment of member governments and provide increased comfort and confidence to the private sector and institutional investors.

**Information and Communication Technology**

Recognizing the above mentioned connectivity deficits, ESCAP member countries initiated the Asia-Pacific Information Superhighway initiative (AP-IS) in 2015. The AP-IS initiative 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: (1) physical infrastructure development; (2) Internet traffic and network management; (3) promoting e-resilience and (4) broadband for all.

The AP-IS initiative recognizes that investment in ICT infrastructure is critical to improving ICT connectivity and lessening the digital divide. Towards this end, the Committee on ICTSTI at its First Session endorsed the implementation of the Master Plan and Regional Cooperation Framework Document of the AP-IS, including the financing mechanisms, as a regional platform for narrowing the digital divide, achieving SDGs and promoting integrated infrastructure development in other sectors, such as trade, transport and energy, and recommended expanded support for the initiative.

Furthermore, at the policy level there is a need to ensure that national, sub-regional and regional policies and regulations on ICT are aligned with the goals of the 2030 Agenda for Sustainable Development and, implemented in order for ICT to contribute meaningfully and to its full potential in the achievement of the SDGs. Within this policy framework, given the disaster-prone nature of the region, there is also a 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 acquisition of rights of way as well as other administrative work. While a similar national project, whether it be it 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 impact all other countries. Co-deployment of infrastructure can reduce the bottlenecks and accelerate the pace of planning and deployment, particularly in LDCs. Leveraging existing regional connectivity agreements in which cross-border connectivity has already been agreed to, such as the Asian Highway and the Trans-Asian Railway and Dry Ports agreements, could be an efficient way to deploy cables and networks faster 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 which 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, sub-regional and bilateral connectivity initiative. It would also help harmonize policies and regulations where necessary. For example, the Asia-Pacific Information Superhighway Master Plan and Regional Cooperation Framework Document, endorsed by the ESCAP Committee on Information and Communications Technology, Science, Technology and Innovation in October 2016, promote open access and competition 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, there certain actions and measures could increase the likelihood of securing investment and financing as well as successful implementation. Asia and the Pacific is a disaster-prone region and economic losses and damages have been disproportionately high, affecting the poor and vulnerable groups of people most. 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 SDGs, Sendai Framework and other internationally agreed development frameworks.
1 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.

2 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).

3 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.

4 See Xianghui (2016) for a recent study on logistics cost in Thailand.

5 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.

6 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.

7 Yanfei and Chang (2014).

8 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.

9 SPREP (2011).

10 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.


12 ESCAP (2016e).

13 Population of East and North-East Asia is 1,618,778, while the population of the ESCAP region is 4,454,265 according to ESCAP (2016a).

14 ESCAP (2016e).

15 ESCAP and NIA (2015).

16 For further information on the missing links between ESCAP countries on terrestrial and Submarine fibre optic cables, please see ESCAP (2017a) for interactive transmission maps.

17 OECD (2014a).

18 See for example, Asia Pacific Carriers’ Coalition (2012).

19 ESCAP (2015c).

20 Network diversity allows the options for alternative mediums of communication traffic through meshed architecture i.e. 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.

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 to support sustainable development in Asia and the Pacific. The Bangkok Declaration emphasizes the need for regional cooperation in areas such as (i) equipping countries with tools to cope with financial volatility and ensure financial stability through, among others, cooperative arrangements for the provision of liquidity support; (ii) strengthening national financial markets and establishing linkages among them; and (iii) effectively mobilizing resources – across and within countries.

Since the Asian financial crisis of 1997-98, the Asia-Pacific region has steadily improved its financial policies and its regulatory and institutional architecture through financial cooperation. For instance, regional arrangements such as the ASEAN+3 liquidity facility, the Chiang Mai Initiative Multilateralisation (CMIM), and the Asian Bond Market Initiative (ABMI), 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 grown in the Asia-Pacific region, although at a slower pace than in other markets such as North America or Western Europe. The region’s continued development of financial markets has led to increases in cross-border flows and transactions, leading in turn to a higher degree of convergence in interest rates and equity markets relative to other regions such as Latin America. South-East Asia is the most advanced subregion, as ASEAN Finance Ministers and Central Bankers agreed on an action plan for financial market integration as part of ASEAN’s Economic Community initiative.

Regional financial development calls for continued attention to the diversification of financial markets, sources and financing options, and effective management of liability risk. In addition, financial intermediation has to become more inclusive, and needs to be able to finance the large and growing requirements for the development of sustainable infrastructure.

The region, with its high foreign exchange reserves (60 per cent of the global reserves) and almost half of the global savings, has a strong financial and investor base with the potential to leverage private capital. This will require both deepening capital markets and the institutional investors’ segment, and an enabling policy environment.

Weaknesses in adequately tapping the opportunities of high global and regional liquidity have been accompanied by constraints in public resource mobilization and management. Despite the 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 for those with ability to pay are rarely utilized, which makes sustainable consumption and production more difficult. Therefore, there is phenomenal scope for mobilizing and spending public resources more effectively. Regional cooperation can be very fruitful for sharing the best tax management policies and practices on domestic resource mobilization.

The financial landscape of Asia and the Pacific

Financial sectors in Asia and the Pacific are relatively large, with deposits accounting 67.7 of GDP in 2014, although not close to the 82 per cent of the USA. Variability is great, though; 28 out of 37 countries with available data report financial system deposits below the 67.7 per cent of GDP benchmark (see Annex I). Hence the diversity in financial landscape is significant. On one end of the spectrum, there are large, diversified, thriving and well-regulated Asian financial hubs that are globally integrated. The rest ranges from a number of middle-sized national financial markets to a larger number of smaller, weaker and isolated financial markets. Despite significant recent progress in countries that are developing their shadow banking sector, financial intermediation is mostly bank-based and most capital markets are shallow and lack liquidity. Financial innovation, including venture capital, plays only a limited role in corporate financing.
Although some economies have privately-held banking systems, there are still large markets where over 60 per cent of banking assets are state-owned (China, India, Malaysia, and Indonesia); or where banks have been designated for financing economic and trade development, as well as state-invested projects (Thailand, the Philippines, or Republic of Korea). Direct government ownership and explicit and implicit guarantees have allowed space for promoting underserved segments, but a lack of credit culture has prevented these banks from harnessing the full potential of their lending, even though the non-availability of long-term finance is a concern across the board.

To some extent, the historical bank dominance in the region was associated with underdeveloped capital markets. Despite this, capital markets have raised Asia’s market capitalization to $23 trillion in 2015 – over one third of global market capitalisation. Equity issuance markets for major economies, estimated at $198 billion, are higher than Europe, Middle East, and Africa combined. Although Asia’s stock markets are an important source of funding for the region overall, their full potential remains to be harnessed – especially in developing countries. Bond issuance remained somewhat subdued at $1.2 trillion, well below the pre-crisis level ($1.9 trillion). Experiences from some countries that have made great progress show that a sequential approach may be useful to boost the development of bond markets (Annex II).

Regarding the supply side of capital markets, it is estimated that around 24 per cent of the world’s total assets under management are from Asia and the Pacific. They have the following distribution: insurance (54 per cent), pensions (25 per cent), sovereign wealth funds and other fund (21 per cent). The size of institutional investors differs widely across countries. Hong Kong, China and Singapore have the largest asset size – 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).

As a whole, the Asia-Pacific region has been relatively successful developing its financial markets. In East and North-East Asia (ENEA) the value of the IMF index of financial markets depth, which captures the importance of stock and bond markets as a share of the GDP, trebled from 0.22 in 1995 to 0.70 in 2014 (Figure 5.2). For South East Asia (SEA), the growth in financial markets depth was even higher – although starting from a lower base: from 0.05 in 1995 to 0.25 in 2014. The North and Central Asia (NCA) subregion also experienced progress, although from an even lower starting point: from 0.02 in 1995 to 0.09 in 2014.

In contrast, progress in increasing the depth of financial institutions has been more subdued. The financial institutions index, which captures the

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

![Graph showing institutional investors structure as percentage of GDP, 2014](source: World Bank (2016), BIS (2016), IMF (2016) and Security Industry and Financial Markets Association (2016).)
importance of bank credit, pension fund assets, mutual fund assets and insurance premiums, increased only from 0.52 in 1995 to 0.60 in 2014 in ENEA, while it decreased from 0.20 to 0.13 during the same period in SEA. The latter decrease is explained by a marked disintermediation process due to the Asian financial crisis. Similar to the financial markets depth index, NCA experienced strong growth starting from a low base (from 0.03 in 1995 to 0.13 in 2014).

