



The Sustainable Development Goals Report 2021

Extended Report

-Goal 15-



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

Note: The UN Statistics Division (UNSD) prepares the annual *The Sustainable Development Goals Report*, also known as the glossy report, based on storyline inputs submitted by UN international agencies in their capacity as mandated custodian agencies for the SDG indicators. However, due to space constraints, not all information received from custodian agencies is able to be included in the final glossy report. Therefore, in order to provide the general public with all information regarding the indicators, this 'Extended Report' has been prepared by UNSD. It includes all storyline contents for each indicator as provided by the custodian agencies and is unedited. For instances where the custodian agency has not submitted a storyline for an indicator, please see the custodian agency focal point information linked for further information.

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Target 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

Indicator 15.1.1: Forest area as a proportion of total land area

In 2020 the earth’s land surface is covered with 31.2% of forest; this is 100 million ha of forest cover less than 2 decades ago

The proportion of forest area of the world’s land area has gradually decreased from 31.9 percent in 2000 (4.2 billion hectares) to 31.5 percent in 2010, then down to 31.2 percent (4.1 billion ha) in 2020. Forest area losses amounted to almost 100 million hectares in the past two decades, however the rate of loss has slightly slowed down within the past ten years.

These global trends result from opposing dynamics in the regions:

- Asia as well as Europe and Northern America showed an overall increase in forest area from 2000 to 2020, due to afforestation and landscape restoration efforts, as well as natural expansion of forests in those regions. The expansion of forest area however slowed down from 2010 to 2020 compared to the period 2000-2010.
- On the other hand, large forest area losses were observed in the past twenty years in Latin America and the Caribbean, as well as in Sub-Saharan Africa, mainly due to the conversion of forest land for agricultural use for crops and grazing. Least developed countries are particularly affected by forest area losses. In Latin America and the Caribbean, the forest losses decreased in 2010-2020 compared to the previous decade, while an increase was observed in Sub-Saharan Africa.

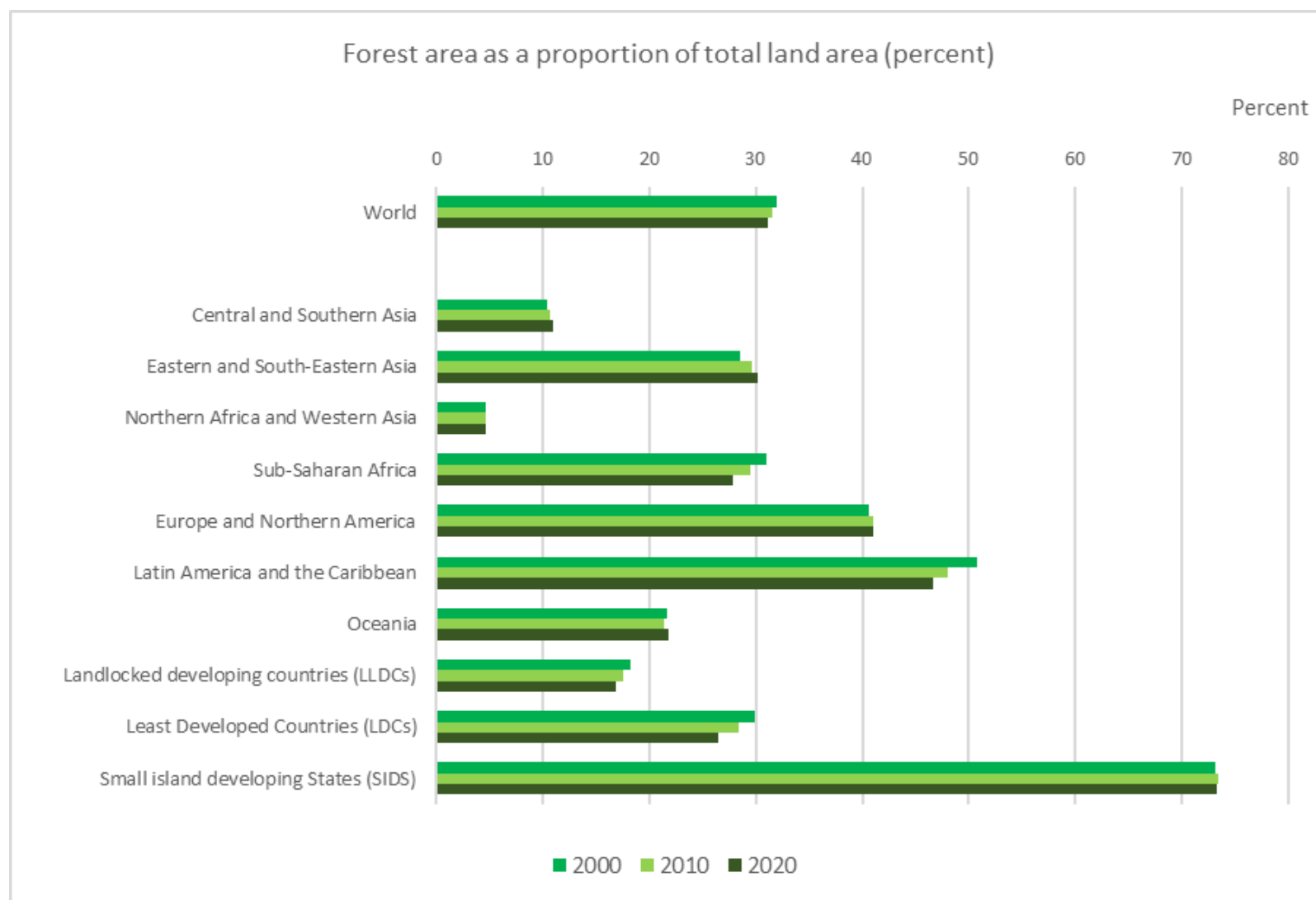
Forests play an important role for livelihoods and the well-being of rural and urban population. They notably contribute to regulate water cycle, mitigate climate change and holds most of the world’s terrestrial biodiversity. Loss of forests contributes to global warming and has negative effects, in particular, on the livelihoods of the poorest people, on interrelated land uses such as agriculture as well as on wildlife and other environmental services.

