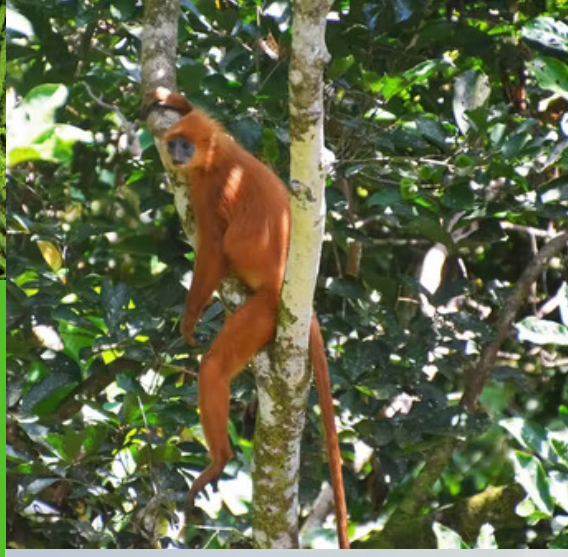




15 LIFE ON LAND



Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degredation and halt biodiversity loss

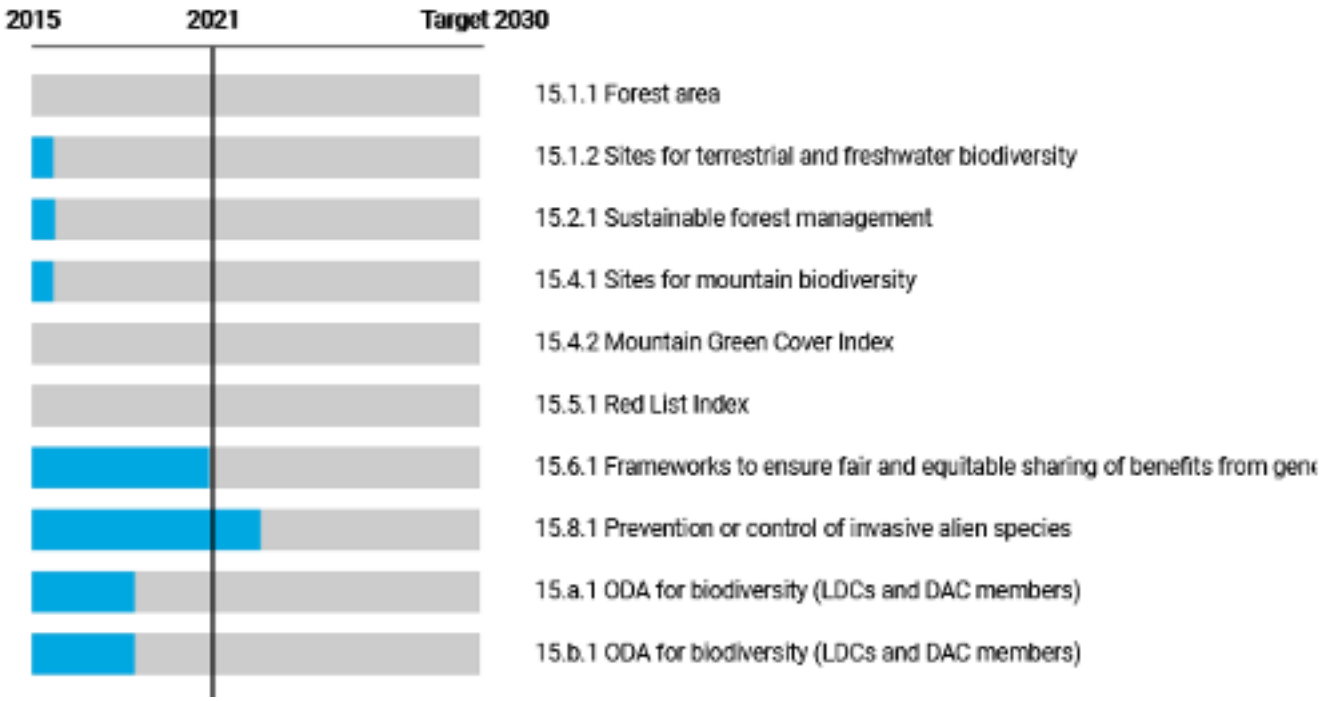
I. SUMMARY

The overall progress on life on land is slow in Asia and the Pacific. Seven targets are currently measurable, and the region is likely to achieve only one of them (Official Development Assistance for biodiversity). Current trends in forest and biodiversity losses need to be reversed, because they are forecast to worsen in most countries in the region by 2030. To achieve its commitments to the 2030 Agenda, Asia and the Pacific must also increase its protection of terrestrial and freshwater ecosystems and improve forest management and the conservation of mountain ecosystems. Wildlife and ecosystem conservation is vital to prevent future pandemics and the transfer of diseases from animals to humans.[1] The 2018 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Asia-Pacific Regional Assessment states that "Direct drivers, such as unsustainable use, illegal trade in wildlife, conversion of habitats, invasive alien species, pollution and climate change, are combining with indirect drivers such as socioeconomic and demographic changes to create stress and risks to ecosystems, threatening livelihoods and food security for millions of people. Climate change will exacerbate these impacts, especially among indigenous and vulnerable communities."[2] Rural livelihoods are intimately connected with and negatively affected by the deteriorating health of terrestrial ecosystems. Similarly, women, who depend disproportionately on natural resources given their limited ownership of land and other productive assets, are more affected by the loss of forest land and other terrestrial ecosystems. Moreover, as evidenced by the ongoing COVID-19 pandemic, adverse impacts on biodiversity and ecosystems are also accompanied by increased health risks such as zoonotic diseases as the potential for people-wildlife and livestock-wildlife interactions are intensified. Lastly, a key challenge identified in the United Nations Economic and Social Commission on Asia and the Pacific (ESCAP) multi-stakeholder 2021 survey was the need to ensure engagement of communities and indigenous peoples in biodiversity conservation and protection.

