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Review of implementation of:

Recommendations of the sixth Ministerial Conference on Environment and Development in Asia and the Pacific (2010)

Regional Implementation Plan for Sustainable Development in Asia and the Pacific, 2011-2015

Astana Green Bridge Initiative

Seoul Initiative on Green Growth

Progress in the implementation of the recommendations and endorsed initiatives of the sixth Ministerial Conference on Environment and Development in Asia and the Pacific

Note by the secretariat**

Summary

The present document contains a review of the progress made in the implementation of the recommendations of the sixth Ministerial Conference on Environment and Development in Asia and the Pacific. As the outcomes of the Ministerial Conference underscored that implementation of the recommendations would rely primarily on political commitment and effective policy actions at the national level, the document presents the areas of work and actions reported by member States on a voluntary basis and an outline of the main activities that were undertaken by the secretariat to support the implementation efforts. A brief assessment of progress made in the Regional Implementation Plan for Sustainable Development in Asia and the Pacific, 2011-2015, priority programme areas is presented as a basis for further decision-making. The Ministerial Conference may wish to deliberate on the issues reported and provide guidance on the future course of action and focus of the Ministerial Conference in the context of the 2030 Agenda for Sustainable Development and related regional instruments.

* E/ESCAP/MCED(7)/L.1.

** The late submission of the present document is because of the need to include late submissions from member States to the voluntary survey necessary for reporting the progress achieved.

I. Introduction

1. The sixth Ministerial Conference on Environment and Development in Asia and the Pacific, held in Astana from 27 September to 2 October 2010, was organized by the Economic and Social Commission for Asia and the Pacific (ESCAP) in cooperation with the Government of Kazakhstan. More than 800 participants attended the event, including representatives of 46 member States. The outcome documents of the Ministerial Conference included the Ministerial Declaration on Environment and Development in Asia and the Pacific, 2010; the Regional Implementation Plan for Sustainable Development in Asia and Pacific, 2011-2015; and the Astana “Green Bridge” Initiative.

2. The Regional Implementation Plan is guided by the principles of the Ministerial Declaration and presents options for implementing it, organized around action areas based on priorities identified by the countries themselves. A periodic review of the implementation of the Plan based on information provided by members and associate members on a voluntary basis is required. A midterm review was presented to the Committee on Environment and Development in 2013.¹ The Committee took note of the efforts to monitor progress in implementing the outcomes of the Conference.

3. In accordance with resolution 67/3 of the Commission, the present document contains the final review of the implementation of the outcomes of the Conference, including the country-sponsored supportive initiatives. The review is based on voluntary responses given by members and associate members, in line with the provision of the outcomes of the Conference, which underscored that implementation of the outcomes would rely primarily on strong political commitment and effective policy actions at the national level. An outline of the main actions undertaken by the secretariat to support efforts aimed at implementing the Conference outcomes is also provided, together with a brief assessment of progress made in each programme area of the Regional Implementation Plan and of the needs of member States.

4. The six priority programme areas identified in the Regional Implementation Plan are taken into account in the efforts aimed at implementing the 2030 Agenda for Sustainable Development, such as the related regional road map. In this context, the future functions of the Ministerial Conference need to be redefined.

II. The Ministerial Declaration and the Regional Implementation Plan

5. In the Ministerial Declaration on Environment and Development in Asia and the Pacific, 2010, members and associate members decided to work together on a range of sectoral and cross-sectoral issues to promote a sustainable development path in the region. The Regional Implementation Plan for Sustainable Development in Asia and the Pacific, 2011-2015, was adopted to present options for action, following the principles contained in the Ministerial Declaration. Six priority programme areas were identified with the goal to enable ESCAP and other organizations to further assist member countries in the implementation of programmes and for member countries in the region to use elements of this plan for implementation as they may deem appropriate by promoting regional, subregional and national capacities for achieving sustainable development.

¹ See E/ESCAP/CED(3)/4.

6. This review covers the responses to the implementation of the Regional Implementation Plan in the six programme areas, namely (a) harmonizing rapid economic growth, employment generation and environmental sustainability; (b) promoting sustainable urban development; (c) enhancing ecological carrying capacity; (d) improving energy resource management for sustainable development; (e) improving water resource management for sustainable development; and (f) enhancing the resilience of socioeconomic development to climate change. This review refers mainly to actions that are relevant to the implementation strategy defined in the Plan, namely resource mobilization and partnership building; capacity-building; access to and transfer of environmentally sound technologies; and stakeholder involvement. It also includes an assessment of progress made in each programme area and the needs of member States, as a basis for further decision-making.

7. The secretariat had conducted the review through a survey questionnaire to which members and associate members of ESCAP were invited to participate on a voluntary basis. The survey was circulated and made available online. It was designed to facilitate information gathering and reporting from line ministries involved in each of the areas identified in the Plan. Additionally, international and regional organizations were invited to report on related activities and initiatives. The results of the midterm review submitted to the third session of the Committee on Environment and Development, based on the initial circulation of the survey, are incorporated in the results set forth in the present document along with the submissions to the follow-up final survey questionnaire. The participating members and associate members in the review were: Armenia;² Indonesia;² Japan;³ Kyrgyzstan; Mongolia;² Myanmar;² Nepal; Russian Federation;³ Turkey; Tuvalu; Hong Kong, China;³ and Macao, China.³ The international organizations that submitted data collection forms were: United Nations Environment Programme; United Nations Educational, Scientific and Cultural Organization;² United Nations Centre for Regional Development;² United Nations Convention to Combat Desertification; United Nations Population Fund; United Nations Children's Fund; Asian Development Bank; Economic Cooperation Organization; South Asian Association for Regional Cooperation; and Economic Commission for Europe.

A. The six programme areas: response, impact and remaining challenges

(a) Harmonizing rapid economic growth, employment generation and environmental sustainability

8. Most members and associate members that responded to this section of the survey indicated that they had used measures related to inclusive green growth mechanisms, such as: resource efficiency, sustainable waste management, investment in clean technology, the application of an environmental impact assessment to facilitate the mainstreaming of environmental plans and programmes into national policy and creation of a circular economy. Some countries applied market-based instruments in addition to implementing other policy programmes in this effort. Notably, such actions as activities related to corporate social responsibility, green procurement and green jobs creation were also cited and appear to be gaining momentum. Increased importance was also placed on monitoring and reporting; one respondent, for instance, invested in software technology to improve the efficiency of its environmental monitoring and present reports on

² Participated only in the final survey.