The COVID-19 crisis might have negative impacts on forest resources and increase risk of deforestation and associated biodiversity loss. Forests have a key role to play in securing livelihoods for the most vulnerable and in increasing resilience against crisis such as pandemics. Hence, there is a risk of increased pressure on forest cover and environmental integrity if other support measures are not in place.

Maintaining momentum on halting deforestation and forest degradation and on restoring damaged ecosystems will be crucial for improving the climate resilience of ecosystems, avoiding biodiversity losses and enhancing rural livelihoods, especially in the tropics and least developed countries.

This annual update of the indicator 15.1.1 uses the latest data from the Global Forest Resources Assessment 2020, which is based on the best available country data and information to date.

Forest area as proportion of total land area (percent)



Additional resources, press releases, etc. with links:

- FAO Global Forest Resources Assessment
 - Website: <http://www.fao.org/forest-resources-assessment/en/>
- FAO The State of the World's Forests 2020
 - Website: <http://www.fao.org/documents/card/en/c/ca8642en>
- FAO Global Forest Resources Assessment
 - Link: <http://www.fao.org/forest-resources-assessment/en/>
- FAO The State of the World's Forests 2020
 - Website: <http://www.fao.org/documents/card/en/c/ca8642en>
- FAO The impacts of COVID-19 on the forest sector: How to respond?
 - Website: <http://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1273752/>

Custodian agency(ies):

FAO

Indicator 15.1.2: Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type

Over the last 20 years, the world's governments have made progress in safeguarding important sites, with mean protected area coverage of terrestrial and freshwater Key Biodiversity Areas increasing globally from 29% in 2000 to 42% now.

Safeguarding important sites for biodiversity is a core requirement for environmental sustainability. Over the last 20 years, the world's governments have made progress in achieving this, with mean protected area coverage of Key Biodiversity Areas increasing globally from 29% in 2000 to 42% now, for both terrestrial and freshwater environments. This said, increases in coverage were fastest in the mid-2000s, and seem to be plateauing recently, with only a 1% increase over the last five years, and on average more than half of each Key Biodiversity Area falls outside any protected areas.

There is considerable spatial variation in this progress. Worryingly, protected area coverage of important sites remains less than a quarter in Oceania, Northern Africa and Western Asia, and Central and Southern Asia. Coverage of terrestrial Key Biodiversity Areas exceeds 40% in just three regions – Sub-Saharan Africa, Australia and New Zealand, and Europe and North America – while for freshwater Key Biodiversity Areas it exceeds 40% for Sub-Saharan Africa, Latin America and the Caribbean, Europe and North America, and Small Island Developing States.

Human interest story:

An important recent example of site level actions to safeguard a Key Biodiversity Area comes from Cameroon, where the country's government recently cancelled the logging concession in Ebo Forest. This critical policy intervention protects much of the Yabassi Key Biodiversity Area, which is habitat for gorillas *Gorilla gorilla*, chimpanzees *Pan troglodytes*, forest elephants *Loxodonta cyclotis*, and Preuss's red colobus monkeys *Piliocolobus preussi*, as well as being ancestral land for more than 40 local communities. At least 12 species of plants discovered in Ebo cannot be found anywhere else on the planet.

What impacts the COVID-19 pandemic will have on protected area coverage of important sites for biodiversity remains uncertain. There have been anecdotal reports that the COVID-19 pandemic has undermined environmental sustainability in some countries, for example by reducing protected area income from tourism, and by destabilising environmental governance. As yet, however, no signal of the pandemic is visible in the indicator of protected area coverage of Key Biodiversity Areas.

As the world emerges from the COVID-19 pandemic, countries face a stark choice. Post-COVID recovery efforts could be directed towards activities which ensure safeguard of key biodiversity areas: green stimulus via protected area establishment, for example; or development of other effective area-based conservation mechanisms which are managed for objectives other than conservation but nevertheless effectively maintain the biodiversity for which they are important. This is essential if countries are to be successful in achieving SDG15 and the new Post-2020 Global Biodiversity Framework. By contrast, if post-COVID recovery entails investments into business-as-usual, there is a danger that protected area coverage of important sites could plateau or even decline, jeopardising not just environmental commitments but sustainability overall.

Progress analysis: [See progress chart](#)

Additional resources, press releases, etc. with links:

- <http://www.keybiodiversityareas.org/kba-news/ebo-forest-saved-from-threat-of-logging>

Storyline author(s)/contributor(s):

UNEP-WCMC, BirdLife International, IUCN

Custodian agency(ies):

UNEP-WCMC, UNEP, IUCN

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

Indicator 15.2.1: Progress towards sustainable forest management

Significant progress all over the world towards sustainable forest management, but forest loss remains high

The indicator 15.2.1 shows evident progress towards sustainable management of the world’s forest. Most sub-indicators indicate notable positive trends while comparing the period 2010-2020 to the period 2000-2010, demonstrating successful efforts to conserve and sustainably use the forests.

The area of forest under certification, the proportion of forest area in protected area and under long-term management plans as well as the above-ground forest biomass per hectare have all increased at the global level and in most of the regions of the world. The number of countries with certified forest area have increased from 80 in 2019 to 83 in 2020.

The only exception from this trend is the forest area change rate, which shows a slight decrease in the rate of forest loss at global level and remains an issue of concern. FRA 2020 data reveal that in Africa and South-Eastern Asia the loss of forest increased in the 2010’s compared to the previous decade. Forest loss is still high also in Latin America and the Caribbean, but it is slowing down. In these regions forest conversion to large scale cropping (in particular in Latin America and South-Eastern Asia), grazing and subsistence agriculture (Africa) are the main drivers of forest loss.