II. CURRENT STATUS

The perception of progress is based on the results of the ESCAP multi-stakeholder survey conducted in 2021 with 59 respondents from Governments, academia, and civil society. The highest-priority areas needing action to ensure progress in Sustainable Development Goal (SDG) 15 identified in the survey were public awareness, capacity building, governance and accountability, policy and institutional coherence, and SDG localization. There is a lack of data to measure progress on SDG 15; further work is needed on this issue. Only 25 per cent of survey respondents indicated work was being undertaken to monitor the progress of SDG 15. More broadly, the unbalanced relationship between human development activity and the environment was commonly identified as a key challenge to SDG 15. Many respondents noted that nature is often damaged because of unsustainable economic development. They mentioned the over-exploitation of natural resources, the overuse of chemical fertilizers and pesticides, and unsustainable practices in agriculture and horticulture, and expressed that these issues negatively impact sustainable livelihoods, increase poverty and food insecurity, and reduce incomes among vulnerable groups. They described the need for institutional and transformative environmental action which places nature at the heart of economic policies and sustainable development. The requirement to promote, protect, and respect the perspectives, rights, and roles of indigenous peoples with regards to land and resources was recognized in the survey as well. The status of selected SDG 15 targets will illustrate areas where progress has been made and where acceleration is necessary to meet these objectives by 2030 (Figure I) with 15.a.1 and 15.b.1 applicable for Least Developed countries (LDC) and Development Assistance Committee (DAC) members

Figure 1: The Status of Sustainable Development Goal 15 in Asia and the Pacific



Source: Asia-Pacific SDG Gateway

II. CURRENT STATUS

The linkages of land-use change to land degradation and biodiversity loss: The specific drivers of land-use change vary between subregions. Larger countries are more impacted by large-scale agricultural development, while smaller countries, especially Small Island Developing States, suffer from land degradation from small-scale activities like shifting cultivation or urban expansion from population growth as well as salinization. Degradation of terrestrial ecosystems results in the loss of current and future benefits from multiple services provided by these ecosystems, including rural livelihoods, disaster risk reduction, water supply, food security, and carbon sequestration.

A. Progress

Complex rates of progress: Asia had the highest net gain of forest area in 2010–2020, followed by Oceania and Europe.[3] Nevertheless, both Europe and Asia recorded substantially lower rates of net gain in 2010–2020 than in the previous decade. Despite an expanded area of protected forests and stability in areas under forest management plans, South-East Asia shows an increased rate of forest cover loss as well as a reduction in biomass stocks, indicating degradation.[4] Habitat degradation and fragmentation, especially in forests, have led to a decline in wild mammals and birds. While some hunting is for subsistence or local markets, there is also a significant regional trade in wildlife and wildlife products for food, traditional medicines, ornaments, and pets, which is also causing species decline in some countries.[5]

Sustainable management of terrestrial ecosystems: In 2021, all countries in Asia and the Pacific, with the exception of Nauru, have terrestrial protected areas totalling 4.7 million square kilometres, equivalent to 17.5 per cent of the land.[6] These figures compare to 3.2 million square kilometres, accounting for 13.9 per cent of the land, in 2014. Since then, some countries with low populations have been able to designate high proportions of their land as protected areas, such as Bhutan at 50 per cent and Brunei Darussalam at 47 per cent.[7] Larger countries have also made progress since 2014, the date of the last SDG 15 report to the Asia-Pacific Forum on Sustainable Development, including Australia and Indonesia, with terrestrial protected area coverage increasing from 17 to 19.7 per cent and 12 to 15 per cent respectively.[8] There are also more areas in the region protected under international designations including World Heritage sites, biosphere reserves, Global Geoparks, Ramsar sites, and Globally Important Agricultural Heritage Systems. While these represent positive trends, there remains a need to ensure that the expansion of protected area coverage targets places with important biodiversity, and that protected areas are managed effectively.

There are positive trends in reforestation and afforestation (target 15.2) driven by substantial gains in planted forest cover, which have resulted in net increases in forest cover in the region through large-scale national, regional, and local tree planting initiatives and movements. Several countries in Asia and the Pacific have made commitments to the Bonn Challenge, and forest restoration is included in the Nationally Determined Contributions (NDCs) of many countries. If fully implemented, NDC commitments of Asia-Pacific countries would result in a 160 per cent enlargement of land-based carbon sinks by 2030, 88 per cent of which will come from improved

forest management.[9] In addition, 27 countries have committed to setting land degradation neutrality (LDN) targets through the United Nations Convention to Combat Desertification LDN Target Setting Programme (target 15.3). Many countries, including the Philippines, have already set their voluntary targets. In addition, the United Nations Decade on Ecosystem Restoration 2021–2030 was launched in June 2021 and is building political momentum and commitment for ecosystem restoration initiatives in the region.