³ Participated in both the midterm and final survey.

the state of the environment that highlight the relation between environmental performance and socioeconomic development. Establishing partnerships and strengthening regional cooperation, environmental awareness activities, such as the Asia Environmental Impact Assessment Conference and other platforms for knowledge dissemination involving peer learning, civil society and local community engagement were mentioned by respondents as key actions undertaken to help to integrate environmental sustainability into the political agenda.

9. The secretariat extended support to member States through resource mobilization, capacity-building activities and strategic partnerships. The partnerships, which provided an important modality, were developed with think tanks, national training agencies and universities in Brunei Darussalam, Kazakhstan, the Lao People's Democratic Republic, Malaysia, Mongolia, Pakistan, the Philippines, the Republic of Korea, Samoa, Thailand, Vanuatu and Viet Nam. Guidance was provided to policymakers for the development of high-level policy frameworks through the Low Carbon Green Growth Roadmap for Asia and the Pacific (developed with financial assistance from the Republic of Korea) and related policy tools and approaches for turning resource constraints and climate crisis into economic growth opportunities necessary for poverty reduction according to their national circumstances. The road map focused on: (a) practical approaches for mainstreaming relevant environmental and socioeconomic actions into national development plans; (b) incorporating environmental costs into market prices; (c) using economic and market-based instruments that are supportive of sustainable development and green growth; (d) promoting eco-efficient innovation through public and private investment in the application of environmentally sound technologies and infrastructure; (e) developing a circular economy stimulated by government-initiated investments and procurement, eco-industrial parks and sustainable waste management (waste for wealth and waste as resource for products); and (f) promoting corporate social responsibility and green jobs.

10. The Low Carbon Green Growth Roadmap was also included as key learning material in an innovative online capacity development programme⁴ that provided capacity-building opportunities for more than 2,000 participants from more than 50 countries around the world during the period 2011-2015. Extending assistance for the training of trainers, based on a methodology developed by ESCAP, which combines on-site with online learning sessions and e-learning courses, helped to build skills related to the development and application of the green economy in the context of sustainable development and poverty eradication strategies, policies and tools. Under this methodology, more than 300 best practices and success stories were shared. In addition, expert group meetings, seminars and workshops were organized on such topics as green economy, eco-efficiency indicators, integrating the three dimensions of sustainable development, big data for sustainable development and South-South partnerships. Pilot projects on solutions, such as a waste-to-resource strategy for the provision of energy in remote areas, demonstrated the validity of the concept, and an integrated economic modelling platform was developed together with the Commonwealth Scientific and Industrial Research Organization of Australia to support analysis of quality of growth, to establish an indicator framework for green growth. Several publications were developed on greening economic growth in the region, presenting a comprehensive analysis of the trends in resource use, material flow and efficiency, and

⁴ An assessment study conducted in 2015 concluded that, compared to traditional on-site training methods, the green growth e-learning facility saved \$1,020,000 and more than 2,110 tons of CO₂ emissions through online training sessions. Available from: <https://sustdev.unescap.org/files/resource/46d3a4affe4636025814027cf48a311d.pdf>.

providing knowledge support to aid in strengthening institutions and their policies to better facilitate and empower different stakeholder actions. A regional online network of green growth practitioners was formed to exchange knowledge and best practices. Because of this work and thanks to the interest and commitment shown by several countries, the Asia-Pacific region has become a front-runner for the proliferation of green growth-related policy frameworks.

11. The validity of the green growth approach was further confirmed by the adoption of “green economy” as a major theme of the United Nations Conference on Sustainable Development, held in Rio de Janeiro, Brazil, from 20 to 22 June 2013, and the voluntary commitments tabled under the historic Paris Agreement, as a signal of a global consensus on the need for action on climate change. In addition, several institutions have stepped forward to promote green growth, providing technical support, analysis and financing to spur green growth approaches.

12. These investment and policy framework shifts had taken place in a context in which governments were seeking to revive their economies in the wake of the then converging food, fuel and energy crises. Support to member States in implementing green growth approaches remains critical, particularly through the sharing of experiences. Governments are facing difficulty in stimulating economic growth under the current condition in which the private sector is expected to respond to changing markets, consumer expectations and awareness and resource constraints, and poverty reduction remains a priority. The link between resource-use patterns, employment generation (including rural livelihoods), poverty and food security needs to be more explicitly recognized, as there are challenges in those interlinked areas as underlined by recent work of the secretariat. Based on the work of ESCAP regarding sustainable development, it is evident that high-level policy frameworks need to be coupled with efforts to promote innovation and transformation and engage all sectors of society. Otherwise, this transformation will not be possible.

(b) Promoting sustainable urban development

13. Several areas of work were identified in the responses to the survey under the area of sustainable urban development. Among them were sustainable urban planning and design; integration of municipal resources and waste recovery; financing measures for vertical urban housing and infrastructure for the poor; and mainstreaming climate change resilience into urban planning. Key actions reported were mainly related to the introduction of low-carbon measures in urban dwellings, such as increasing the use of renewable energy in buildings and making them more energy-efficient, sustainable cooking solutions, promotion of sustainable housing approaches, and equal access to infrastructure. Another action cited was the use of a computer-aided sustainability evaluation tool. Establishing networks and work groups comprised of different types of stakeholders was regarded as a successful method for enhancing capacity-building in communities and raising awareness of issues related to equality, together with the use of ecological resources. Notably, one landlocked country commended this cooperative approach as being beneficial for tackling inequalities related to access to water and sanitation, and for developing mechanisms to support vulnerable and marginalized groups.