Lack of depth and breadth in developing countries’ financial markets is accompanied by lack of financial market diversification (a source of stability), hindering the potential to serve economy-wide investment requirements. Despite the advancement in macroprudential regulatory frameworks, tendencies to manage businesses through high sector exposures and overleveraging remains an issue. Among others, financial regulators need to emphasize sustainable financing which demands a shift in intermediation process to deepen financial inclusion, channel credit to underserved sectors and regions, and promote green financing. The three areas are developed next.

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 SEA having the lowest level of inclusion (i.e. highest exclusion) and East and North Asia the highest (figure 5.3). Three countries in the region (China, India, and Indonesia) account for 38 per cent of the world’s unbanked. In 2014, account ownership shows a wide variation in financial penetration, ranging from 1.8 per cent (Turkmenistan) to 99.5 per cent (New Zealand). This also entails barriers to small and medium enterprises (SMEs). Compared to their peers in other regions, the most recent data shows that 27 per cent of firms in South Asia, and 27.9 per cent in South East Asia have access to credit lines in Asia-Pacific, compared to 44.6 per cent in Latin America.6

An aspect that can contribute to financial exclusion is out-of-control urbanization. The unprecedented speed and dominance of megacities of Asia-Pacific’s urbanization have 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 crisis, further exhausted the credit potential of many subnational governments and led to swift

---

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

Source: Author’s calculations based on data from Svirydzenka (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.
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 public-private partnerships (PPPs) arrangements for large projects in energy and transport. The private sector has considerably invested in telecommunications – following the industry’s gradual liberalization. Private investments have 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, via concessional loans and grants, has also supported developing countries in addressing their infrastructure financing challenges. Such assistance will 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 due to differences in the investor base and assets’ risk profile.

Accumulation of local government debt 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, for instance, is often able to shoulder the bulk of the financing burdens of municipal governments in developed countries, but on average only achieves a fraction of the revenue potential in developing countries due to capacity and institutional constraints, weak tax culture and the lack of mature property registration and market in the first place. Instead, Asia-Pacific cities would need to explore a diversified mix of revenue mobilization vehicles, including property taxes, local business or income taxes, 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.

**Infrastructure Finance:** The need for infrastructure investment is exceptionally high in Asia (see Table 5.1) due to growing infrastructure deficits that are exacerbated by demographic and urbanization pressures, vast requirements of emerging mega-plans for regional connectivity and the Agenda 2030 which places increased emphasis on sound social and ecological investments. This adds up to past neglected maintenance of national infrastructure systems.
For capital markets to play a greater role in infrastructure financing, deepening of domestic markets is required. Similarly, promoting capital market integration is needed to further mobilize foreign capital for infrastructure. However, capital market integration requires additional work to harmonize (or at least establish mutual recognition of legal and regulatory frameworks), and standardize administrative procedures through an easier inter-operability of trading and settlement platforms.

Financing the decarbonisation agenda will require a large scaling-up of finance from the current levels. 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. This is compounded by poorly developed financial and insurance markets and regulatory restrictions on long-term bank lending, which reduce the pool of low-cost capital available for infrastructure investment – especially in countries with special needs.

Arrangements to ensure financial stability

The main pillars to ensure financial stability are (i) economic surveillance and monitoring and (ii) 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 (i):

- The ASEAN Surveillance Process (ASP) was the first formal institutional mechanism introduced in 1998, and provides peer review of economic surveillance and monitoring in the annual ASEAN Surveillance Report (ASR). This serves as the main input for annual policy discussions of ASEAN Finance Ministers.

- The Economic Review and Policy Dialogue (ERPD), 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 works on strengthening banking and financial system conditions and provides an Asian voice in the reform of the international financial system. In April 2011, the ASEAN+3 authorities established the ASEAN+3 Macroeconomic Research Office (AMRO), a unit in charge of regional economic surveillance.

- In the Pacific, the Association of Financial Supervisors of Pacific Countries (AFSPC), established in 2002, meets regularly to discuss supervisory and surveillance-related developments.

- In North and Central Asia, the Eurasian Economic Community (EurAsEC) launched the Anti-Crisis Fund (ACF) in 2009, as a regional financial arrangement to help member countries address the global financial crisis. In 2015, the ACF was transformed into the Eurasian...

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

<table>
<thead>
<tr>
<th>Various estimates</th>
<th>Time horizon</th>
<th>Area of focus</th>
<th>Annual investments ($ billion)</th>
<th>Total investments ($ trillion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD (2006)</td>
<td>2010-2030</td>
<td>Global estimates</td>
<td>2,650</td>
<td>71</td>
</tr>
<tr>
<td>Global Commission on Economy and Climate (2012)</td>
<td>2015-2030</td>
<td>Global estimates</td>
<td>5,800-7,100</td>
<td>89-93</td>
</tr>
<tr>
<td>ADBI (2010)</td>
<td>2010-2020</td>
<td>Developing Asia Pacific</td>
<td>850</td>
<td>8.5</td>
</tr>
<tr>
<td>G-20 MDB Task Force (2011)</td>
<td></td>
<td>Developing countries</td>
<td>1,000-1,500</td>
<td>..</td>
</tr>
<tr>
<td>McKinsey (2014)</td>
<td>2014-2030</td>
<td>ASEAN-5</td>
<td>..</td>
<td>3.4</td>
</tr>
<tr>
<td>World Economic Forum (2013)</td>
<td>2010-2030</td>
<td>Developing countries</td>
<td>1,250-1,500</td>
<td>..</td>
</tr>
<tr>
<td>Amar Bhattacharya &amp; Romani (2013)</td>
<td></td>
<td>Developing countries</td>
<td>1,800-2,300</td>
<td>..</td>
</tr>
<tr>
<td>Ruiz-Nunez and Wei (2015)</td>
<td>2014-2020</td>
<td>Developing Countries</td>
<td>836</td>
<td>..</td>
</tr>
<tr>
<td>A. Bhattachrya &amp; Holt (forthcoming)</td>
<td></td>
<td>Developing Countries</td>
<td>3,000</td>
<td>..</td>
</tr>
</tbody>
</table>


Note: a) Sustainable infrastructure and includes low carbon choices. b) Includes greening of infrastructure.
Fund for Stabilization and Development (EFSDI), which supports members’ adjustment programmes while overseeing surveillance mechanisms.

With regard to short-term liquidity support, ASEAN established the ASEAN Swap Arrangement (ASA) in 1997 to deal with balance-of-payment difficulties, whose size has been raised from $100 million to $2 billion. Subsequently, the Chiang Mai Initiative started as a network of bilateral swap agreements (BSA), combining the ASA with a number of BSAs between different ASEAN+3. In 2010, the Chiang Mai Initiative Multilateralization (CMIM) pooled this network of BSAs into a single reserve pooling arrangement of $240 billion. Crisis-affected members are eligible for short-term liquidity support from the CMIM 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. The lack of capacity to formulate and enforce effective adjustment programs during crises is the reason for requiring that access to CMIM is linked to an IMF arrangement.

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; China’s led $230 billion BSA for over thirty countries since 2009; or the Eurasian Economic Community (EEC) led EFCDs, of about $8.5 billion which offers financial credits and investment loans.

Cooperation on capital market development

To evolve capital market cooperation, a number of initiatives have been undertaken. Most notable is the Asian Bond Fund (ABF), introduced in June 2003 by EMEAP, and the Asian Bond Markets Initiative (ABMI) launched by ASEAN+3 in August 2013. Asian Bond Fund I called for purchases by central banks of sovereign and quasi-sovereign US dollar-denominated $1 billion bonds issued by 8 of the 11 EMEAP emerging members using their foreign exchange reserves. To facilitate investments by public and private sector entities, ABF II involved purchases for $2 billion in local currency-denominated sovereign and quasi-sovereign bonds and the listing of local currency exchange-traded bond funds (ETF) in Hong Kong, Malaysia, Singapore and other stock markets.

The ABMI is aimed at creating robust primary and secondary markets through bond market infrastructure development and improved market access to a diverse issuer and investor base. ABMI has facilitated issuance of $72.6 billion in local currency bonds (79.3 per cent government bonds, vs 20.7 corporate bonds). The main issuing countries were China, Japan, Republic of Korea and Malaysia. 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 ABMI New Road Map, which has further promoted the issuance of LCY bonds, facilitated the demand of LCY bonds, and improved the infrastructure and regulatory frameworks.