There are promising regional examples of countries participating in global conservation efforts and addressing threatened species issues (target 15.5), including under the Global Tiger Initiative Council and the Global Snow Leopard Ecosystem Protection Program, in which all tiger- and snow leopard-range countries have demonstrated strong participation.[10] Multiple Asia-Pacific countries are also participating in the Global Environment Facility-funded Global Wildlife Program (GWP), which brings together 19 countries across Asia and Africa in coordinated efforts to combat wildlife trafficking. Additional countries from Asia are joining the GWP in its second phase alongside several countries continuing their progress from phase one.

Transboundary collaboration: Given the transboundary nature of ecosystems and the challenge posed by zoonotic diseases, among other issues, there is an increasing need for stronger transboundary collaboration. Interest is growing in transboundary collaboration to protect areas of high biodiversity conservation value, such as the Emerald Triangle Protected Forests Complex in Thailand, the Lao People's Democratic Republic, and Cambodia; the Terai Arc landscape in India and Nepal; and the area covered by the Heart of Borneo Initiative.[11] Other examples include the Hindu Kush Himalaya transboundary landscape initiatives and resilient mountain solutions supported by the International Centre for Integrated Mountain Development. The ESCAP Asian and Pacific Centre for the Development of Disaster Information Management is also supporting a regional action plan proposal on sand and dust storms pursuant to ESCAP resolution 72/7. Another area where transboundary collaboration has improved is in tackling the Illegal wildlife trade. GWP promotes intergovernmental cooperation to track animals and criminals, combat money laundering, facilitate knowledge sharing, and apply innovative communication strategies. For example, GWP implements a program component to promote best practices in ports and collaboration between African and Asian countries and agencies involved in reducing the maritime transport of illegal wildlife products, especially ivory.

National-level policies and plans: The National Biodiversity Strategies and Action Plans (NBSAPs) under the framework of the Convention on Biological Diversity have become a key policy instrument for many countries (target 15.1). Countries in Asia and the Pacific have made steady progress in formulating policies to support the Strategic Plan for Biodiversity 2011–2020 and its Aichi Biodiversity Target 11 on protected areas. Almost all the countries in region developed NBSAPs that set national targets and indicators to achieve related Strategic Goals and specific Aichi Biodiversity Targets.[12] The national indicators can vary between countries both in definition and quality, however. Some countries such as Viet Nam have also introduced subnational biodiversity plans. Although countries in the region have made progress in creating and revising NBSAPs, implementation remains challenging. Furthermore, not all countries

express the same commitment to reflect the Aichi Biodiversity Targets in their NBSAPS, with countries from North-East Asia generally showing the most commitment.[13] At the same time, looking beyond the Strategic Plan for Biodiversity 2011–2020, countries in the region are engaged in the development of a Post-2020 Global Biodiversity Framework and 2050 Vision for Biodiversity under the Convention on Biological Diversity.

Technical capacity for measuring forests and greenhouse gas emissions from the forestry sector: Capacity has advanced substantially for many countries in Asia and the Pacific to design and implement national strategies for reducing emissions from deforestation and forest degradation in developing countries (REDD+) and report on their progress to the United Nations Framework Convention on Climate Change, as part of their contribution to the Paris Agreement. Eleven developing countries in the region have submitted Forest Reference Emission Levels to the United Nations Framework Convention on Climate Change, including India, Indonesia, Malaysia, Myanmar, Papua New Guinea, and Viet Nam, providing a benchmark against which greenhouse gas emissions and removals can be measured. Several countries are already implementing or at an advanced stage of designing National Forest Inventories, enabling the provision of up-to-date information about forest extent, condition, biomass stocks, and changes in stocks over time.

B. Areas Requiring Attention and Associated Challenges

Protecting and preventing the extinction of threatened species: Asia and the Pacific must reverse current trends related to SDG 15.5 to protect and prevent the extinction of threatened species. The region contains the world's largest number of threatened species, with 40,171 plants and 5,250 vertebrates categorized as threatened in 2015. Moreover, the number of threatened mammal and plant species has increased by more than 10% and 18%, respectively, from 2006-2016.[14] A primary issue concerning biodiversity in general, along with threatened species such as elephants, rhinos, pangolins, tigers, and snow leopards, is illegal trade in wildlife and forest products (target 15.7). The value of the illegal wildlife trade is estimated at $US7 billion to $US10 billion globally. In addition to the exploitation of wildlife and climate change as direct drivers, the global trade in timber and high demand for traditional medicines and natural products are also causing species decline. Since they are both sources and consumers of a variety of species listed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora, countries in Asia and the Pacific—particularly in the southeast—arguably face larger challenges than other regions of the world.[15] Online trading is playing an increasingly important role in the illegal wildlife trade. Since the start of the COVID-19 pandemic, the region's high mobile penetration rate has offered buyers easy access to black market traders and vice versa. The lack of effective monitoring combined with the popularity of social media platforms means wildlife cybercrime is a growing concern.[16]