14. The secretariat has undertaken many actions to support member States in the promotion of sustainable urban development, including, among them, strengthening cooperation and capacity among local authorities; engaging in technical cooperation; and supporting regional and municipal-level

knowledge-sharing and norm-setting of key urban development issues. In cooperation with the United Nations Human Settlements Programme (UN-Habitat) and the Government of Indonesia, the secretariat supported regional preparations leading to the United Nations Conference on Housing and Sustainable Urban Development (Habitat III), held in Quito from 17 to 20 October 2016, including the compilation of the regional report for the Asia-Pacific region, which was fed into the process for the development of the New Urban Agenda. Back-to-back with the High-level Regional Preparatory Meeting to Habitat III for Asia-Pacific, the secretariat also convened the Sixth Asia-Pacific Urban Forum in Jakarta on 21 and 22 October 2015. As with the fifth session, organized by the secretariat in 2011, the Forum brought together more than 900 participants, including ministers, mayors and other government officials, representatives from academia, urban professionals, the private sector, civil society, grassroots leaders, older persons, youth and international organizations, to discuss persistent and emerging issues related to sustainable urban development in the Asia-Pacific region. The Forum adopted the Jakarta 'Call for Action' on sustainable, inclusive and resilient urban development, highlighting priority issues for the region to be considered in the New Urban Agenda and in the implementation of the 2030 Agenda.

15. The secretariat has conducted research and analytical work leading to the development of several publications and knowledge products. In a follow-up on the outcomes of the United Nations Conference on Sustainable Development that focus specifically on sustainable cities, an assessment study on green urbanism reviewed the status of ecocity planning in the region with the objective to develop new strategies for sustainable urban planning based on the integration of the three dimensions of sustainable development, namely economic, social and environmental, increased livability and quality of life. Notably, the secretariat prepared the flagship *State of Asian Cities* and *State of Asia-Pacific Cities* reports in close partnership with UN-Habitat and recruited various experts to guide the preparations and serve as advisers on different topics and subregional issues. Through partnerships with United Nations agencies, academia, research institutes and foundations, several policy guidelines, manuals and studies were developed on such topics as pro-poor urban climate resilience in Asia and the Pacific, greening building codes, waste-to-resource strategies, urban wastewater management, and eco-efficient and socially inclusive infrastructure.

16. Policy dialogues, seminars and workshops were organized at different levels to deal with gaps between the global commitment and local implementation and in financing and capacities, which limit the ability of local government to effectively respond to challenges and meet the expectations associated with global mandates, and to review wider issues, such as urban infrastructure development and financing mechanisms with regard to the implementation of the 2030 Agenda (with a focus on South Asia), and strengthening sustainable urban infrastructure management and development of sustainable and inclusive cities (with the creation of a multi-stakeholder platform for Central Asia, with support from the Russian Federation).

17. Several pilot projects were supported by the secretariat with the aim to demonstrate the validity of available sustainable solutions to urban development. For instance, ESCAP has been implementing the project entitled "Pro-poor sustainable solid waste management", which focuses on the establishment of integrated resource recovery centres in developing countries, such as Bangladesh, Bhutan, Cambodia, Indonesia, Pakistan, Sri Lanka and Viet Nam. The objective of this project is to promote an attitudinal change that treats both inorganic and organic waste as a resource from which governments can earn revenue and create employment, while at the same time protect the

environment. The project, which focuses on secondary cities and small towns, also links solid waste management with carbon financing to increase the profitability of the integrated resource recovery centres and explores waste-to-energy approaches and linkages between wastewater treatment and solid waste management. Also thanks to the knowledge generated through this initiative, the secretariat has supported two member States in the development of nationally appropriate mitigation actions targeting the waste sector.

18. The secretariat has also been implementing the project entitled “Integrated resource management in Asian cities: the urban nexus”, together with the German Agency for International Cooperation. The project aims to integrate the planning and management processes of the energy, water and food sectors and is expected to contribute substantially to the long-term sustainable development of rapidly growing secondary cities in the region with support extended by China, Indonesia, Mongolia, the Philippines, Thailand and Viet Nam.

19. In partnership with local experts in the Philippines, ESCAP developed a design for eco-efficient buildings that are also disaster and climate change resilient. The project fosters the use of locally available sustainable materials for the construction of school buildings, which often serve as essential community infrastructure in times of disasters. The secretariat has also implemented many initiatives involving wastewater treatment and management. They include the following: a project dedicated to improving the resilience of community-based integrated water supply and wastewater treatment systems to climate change; pilot projects that integrate rainwater, storm water and wastewater management systems in the construction of green school buildings; and demonstration projects on rainwater harvesting, wastewater treatment and developing eco-efficient urban water infrastructure. Various aspects of the project are being used as inputs for the development of a national road map for eco-sustainable water infrastructure and a strategy paper on eco-efficient urban water infrastructure development.

20. Following decades of increasing urbanization rates, the region is projected to experience an unprecedented level of demographic, economic and social shifts that require appropriate national urban agendas and policies. Cities in Asia and the Pacific have served as engines for economic growth, social transformations and innovations that have reshaped the region and the world. However, they are still facing a range of challenges, such as vulnerability to climate change and natural disasters; rising inequalities and increases in informal settlements; lack of governance capacity and rule of law leading to insecurity; steep levels of material consumption and waste generation; lack of access to water and sanitation; and growing levels of pollution that lead to high economic and health costs.

21. Therefore, the successful implementation of the 2030 Agenda in Asia and the Pacific depends on the way urbanization in the region is managed. The New Urban Agenda provides an opportunity to advance the implementation of Sustainable Development Goal 11⁵ and the other Sustainable Development Goals that require local action. For this purpose, integrated approaches are crucial in the management of key resources, such as food, energy and water. Some of the key issues that need to be dealt with in order to grasp the potential role of cities in the drive to achieve sustainable development are the following: pursuing effective multilevel governance and integrated solutions; strengthening the enforcement of rules and regulations; closing the data gap;

⁵ Make cities and human settlements inclusive, safe, resilient and sustainable.

establishing partnerships and fostering stakeholder participation; knowledge-sharing for the replication of successful solutions; and financing for sustainable, resilient and inclusive infrastructure.