Deforestation and forest degradation remain major challenges especially in the tropics, in least developed countries (LDCs), landlocked developing countries (LLDCs) as well as in small island developing states (SIDS). This calls for the need to further strengthen forest governance at all levels.

Forests are the largest carbon and biodiversity reservoirs on Earth. They are essential source of foods, goods and services and vital to the livelihood of the poorest and the rural communities.

As the COVID-19 pandemic continues to spread around the globe, it also affects forest and forestry in many ways. There is an increased risk of further deforestation and associated biodiversity loss, as some people are losing jobs and income and turning to forests and forest product for subsistence, putting more pressure on forest resources. Strengthened monitoring and enforcement to curb illegalities and support to those most vulnerable are essential measures to mitigate the pandemic-driven deforestation and degradation.

Forests have a key role to play in providing solutions to crisis such as the COVID-19 pandemic. They act as safety nets for the most vulnerable members of society, providing food, subsistence and income in times of scarcity and thereby increasing their resilience.

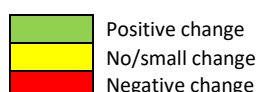
Global and regional efforts to sustain forest ecosystems as well as their social, economic and environmental functions should be pursued with particular emphasis on the tropics and developing countries.

This annual update of the indicator 15.2.1 is using the latest data from the Global Forest Resources Assessment 2020 as well as most recent certification data updated for the year 2020. The Global Forest Resources assessment is based on the best available country data and information to date.

15.2.1. Dashboard for SDG sub-indicators

SDG Region	Annual forest area change rate ¹⁾	Above-ground biomass stock in forest (t/ha)	Proportion of forest area within legally established protected	Proportion of forest area under a long-term forest management	Certified forest area
World	Green	Green	Green	Green	Green
Central and Southern Asia	Green	Green	Green	Green	Green
<i>Central Asia</i>	Green	Green	Green	Green	Green
<i>Southern Asia</i>	Green	Green	Green	Green	Green
Eastern and South-Eastern Asia	Green	Green	Green	Green	Green
<i>Eastern Asia</i>	Green	Green	Green	Green	Green
<i>South-Eastern Asia</i>	Red	Green	Green	Green	Green
Northern Africa and Western Asia	Red	Green	Green	Green	Green
<i>Northern Africa</i>	Red	Green	Green	Green	Green
<i>Western Asia</i>	Green	Green	Green	Green	Green
Sub-Saharan Africa	Red	Green	Green	Green	Green
Europe and Northern America	Green	Green	Green	Green	Green
<i>Europe</i>	Green	Green	Green	Green	Green
<i>Northern America</i>	Green	Green	Green	Green	Green
Latin America and the Caribbean	Green	Green	Green	Green	Green
Oceania	Green	Green	Green	Green	Green
<i>Oceania (exc. Australia and New Zealand)</i>	Red	Green	Green	Green	Green
<i>Australia and New Zealand</i>	Red	Green	Green	Green	Green
Landlocked developing countries (LLDCs)	Red	Green	Green	Green	Green
Least Developed Countries (LDCs)	Red	Green	Green	Green	Green
Small island developing States (SIDS)	Red	Green	Green	Green	Green

¹⁾ Calculated using compound interest formula.



Additional resources, press releases, etc. with links:

- FAO Global Forest Resources Assessment
 - Website: <http://www.fao.org/forest-resources-assessment/en/>
- FAO The State of the World's Forests 2020
 - Website: <http://www.fao.org/documents/card/en/c/ca8642en>
- FAO The impacts of COVID-19 on the forest sector: How to respond?
 - Website: <http://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1273752/>

Custodian agency(ies):

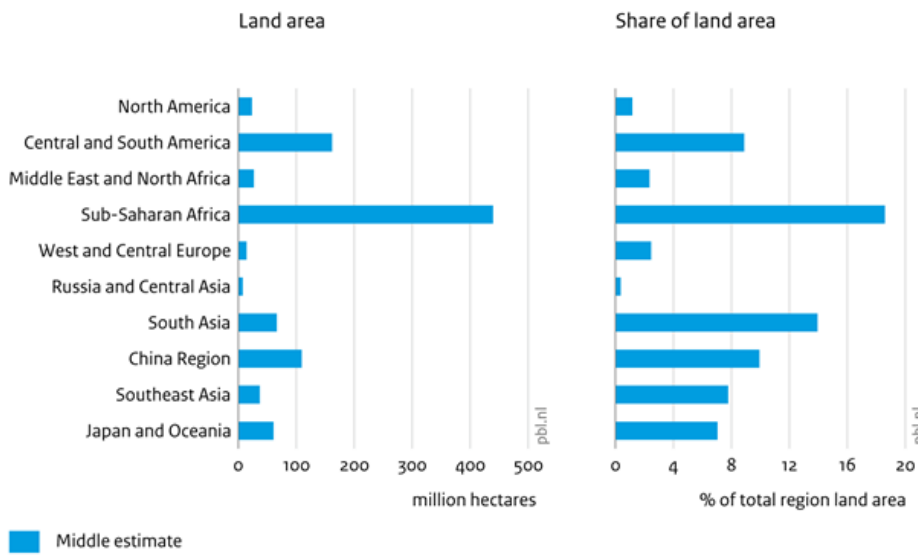
FAO

Target 15.3: By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

Indicator 15.3.1: Proportion of land that is degraded over total land area

As of July 2021, 127 countries had committed themselves to setting their voluntary targets for achieving land degradation neutrality, and in 68 countries, governments had already officially endorsed those targets. Overall, commitments to land restoration are estimated at 1 billion hectares, out of which 450 million hectares are committed through land degradation neutrality targets. In November 2020, the G20 launched an initiative to restore 50% of all degraded land by 2040 to help countries move from commitments to action and accelerate synergistic progress towards SDG target 15.3.