The widespread loss of large vertebrates has had a measurable impact on several forest functions and services, including seed dispersal. Illegal trade in wildlife and wildlife products is

also causing species decline in some countries.[17] Less diversity and lower numbers of pollinator species, such as bees, have significant implications for food security and nutrition, particularly the production of fruits and vegetables.[18] The wild and cultivated harvests that underpin our food supply and dietary diversity are products of complex natural interactions and processes, collectively referred to as ecosystem services. Ecosystem services include the natural processes that directly and indirectly bring about genetic diversity and have a host of important consequences: keeping pests in check; ensuring crops are resilient to diseases; bringing about nutrient cycling and the fixing of nutrients in agricultural soils; enabling the filtration, circulation, and retention of water systems; providing flood defences; facilitating the breakdown of pollutants and the release or sequestration of carbon; and regulating weather, seasonal weather patterns, and climate. The beneficial services of biodiversity are of immense value to our food systems and therefore to the health of our populations, society, and economy.[19] In rivers and lakes across Asia and the Pacific, 37 per cent of freshwater species are threatened by overfishing, pollution, infrastructure development, and invasive alien species.[20]

Habitat degradation and biodiversity loss: Forest degradation is a critical parameter to monitor impacts on biodiversity. Remote sensing analysis of partial canopy cover loss, which can be used as a proxy for forest degradation, indicates that significant areas of remaining forests underwent degradation between 2000 and 2012. South and South-East Asia exhibited the largest amount of partial canopy cover loss globally; a decrease of over 50 million hectares was detected.[21] According to the Food and Agriculture Organization of the United Nations (FAO) State of the World's Forests 2020 report, the main drivers of forest degradation in the region are timber logging, which accounts for 80 per cent, fuelwood collection at 12 per cent, and uncontrolled fires at 5 per cent.

Rapid and continuing land use change and growing demand for natural resources and arable land present serious challenges to the sustainable use of terrestrial ecosystems. Land degradation is another threat to biodiversity in Asia and the Pacific, having affected about 850 million hectares, or about 28 per cent of its land area.[22] In terms of water resources and ecosystems, the cumulative impacts of global warming coupled with the damming of rivers for hydropower in some river basins will have significant negative consequences for fish production and environmental flows.[23] Some forms of agricultural investments—notably large-scale investments in land—can entail considerable environmental and social risks, reducing access to natural resources and causing the loss of livelihoods, especially where land rights are unclear and governance is weak. Ecosystems and the livelihoods of forest-dependent communities will experience the detrimental effects of the large-scale destruction and conversion of primary forests due to increased production of commodities such as palm oil, combined with a lack of application of environmental standards, legal loopholes, and corruption. Reconciling the exploitation of natural resources, such as mineral resources, with sustainability will require strengthening institutions that facilitate dialogue and the wide participation of local communities and stakeholders, including the private sector.

Invasive alien species: Invasive alien species (target 15.8) are found in all countries in Asia and the Pacific, and their number is steadily increasing, posing challenges to native biodiversity, ecosystem functioning, and productivity.[24] They affect the region's key terrestrial, wetland, coastal, marine, and estuarine ecosystems, including human production systems such as plantations and horticulture. Invasive species are implicated in over half of known bird extinctions on islands, many of which are located in Asia and the Pacific.[25] They constitute one of the most serious drivers of ecosystem change and biodiversity loss across the region, especially for oceanic islands. There is also increasing evidence that marine invasive alien species constitute an extremely serious, but less well understood, threat to fisheries, coral reefs, and the overall functioning of marine ecosystems and food webs. The annual economic loss attributed to invasive alien species is not well studied but is likely to be substantial—for example, it is estimated at US$33.5 billion in South-East Asia.[26] Some efforts have been made to address invasive alien species, including regional initiatives in the Pacific funded by the Global Environment Facility focused on strengthening national and regional capacities to reduce the impact of these species, but there is urgent need to scale up those efforts.

Natural forests: The latest data and analysis from FAO show that overall, Asia lost 386,000 hectares of naturally regenerating forest per year in 2010–2020, due mainly to losses in South and South-East Asia.[27] In the same period, however, there were gains in area in East Asia and West and Central Asia. The average annual rate of loss in Asia was higher in 2010–2020 than in 2000–2010; nevertheless, it was still 80 per cent lower than in 1990–2000, when it was 1.79 million hectares. The declining rate was due mainly to a reduction in losses in South and South-East Asia, especially Indonesia, which lost naturally regenerating forest at a rate of 2.10 million hectares per year in 1990–2000 and at a much lower rate of 787,000 hectares per year in 2010–2020. In Oceania, the gain of 391,000 hectares per year represented a reversal compared to previous decades; forest area was lost at the rate of 264,000 hectares per year in 1990–2000 and 303,000 hectares per year in 2000–2010. This situation mainly reflects changes in Australia, which reported losses of 253,000 hectares per year in the 1990s and gains of 424,000 hectares per year in 2010–2020. In subtropical Asia, commercial and subsistence agriculture is responsible for one third of forest loss each year.[28] One of the most recent drivers of forest loss from agriculture has been palm oil production, which has more than doubled in the past decade; most of the expansion has occurred in South-East Asia, especially in Indonesia and Malaysia, providing over 80 per cent of the world's supply.