(c) Enhancing ecological carrying capacity

22. Regarding ecological issues, member States indicated that they had been directly involved in reporting activities connected to the following: climate change adaptation; management of natural resources, such as freshwater ecosystem services; traditional farming and indigenous culture; and mountain ecosystems. Key actions identified in that regard included partnership approaches towards poverty reduction in rural areas and development of national policies that specifically target the resilience of landlocked developing countries and small island developing States. The relevant initiatives undertaken by member States emphasize a participatory and community-driven approach for enhancing natural resources conservation and investment in agriculture development, both traditional and organic. One respondent, for instance, reported on work aimed at empowering indigenous communities, which involved including them in the monitoring and enforcement of the national fisheries management plans. Other member States reported on their countries' efforts to engage local communities in forestry conservation and management and to promote participatory irrigation management in Asian countries through technical cooperation with several international networks and institutions.

23. Support provided to member States in this area was delivered through regional and subregional partnerships, technical cooperation support and substantial investments in capacity-building. Action areas included the establishment of appropriate management arrangements, partnerships and national policies, and fostering dialogue among different stakeholders, including government officials of different ministries, to explore the barriers to investment in ecosystem services based on economic arguments. A research project identified ecosystem services critical to the national development goals of Viet Nam. Direct technical support for creating an enabling environment for investment was provided to Indonesia and Viet Nam in the areas of policy development and ecosystem price setting. Following a period of growing interest and knowledge, the secretariat has supported policy dialogue across the region by issuing publications on payments for ecosystem services. This work was complemented by support given to national statistical offices by ESCAP, at the request of specific countries, in building their capacity to establish an integrated system of environmental and economic accounting, with satellite accounts for specific natural resources established.

24. The Centre for Alleviation of Poverty through Sustainable Agriculture of ESCAP has continued to function as the regional hub for knowledge-sharing, capacity-building and South-South cooperation with regards to sustainable agriculture, food security and rural development in Asia and the Pacific. During the period 2010-2016, the Centre trained more than 2,000 government officials, researchers and practitioners in a series of capacity-building events related to emerging and persistent challenges in pursuing eco-efficient agricultural development. It also manages the Network for Knowledge Transfer on Sustainable Agricultural Technologies and Improved Market Linkages in South and Southeast Asia (SATNET Asia), a vibrant expert network that facilitates innovation in sustainable agriculture policies, practices and technologies for poverty reduction, food security and inclusive rural development and connects with more than 50 institutions and 1,400 individuals across the region.

25. The North-East Asian Subregional Programme for Environmental Cooperation (NEASPEC) is a comprehensive intergovernmental cooperation framework supported by the secretariat, which addresses environmental challenges in the East and North-East Asia subregion. More than 100 protected areas are spread out along and across international borders among North-East Asian countries. To maintain those areas, strengthened transboundary cooperation is required through a partnership platform that brings the stakeholders together to share information and undertake joint action. Under its Nature Conservation Strategy, NEASPEC strives to contribute to biodiversity conservation in the subregion by ensuring the survival of six flagship species; promoting transboundary and intergovernmental cooperation for nature conservation among its member States; and enhancing a coordinated mechanism for the conservation of target species and their habitats. Several expert group meetings, workshops, field surveys and studies have been organized to strengthen these transboundary efforts.

26. The continuing trends relating to climate change, land-use change, exploitation of oceans and seas and biodiversity loss underline the need for governments to take more meaningful action in these areas. Ocean ecosystems are pivotal to the character and well-being of island countries, representing the most tangible asset for their present and future generations. Natural capital in many Pacific island countries has steadily eroded over the past few decades because of poor waste management; overexploitation of natural resources; abundance of invasive species; and increasing damage from natural disasters and climate change. Resource-extractive activities, such as commercial fishing, logging and mining, have resulted in extensive environmental degradation and loss of biodiversity. Although forest cover is stabilizing, in many areas, the flow of ecosystem services has stopped or been substantially reduced in quality and contribution. Natural forests, for example, are being replaced by plantation forests. Regarding agriculture, there is need to expand access to knowledge and exchange of experiences, given the trends in the light of growing resource constraints reducing access to natural resources in rural communities and increasing pressures on natural areas to provide agro-industrial products and to produce food at a time when the risk of extreme climate events is growing. The need for analytical research, capacity-building, and knowledge-sharing and networking in the area of sustainable agriculture continues; work in this area should promote the use of integrated approaches towards achieving the Sustainable Development Goals by highlighting the multiple benefits of sustainable agriculture, which potentially contributes to Goal 2⁶ and to other Sustainable Development Goals that are related to health, water, energy, ecosystems and climate change in a synergetic manner. Regional support in dealing with transboundary ecosystems remains critical, particularly in relation to oceans. For this purpose, stakeholder engagement is crucial to increase ownership, awareness, action and investment.

(d) Improving energy resource management for sustainable development

27. Several members and associated members that participated in the survey ranked investing in energy technology and advancing energy security as a priority. Energy efficiency and conservation measures, integration of alternative and renewable energy into national development policies, deployment and investment in clean energy technologies and target setting for energy resource management were listed among the core working areas. Focal attention was centred on community engagement; partnership with international organizations, such as the International Renewable Energy Agency; setting

⁶ End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

ambitious renewable energy targets; knowledge dissemination on renewable energy; and sustainable energy management through national workshops on energy financing and development of manuals to promote energy conservation and green technology.

28. The secretariat has convened workshops and produced publications and studies to inform policymakers about relevant concepts, such as the co-benefit approach to enhancing energy security; innovative financing schemes at the microlevel and macrolevel for accessing energy services and improving energy efficiency; the low-carbon development path and the opportunities it provides to the energy sector; and increasing the sustainability of the power generation sector through regional energy connectivity and transboundary power trade.

29. The secretariat convened the first Asian and Pacific Energy Forum in Vladivostok, Russian Federation, in May 2013. The Forum was attended by 34 countries, of which 20 were represented at the ministerial level. The Asian and Pacific Energy Forum adopted the Ministerial Declaration on Regional Cooperation for Enhanced Energy Security and the Sustainable Use of Energy in Asia and the Pacific: Shaping the Future of Sustainable Energy in Asia and the Pacific and a plan of action. The secretariat developed an implementation support mechanism to carry out the mandates from the outcomes of the Forum. The mechanism consists of three pillars, namely (a) a data and policy information portal, (b) dialogue, and (c) analysis and reports. The dialogue pillar includes annual high-level policy dialogues, which focus on identifying solutions to key emerging challenges and convening working-level meetings. Under the analysis and reports pillar, the Regional Trends Report on Energy for Sustainable Development in Asia and the Pacific is produced annually. The objectives of the report are to identify appropriate responses to clean energy issues and provide a review of efficiency enhancing measures and advanced technologies, carry out an assessment of related initiatives and enhance knowledge-sharing through case studies involving member States, pertaining to the energy sector and its future development.