ASEAN+3 is now working on integrating markets through the ASEAN+3 Bond Market Forum (ABMF), which seek to harmonize and standardize market practices, regulations, and clearing and settlement procedures of cross-border bond transactions. As part of its ASEAN Economic Community project, ASEAN Capital Market Forum (ACMF), composed of capital market regulators, has focused on the harmonization of rules and regulations and fostering integration of the region’s capital markets under the AEC Blueprint 2015 through ASEAN capital market disclosure standards for cross-border offerings of securities among others. Given the different size and pace of capital market reforms, few ASEAN countries such as Malaysia, Singapore and Thailand have thus far moved to adopt the cross-listing of stocks through the ASEAN Trading Link.

Besides ASEAN Exchanges, the South Asian Federation of Exchanges (SAFE), established in 2000, aims to work towards common standards of listing, trading, clearing, settlement and investors’ protection, and to encourage cross-border listings and securities trading. In North and Central Asia, Eurasian Economic Community, with support of Kazakhstan and the Russian Federation (more developed capital markets in the sub-region), is promoting further capital market integration. In the Pacific Islands, capital market development is very limited. In 2000, the Suva Stock Exchange was renamed as the South Pacific Stock Exchange (SPSE), with a view to becoming a regional exchange which launched an electronic trading platform.

Capital controls and lack of foreign exchange hedging instruments is another area that requires further work to develop financial markets in the region. Progressive capital account liberalization has eased market access to foreign investors although there are still limits on non-residents holding and trading domestic securities in several countries. For example, India has restrictions on foreign investment in rupee denominated bonds.
In the same vein, Thailand only grants approval to foreign entities to issue baht 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. However, derivatives markets are relatively underdeveloped in Asia compared to other regions. While the derivative market value represents 15 per cent of the underlying market in Asia, it accounts for 35 per cent in the United States of America and 50 per cent in Europe (as of 2012).

Some initiatives have been launched to overcome this issue at the national level. For example, the Reserve Bank of India (RBI) has been working with the Securities and Exchange Board of India (SEBI) to allow non-resident institutional investors to hedge currency risk with exchange-traded currency futures. At the international level, the Currency Exchange Fund (TCX) was created to provide hedging against currency and interest rate mismatches in frontier and less liquid emerging markets. Its services cover around 70 currencies including 17 in Asia. However, the price of these hedging instruments might be prohibitive especially for illiquid and underdeveloped markets. Given the importance of hedging instruments, efforts are needed to develop regional derivative markets, especially covering 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 (SDG) having a direct infrastructure link. In Asia and the Pacific, some countries have had an impressive performance in building and maintaining world-class infrastructure, scoring relatively well in for logistics performance. Countries in the region that have built and maintained high-quality infrastructure include Hong Kong, China; Singapore; Malaysia; China; and Thailand. China and Japan have spent much more than the global average, with their infrastructure stock estimated at 76 percent and 179 percent of GDP, respectively compared to 64 percent in the USA and 58 percent in Canada. In contrast, India, Indonesia, the Philippines and other countries, mostly in the Pacific, have invested in infrastructure less than what is necessary to support their competitiveness and quality of life, which has affected, especially, people in cities and in remote rural areas.

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

- Infrastructure deficits, both for new investments and upgrading existing stock, are large. Yearly infrastructure needs in Asia could be anywhere around $1.6 trillion, on average, for the period 2016-2030, or 60 per cent higher than yearly historical spending during the previous 15 years. At the current pace, infrastructure gaps vis-à-vis the required...
cumulative investments by 2030 will be astronomical. For instance, at country level infrastructure gap is estimated to be in the range of $1.3 trillion for Indonesia and $500 billion for India.15

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 complex, but critical element of 2030 Agenda. SDG 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 SDG 6 which 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.16,17 An unbalanced development of ICT infrastructure in the region have also created a digital divide, with millions of people excluded from opportunities related to modern technologies.

Climate friendly infrastructure development and dealing with congestion and air pollution calls for 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 emission.18,19

Given that Asia and the Pacific is the most disaster-prone region in the world, infrastructure development ought to be more resilient.20 Resilient infrastructure can reduce the impact of such events, 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 few countries, most face enormous financing bottlenecks to raise market resources for infrastructure development. Related constraints include shallow financial markets, uncertain macroeconomic policy and regulatory environments, and a lack of viable project pipelines. At the same time, demand for new investment in infrastructure and maintenance of the existing stock continues to soar. In this vein, it remains a challenge to improve the process of project selection so that funding is prioritized.

To tackle these infrastructure challenges, government will have to address both funding and financing issues. Funding and financing are sometimes used interchangeably, but the distinction is important. Funding basically means who is paying for the infrastructure services while financing involves the repayment of the capital or money invested, often with interest. It is important that policymakers focus both on enhancing funding for infrastructure and improving efficiency in financing infrastructure. Most sustainable source of financing is public finance that needs to leverage private capital to ensure that debt sustainability is manageable.

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; (d) through commercial revenues generated from the public asset (for example real estate development). For instance, policymakers could significantly increase 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 done by enhancing project selection, ensuring adequate maintenance, reforming state-owned enterprises and optimizing the use of infrastructure assets. These improvements should ease the funding of infrastructure development.

Barring some economies of the region, large proportion of infrastructure is financed by public sector with only 20 per cent financed by private sector and remaining by official development agencies.21 Bulk of the financing burden falls on federal governments whose fiscal constraints and debt position may already be unsustainable. State and local budgets often operate on weak financial resource base and turn to national budgets for financing or recourse to guarantees. Infrastructure financing requires longer tenor both of foreign currency and local currency and as such development of bond and equity markets is
crucial. Loans from the commercial banks, multilateral development banks and other financial institutions such as the development finance institutions still dominate project finance in Asia. Credit, country and project exposure limits often pose problems in large project financing for any of these single entities. Hence infrastructure transactions require recourse to private capital which in turn is contingent on official credit enhancements and guarantees for political and economic risks and co-financing. More recently, the regional development bank like AIIB has emerged as an alternate window for co-financing.

Governments should further involve the private sector, notably through PPPs, in order to circumvent limited public budgets and borrowing capacity. Over the last 15 years, private companies invested around $650 billion in Asian developing countries, 54 per cent in energy, 33 per cent in transport, 10 per cent in information and communication technology, and 3 per cent in 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 since the private sector requires returns commensurate to the risk taken. Thus the project delivered as a PPP needs 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, where 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 roughly 50 per cent of investments in power generation assets in South-East Asia over the period 2000-2013.22 Likewise, in transport, the private sector contribution reached an impressive 34 per cent of total investment in roads and highways in India in the 11th Plan (2007-2012).23 In addition, PPPs are not only about financing. Other benefits that make PPPs an attractive option including efficiency gains, risk transfers and life-cycle cost optimization.

**FIGURE 5.5: Importance of PPPs 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. An effective pursuit of the entire Agenda would be much more daunting for the Asia-Pacific developing countries. The United Nations Sustainable Development Network estimates that a total 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, would have to 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 17.8 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. This level only surpasses Middle East and North Africa, where non-tax resource revenues 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 sub-region 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 Asia-Pacific 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 OECD countries. Such difference is not surprising because indirect taxes, like VAT or excise taxes, typically pose smaller tax administration challenges for developing countries compared to direct taxes, but 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 with gradual deepening of regional economic integration and globalization. The misuse of tax treaties and tax heavens as well as the trade-based tax evasion and fraud are becoming significant drains on public revenues for developed and developing countries alike. OECD estimates that the global revenue losses from such activities are between US$100 billion and US$240 billion annually.

**FIGURE 5.6: Tax composition and revenues in selected Asia Pacific countries, percentage of GDP**

![Graph showing tax composition and revenues in selected Asia Pacific countries](image)

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

Data shows that tax incentives are generally more prevalent in the Asia-Pacific region compared to other regions. James (2013) reported that all (100 per cent) of the 7 surveyed South Asian countries provided tax holidays or exemptions, and 92 per cent of the 12 surveyed East Asia and Pacific countries also provided such incentives (figure 5.6). This is much higher compared to around 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 ranks 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 the region as countries expand tax incentives as well as cut rates in an attempt to attract foreign investment. Keen and Simone (2004) noted that unlike other regions, corporate tax reform in Asia and the Pacific has been both rate-reducing and base-reducing. A study by Chen et. al. (2012) 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. A recent KPMG study has warned that the paucity of coordination and harmonization on tax matters in the ASEAN region, especially in light of the ASEAN Economic Community, could result in continued tax competition that will have adverse effects on tax bases in the region.

For all these challenges originating from the internationalization of taxation, effective regional and global tax cooperation and joint actions by all stakeholders would be 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.