Total restoration commitments per region, 2020



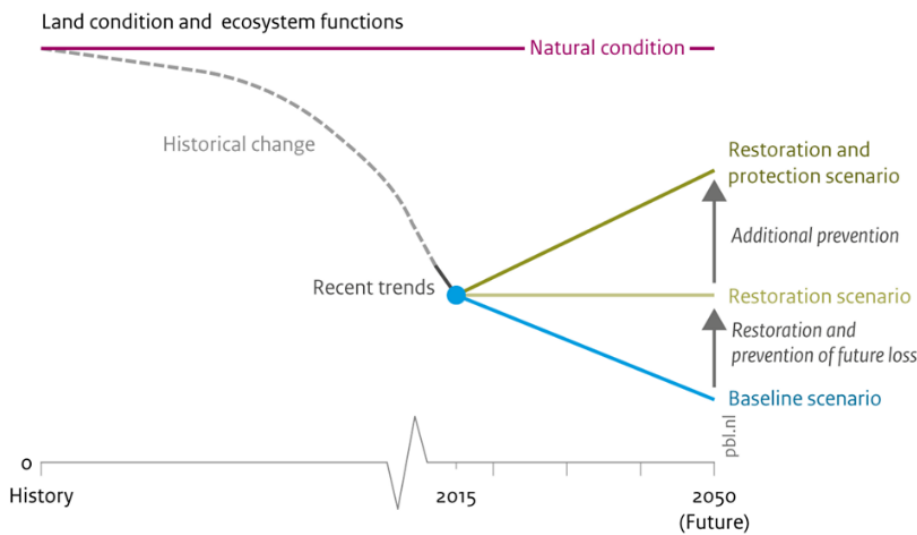
Source: UNCCD, UNFCCC, CBD, Bonn Challenge, FAO; collected and adapted by PBL for Global Restoration Commitments database, August 2020

Implementing the current commitments requires investments estimated at 0.04% to 0.21% of annual global GDP for 10 years (USD 300 billion to USD 1,670 billion). Estimated costs are highest for sub-Saharan Africa due to the large restoration commitments in this region. Land restoration is the cheapest and most effective solution to improved water storage, mitigating impacts of drought and addressing biodiversity loss. On average, every \$1 spent on ecosystem restoration gives a return of around \$10 in ecosystem goods and services. Some of that is direct monetary returns, such as from sustainable wood, improved agricultural yields, and ecotourism revenues but the greater part are global common goods, such as clean air and water, pollination, pest control, nutrient recycling, carbon sequestration, fewer animal-transmitted diseases and greater resilience to extreme weather and natural disasters.

The Great Green Wall (GGW) and other land restoration commitments in the Sahel are prime examples of cooperation and finance to further long-term COVID-19 recovery efforts at the local level. The recently announced GGW Accelerator Initiative expects up to USD 20 billion of funding by 2025 from new and existing partners such as the EU and its Member States, World Bank, AFDB, EIB, GCF and IFAD. As part of this effort, the UNCCD helped trigger the new Green Climate Fund Umbrella Program (USD 1 billion) for scaling up land restoration activities in GGW countries.

The PBL Netherlands Environment Assessment Agency developed scenarios to assess potential benefits of land restoration. Three scenarios up to the year 2050 were developed to provide a view of the extent and risks of land degradation, and to estimate the potential of land restoration compared to a future without restoration. These three scenarios are the Baseline, Restoration and Restoration & Protection scenarios. The effects of land restoration were assessed for their impact on natural area, biodiversity, soil organic carbon, agricultural yields, water regulation and carbon storage. Restoration measures were applied, often in combination, on 1.6 billion hectares of cropland, 2.2 billion of grazing land, and 1.4 billion of natural areas. Sub-Saharan Africa and Latin America have the largest areas with the potential for land restoration. When compared to the Baseline scenario, restoration means by 2050: Crop yields increase by 5-10% in most developing countries; Carbon stocks rise by 17 gigatons due to gains in soil carbon and reduced emissions; and slower biodiversity decline and loss of natural land.

Scenarios to assess potential benefits of land restoration



Source: PBL

Additional resources, press releases, etc. with links:

- Restored Land, Healthy People, Green Recovery: Build Forward Better with Land-Centered Solutions (UNCCD Solution Brief) https://www.unccd.int/sites/default/files/inline-files/UNCCD_Solution%20Brief.pdf

- Land Degradation Neutrality for Sustainable Agriculture and Food Security (UNCCD Brochure)
<https://www.unccd.int/publications/land-degradation-neutrality-sustainable-agriculture-and-food-security>
- Goals and Commitments for the Restoration Decade (PBL Policy Brief)
<https://www.pbl.nl/en/publications/goals-and-commitments-for-the-restoration-decade>
- The global potential for land restoration: Scenarios for the Global Land Outlook 2 (PBL Report)
<https://www.pbl.nl/en/publications/the-global-potential-for-land-restoration-scenarios-for-the-global-land-outlook-2>

Custodian agency(ies):

UNCCD

Target 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 for sustainable development

Indicator 15.4.1: Coverage by protected areas of important sites for mountain biodiversity

Over the last 20 years, the world's governments have made good progress in safeguarding important upland sites, with mean protected area coverage of mountain key biodiversity areas increasing globally from 28% in 2000 to 41% now.

Safeguarding important sites for biodiversity is a core requirement for environmental sustainability. Over the last 20 years, the world's governments have made good progress in achieving this, with mean protected area coverage of mountain key biodiversity areas increasing globally from 28% in 2000 to 41% now. This said, increases in coverage were fastest in the mid-2000s, and seem to be plateauing recently, with only a 1% increase over the last five years.

There is considerable spatial variation in this progress. Worryingly, protected area coverage of important mountain sites remains less than a quarter in Oceania and in Northern Africa and Western Asia. Coverage of mountain key biodiversity areas exceeds 40% in six regions – Least Developed Countries, Latin America and the Caribbean, Landlocked Developing Countries, Sub-Saharan Africa, Australia and New Zealand, and Europe and North America.