30. The secretariat has developed the Asia Pacific Energy Portal, a web-based information platform designed to increase the accessibility and use of ESCAP regional energy information to support research and analysis and ultimately inform decision-making and policy actions. The portal provides the informational foundation for ongoing ESCAP dialogues, analysis and reporting. As mandated by member States under the Asian and Pacific Energy Forum, ESCAP is responsible for establishing a platform for regional cooperation, reviewing progress against the outcomes of the Forum, and reporting to the Commission. The Portal collects and makes available more than 200 datasets from the International Energy Initiative, the World Bank, Sustainable Energy for All, the International Monetary Fund, the Energy Information Administration of the United States of America, the United Nations Commodity Trade Statistics Database and Bloomberg, covering, for example, access, efficiency, renewables, trade flows, subsidies and investment. It also displays policies from 58 member States, sourced from hundreds of official websites. The portal offers more than 2,400 policy and programme documents, which have been categorized to enable cross-sectional views of policy approaches from the region. It has a section that offers an interactive spatial and temporal display of power plant infrastructure, plotting more than 6,000 points of conventional and renewable energy power generation.

31. The secretariat has also been organizing the International Forum on Energy for Sustainable Development with the Economic Commission for Europe and other regional commissions and host countries. These events have brought together international energy experts, government officials and

representatives of the business community, financial sector, academia and civil society. At the Fifth International Forum, held in Hammamet, Tunisia, in 2014, the executive secretaries of the five regional commissions issued a joint statement in which they called for action to accelerate the transition to sustainable energy (Hammamet Declaration). At the subregional level, ESCAP has served as the interim secretariat of the Intergovernmental Collaborative Mechanism on Energy Cooperation in North-East Asia and for the implementation of the Baku Initiative on Energy Efficiency and Conservation.

32. The secretariat has also focused on increasing access to energy services through innovative policies and financing schemes. As part of a project dedicated to enhancing and improving access to energy services through development of public-private renewable energy partnerships, implemented during the period 2011-2014, the secretariat organized capacity-building activities for policymakers, civil society and the private sector on including public-private partnerships in promoting the use of renewable energy and improving access to energy services. The secretariat also implemented a project entitled “Leveraging Pro-Poor Public-Private-Partnerships (5Ps) for rural development – Widening access to energy services for rural poor in Asia and the Pacific”. Funded by the International Fund for Agricultural Development, the project involved training member States in formulating effective policies and strategies on the management and use of energy resources to improve access to modern energy services. At the request of the Government of China, as the President of the G20, ESCAP worked with the Government and Sustainable Energy for All to develop an action plan for the G20 Ministerial Meeting on Energy in 2016, which was entitled “Enhancing Energy Access in Asia and the Pacific: Key Challenges and G20 Voluntary Collaboration Action Plan”.

33. Enhancing energy security in the region continues to be a major concern for policymakers that need to tackle challenges arising from the implementation of the 2030 Agenda. To ensure success in achieving Sustainable Development Goal 7,⁷ capacity-building activities must continue to be focused on formulating energy policies that integrate the three dimensions of sustainable development and establishing interlinkages with other goals. Capacity-building activities must also be directed towards developing investment projects on energy efficiency. In the region, policymakers need to develop an effective mechanism to provide access to electricity to more than 400 million people and clean fuel technologies to more than one billion people; manage energy demand to contribute to the global target to double the rate of improvement in energy efficiency; and increase substantially the share of renewable energy in the energy mix.

(e) Improving water resource management for sustainable development

34. In the survey, several respondents indicated that water quality and efficiency in the region had been enhanced by various initiatives, such as the introduction of decentralized wastewater treatment systems; routine inspections and regular collection of water samples; the creation of community-oriented business environments and competitive markets for water supply; and the introduction of water tariffs to enhance savings. Safe access to water and adequate sanitation, climate-change adaptation, investment in eco-efficient water infrastructure in rural and urban areas, and improving rainwater collection systems are some of the key areas of work reported by member States. In that regard, one country reported on the introduction of federal

⁷ Ensure access to affordable, reliable, sustainable and modern energy for all.

legislation to protect and rationalize the usage of groundwater resources and the adoption of measures to classify and rationalize water resources use and safeguard underground water resources from pollutants. Another country reported on the effectiveness of knowledge-exchange platforms, such as the Water Environment Partnership in Asia, in building a partnership approach for information-sharing and raising awareness about the environment.

35. Member States have adopted resolutions⁸ to deal with concerns related to the establishment of water resource management strategies, and as part of the process to implement them, the secretariat has established a platform for experts, research institutions, civil society organizations, the private sector, intergovernmental bodies and financing institutions in the region to discuss the current state of water management practices. To support the use of existing regional platforms for the dissemination of knowledge and exchange of good practices on sustainable management of water resources, the secretariat developed a policy guidance manual on wastewater management, which focuses on decentralized wastewater treatment. The secretariat also organized the second regional policy workshop on wastewater management and sanitation to share best practices from the implementation of a project that focused on strengthening the capacity of policymakers in South-East Asia in the field of wastewater treatment and reuse in urban and peri-urban areas.

36. Furthermore, ESCAP helped organize the Asia-Pacific Water Summit, which was held in Chiang Mai, Thailand, on 19 and 20 May 2013. The Summit gave stakeholders the opportunity to discuss a number of issues, including, among them, investment requirements in infrastructure and capacity-building needs related to water and sanitation services and the application of integrated water resources management strategies to protect and restore river basins in the region. In addition, ESCAP members had the opportunity to discuss various critical areas pertaining to water and green growth by participating in workshops and seminars, such as the Workshop on Water and Green Growth, which was part of the preparation for the Seventh World Water Forum during which case studies from Asia and the Pacific were presented.