Against this background, tax cooperation at both global and regional levels has been gaining momentum. At the global level, the Addis Ababa Action Agenda (AAAA) adopted at the 3rd International Conference on Financing for Development in July 2015 committed to scaling 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 AAAA also emphasized the importance, in fostering cooperation in tax matters, of taking into account the different policy priorities and capacity constraints of developing countries.

At the regional level, Latin America, Africa and the 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 (ATAF), the Inter-American Center of Tax Administrations (CIAT), and the Intra-European Organization of Tax Administrations (IOTA). These organizations not only provide a central platform for regional tax cooperation but also play a significantly role in supporting these regions’ engagements in international tax cooperation and reforms through coordinated regional positions and inputs and targeted implementation support that takes into account local contexts.

### TABLE 5.2: Types of tax incentives and their prevalence

<table>
<thead>
<tr>
<th>Region</th>
<th>No of countries surveyed</th>
<th>Tax holiday/exemption</th>
<th>Reduced tax rate</th>
<th>Investment allowance/tax credit</th>
<th>R&amp;D tax incentives</th>
<th>Super deductions</th>
<th>Free Zones/SEZ/EPZ/Free Port</th>
<th>Discretionary process</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia and Pacific</td>
<td>12</td>
<td>92%</td>
<td>75%</td>
<td>67%</td>
<td>83%</td>
<td>33%</td>
<td>92%</td>
<td>83%</td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td>16</td>
<td>88%</td>
<td>38%</td>
<td>25%</td>
<td>31%</td>
<td>0%</td>
<td>100%</td>
<td>38%</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>25</td>
<td>88%</td>
<td>32%</td>
<td>52%</td>
<td>12%</td>
<td>4%</td>
<td>72%</td>
<td>40%</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>15</td>
<td>80%</td>
<td>40%</td>
<td>13%</td>
<td>0%</td>
<td>0%</td>
<td>80%</td>
<td>40%</td>
</tr>
<tr>
<td>OECD</td>
<td>33</td>
<td>21%</td>
<td>36%</td>
<td>64%</td>
<td>76%</td>
<td>21%</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td>South Asia</td>
<td>7</td>
<td>100%</td>
<td>43%</td>
<td>71%</td>
<td>29%</td>
<td>71%</td>
<td>71%</td>
<td>43%</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>45</td>
<td>78%</td>
<td>62%</td>
<td>78%</td>
<td>11%</td>
<td>18%</td>
<td>64%</td>
<td>82%</td>
</tr>
</tbody>
</table>

Source: Sebastian (2016).
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 successful sub-regional forums like the Study Group on Asian Tax Administration and Research (SGATAR) and the Pacific Islands Tax Administrators’ Association (PITAA) have been created, 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).

These weaknesses in inclusive and region-wide cooperation and capacity support has prevented Asia and the Pacific from proactively engaging and substantively contributing 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 members that are not part of OECD or G20, has largely remained passive in international tax norm-setting processes and negotiations with little united voice nor well-developed regional inputs.

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

<table>
<thead>
<tr>
<th>South-East Asia</th>
<th>Malaysia</th>
<th>Indonesia</th>
<th>Singapore</th>
<th>Brunei Darussalam</th>
<th>Philippines</th>
<th>Cambodia</th>
<th>Viet Nam</th>
<th>Lao People's Democratic Republic</th>
<th>Myanmar</th>
<th>Timor-Leste</th>
</tr>
</thead>
<tbody>
<tr>
<td>East and North-East Asia</td>
<td>China</td>
<td>Japan</td>
<td>Hong Kong, China</td>
<td>Mongolia</td>
<td>Australia</td>
<td>New Zealand</td>
<td>Samoa</td>
<td>Cook Islands</td>
<td>Fiji</td>
<td>Marshall Islands</td>
</tr>
<tr>
<td>The Pacific</td>
<td>India</td>
<td>Pakistan</td>
<td>Bangladesh</td>
<td>Afghanistan</td>
<td>Maldives</td>
<td>Sri Lanka</td>
<td>Turkey</td>
<td>Bhutan</td>
<td>Iran (Islamic Republic of)</td>
<td>Nepal</td>
</tr>
</tbody>
</table>

*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 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?
• CMIM is currently reliant on IMF surveillance beyond the 30 per cent quota of liquidity. The key then is how swiftly surveillance reports can be developed and, if IMF recommends its standard conditionalities, how to ensure that they are complement to IMF emergency support?
• Finally, there remains concern regarding the ability of subregional surveillance and coordination given the policy uncertainty on how to access resources which has yet to be tested in emergency situations. Thus, there is a need in the region to develop capacities to formulate and monitor policy conditionality associated with emergency lending.

Capital Market Cooperation. There is a clear need to further develop domestic financial markets and institutions in the Asia-Pacific region, as it can help channel the abundant savings available within the region that are mostly flowing to more mature economies outside the region. 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, there is a need to enhance financial market infrastructure in order to regulate the issue and trading of bonds and securities, functioning of 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 process of price discovery, which are essential to encourage 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.

Most countries in the region, except Hong Kong China, Japan, Singapore and the Republic of Korea, have foreign exchange restrictions, which does not bode well for regional financial cooperation efforts. While such restrictions help mitigate vulnerabilities stemming from capital outflows, they also entail costs such as low level of investments by nonresident institutional investors and cross border transactions, adversely affecting capital market development in these countries. Thus, countries in the region should consider gradually accelerating capital account liberalization efforts while balancing the negative and positive effects of capital control policies on financial stability and cross border transactions.

Financing Infrastructure Development. Given the scale of infrastructure investment requirements, financing sources, in addition to public sector, will have 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, development of domestic financial markets and institutions, and linking them through cooperation, is also needed to facilitate financing of high-priority, bankable infrastructure projects, with an appropriate mix of debt and equity.

Countries should also tap new emerging financing sources. For instance, the Asian Infrastructure Investment Bank (AIIB), which started its operations in 2016, significantly increase the infrastructure financing available to developing Asian economies. Likewise the New Development Bank (NDB) 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 Asia-Pacific Project Preparation Facility (AP3F) of the Asian Development Bank.

There is a need to improve the process of infrastructure project selection so that funding is prioritized for projects that contribute most effectively to (i) - seamless connectivity in the region; and (ii) - the implementation of the 2030 Agenda by ensuring that infrastructure development is inclusive, climate-friendly and resilient. For this purpose, both a regional viewpoint and a multi-sectoral focus are necessary. A regional viewpoint will consider each project in the context of the development needs of the region as a whole. Such approach will prioritize projects that build ‘missing links’, for instance, in regional railway networks to enhance the functionality and usefulness of such networks. A multi-sectoral approach will carefully weigh the economic, social and environmental gains and losses of each project in order to select those that bring most benefits to the three dimensions of sustainable development.

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

Cross-border projects often receive lower priority compared to 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 contribute to raise their priority level while serving as coordination platform among the involved countries. These mechanisms could take different forms such as 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 will need to create an enabling environment characterized, among other things, by a clear policy orientation, including priorities and expected time lines 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 affordable to the public purse over the entire period and do not threaten fiscal stability in the long run.

PPP projects are complex and may require skills not available internally. Therefore, to make the most of the PPP mechanism, regional cooperation is critical as countries have 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 will 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 network of experts.

Not only countries need to take the necessary steps that facilitate higher volumes of investments for sustainable development; they also need to enhance the quality of those investments. That can be done through two additional perspectives. Financial inclusion, given its great potential for improvement and its importance for human capabilities, is an area that needs to be nurtured. There are few lessons learnt from experiences in the region, such as that in India.
Second, Providing greater policy space for municipal governments in local fiscal governance, while enhancing their accountability, is a desirable direction moving forward. Asia-Pacific cities need to explore a diversified mix of revenue mobilization vehicles, including property taxes, local business or income taxes, service charges, as well as more innovative solutions such as land value capture and transport/fuel taxes.

To scale up financing, 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 securitisation; and targeting support to the most vulnerable countries. Multilateral development banks are uniquely positioned to mobilise additional low-carbon and adaptation finance, drawing on their ability to leverage money from the global capital markets, as well as through blending and co-financing activities. MDBs 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 low tax-to-GDP ratios in Asia and the Pacific. However, raising tax-to-GDP ratios is a complex task. It has to 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 has to be achieved through appropriately sequenced and paced reforms to rationalize tax structures, enhance tax administration capacities and improve legislation and transparency.

To facilitate achievement of these objectives, the Asia-Pacific region needs to develop a regional approach and vision on public finance strategies and policies. This will require rethinking and recalibration of existing policies and practices in the context of sustainable development principles and Asia-Pacific’s unique challenges and priorities such as fast 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 will also support national efforts to enhance public revenues and to implement suitable tax and spending policies for sustainable development.