What impacts the COVID-19 pandemic will have on protected area coverage of important sites for mountain biodiversity remains uncertain. There have been anecdotal reports that the COVID-19 pandemic has undermined environmental sustainability in some countries, for example by reducing protected area income from tourism, and by destabilising environmental governance. As yet, however, no signal of the pandemic is visible in the indicator of protected area coverage of mountain key biodiversity areas.

As the world emerges from the COVID-19 pandemic, countries face a stark choice. Post-COVID recovery efforts could be directed towards activities which ensure safeguard of mountain key biodiversity areas: green stimulus via protected area establishment, for example; or development of other effective area-based conservation mechanisms which are managed for objectives other than conservation but nevertheless effectively maintain the biodiversity for which they are important. This is essential if countries are to be successful in achieving SDG15 and the new Post-2020 Global Biodiversity Framework. By contrast, if post-COVID recovery entails investments into business-as-usual, there is a danger that protected area coverage of important mountain sites could plateau or even decline, jeopardising not just environmental commitments but sustainability overall.

Storyline author(s)/contributor(s):

UNEP-WCMC, BirdLife International, IUCN

Custodian agency(ies):

UNEP-WCMC, UNEP, IUCN

Indicator 15.4.2: Mountain Green Cover Index

[Mountain ecosystems, which sustain 25 percent of terrestrial biodiversity, are especially vulnerable to climate change, putting biodiversity and the livelihoods of mountain peoples at risk](#)

Mountains cover about 22 per cent of the earth's land area and are home to some 915 million people as well as 25 per cent of terrestrial biodiversity. However, mountain ecosystems are especially vulnerable to climate change, which threatens their ability to continue providing ecosystem services and shelter. This is particularly alarming when mountain peoples are already among the world's most food insecure, with about 1 in 3 mountain dwellers facing the threat of food insecurity.

The green coverage of mountain areas is generally positively correlated to their state of health and therefore to their capacity to fulfil their ecosystem roles. New data based on satellite imagery at a 300m resolution reveals that about 73 per cent of the world's mountains are covered in green vegetation (forests, grasslands and croplands). Eastern and South Eastern Asia is the region with the highest proportion of green mountain cover, at 87 percent, whereas Western Asia and Northern Africa has the lowest cover, at 63%. Oceania* and Latin America and the Caribbean have a green mountain cover of 86 percent and 82 percent respectively, followed by Sub-Saharan Africa at 80 percent and Australia and New Zealand at 78 percent. Northern America and Europe and Central and Southern Asia have green mountain covers between 69 and 68 percent.

Disaggregated data by land cover type and elevation further reveals important patterns for the world's mountains. At the lowest elevation, forests are the predominant land cover type, covering over 50 per cent of the area. However, the share of forest cover steadily drops with higher elevation, becoming almost negligible above 4,500 meters. Correspondingly, the proportion of mountain area covered by grassland and otherlands (which may include ice cover, glaciers and barren land) generally increases with elevation, with grassland becoming the predominant land cover type above 3,500 meters. Across elevation ranges, cropland is most expanded between 1,500 and 2,500 meters, probably reflecting the fact that mountains at lower elevation are also defined by a higher slope and local elevation range (LER), which may not provide a suitable landscape for growing crops. Above 2,500 meters, crop coverage of mountains also steadily decreases. The share of mountain cover of settlements and wetland is negligible at all elevation ranges, although also with a tendency to decrease with higher altitudes.

Improvement in the accuracy, frequency and resolution of geospatial data will allow for a finer analysis of green cover changes in the future across different elevation classes and land cover types.

[Custodian agency\(ies\):](#)

FAO

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

Indicator 15.5.1: Red List Index

Globally, species survival probability is decreasing, as revealed by repeat assessments of the extinction risk of >25,000 species for the IUCN Red List of Threatened Species.

Human impacts have increased species extinction rates by around three orders of magnitude compared to those usual over Earth’s history, one of the most fundamental and irreversible impacts that humanity has on nature. In response, SDG 15 commits to halting species extinction. Nevertheless, globally, the risk of global species extinction has continued to increase over the period since 1993. Specifically, SDG indicator 15.5.1, the Red List Index, has deteriorated by 10% (from 0.81 to 0.73) over this quarter-century, as revealed by repeat assessments of the extinction risk of >25,000 species (including all mammals, birds, amphibians, reef-building corals, and cycads) for the IUCN Red List of Threatened Species.

There is considerable variation between regions in changes in the Red List Index over the last 27 years.