37. In 2015, ESCAP teamed up with UN-Habitat and the Asian Institute of Technology to develop the *Policy Guidance Manual on Wastewater Management with a Specific Emphasis on Decentralized Wastewater Treatment Systems*. To improve skills in managing integrated water resources, the secretariat organized workshops in Mongolia, Nepal and the Philippines. It also published a strategy paper entitled “Integrated energy-water resources management for green industries: the case of Mongolia” to highlight the links between water and energy. It developed a working paper on current trends in water and sanitation in the regional markets and a publication entitled *Integrated approaches for Sustainable Development Goals planning: the case of Goal 6 on water and sanitation*.

38. In 2015, ESCAP and the Institute for Water, Environment and Health organized the UN-Water Regional Expert Consultation on Water Security in Asia-Pacific for regional and global experts on water issues. The secretariat has also supported, together with member States, the annual commemoration of the World Water Day and contributed to the preparations for the World Water Development Report, led by the World Water Assessment Programme,

⁸ Commission resolution 69/8 on enhancing knowledge-sharing and cooperation in integrated water resources management in Asia and the Pacific and resolution 71/9 on strengthening cooperation on sustainable management of water resources in Asia and the Pacific.

which in recent years has focused on water and sustainable development, energy and water, water and jobs, and wastewater as an untapped resource.

39. The availability and sustainable management of water plays a crucial role in promoting economic and sustainable growth in Asia and the Pacific. The challenges related to water are critical, as some 277 million people lacked access to safe drinking water as of 2015, and more than 80 per cent of the wastewater generated in developing countries was untreated. With about half of the rural population in the region lacking access to improved sanitation, the links between urban, peri-urban and rural areas must be strengthened. Furthermore, these conditions, compounded with the impacts of climate change, will hamper the achievement of Goal 6,⁹ and threats related to water scarcity, poor water quality and inadequate sanitation will adversely affect the achievement of other Goals, as well. Using a systems thinking approach in the efforts to achieve Goal 6 can complement tools that are being applied for developing strategies and plans for the effective implementation of the 2030 Agenda.

(f) Enhancing the resilience of socioeconomic development to climate change

40. Compared to the other priority areas of the Regional Implementation Plan, fewer responses were received from member States on their activities aimed at improving social and economic adaptability and preparedness to climate change. Among the responses, emphasis was placed on institutional support through capacity-building activities and technology transfer; awareness-raising through community engagement and participatory policy approaches for monitoring and implementation; and community empowerment for risk management, especially for vulnerable groups and areas particularly prone to natural disasters. Among the key actions reported were the adoption of a green economy and climate resilience policy framework, the development of national plans for adaptation to the impact of climate change, the provision of educational and outreaching programmes on climate change, and building awareness about the importance of stakeholder engagement and public acceptance.

41. As a cross-cutting issue, resilience to climate change has been the focus of several activities undertaken by the secretariat in support of member States. Work dedicated to nationally appropriate mitigation actions, pro-poor urban climate resilience and mainstreaming climate concerns into urban-related policies mentioned above for area (b) of the Plan is an example of this. Other work in this area that also dealt with climate resilience included developing design and technology solutions for resilient low-cost housing in the Philippines, which involved developing local supply chains resulting in the foundation of a social enterprise. In addition, the Asia-Pacific Urban Forum served as a platform for forging a common understanding of the role of local authorities and other stakeholders with regard to climate change mitigation and urban vulnerability, and the required actions to enhance the resilience of socioeconomic development to climate change in an urban context.

42. The secretariat has issued reports, such as *Green Growth, Resources and Resilience: Environmental Sustainability in Asia and the Pacific*, to provide an analytical base to promote the region's resilience from a socioeconomic perspective to such issues as climate change. It has also developed *Case Studies on Water and Green Growth in Asia and the Pacific*, a publication that contains guidelines for policymakers to cope with the impacts of climate change on water-related issues in the region. The secretariat

⁹ Ensure availability and sustainable management of water and sanitation for all.

also produced green growth policy snapshots for a United Nations-wide joint publication for the Secretary-General's Climate Summit, which was held in New York on 23 September 2014.

43. The secretariat has supported member States in gaining access and using space information, tools and services. This has been particularly relevant to climate change adaptation in building resilience to disasters. For example, through the secretariat's long-standing Regional Space Applications Programme for Sustainable Development, countries hit by disasters can obtain satellite imagery and data to be used for emergency responses and post-disaster impact assessments. Countries are increasingly benefiting from activities aimed at using disaster risk reduction and adaptation tools, including capacity-building programmes, exchanging experiences and information, and the development of data portals for emergency preparedness and risk assessment.

44. In addition, through the Regional Cooperative Mechanism for Drought Monitoring and Early Warning, ESCAP is bringing together countries experienced in using space applications for drought monitoring and management with drought-prone countries eager to become more adept in using such systems. Coupled with seasonal forecasts and long-term climate scenarios, the function of the Regional Cooperative Mechanism for Drought Monitoring and Early Warning is expanding from strictly being dedicated to monitoring to providing tools to help with long-term planning and climate adaptation through regional cooperation. In the follow-up to the 2030 Agenda, space technology applications were identified as important tools for implementation, particularly for attaining the Sustainable Development Goals. These tools have applications tailored for specific sectors, such as disaster risk management, agriculture, water management, fisheries and ocean resources management, urban development, land resources and forestry, ecosystem services, climate change monitoring and adaptation, health and social services.

45. The need to align infrastructure and development planning processes in the region with climate change mitigation and resilience strategies remains essential. As climate finance progresses, efforts to scale up adaptation and resilience support is crucial for least developed and small island developing States, while accounting and reporting for climate expenditures requires strengthening.

B. Lessons learned

46. Respondents to the survey elaborated on several barriers and success factors associated with the implementation of the different programme areas in the Regional Plan. The following are some of the constraints cited by the respondents in their efforts to implement the Regional Plan: gaps in institutional capacity; lack of access to appropriate technologies; market maturity; and costs related to maintenance of infrastructure and access to funding. They also listed stakeholder engagement, local stewardship, public acceptance and community participation as successful drivers in the implementation process. However, effective coordination among the various actors involved was noted as a challenge. Overall, the respondents listed community engagement, local ownership in projects, involving non-governmental organizations to facilitate processes and support towards community-driven management as ways to overcome monitoring and enforcement challenges. Additionally, good coordination among government agencies and departments, and ongoing dialogue and cooperation with stakeholders in formulating implementation plans and strategies were highlighted.