C. Human Rights and Gender Equality Considerations

The full enjoyment of human rights as recognized by the United Nations Human Rights Council, including the rights to life, health, food, water, and a healthy environment, depends on the services provided by terrestrial ecosystems.[29] In addition, deforestation, the loss of biodiversity, and ecosystem degradation can perpetuate gender inequalities by, for instance, increasing the amount of time spent by women and girls to obtain food, water, and firewood.[30] In order to protect human rights, States have a general obligation to protect ecosystems and biodiversity. Measures

taken in the name of conservation efforts, however, can also violate human rights. For example, militarized conservation personnel have killed and attacked people and environmental human rights defenders in some countries in Asia.[31] When national parks and other protected areas are designated without participation or free, prior, and informed consent, indigenous peoples and local communities may be displaced and denied access to territories that they traditionally used for food, water, cultural purposes, and livelihoods.[32] States therefore have heightened duties to ensure that people are able to enjoy the rights to information, participation, freedom of expression and association, and effective remedies in relation to actions that may adversely affect their relationship with the ecosystems on which they depend, as well as substantive rights to protection of the terrestrial ecosystems themselves.

Given existing barriers to women's ownership of land and other productive resources, women disproportionately depend on natural resources, including wild forest land. When employed, women in Asia and the Pacific are more likely than men to engage in agriculture, which highlights their disproportionate reliance on land. For instance, in South Asia, agriculture engages close to 70 per cent of all working women.[33] Nonetheless, they are much less likely than men to own land. In South-East Asia, for instance, over 85 per cent of agricultural landholders are men.[34] This situation reduces women's capacity to cope with shocks, such as natural disasters, and exacerbates their vulnerability to climate change and biodiversity loss overall. In this context of limited ownership, it is men who often make decisions regarding resource use and operations on agricultural land. These include choices about crop selection and pesticide which may have significant consequences for biodiversity loss and land degradation. Increasing women's ownership and decision-making power over the land and forests they use is important to ensure they can contribute to, and benefit from, environmental sustainability.[35]

Women's participation in forest committees and other forest management groups can ensure they play a role in natural resource management and conservation. Data about women's engagement with these institutions is scant, so efforts are needed to regularly compile individual-level data about the roles women and men play in forest and land management and their degree of engagement and decision-making power on management committees. Factors known to promote their participation include enhanced educational attainment, reduced unpaid care and domestic work burdens, and the existence of an enabling environment, such as regulation that lift barriers to their participation.

D. Recovery from COVID-19

The linkage between the degradation of natural resources and the pandemic. Economic activities exacerbated by climate change are impacting the structure and functions of ecosystems and causing biodiversity to decline. Among other impacts, they are accelerating the pace at which human-animal-wildlife interactions are modified, leading to disease spillovers and the emergence of pandemics. Some 60 per cent of known infectious diseases and up to 75 per cent of emerging infectious diseases are zoonotic, where the infectious disease is transmitted

between species from animals to humans.[36] The risks depend partly on how human interactions with nature are managed. Ecological degradation worsens the risk of zoonotic diseases through increased human contact with pathogens and changes in pathogen ecology. In addition, the close contact between humans and different species of wildlife in the global wildlife trade can facilitate animal-to-human spillover of new zoonotic viruses, such as COVID-19, that are capable of infecting diverse host species. This process can trigger emerging disease events with higher pandemic potential because these viruses are more likely to amplify via human-to-human transmission and thus spread widely. During the COVID-19 recovery phase, there is therefore a need for scaled up action through a One Health approach—a holistic, inter-sectoral, interdisciplinary approach that focuses on where human health, animal health, and environmental health converge—and for heightened efforts to prevent ecosystem degradation, the illegal wildlife trade, and unsustainable food production.

The COVID-19 crisis is expected to have negative impacts on forest resources (indicator 15.2.1) and exacerbate the risk of deforestation and associated biodiversity loss.[37] Forests play a key role in securing livelihoods for the most vulnerable and in strengthening resilience against crises such as pandemics. Hence, there is a risk of increased pressure on forest cover and environmental integrity if other support measures are not put in place during the recovery to halt deforestation and forest degradation; such measures can improve the climate resilience of ecosystems, reduce emissions from deforestation, and enhance rural livelihoods.

To slow the pandemic's spread, many Governments implemented strict measures that negatively affected countries' economies. This situation may mean less funding for nature and nature-based solutions with corresponding threats to biodiversity conservation authorities and enterprises, possibly leading to additional problems such as habitat degradation and the illegal and unsustainable harvest of biological resources. As Governments in the region pour large investments into responding to and recovering from the pandemic, a good opportunity opens to promote a greener, sustainable recovery by adopting appropriate approaches in these investments. In Pakistan, the Government introduced a "Green Stimulus" package focused on job creation and ecosystem restoration. Interventions have included planting trees, reviving protected areas, and improving water and sanitation, while targeting unemployed youths, women, and daily wage earners who are out of jobs and migrating to rural areas. This nature-positive Green Stimulus exemplifies the possibility of rebuilding the economy and encouraging sustainable growth. Moreover, the pandemic has also triggered a renewed focus on "development beyond gross domestic product" to measure progress. Many countries in the region are expressing increased interest in approaches such as Bhutan's Gross National Happiness and Thailand's sufficiency economy; both approaches are concerned with holistic rather than simply economic development, including putting nature at the heart of development.[38] There is also growing interest in using inclusive wealth to better measure of sustainable economic growth, to transition to a green economy, and to guide policy and investment decisions made in the post-COVID-19 recovery process.[39]

III. PROMISING INNOVATIONS AND PRACTICES

Regional environmental cooperation: Asia-Pacific countries are demonstrating strong willingness to cooperate on better solutions for major, common sub-regional and regional environmental issues. Examples include the Association of Southeast Asian Nations Center for Biodiversity, the Secretariat of the Pacific Regional Environment Programme, the 1996 Ganges Water Sharing Treaty between India and Bangladesh, the Association of Southeast Asian Nations Agreement on Transboundary Haze Pollution, the Greater Mekong Subregion Core Environment Programme, and the four sub-regional biosphere reserve networks linking 168 internationally designated sites in 40 countries working towards the reconciliation of biodiversity and sustainable local economies. Additional United Nations-supported regional environmental cooperation mechanisms include the Ministerial Conference on Environment and Development and the Forum of Ministers and Environment Authorities of Asia and the Pacific.