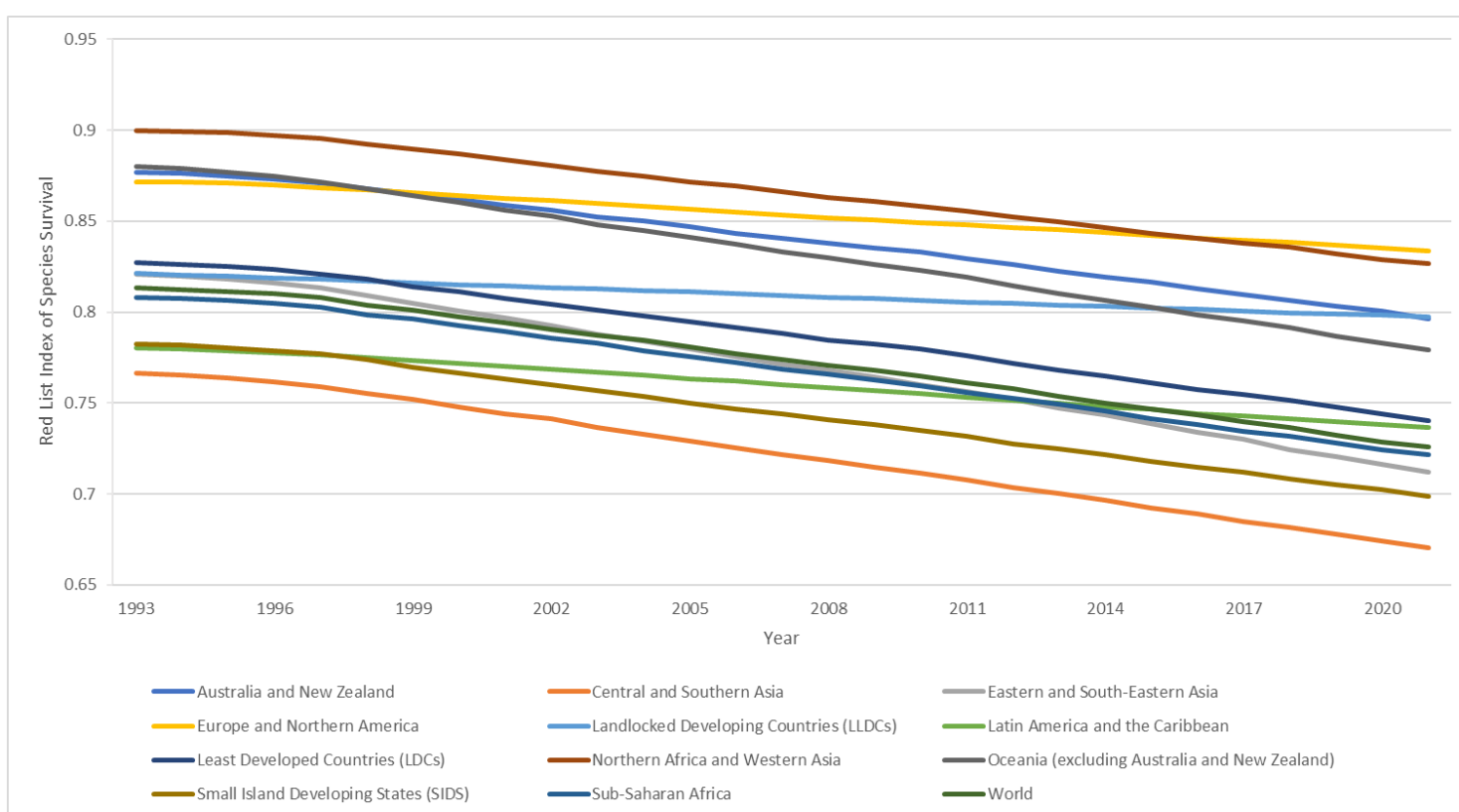
Species in Central and Southern Asia, Eastern and South-Eastern Asia, and Small Island Developing States face both the highest extinction risk, and the most rapid increases in extinction risk, followed by Sub-Saharan Africa. Deteriorations are also rapid in Australia and New Zealand and Oceania, and in Least Developed Countries, although the absolute prevalence of extinction risk is lower than the overall global value in these regions. Meanwhile species in Europe and North America, Latin America and the Caribbean, Northern Africa and Western Asia, and Landlocked Developing Countries face both lower extinction risk and slower deteriorations.

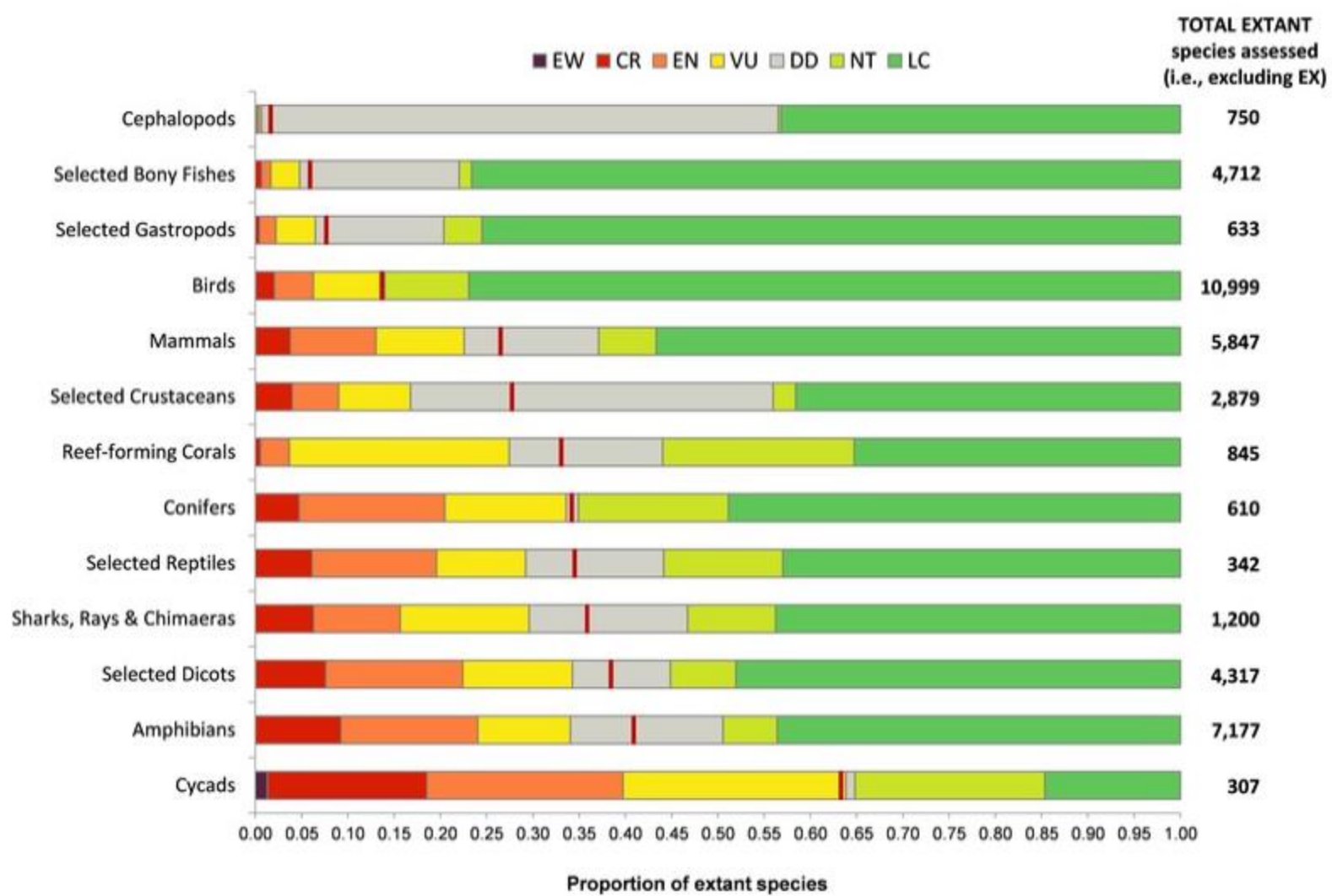
Human interest story:

While these deteriorations are deeply concerning, good news from 2020 is novel evidence on the crucial impact of conservation actions in preventing global extinctions. Specifically, conservation has been shown to have prevented 21–32 bird and 7–16 mammal extinctions since 1993. These species include Puerto Rican Amazon *Amazona vittata*, Przewalski’s Horse *Equus ferus*, Alagoas Antwren *Myrmotherula snowi*, Iberian Lynx *Lynx pardinus*, and Black Stilt *Himantopus novaezelandiae*, among others. Twenty-one bird species benefited from invasive species control, 20 from conservation in zoos and collections, and 19 from site protection, while 14 mammal species benefited from legislation, and nine from species re-introductions and conservation in zoos and collections. Considering that 10 bird and five mammal species were actually driven to extinction over this period, these conservation actions have reduced extinction rates by 3–4 times in comparison to those that would have been anticipated in the absence of conservation action.

What impacts the COVID-19 pandemic will have on species extinction risk remains uncertain. The most prevalent overall drivers of species extinction risk are unsustainable harvest, agricultural and urban development, and invasive alien species. On the one hand, reduced economic activity may have temporarily alleviated some of these; for example, less transportation activity could reduce pressure from invasive species. On the other hand, there have been reports that the COVID-19 pandemic has undermined environmental sustainability in some countries, for example by reducing income from tourism, curtailing conservation interventions and enforcement efforts, and by destabilising environmental governance. It is too early to detect any signal of the pandemic in the Red List Index.

As the world emerges from the COVID-19 pandemic, countries face a stark choice. Post-COVID recovery efforts could be directed towards activities which abate the drivers of species extinction – this is essential if countries are to be successful in achieving SDG15 and the new Post-2020 Global Biodiversity Framework. By contrast, if post-COVID recovery entails investments into business-as-usual, threats to species will continue to increase, jeopardising not just environmental commitments but sustainability overall, and potentially increasing the risk of further zoonotic diseases.





Progress analysis: [See progress chart](#)

Additional resources, press releases, etc. with links:

- IUCN Red List of Threatened Species <https://www.iucnredlist.org/>
- GEF Pandemic Task Force <https://www.thegef.org/news/gef-pandemic-task-force-issues-guidance>
- <https://www.ncl.ac.uk/press/articles/latest/2020/09/28speciesextinctionsprevented/>
- <https://conbio.onlinelibrary.wiley.com/doi/10.1111/conl.12762>

Storyline author(s)/contributor(s):

IUCN, BirdLife International

[Custodian agency\(ies\):](#)

IUCN

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

Indicator 15.6.1: Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits

There has been significant progress since 2016. As of 1 February 2021, 128 countries and the European Union have ratified the Nagoya Protocol on Access and Benefit-sharing (ABS) (an increase of 60) and 67 countries and the European Union have shared information on their ABS frameworks through the ABS Clearing-House (representing an increase of 61 countries). For the International Treaty on Plant Genetic Resources for Food and Agriculture, there are now 148 Contracting Parties, and 57 countries have thus far provided information about their ABS measures through their Compliance report.

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization entered into force on 12 October 2014 as a supplementary agreement to the Convention on Biological Diversity to further advance the third objective of the Convention. The Protocol is still at the early stages of its implementation. Nevertheless, many Parties to the Nagoya Protocol as well as non-Parties have made considerable progress in putting in place access and benefit-sharing (ABS) frameworks. As of 1 February 2021, 128 countries and the European Union have ratified the Protocol and 67 countries and the European Union have adopted ABS frameworks and published related information in the ABS Clearing-House. So far, 22 countries have published 2110 internationally recognized certificates of compliance and 6 countries have published 44 checkpoint communiqués. The Secretariat of the Convention on Biological Diversity is engaging with countries to facilitate this process.

The International Treaty on Plant Genetic Resources for Food and Agriculture facilitates access to plant genetic material for farmers and plant breeders to develop new crop varieties to adapt agricultural production to a changing environment. The exchange of plant material increases the opportunity for farmers to share in the monetary and non-monetary benefits arising from the use of such material. As of February 2021, 57 countries have provided reports about their access and benefit-sharing measures to facilitate exchange of plant material, while there are 148 Contracting Parties to the Treaty. To date, over 5.5 million samples have been transferred globally with more than 78,000 contracts concluded - known as Standard Material Transfer Agreements (SMTAs), which 6,447 recipients in 181 countries have used to facilitate exchange of plant genetic material.