47. Of the key modalities listed in the Regional Implementation Plan, international and regional organizations reported 88 times that modality (c) “developing the capacity of countries to adapt, replicate and scale up innovative practices and policy initiatives through capacity development and training of trainers, including online training” was used during project implementation. The second most prevalent modality, identified in 48 instances, was modality (a) “undertaking normative and analytical research on emerging issues and innovative solutions to develop policy recommendations and undertaking action research and analysis to develop replicable models”. Third, with 33 reported incidences of use, was modality (b) “catalysing high-level, high-visibility policy recommendations through regional policy dialogues, forums and specially convened ministerial conferences”. Respondents also noted engagement with governments, academic and scientific communities, the international community and civil society organizations. Also of note, only a few of the respondents indicated that working arrangements were undertaken with the private sector.

III. Regional initiatives

48. In the Regional Implementation Plan and the Ministerial Declaration, it is recognized that regional initiatives provide excellent examples in promoting new approaches to economic growth and have created the necessary impetus to strengthen region-wide cooperative action.

A. The Astana “Green Bridge” Initiative

49. The Astana “Green Bridge” Initiative: Europe-Asia-Pacific partnership for the Implementation of “Green Growth”,¹⁰ championed by the Government of Kazakhstan, outlines the blueprint for the first interregional partnership between Europe and Asia and the Pacific, with the intention to stimulate further cooperation for eco-efficient use of natural resources, investment in ecosystem services, low-carbon development and adaptation to climate change, sustainable urban development and the promotion of green business and green technology, as well as sustainable lifestyles and improvement of quality of life.

50. The Government of Kazakhstan established the Green Bridge Office in January 2011 and developed, with expert assistance provided by the secretariat, the Europe-Asia-Pacific partnership programme and an operational mechanism, which was welcomed and supported at the Seventh “Environment for Europe” Ministerial Conference, held in Astana from 21 to 23 September 2011.¹¹ The Green Bridge Partnership Programme, which has more than 30 signatories to its charter, mainly countries and non-governmental organizations from Europe and Asia and the Pacific regions, was the only interregional initiative to be cited in “The future we want”, the outcome document of the United Nations Conference on Sustainable Development.

51. Guided by Commission resolution 67/3, the secretariat has supported the Astana “Green Bridge” Initiative through various activities, including participation in meetings and conferences organized by the Government of Kazakhstan and the Economic Commission for Europe, and conducting consultations with the Government of Kazakhstan with the objective to develop a workplan and a partnership programme to implement the Initiative. The secretariat has reaffirmed its support by signing a memorandum of understanding with the Ministry of Energy of Kazakhstan in July 2015.

¹⁰ E/ESCAP/67/8, chap. I, sect. C.

¹¹ ECE/ASTANA.CONF/2011/2/Add.1, para. 17.

The partnership focuses on joint technical assistance for capacity development, advisory services, awareness-raising, outreach and dissemination. It also provides platforms for information- and technology-sharing based on requests from countries in Central Asia and small island developing States.

52. Two consultation meetings with partners were organized by the Government of Kazakhstan in Astana in 2011, with one being held back-to-back with the Fourth Astana Economic Forum. Two Green Bridge Conferences were held, in 2013 and 2014, and a road map to further promote the Green Bridge Partnership Programme over the period 2014-2016 was adopted in June 2014. Capacity-building support for the development of low-carbon green growth policies was provided over a period of several years.

53. A trust fund agreement was established in December 2014 to follow up on the pledges made at the third International Conference on Small Island Developing States, held in Apia from 1 to 4 September 2014. The trust fund supports community-managed sanitation and biogas renewable energy approaches for poverty reduction in small island developing States. The funding facilitates the replication of a successful pro-poor green business model for a community-managed sanitation and biogas energy system applied in Samoa in 2010-2011 by the Youth with a Mission programme through funding extended by the Korean International Cooperation Agency. In addition, the secretariat formalized a partnership with the Regional Environmental Centre for Central Asia in 2015 for the establishment of a subregional e-learning centre for green growth and sustainable development, and organized the first Central Asian capacity development workshop entitled “Green Growth for Sustainable Development: Capacity Development for Policy Makers in Central Asia” in December 2015.

54. Following up to its commitments under the Astana “Green Bridge” Initiative and the hosting of the International Exposition EXPO 2017 under the theme “Future energy”, the Government of Kazakhstan put forward an initiative to establish an international centre for green technologies. The centre will be comprised of the Green Bridge Institute, whose functions will include dealing with the transfer and adaptation of green technologies, reviewing and monitoring projects, building green growth potential, and providing expert advisory support.

B. The Seoul Initiative on Green Growth

55. The Seoul Initiative Network on Environmentally Sustainable Economic Growth (Green Growth) was adopted at the fifth Ministerial Conference on Environment and Development in 2005 and endorsed at the sixty-first session of the Commission,¹² with a commitment of financial assistance from the Government of the Republic of Korea. Based on the outcomes of the activities undertaken by the Network from 2005 to 2010 and the recommendations of the sixth Ministerial Conference on Environment and Development in Asia and the Pacific, the Initiative was extended to phase II¹³ for an additional five-year period through to 2015. The implementation plan, which was discussed at the fourth Network meeting, held in Busan, Republic of Korea, on 5 July 2011, was intended to further promote the green growth approach and policy options in the Asia-Pacific region for the following five years. At the meeting, it was decided that the Initiative would operate key activities, following the programme formats established in the previous period,

¹² Commission resolution 61/9.

¹³ See E/ESCAP/MCED(6)/3.

namely the annual Policy Consultation Forum, annual Leadership Programme, grant for pilot projects, and technical advisory services upon request.