For this purpose, an inclusive and region-wide platform, such as that provided by ESCAP, can be considered. Examples of areas where 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.
1 Financial system deposits as share of GDP (per cent), simple average. World Bank (2016a).


3 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.

4 See World Economic Forum (2014a).

5 The figures are normalized so that a value of 1 represents the value of the index for the United States in a given year. Moreover, it is worth highlighting that IMF’s financial market development index covers both government and local corporate bond market (LCBM) development. This can portray a somewhat distorted view because, for example, while the size of corporate bond market in Japan is only 15.8 percent to GDP, the size of government bond market is 203.95 percent. Thus, for government bond market development Japan has a developed bond market but for the LCBM, the same is not the case.

6 See World Bank (2017e) Years differ by country.

7 See Kidney, Guiliani and Sonerub (2017).

8 At the time ASEAN was composed of Indonesia, Malaysia, Philippines, Singapore and Thailand, the association’s funding members.

9 The members of EMEAP are the central banks of 9 East Asian economies (China; Hong Kong, China; Indonesia; Japan; Republic of Korea; Malaysia, Philippines; Singapore and Thailand) plus Australia and New Zealand.

10 See Kidney, Guiliani and Sonerub (2017).

11 See ADB (2016).


13 According to the Logistics Performance Index (World Bank, 2016), the world’s average score in 2014 was 2.89. Singapore was the first country ranked from Asia-Pacific (5th in the world rank) with a score of 4, while the last one was Afghanistan (scoring 2.07). East Asia and the Pacific had a score of 2.91.


15 Ibid.

16 IEA (2016).

17 ESCAP (2015d).


19 See ESCAP (2015d).

20 ESCAP (2015b).

21 Inderst (2016).

22 See Annex of IEA (2014) for historical investment data and World Bank (2016c) for private investments.

23 PwC (2011).

24 Three years average between 2012 and 2014, or the latest three years, where data is available.

25 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.

26 OECD (2016).

27 Sebastian (2013).

28 Keen and Simone (2004).

29 Cheng, Huang and Regis (2012).

30 KPMG (2014).

31 For an earlier study on ASEAN tax competition see Chia and Whalley (1995).

32 Chang (2016).
CHAPTER 6
SHARED VULNERABILITIES

Despite the diversity of Asia-Pacific countries in terms of population, socio-economic development, and geography, many countries share vulnerabilities and risks. These include transboundary natural disasters, scarcity of natural resources, food security and climate change, among others. Shared vulnerabilities and risks to socio-economic development and environmental sustainability have been heightened with the increased interdependencies between 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.

The 2030 Agenda has placed addressing risks and vulnerability as the core element of sustainable development. Disaster risk reduction is a crosscutting issue and is interlinked with several of the SDGs. Disaster risk reduction is directly relevant for achieving the specific target of ending poverty in all its forms everywhere (Goal 1), 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 to promote sustainable and resilient agriculture. Goal 13 on climate mitigation and adaptation addresses 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 which cross many national borders, ocean basins which experience frequent cyclones, and many river basins with flood potential. The region is one of the most disaster-prone in the world, with 500,000 people losing their lives and around 1.4 billion people being affected by 1,625 reported disaster events over the last 10 years. During that period, economic damage caused by disasters amounted to $523 billion, or 45 per cent of the global total, eight of the ten largest disasters in terms of fatalities and four of the ten largest in terms of overall economic damages, occurred in the region. The economic losses are higher if lost income, increased cost of production, and other financial losses of businesses and households as a result of damages to assets and economic activity are taken into account (Figure 6.1).

FIGURE 6.1: Rising economic damages, 1970-2013

![Figure 6.1: Rising economic damages, 1970-2013](chart)

In particular, disaster risks are growing in urban areas. Cities, especially 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 from rapid growth in the urban population, but also because of other contributing factors such as the gradual erosion of ecological buffers. Since cities are the centers 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-Pacific, the region is also affected by multiple smaller-scale but recurring events, also known as extensive risks [high-frequency, low-severity losses]. Illustrating this, 85 per cent of disasters since 1970 have been minor but recurrent, cumulatively affected 2.24 billion people and caused over $400 billion of damage through triggering an ongoing erosion of development assets, such as local infrastructure, dwellings, schools, health facilities, and roads.

Since extensive disaster risks are frequently associated with the ecological vulnerability of affected areas, more attention should be given to 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 factors such 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, and therefore represent a particular challenge to the achievement of the SDGs, especially in areas and regions with widespread poverty and high social inequality.

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 below, 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 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 7 per cent loss in the tourism sector.

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

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. For less diversified economies, a recent study highlights that national incomes decline, relative to their pre-disaster trend, detrimental impacts persist and national incomes do not recover even two decades later.\textsuperscript{5} The largest event in the sample saw a reduction in long-term GDP of almost 30 per cent, compared to a ‘no disaster’ counterfactual. In the Pacific small island developing States, after major cyclones, it was found that 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 hydro-meteorological origin that are linked with river and ocean basins, climate, weather, and agro-ecosystems. For instance, in addition to numerous seasonal small-scale floods that impact the region every year, major floods have impacted 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 various regions of Pakistan, Kazakhstan and Tajikistan. Several of these 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 (Figure 6.3). Flooding in the Mekong river basin can affect downstream riparian countries – Cambodia, Lao People’s Democratic Republic, Thailand and Viet Nam. With around 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 agro-ecological zones across national boundaries. Four-fifths of the economic impacts of drought are shouldered by agriculture, thus prolonged droughts slow down income growth in agriculture and in related agro-processing activities, with knock-on effects for 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 as well as urban areas. In extreme cases, drought leads to desertification, affecting around 1,400 million hectares of land across the region, more than in any other region in the world. This has serious implications for future agricultural production, particularly for activities that require large volumes of water.

\textbf{FIGURE 6.3: Regional flood risks from international river basins}

\textbf{Source:} ESCAP based on ESCAP (2016b).
Storms also impact 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 strong participation by the region in these 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.\(^6\) Three months after the disaster, due to shortages in components, automobile production dropped by 20 per cent in Thailand and by 24 per cent in the Philippines, and in Indonesia by 6 per cent.\(^7\)

These shared vulnerabilities and risks have imposed a significant burden on sustainable development of the region. Driven by climate variability and change, there are significant changes in the intensity, frequency, and geographical location of the hazards as well as 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 multi-sectoral impacts, the response to climate change has a strong inter-linkage with RECI. However, most of the region’s infrastructure is not built to take account of the risks of disasters and climate change.

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 Goal 13 of the SDGs 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 mid-century. As the region accounts for over 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 single most critical collective threat to the survival of small island developing States. With the ocean comprising over 99 per cent of their sovereign territory, and the majority of populations concentrated in coastal or low lying areas, Pacific countries are among the most exposed and vulnerable in the world. 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.\(^8\) For atoll states like Tuvalu, the Marshall Islands and Kiribati, which are less than one meter above sea level in most places, the threat is existential.\(^9\)

With the acceleration of climate change consequences and concomitant increase in the disaster risks, Pacific Island countries face development challenges that are large and difficult to tackle alone. 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 due to a range of factors, including heavy consumption of fossil fuels, insufficiency of abatement technology application and lack of effective policy enforcement. In particular, the combination of meteorological and geographical factors, i.e. 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 pollution. The long-range movement of dust and sandstorms (DSS) has also contributed to severe environmental impacts ranging from 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, possibly even influencing 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 FAO’s Global Land Degradation Information System, 32 of 34 Asia-Pacific countries, ecosystems are experiencing ‘medium’ to ‘strong’ degradation that can exacerbate the impact of natural hazards – affecting their magnitude, frequency, and timing.

**Food security and shared vulnerabilities**

Over the past half-century, 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 1990–92 to 552 million in 2011–13 and the proportion of undernourished people declined from 24.1 per cent in 1990–92 to 13.5 per cent in 2011–13. This is an impressive achievement given that the population during the same period grew by 988 million people, from 3,127 to 4,115 million people.

Despite this progress, the region still faces persistent poverty and hunger, and is still home to about 65 per cent of people suffering from hunger globally. The main obstacle 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 poverty, natural disasters, conflict and war, poor access to resources, lack of employment opportunities, lack of education and underinvestment in agriculture as well as 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 supply-side constraints, inadequate demand due to poor income and inability to physically access food due to remoteness. Analyses on the Average Dietary Energy Supply Adequacy ratio also reveal that factors causing food insecurity across countries and regions vary significantly. They range from rigid food trading regimes, inadequate domestic production, extremely high food waste throughout value chains and seemingly high food stockpiling, which reduce food available for human consumption.