Natural capital accounting and the mobilization of finance and investment for nature There is growing recognition that achieving the SDGs through scaled-up actions for nature, including protection and sustainable management of terrestrial ecosystems, will require increased financial flows and a shift in investment patterns. Furthermore, the scale of financial investment that can achieve transformative change greatly exceeds the current capacity of public financing, highlighting the need to attract substantial private-sector financing. Exploring Natural Capital Opportunities, Risks and Exposure (ENCORE), for example, supports the integration of natural capital-related considerations into the risk analyses and investment decisions of financial institutions. This web-based tool was developed by the Natural Capital Finance Alliance, including the United Nations Environment Programme (UNEP) Finance Initiative, the UNEP World Conservation Monitoring Centre (UNEP-WCMC), and Global Canopy. ENCORE helps users understand how economic activities at the sectoral level potentially depend upon and impact nature and might represent a business risk. It has seen successful uptake by multiple organizations in the past three years and has excellent potential to support similar analyses in Asia and the Pacific.[40] Another complementary approach taken by more than 11 countries in Asia and the Pacific is the United Nations Development Programme (UNDP) Biodiversity Finance Initiative (BIOFIN). BIOFIN supports the development of comprehensive Biodiversity Finance Plans, drawing on 150+ finance solutions with a focus on delivering better on what is available, reallocating resources from where they harm to where they help.[41]

Regarding financial institutions, there is growing recognition of the need to incentivize banks, impact investors, or others to invest in deforestation-free commodity production and the restoration of degraded land, as demonstrated by investment vehicles initiated and supported by UNEP, including the Agri3 Fund and the Restoration Seed Capital Facility.[42] In addition, increasing efforts have been directed toward monitoring the status of natural capital and making the economic case for investing in nature. The UNEP Economics of Ecosystems and Biodiversity for

III. PROMISING INNOVATIONS AND PRACTICES

Agriculture and Food initiative has been serving decision-makers in China, India, Indonesia, Malaysia, and Thailand, helping actors in the agri-food sector recognize and value in economic terms the often-invisible contributions that nature makes to food systems and the hidden environmental costs of current food production.[43] By doing so, this initiative enables decision-makers to understand where and how the goals of the agri-food sector can be adjusted to maximize environmental and health benefits and minimize negative impacts. Countries in Asia and the Pacific have also made significant strides toward the implementation of the System of Environmental-Economic Accounting Ecosystem Accounting (SEEA EA), as agreed upon internationally in March 2021. Through the Natural Capital Accounting and Valuation of Ecosystem Services project, China and India have developed a series of pilot accounts in line with the SEEA EA and taken steps to mainstream their use into policymaking. The calculation of SDG indicator 15.1.1 using SEEA EA data has also been trialled as part of the project.[44] Progress has also been made in building the capacity of national stakeholders to develop and strengthen the knowledge base about biodiversity, ecosystem services, and the role these play in supporting the economy and society; the National Ecosystem Assessment Initiative, coordinated by UNEP-WCMC and involving the United Nations Development Programme and the United Nations Educational, Scientific and Cultural Organization, is currently working with 11 countries, including Viet Nam, Cambodia, and Thailand, to conduct national ecosystem assessments to fully consider the value of nature in decision-making.[45]

Using market-based mechanisms to promote sustainable forest management: Using voluntary certification schemes for forests and forest products, such as the ones from the Forest Stewardship Council and the Programme for the Endorsement of Forest Certification, promotes legal and sustainable forest management. Focusing on the ecosystem services provided by forests and built on the core of the global Forest Stewardship Council certification system, the Forest Certification for Ecosystem Services programme has expanded in Asia and the Pacific, with successful pilots in Nepal, Indonesia, and Viet Nam. More broadly, payments for ecosystems services provide a tool for policymakers and communities; other examples include Payments for Forest Ecosystem Services in Viet Nam and the Grain-for-Green Project in China.[46] These payments enable market-based mechanisms, including activities meant to guarantee forest management, to maintain or enhance the provision of a given ecosystem service such as water, biodiversity, or recreation. The European Union's Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan is another initiative using market-based mechanisms in Asia and the Pacific.[47] This initiative aims to reduce illegal logging by strengthening sustainable and legal forest management, improving governance, and promoting trade in legally produced timber. Indonesia has been issuing FLEGT licenses since late 2016 and verifying the legality of products it exports to the European Union, with such timber no longer subject to checks under the European Union Timber Regulation.