56. In cooperation with the Republic of Korea, the secretariat organized and participated in the five policy consultation forums and leadership programmes in phase II under the respective themes: system change for green economy (2011), the double dividend of green and economy (2012), biodiversity for sustainable development (2013), improving resource efficiency and sustainable development (2014), and enhancing climate resilience for sustainable development (2015).¹⁴ In parallel with the above activities, the secretariat, in consultation with the Republic of Korea, has supported the implementation of 17 pilot projects in 11 member countries, namely Cambodia, Fiji, Indonesia, Kazakhstan, the Lao People's Democratic Republic, Maldives, Mongolia, Pakistan, the Philippines, Sri Lanka and Thailand.

57. Building on the favourable assessment of the first two phases, the Initiative has been extended to phase III for five years, from 2016 to 2020.¹⁵ The Government of the Republic of Korea has committed to continue to fund the Initiative. Under phase III, the Initiative will continue to work towards enhancing the capacity of countries in the region to develop and implement green growth strategies in support of the implementation of 2030 Agenda. The objectives of the third phase will continue to be directed towards building the capacity of policymakers and strengthening regional cooperation. The key activities will continue to be the annual Policy Consultation Forum, pilot projects, national workshops and analytical work. An external evaluation for the entire period of the project will be conducted in consultation with the Republic of Korea after phase III is concluded.

IV. Issues for consideration

58. For more than thirty years the Ministerial Conference on Environment and Development has provided countries with the opportunity to assess the state of the environment in Asia and the Pacific, formulate strategic policies in response to requirements posed by global forums, and develop regional perspectives, priorities and forward-looking agendas. The Conference has been run in collaboration with the United Nations Environment Programme and the Asian Development Bank, and has given ministers and environment authorities a regional platform to share national experiences and policies, highlight urgent issues, identify areas for regional cooperation and bring them forward to the highest level of political attention through ESCAP. Previous conferences have provided the impetus and opportunity for the following: an in-depth review of the state of the environment across the region; discussions on the synergy between environmental sustainability and economic growth; amplification of pioneering concepts, such as green growth; and bringing these aspects to the attention of policymakers.

59. The Conference has also presented the opportunity for the endorsement of regional initiatives sponsored by member States, which have enabled the exchange of good practices between cities (Kitakyushu Initiative for a Clean Environment), built capacity regarding green growth approaches

¹⁴ The eleventh Policy Consultation Forum was held in Seoul from 7 to 9 September 2016 under the theme "Building a resource efficient society responding to climate change". Preparation is under way for the phase III.

¹⁵ See E/ESCAP/71/42.

(Seoul Initiative Network on Green Growth) and created the necessary impetus to strengthen cooperation across regions (Astana “Green Bridge” Initiative).

60. The secretariat has been guided by the outcomes of the Conference to coordinate effectively with relevant United Nations bodies and specialized agencies to carry out regional activities, and to support members and associate members in carrying out activities related to their priorities by providing technical assistance, supporting capacity development, facilitating regional and subregional cooperation and dialogue, and fostering communication between members and stakeholders.

61. The historical function of the Conference in formulating a regional response to emerging and persistent environmental and developmental challenges will have to be repositioned in the context of the 2030 Agenda. The Asia-Pacific Forum on Sustainable Development serves as a platform for regional coordination in achieving sustainable development and has provided the main framework for action and regional cooperation through the regional road map for implementing the 2030 Agenda in Asia and the Pacific.¹⁶ The Forum and the road map address, in a balanced way, the environmental, economic and social dimensions of sustainability. As such, environmental issues are not addressed in detail, partly because the audience of the Forum is not primarily the environmental community. Nevertheless, management of natural resources provides specific opportunities for regional cooperation, as recognized in the regional road map, including to promote policies and strategies with respect to resource efficiency and environmentally sound technologies, share experiences and cooperate on management of natural resources, including oceans and seas, with a view to increasing food security, conserving the environment, protecting biodiversity and enhancing the welfare of the community, and develop and share best practices related to increasing agricultural productivity, sustainable agriculture, food security and rural welfare while reducing the negative environmental impacts and degradation of the ecosystem. Consequently, environment ministers and authorities in Asia and the Pacific still need to assess the state of the environment in the region, prepare concerted strategies for regional cooperation in response to emerging and persistent environmental challenges, and bring their regional priorities and strategies to the attention of governments of the region through the Commission and the Economic and Social Council.

62. The role of an ESCAP intergovernmental ministerial-level conference dedicated to the environment remains significant for the region because it provides high-level policy guidance on environment and development issues to, for example, inform, among others, the Commission’s strategic planning; ensure that environment and development issues are addressed in a balanced and integrated manner in the work of ESCAP; bring emerging and persistent environment and natural resource management issues to the attention of the region’s senior environmental policy leaders in order to inform evidence-based decision-making; provide a regional platform for the exchange of best practices; conduct an analysis of existing and emerging challenges; and provide data, analytical services and policy advice to address regional issues in line with the role envisioned in the Secretary-General’s advance report on the repositioning of the United Nations development system for regional economic commissions. Furthermore, the role of ESCAP as convener of the Asia-Pacific Regional Coordination Mechanism also places the secretariat in a position to mainstream such policy guidance into the work of the United Nations system, including through its Thematic Working Group on Resource Efficient Growth,

¹⁶ Commission resolution 73/9.

which focuses on such areas as natural resources management, climate change mitigation, sustainable consumption and production, sustainable urbanization, waste management and the application of reduction, reuse and recycling (3Rs).

63. The seventh Conference may wish to reaffirm its role as a platform for providing high-level policy guidance on environmental issues within the context of sustainable development, and for identifying regional responses and fostering environmental resolutions and actions that support the implementation of the environmental components of the Sustainable Development Goals and supporting the regional road map priority areas related to management of natural resources.

64. The Conference may also wish to propose specific modalities for the periodicity of the Ministerial Conference on Environment and Development, taking into account the conference structure of the Commission as revised in its resolution 73/1, which provides for committees¹⁷ to be convened at the ministerial level on an ad hoc basis to ensure high-level engagement on the issues to be addressed, as well as modalities for the organization of the Conference in coordination with other United Nations agencies and related meetings.

¹⁷ The Committee on Environment and Development meets in the even years as per Commission resolution 71/1.