Inter-seasonal and annual food production variability continues to be a major factor that affects localised 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 weather 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.

This rapidly rising use of natural resources, 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 will mean addressing this nexus of converging threats.

This interconnected and complex scenario is forcing governments across the region to accept that it is no longer adequate 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.

There are a series of policy options available for regional organizations to support national food security. ASEAN has a long history of working towards greater regional cooperation in the area of food security. One of the pioneering efforts was the ASEAN Plan of Action on Rural Development and Poverty Eradication and the ASEAN Action Plan on Social Safety Nets, which aimed at ensuring 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 on Food Security in the ASEAN Region (SPA-FS) have provided an overarching framework for the region to comprehensively address food security by defining goals, objectives, guiding principles and the key components.

The Colombo Statement on Food Security, issued during the 15th SAARC summit in Colombo in 2008, recognized the importance of food security and the need to develop ‘people-centered’ 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 for human resource development and capacity building in identified areas, namely integrated pest management, pest-risk analysis, integrated nutrient management, post-harvest technologies, bio-technology and bio-resource management.

Strengthening regional food stocks has received heightened focus in the recent past. The ASEAN Food Security Reserve initially established with a rice reserve of 50,000 metric tons of 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: (i) receive rice on commercial contracts to meet supply-demand deficits; (ii) obtain food stocks as a loan in an emergency; (iii) receive food stock free in severe cases. All three tiers have been used in the recent past, indicating its success. Similarly, the SAARC also replaced its food security reserve by a SAARC Food Bank (SFB) at the 14th SAARC Summit in 2007 and introduced new guidelines on withdrawals and negotiations, and definitions on food shortages and quality standards of grains have been established. Operationalization of the SFB has been under discussion over recent years.

The Pacific Island Leaders Forum in 2008 agreed that food security requires a coordinated multispectral approach and engagement of governments, national and regional organisations, international and multilateral organisations, private sector, food industry, farmers and fishermen, consumers and the civil society.11 The summit endorsed the Framework for Action on Food Security in the Pacific with its focus on 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 mobilising partners; food security information system; and enabling mechanisms such as land, transport, energy, ICT, and education.

Regional organisations have developed innovative mechanisms for coordinating efforts to combat transboundary animal and plant diseases and sharing agricultural knowledge and research findings. The ASEAN Integrated Food Security Framework, the SAARC Global Framework for Containment of the Priority Transboundary Animal Diseases, exchange of scientific information on agricultural production and consumption through the Asia-Pacific Association of Agricultural Research Institutions are a few examples for such innovative mechanisms.

Shared vulnerabilities: main challenges

Improving the collective management of shared vulnerabilities and risks is a major challenge that needs to be addressed 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 the 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 – is needed for the estimation of regional disaster risks and transboundary hazards, as well as for strengthening early-warning systems.

Considering the huge contingent liabilities represented by 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 towards 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 a number that are most vulnerable to disasters, another important challenge is identifying ways to manage
risks and to create opportunities to share or transfer disaster contingencies. The challenge of building 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 challenges 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 already exist but are at various stages of development. In most cases, these need to address more comprehensively shared vulnerabilities and risks, as well as resilience building. Regional cooperation efforts to address shared vulnerabilities and risks are not yet sufficiently evolved to optimise regional solutions which are greater than the sum of individual country responses.

**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 and also the establishment of new areas for regional cooperation in 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. Addressing complications created by natural disasters, lack of natural resources, food security and climate change lend themselves to regional cooperation as well as regional solutions. In view of this, the intergovernmental platform of ESCAP has deliberated on the need for facilitating strategic partnerships, promoting the pooling of resources as well as sharing of 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 in strengthening early warning for tsunami and tropical cyclones, significant gaps still exist for other cross-border hazards despite the scientific advances and their availability, especially in terms of space technology applications. Regional cooperation, supported by ESCAP, can assist countries in the region by extending basin floods, glacial lake outburst floods, flash floods, landslides, sand and dust storms.

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

In order to address the disaster risk reduction and resilience related goals in the 2030 Agenda for Sustainable Development, the international network for multi-hazard early warning system (IN-MHEWS), led by the UN in partnership with the World Bank and related development partners, is being established. ESCAP is to lead the regional component of IN-MHEWS through a regional action plan. The ESCAP regional action plan envisages (i) strengthening the existing ESCAP/WMO Typhoon Committee, WMO/ESCAP Panel on Tropical Cyclones and extending the ESCAP and WMO partnership to the Pacific through the Tropical Cyclone Committee; (ii) deepening the partnership between ESCAP and UNESCO-IOC for effective end-to-end tsunami early warning systems in the Indian and Pacific Ocean basins; (iii) 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 (GLOFs), flash floods and landslides; and (iv) partnering with UNEP, WMO and UNCCD for enhancing regional cooperation mechanisms for combatting sand and dust storms. While addressing the unmet needs of more effective multi-hazard regional early warning, the action plan intends to facilitate 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. Regional cooperation becomes an attractive strategy, as not only do countries transfer their risk by pooling it across countries, they use this pool to purchase re-insurance at a much lower premium than what would have been the case had each country approached the market individually. Like other 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: (i) building integrated regional food markets to insure against localised food production shortfalls that a nation alone may not be able to withstand; (ii) coordinating policies and sharing information for sustainable food production; (iii) managing trans-boundary resources better thus minimising potential impacts arising from climatic changes; and (iv) pooling food security risks through innovative mechanisms.

Increased confidence in regional food markets can minimise run-on-the-mill price hikes that are often a result of panic buying due to shortfalls in local food production. Trade restrictions imposed on food trade during the 2007/08 food crisis is often used by countries to argue for food self-sufficiency often at the expense of potential efficiency gains from alternative use of precision land and other resources.

Confidence also needs to be built on the quality and safety of food by harmonising sanitary and phyto-sanitary 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 much better 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 nations on the regional food markets. Sharing knowledge on trans-boundary plant and animal diseases has become an essential component of agricultural policy because of greater possibilities for their spread in the current global production and consumption systems.
CHAPTER 7
THE WAY FORWARD FOR RECI IN ASIA AND THE PACIFIC

The analysis in this 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 summarised 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 of streamlining and potentially harmonizing them.

Efforts to move towards the consolidation of 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 adopted by ESCAP member States in 2016.

Existing bilateral and multilateral international investment agreements (IIAs) 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 to improving transparency and clarity in international investment rules, which will help boost regional integration.

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

Seamless connectivity of transport, energy and ICT

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 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 works. 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.

Harmonisation of technical standards and operational rules is needed to support cross-border connectivity efforts. Regionally accepted, transparent and fair rules and regulations will be the first step towards facilitating cross-border inter-operability. Regional cooperation in this respect could internalize and monetize asymmetric costs and ensure a 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 of national 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 realisation of benefits from these investments.

Finally, there is a need to ensure that national, sub-regional 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 recommended in the Report are to: (i) strengthen and broaden current regional frameworks for macroeconomic and financial surveillance and ensure availability of emergency lending; (ii) develop financial markets, and (iii) enhance the availability of financing for infrastructure projects, including through public-private partnerships, 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.

A 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 will require development of a supportive financial market infrastructure, including effective regulation of the issuing and trading of bonds and securities and moving towards the harmonization of 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 will be 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 regards to the financing of infrastructure projects, it is important to seek ways to leverage lending from multilateral development banks, including 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 further develop the effective use of PPPs through improvements in the business environment, including 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 will entail stronger national efforts to enhance public revenues and implement suitable tax and spending policies that support sustainable development – including at the municipal level. To achieve this, countries will require appropriately-sequenced and paced reforms to rationalize tax structures, enhance tax administration capacity, and improve legislation and transparency, which will also contribute to curbing tax avoidance and evasion.

**Shared vulnerabilities and risks**

Enhanced regional cooperation, especially related to emerging areas of transboundary hazards, and implementing strategies to mitigate and prevent risks would both enable the region to better respond to shared vulnerabilities and safeguard people and economic activity from transboundary disasters and risks. Addressing challenges created by natural disasters, lack of financial resources, food security and climate change lend themselves to regional cooperation as well as regional solutions. Regional cooperation is also critical in strengthening early warning systems for basin floods, glacial lake outburst floods, flash floods, landslides, sand and dust storms.