Community-based initiatives: Several countries, particularly in South and South-East Asia, have developed community-based forest management and set up Joint Forest Management Committees, Community-based Forest Management, and Forest User Groups. In the Province of Lam Dong in Viet Nam, forest-based ecosystem payments improved the quality of life of more

than 40,000 rural poor and helped conserve more than 200,000 hectares of forest. In terms of species conservation, the Dugong and Seagrass Conservation Project—a regional project of UNEP and the Global Environment Facility supported by the Convention on the Conservation of Migratory Species—focuses on the dugong-range states of Indonesia, Malaysia, Solomon Islands, Sri Lanka, Timor-Leste, and Vanuatu. It seeks to work with local communities to help them understand the benefits of conserving dugongs and their habitat. In Thailand, indigenous people in protected areas around the Surin Islands in the Andaman Sea have been engaged through the Local and Indigenous Knowledge Systems programme from the United Nations Educational, Scientific and Cultural Organization. Furthermore, civil-society actions carried out by national non-governmental, community-based, and indigenous peoples' organizations in support of the Aichi Biodiversity Targets are underway with support from the United Nations Development Programme-implemented Global Environment Facility Small Grants Programme, now operational in 90 per cent of the eligible countries—30 in total—across Asia and the Pacific. The "Biosphere Forums" established in several Indonesian biosphere reserves also provide a useful model for enhancing stakeholder engagement in the management of protected areas and the wider landscape.

IV. PRIORITIES FOR ACTION

Priority 1: Catalyse a shift toward nature-positive, regenerative, and resilient agriculture, fisheries, and forestry systems. Achieving this priority will involve implementing agricultural practices that maintain pollinator habitats, shrink impacts on nature, restore soil productivity, sequester carbon, secure water supplies, minimize disease, and foster genetic and crop diversity. This objective includes a movement toward agroforestry and agroecological practices such as sustainable land and forest management to ensure the production of key commodities on a sustainable basis, focusing on long-term productivity over short-term gains. Sustainable land management is especially necessary across agricultural land and forest production areas but also in urban areas, which have received less attention as protected areas, yet involve the highest levels of threats and extinctions. These efforts can build on the outcomes of the United Nations Food Systems Summit held in September 2021 and can be integrated with efforts to implement the national pathways toward sustainable food systems.

Priority 2: Engage with and implement relevant international environmental agreements. Achieving this priority will involve encouraging active participation and strong commitment towards the finalization and adoption of the post-2020 Global Biodiversity Framework at the second part of the United Nations Biodiversity Conference of the Parties (COP) 15. Supporting its effective implementation will help scale up efforts to accomplish SDG 15. To halt and reverse forest loss and land degradation by 2030, it will also be essential to actively participate in relevant Paris Agreement COP 26 initiatives, including the Glasgow Leaders' Declaration on Forest and Land Use, and to integrate SDG 15 action into the NDCs.

IV. PRIORITIES FOR ACTION

Priority 3: Encourage decision-makers to apply the International Resource Panel's four principles of natural resource management that can help countries effectively implement biodiversity policy.[48] These principles are as follows: first, know your true impact; second, grow with nature; third, value nature; and fourth, plan together. Important approaches to employ include value-chain transparency, integrated landscape planning, nature-based and circular solutions, and recognition of nature's benefits.

Priority 4: Address the data deficit. A recurring constraint is the lack of information and data to accurately assess the status, trends, risks, threats, and conservation needs for SDG 15 in the Asia-Pacific region. Further capacity development action is needed, including support from the relevant United Nations agencies and institutions that are the custodians of SDG 15 indicators, such as UNEP, UNEP-WCMC, the International Union for Conservation of Nature, United Nations Convention to Combat Desertification, FAO, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Convention on Biological Diversity, the United Nations Office on Drugs and Crime, and the Organisation for Economic Co-operation and Development.

Priority 5: Mobilize resources for nature from private, public, and global funds (targets 15.a and 15b). Seeking out multiple avenues to mobilize and realign financial resources for biodiversity conservation and sustainable use is key in Asia and the Pacific, including redirecting and realigning public and private finance flows, both domestic and international, from nature- and climate-harmful investments to nature-positive and climate-adaptive ones. This objective also involves catalysing and leveraging private-sector investment and philanthropic finance for nature-based solutions. There is potential for increased engagement with or replication of financing initiatives and for the application of economic instruments including ENCORE, Biodiversity Finance Initiative (BIOFIN), the Agri3 Fund, the Restoration Seed Capital Facility, market-based instruments such as payments for ecosystem services, and efforts under the UNEP Economics of Ecosystems and Biodiversity for Agriculture and Food initiative.

Priority 6: Increase stakeholder engagement and awareness in addressing SDG 15. Key strategies to expand protected areas and their effective management, as well as to broaden action on SDG 15, include expanding the role of the private sector, civil society, indigenous peoples, and local communities through innovative and diverse participatory governance models. This priority includes raising awareness of the contribution of biodiversity and ecosystems services to people's lives.

Priority 7: Enhance a holistic One-Health approach in the post-COVID-19 world. Raising awareness and enhancing the knowledge base about connections between zoonotic diseases and environmental integrity is essential. Adopting a One Health approach at all levels of decision-making from the global to the local; recognizing the complex interconnections among the health of people, animals, plants, and our shared environment; and fostering cross-sectoral collaboration can reduce the risk of future outbreaks of zoonotic diseases. To minimize this

risks, the post-COVID-19 recovery process must incentivize more sustainable and nature-positive activities and not augment environmental externalities such as carbon emissions and pressure on biodiversity and ecosystems.