Evidence-based policy making will help address sectoral impacts of slow onset disasters such as droughts and El Nino 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 building integrated regional food markets to insure against localised food production.
shortfalls that a nation alone may not be able to withstand; (ii) coordinating policies and sharing information for sustainable food production; (iii) managing trans-boundary resources better thus minimising potential impacts arising from climatic changes; and (iv) 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 realised 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 areas such as trade preferences, investment protection, transport norms and trade facilitation. These "noodle bowls" create inefficiencies and transaction costs. In order to facilitate trade and investment throughout the region, such noodle bowls should be simplified.

Second, new regional integration initiatives, including China's Belt and Road Initiative and the Republic of Korea's 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 a simplification of regulations, including those pertaining to trade and investment. Furthermore, a significant boost in infrastructure investment will require the mobilization of additional financial resources, and that such investment needs to be undertaken in a way that contributes to reduce vulnerabilities emanating from transboundary environmental and disaster risks. In 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, and such opportunities can directly and indirectly contribute to achieving the SDGs. On the other hand, SDGs have a vital role to play in guiding the implementation of RECI, for instance by ensuring that infrastructure projects have favourable social and environmental, as well as economic, impacts. Other ways in which SDGs can contribute to the 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 the RECI with SDGs will also enable the region to cultivate solutions for shared regional challenges, such as rapid urbanization, climate change, energy security and rising inequalities.

To allow the region to capitalise on these opportunities, ESCAP can play an overarching role through leveraging its inclusive intergovernmental platform, its normative work and its multi-sectoral 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 organisations including ASEAN, SAARC, PIF and ECO and is providing technical cooperation on 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 organisations and other relevant institutions working on RECI on its platform. For this purpose, it can draw on its longstanding 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, develop cross-sectoral synergies. It can also facilitate connecting RECI to global initiatives and frameworks for action on sustainable development, financing for development and climate change.

To support member States in moving towards a more integrated Asia-Pacific, ESCAP could continue the process of incorporating and formalising RECI into its own work program and into the work of its intergovernmental committees. There are a number of options which can be considered. These include instituting a cross-sectoral task force on seamless connectivity that works under the Energy, ICT and Transport Committees; and a recurring segment on RECI during the Commission session to engage member States and subregional organisations in a dialogue on how to prioritise and progress on key RECI initiatives.

As the Asia-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 will require learning from existing models of subregional cooperation, enhanced regional cooperation and agreements, as well as continuous efforts to build trust through mutual understanding and sharing of benefits.
ANNEX I
OVERARCHING RECI INITIATIVES IN ASIA AND THE PACIFIC

SAARC1

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 located in Kathmandu, Nepal. The SAARC charter laid out objectives and principles, as well as institutional and financial arrangements. The overall progress in integrating the subregion has been quite slow: intraregional trade in South Asia is the lowest in the region; 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.

SAARC adopted a program 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 (SAFTA) was established under SAARC, with the vision of implementing a borderless economic zone between 2006 and 2016. At the 16th SAARC Summit in Bhutan in 2010, SAARC adopted the SAARC Agreement on Trade in Services (SATIS) 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 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 PIF was expanded over time and now includes 16 members, 3 associate members and a number of observers including multilateral institutions, UN agencies and a number of island countries. The Secretariat is located in Suva, Fiji. Its main work focuses on policy advice programs on economic governance. PIF covers issues of trade and investment, money and finance, regional public goods and security. The Pacific region has been reasonably successful in articulating its regional concerns and voice, such as the issue of climate change and its implications for the Pacific Island countries.

The annual PIF meetings are chaired by the Head of Government of the host country who remains as PIF Chair until the next meeting. Since 1989, the PIF also has held Post Forum Dialogues with key Dialogue Partners at the Ministerial level.

There are currently 17 Dialogue Partners: Canada, China, Cuba, European Union, France, India, Indonesia, Italy, Japan, Republic of Korea, Malaysia, Philippines, Spain, Thailand, Turkey, United Kingdom and the United States.

In 2014 the PIF adopted the Framework for Pacific Regionalism, which represents a high-level commitment to pursuing deeper regionalism. The Framework sets out the vision, values, objectives and approaches towards deeper regionalism and sets out a process for developing and prioritizing regional public policy. At the PIF’s 46th annual meeting in 2015, it was decided that the three agreements, namely, SAMOA Pathway, the 2030 Agenda for Sustainable Development, and Framework for Pacific Regionalism should be implemented in an integrated manner that promotes sustainability and enhances ownership by the Pacific nations themselves.

Eurasian Economic Union

The Treaty on the Eurasian Economic Union (EAEU) established a customs union in 2015 to comprehensively upgrade and raise the competitiveness of and cooperation among the national economies of the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic and the Russian Federation. The EAEU was set up to promote regional economic cooperation and integration through free movement of goods, services, capital and labour, and pursues coordinated, harmonized and single policy in the sectors determined by the treaty and international agreements within the union.

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

Trilateral Summit

Established in 2008, the Trilateral Summit has China, Japan and the Republic of Korea as members and its activities include high level meetings of political leaders in addition to various-level other meetings to enhance mutual political trust, increase trade and investment and widen social and cultural exchanges. A secretariat was set up in 2011, located
in Seoul, Republic of Korea, after an agreement was signed and ratified by each of the three governments. On the basis of equal participation, each government shares 1/3 of the total operational budget. Because of political considerations, there are no formal, overarching institutional arrangements. The three countries have joined other interregional arrangements such as ASEAN +3 and CAREC. There are number of areas such as marine environment, climate change and transboundary air pollution where these countries can cooperate to address challenges.

### East Asia Summit

East Asia Summit is a leaders’ forum for strategic dialogue and includes ASEAN + 3 (i.e., 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 more 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 RECI arrangements and programs

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 specialization. This 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 they adopt “bottom-up” processes. Although their collective efforts do contribute to improve cross-border connectivity or to deal with problems that are localized, a lot of resources are used, which can be a problem for countries with limited financial and human resources. For instance, various ASEAN members are part of Greater Mekong Subregion (GMS), Brunei-Indonesia-Malaysia-Philippines East ASEAN Growth Triangle (BIMP-EAGA), Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT), the Mekong River Commission, and Southeast Asian Water Utilities Network, in addition to ASEAN’s own processes dealing with the same sectors. There are also cooperation programs with other international institutions. In short, there is a “Noodle Bowl” effect for functional groups, just as is the case with subregional trade agreements, though not so pronounced. Some of the region’s major functional subgroups are describe in the following table

### BIMSTEC

The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation was set up in 1997 through a declaration and currently includes Bangladesh, Bhutan, India, Nepal, Myanmar, Thailand and Sri Lanka. Its activities include 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 BIMSTEC’s initiatives. Seven national think tanks of 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 is also negotiating a comprehensive Preferential Trade Agreement (PTA) since 2004, but the negotiations are yet to be concluded.

### ECO

The Economic Cooperation Organization was set up in 1985 with three founding members – Iran, Pakistan, and Turkey – with the purpose of promoting economic, technical and cultural cooperation among its Member States. ECO is the successor organization of the Regional Cooperation for Development (RCD), which remained in existence from 1964 to 1979. ECO was expanded to include Afghanistan, Azerbaijan, Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan in 1992. Regional programs and projects include trade and investment, infrastructure, agriculture, forestry, environment, disaster, and crime management.

### CAREC

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

### BIMP-EAGA

The BIMP-EAGA was set up in 1994 as an initiative to promote economic growth in poorer provinces and border areas of four countries – Brunei Darussalam, Indonesia, Malaysia and the Philippines. The private sector is supposed to be the main growth and development driver for the program whereas the public sector is to facilitate and support the activities. The initiative relate to promoting cooperation in infrastructure, trade and investment, tourism, and managing environmental concerns. The program operates through designated ministries in each country and there are annual senior officials and ministerial meetings.