Priority 8: Mainstream biodiversity across government sectors. An essential conservation need is to integrate biodiversity considerations into decision-making across sectors including in ministries of finance, agriculture, infrastructure, planning, tourism, health, and education, among others. This could be done by adopting an integrated approach to sustainable development, planning, and implementation, taking into account the links between SDG 15 and other SDGs, such as SDG 2—Zero Hunger, SDG 3—Good Health and Well-Being, SDG 6—Clean Water and Sanitation, and SDG 12—Responsible Consumption and Production. One of the primary levers for this priority is high-quality data availability for decision-making, including integrated land-use planning, by identifying areas important to protect, manage, and restore nature in order to maintain essential ecosystem services and achieve nature-dependent development goals.

Priority 9: Acknowledge and support the SDG 15-related priorities identified at the Fourth Forum of Ministers and Environment Authorities of Asia Pacific, Suwon City, the Republic of Korea, 5-7 October 2021. These priorities include the following:

- Focusing on nature-based solutions and implementing United Nations Environment Assembly resolutions to promote sustainable and resilient ecosystems as part of COVID-19 recovery efforts.
- Supporting the Colombo Declaration on Sustainable Nitrogen Management, which is a roadmap for action on nitrogen challenges, including encouraging additional countries to join the initiative.
- Engaging with the Asian and Pacific Centre for the Development of Disaster Information Management, including for action on sand and dust storms.

Other issues highlighted included the need for sustainable lake management as well as sustainable consumption and production. In addition, a “One United Nations approach” could enable the coordination required to solve multidisciplinary environmental issues. Good examples of such an approach include the Partnership for Action on Green Economy and the Poverty Environment Action for SDGs.

ANNEX

This annex presents the official indicator framework for SDG 15.

Progress:
Green = MAINTAIN progress to achieve the target.
Yellow = ACCELERATE progress to achieve the target.
Red = REVERSE the trend to achieve the target.
Grey = INSUFFICIENT DATA to measure progress.

Target	Indicator	Latest data available, aggregated by ESCAP region if available	Comments
15.1 By 2020, ensure the conservation, restoration, and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains, and drylands, in line with obligations under international agreements.	15.1.1: Forest area as a proportion of total land area 15.1.2: The proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type	31.1% in 2020	ACCELERATE progress to achieve the target.
15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests, and substantially increase afforestation and reforestation globally.	15.2.1: Progress towards sustainable forest management	i. Forest area net change rate: 0.1% in 2020 ii. Forest area with a long-term management plan: 79.7% in 2020 iii. Forest area within legally established protected area: 12% in 2020	ACCELERATE progress to achieve the target.
15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, droughts, and floods, and strive to achieve a land degradation-neutral world.	15.3.1: The proportion of land that is degraded within the total land area	N/A	INSUFFICIENT DATA to measure progress.

ANNEX

15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential to sustainable development.	15.4.1: Coverage by protected areas of important sites for mountain biodiversity 15.4.2: Mountain Green Cover Index	N/A	ACCELERATE progress to achieve the target.
15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity, and, by 2020, protect and prevent the extinction of threatened species.	15.5.1: Red List Index	N/A	REVERSE the trend to achieve the target.
15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources, and promote appropriate access to such resources, as internationally agreed.	15.6.1: The number of countries that have adopted legislative, administrative, and policy frameworks to ensure fair and equitable sharing of benefits	N/A	INSUFFICIENT DATA to measure progress.
15.7 Take urgent action to end poaching and trafficking of protected species of flora and fauna, and address both the demand for and supply of illegal wildlife products.	15.7.1: The proportion of traded wildlife that was poached or illicitly trafficked	N/A	INSUFFICIENT DATA to measure progress.
15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species within land and water ecosystems, and control or eradicate priority species.	15.8.1: The proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species.	N/A	ACCELERATE progress to achieve the target.

ANNEX

15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies, and accounts.	15.9.1: (a) The number of countries that have established national targets in accordance with or similar to Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011–2020 in their national biodiversity strategy and action plans and the progress reported towards these targets; and (b) integration of biodiversity into national accounting and reporting systems, defined as implementation of the System of Environmental-Economic Accounting.	N/A	INSUFFICIENT DATA to measure progress.
15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems.	15.a.1 (a) Official development assistance on conservation and sustainable use of biodiversity; and (b) revenue generated and finance mobilized from biodiversity-relevant economic instruments	N/A	MAINTAIN progress to achieve the target.
15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation.	15.b.1 (a) Official development assistance for conservation and the sustainable use of biodiversity; and (b) revenue generated and finance mobilized from biodiversity-relevant economic instruments	N/A	MAINTAIN progress to achieve the target.

ANNEX

15.c Enhance global support for efforts to combat the poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities.	15.c.1: Proportion of traded wildlife that was poached or illicitly trafficked	N/A	INSUFFICIENT DATA to measure progress.

Source: UNESCO Institute for Statistics (UIS). (2022). Retrieved 21 January 2022, from https://geo.uis.unesco.org/sdg-benchmark/education-proficiency?viewBy=region&regionDefinitions=asia-central-and-southern&regionDefinitions=asia-eastern-and-south-eastern&regionDefinitions=oceania

Note: ESCAP stands for "the United Nations Economic and Social Commission for Asia and the Pacific."

** N/A represents areas where data is not available*

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