### GMS

This is one of the oldest ADB regional cooperation programs established in 1992 to promote growth and development through connectivity and closer economic linkages. It covers five countries, namely, Cambodia, Lao PDR, Myanmar, Thailand, Viet Nam, and the two south-western Chinese provinces of Yunnan and Guangxi. The Program
## Selected overarching and functional RECI initiatives in Asia and the Pacific

<table>
<thead>
<tr>
<th>Year</th>
<th>Organization</th>
<th>No. of members</th>
<th>Type of organization</th>
<th>Secretariat</th>
<th>Highest Level</th>
<th>Delegation</th>
<th>Rules</th>
<th>Governance and decision making</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>Secretariat of the Pacific Community</td>
<td>26</td>
<td>Agreement</td>
<td>New Caledonia, Noumea</td>
<td>M</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1967</td>
<td>Association of Southeast Asian Nations</td>
<td>10</td>
<td>Charter</td>
<td>Indonesia, Jakarta</td>
<td>S,M,O</td>
<td>Weak</td>
<td>Binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1971</td>
<td>Pacific Islands Forum</td>
<td>18</td>
<td>Treaty</td>
<td>Suva, Fiji</td>
<td>S,M,O</td>
<td>Limited</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1980</td>
<td>South Pacific Tourism Organization</td>
<td>13</td>
<td>Agreement</td>
<td>Suva, Fiji</td>
<td>M</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1982</td>
<td>Pacific Regional Environment Program</td>
<td>25</td>
<td>Convention</td>
<td>Apia, Samoa</td>
<td>S,M,O</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1982</td>
<td>South Asia Cooperative Environment Program</td>
<td>8</td>
<td>Declaration</td>
<td>Colombo, Sri Lanka</td>
<td>M</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus and qualified Majority</td>
</tr>
<tr>
<td>1985</td>
<td>South Asian Association for Regional Cooperation</td>
<td>8</td>
<td>Declaration</td>
<td>Nepal, Kathmandu</td>
<td>S,M,O</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1985</td>
<td>Economic Cooperation Organization</td>
<td>10</td>
<td>Charter</td>
<td>Iran, Tehran</td>
<td>S,M,O</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1992</td>
<td>Greater Mekong Subregion Economic Cooperation Program</td>
<td>6</td>
<td>Declaration</td>
<td>Philippines, ADB Office</td>
<td>S,M,O</td>
<td>Weak</td>
<td>Non-binding</td>
<td>Consensus and qualified Majority</td>
</tr>
<tr>
<td>1993</td>
<td>Indonesia-Malaysia-Thailand Growth Triangle</td>
<td>3</td>
<td>Declaration</td>
<td>Malaysia, Putrajaya</td>
<td>P</td>
<td>Weak</td>
<td>Non-binding</td>
<td>Consensus and qualified Majority</td>
</tr>
<tr>
<td>1993</td>
<td>ASEAN Regional Forum</td>
<td>27</td>
<td></td>
<td>Indonesia, Jakarta *</td>
<td>S,M,P</td>
<td>Weak</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1994</td>
<td>Brunei-Darussalam-Indonesia-Malaysia-Philippines East ASEAN</td>
<td>4</td>
<td>Declaration</td>
<td>Malaysia, Kota Kinabalu</td>
<td>S,O</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1995</td>
<td>Greater Tumen Initiative</td>
<td>4</td>
<td>Framework</td>
<td>China, Beijing</td>
<td>M</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1995</td>
<td>Indian Ocean Rim Association Regional Cooperation</td>
<td>18</td>
<td>Charter</td>
<td>India, Delhi</td>
<td>D</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1996</td>
<td>Asia-Europe Meeting</td>
<td>46</td>
<td>Framework</td>
<td>None</td>
<td>M</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1997</td>
<td>ASEAN+3</td>
<td>13</td>
<td>Declaration</td>
<td>None</td>
<td>S</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Flexible consensus</td>
</tr>
<tr>
<td>1997</td>
<td>Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation</td>
<td>7</td>
<td>Treaty</td>
<td>Bangladesh, Dhaka</td>
<td>S,M,O</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1997</td>
<td>Central Asia Regional Economic Cooperation Program</td>
<td>10</td>
<td>Program</td>
<td>Philippines, ADB Office</td>
<td>M</td>
<td>Weak</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>1999</td>
<td>Bay of Bengal Inter-Governmental Organization</td>
<td>4</td>
<td>Agreement</td>
<td>India, Chennai</td>
<td>S,O</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>2000</td>
<td>Eurasian Economic Community</td>
<td>5</td>
<td>Treaty</td>
<td>Russia, Moscow and Kazakhstan, Almaty</td>
<td>O</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus and qualified Majority</td>
</tr>
<tr>
<td>2005</td>
<td>East Asia Summit</td>
<td>18</td>
<td>Declaration</td>
<td>None</td>
<td>S,O</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>2008</td>
<td>Trilateral Summit</td>
<td>3</td>
<td>Declaration</td>
<td>Republic of Korea</td>
<td>S</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td>13</td>
<td>Declaration</td>
<td>None</td>
<td>S,M,O</td>
<td>Minimal</td>
<td>Non-binding</td>
<td>Consensus</td>
</tr>
</tbody>
</table>

*Source: ESCAP.*
promotes three “C”s, connectivity, competitiveness and a sense of community. It has expanded to cover cross-border infrastructure projects, as well as issues such as 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.

**SACEP.** The South Asia Cooperative Environment Program was set up in 1982 and exclusively focuses on environmental issues, namely, marine environment, coastal ecosystem, and a regional oil-spill contingency plan. The SACEP includes SAARC members and the Maldives. SACEP also organizes a Coral Reef task Force and a South Asia biodiversity clearing-house mechanism.

18. **SASEC.** The South Asia Subregional Economic Cooperation program includes a subset of SAARC membership, namely, India, Bangladesh, Bhutan and Nepal. The SASEC program covers infrastructure projects, trade and investment, money and finance, as well as regional public goods. The program works through six priority area working group: transport, tourism, trade and investment, private sector cooperation, energy and power, environment, and ICT. ADB supports the projects and programs of cooperation through technical assistance and financing.

**SCO.** The Shanghai Cooperation Organization, set up in 2001 has four Central Asian countries, namely Kazakhstan, Kyrgyz Republic, Tajikistan, and Uzbekistan, in addition to China and Russian Federation. In 2016, India and Pakistan also became full members; earlier they were just observers along with Iran and Mongolia. SCO’s main focus is on 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 is promoting energy cooperation and connectivity.

**The Pacific.** There are five focused programs of regional cooperation in the Pacific covering fisheries, the Forum Fisheries Agency (FFA), Pacific Regional Environment Programme (SPREP), Pacific Islands Applied Geoscience Commission (SOPAC), Secretariat of Pacific Community (SPC) and South Pacific Tourism Organisation (SPTO). Most of these programs have differing memberships, depend heavily on donor funding and deal with regional public goods.

**ENDNOTES**

1 The coverage is not exhaustive.

2 There are still many historical grievances remaining from the colonial era as well as from the post-Second World War settlements between ENEA countries (Timmermann, 2008 and Yahuda, 2011).

3 As per ADB’s estimates, there are as many as 28 different functional groups within ADB membership.
When looking at individual countries for the last year available, 2014, it is possible to distinguish four groups of countries (figure below). The first one is the group of financially developed countries, with an average value of the indexes of financial market depth and financial institutions depth of 0.8 or more. This group includes Singapore, Australia, Republic of Korea, Malaysia and Japan. 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 indexes of between 0.3 and 0.7. It is interesting to note that all countries in this group, except New Zealand, are characterized by a significantly higher level of financial market development compared to financial institutions development.

The next group includes countries with an incipient level of financial development, with an average of the two indexes of between 0.10 and 0.30. This group includes 12 developing countries from the five ESCAP subregions. On average, the level of financial market and financial institutions depth is similar for the group, although some of its countries, such as Lao PDR or Papua New Guinea, have a significantly higher development of financial markets while others, such as Fiji and Nepal, have a significantly higher development of financial institutions.

The final group includes countries with low level of financial development, with an average of the two indexes of less than 0.10. This group includes countries such as Azerbaijan, Bangladesh, Bhutan and Pakistan, with similar levels of development of financial markets and financial institutions, and other countries, such as Vanuatu, Samoa, Maldives, or Tonga, that have only some development in their financial institutions. On average, the members of this group have a higher level of development in their financial institutions (average of 0.07) than in their financial markets (average of 0.02).

Source: ESCAP based on Svirydzenka (2016).

Note: Refer to notes of figure 5.2 for details. The countries included are 44 ESCAP member States for which data was available.
Capital markets are not developed overnight but through an incremental process as described below. Such a process has been observed in the region where countries such as Viet Nam, Indonesia and the Philippines have first established a government bond market before the corporate one. This incremental process means that each country should follow a strategy based on its current market development stage.

Typically, the money market (i.e. very short term debt securities usually issued by governments and financial institutions) precedes the 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 where 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 appropriate bond market infrastructure (with expected positive spillovers for 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.
REFERENCES


Enhancing Regional Economic Cooperation and Integration in Asia and the Pacific


[2016d]. Systematic country diagnostic for eight small Pacific Island countries: priorities for ending poverty and boosting shared prosperity. Washington D.C.


Enhancing Regional Economic Cooperation and Integration in Asia and the Pacific

This publication has been issued without formal editing.