[Custodian agency\(ies\):](#)

CBD-Secretariat

Target 15.7: Take urgent action to end poaching and trafficking of protected species of flora and fauna and address both demand and supply of illegal wildlife products

Indicator 15.7.1/15.c.1: Proportion of traded wildlife that was poached or illicitly trafficked

Traffickers are adapting to market dynamics, shifting away from ivory as prices decline and moving to more lucrative products like pangolin scales

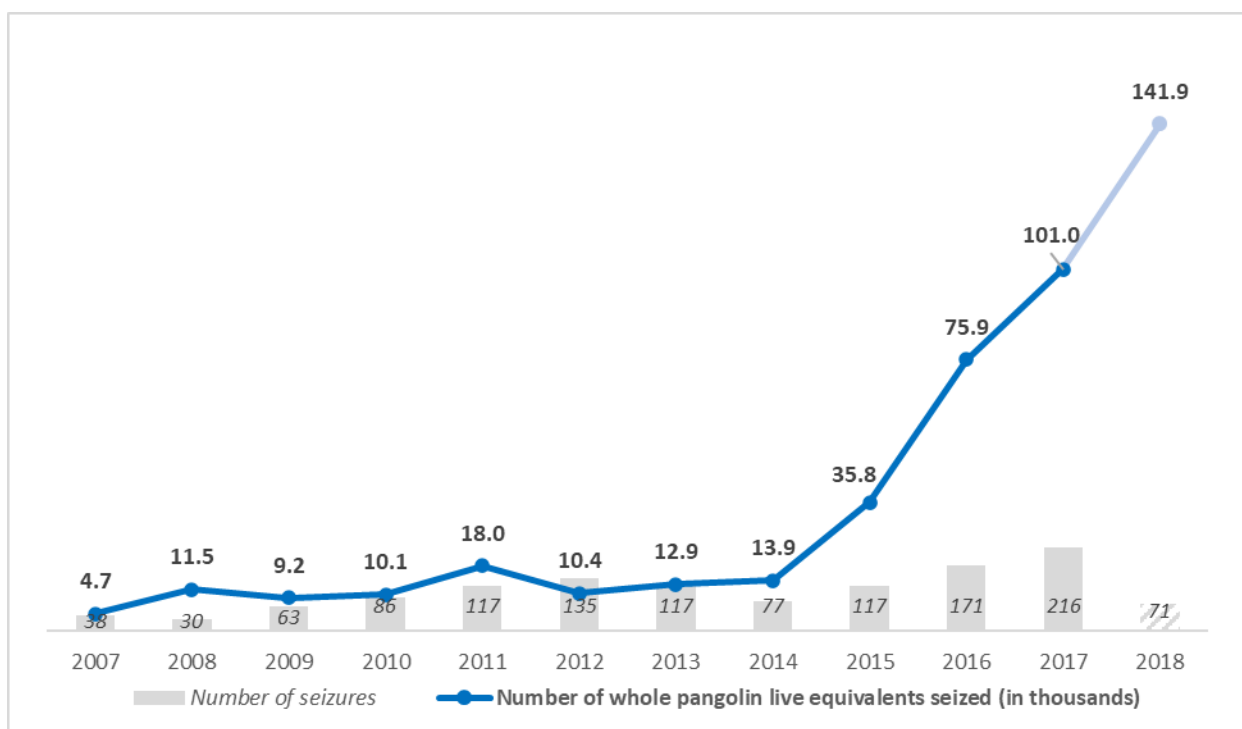
While it is too early to declare success in curbing the illegal trade in ivory, a combination of overall decreasing numbers of poached elephants and ivory seizures, and dropping prices suggest that the market for ivory is in decline. The primary poaching indicator – the Percentage of Illegally Killed Elephants (PIKE) of the Convention on International Trade in Endangered Species’ Monitoring the Illegal Killing of Elephants (MIKE) program – has declined every year from 2011 to 2019. The volume of ivory tusks seized globally has declined overall from 2013, despite fluctuations from year to year.¹ Its less supply with the same demand or an increase in demand, would suggest a rise in prices, but on the contrary, prices for ivory have declined since 2014. African market prices in 2018 were one-half to one-third of the ivory prices paid in 2014. Asian market prices have also seen a parallel decline in the price of illicit raw tusks, from a high of about 2,000 USD per kg in 2014 to a low of about 700 USD per kg in 2018. Consumer demand surveys in Southeast and East Asia, ivory’s main destination markets, confirm declining interest in ivory, with consumers saying they feel buying the product is shameful. There are several possible explanations for the downward trend, but it seems likely that at least part of the decline can be attributed to tightened domestic market controls in East and South East Asia.

Meanwhile, there has been a 10-fold increase in the number of whole pangolin equivalents seized since 2014 and the size of individual seizures has also increased. Before 2016, the largest seizures intercepted amounted to less than 10,000 live pangolin equivalents while in 2019, just three major seizures were equivalent to more than twice that number. The years 2019 and 2020 also saw a rise in mixed shipments of ivory and pangolin scales (6 of the 11 largest pangolin scale seizures in 2019 involved mixed shipments) with a preference towards the pangolin trade because of lower perceived enforcement risk and higher profits given declining prices paid for ivory.

Poachers in Sub-Saharan Africa also noted prices for pangolins have been going up since 2017. This species displacement suggests that traffickers are adapting to the market dynamics and shifting to other lucrative species as opportunities allow, reusing existing trafficking chains and infrastructure like that for ivory. In the case of pangolin trafficking, this displacement is made especially simple because collecting pangolins, unlike big game hunting, requires no heavy guns or specialized equipment. Most hunters hunt part-time and many villages have a large percentage of the community involved in the illicit trade.

This species displacement poses obvious challenges for law enforcement trying to dismantle wildlife trafficking networks. It requires constant re-evaluation of enforcement priorities and the ability to shift staff and resources to protect new target species quickly. It also requires law enforcement to adapt their approach to the changing poacher modus operandi which is not the same for specialized elephant poaching gangs vs. part-time pangolin hunters. The flexibility required to stay one step ahead of wildlife criminals highlights the need for strong law enforcement information sharing and coordination to anticipate developments like changes in target species.

Number of whole pangolin equivalents seized and number of seizures annually, 2007-2018



¹ Preliminary results from 2019 suggest an increase in seizures that could be due to improved interdiction and/or poachers attempting to unload stock in response to declining prices.

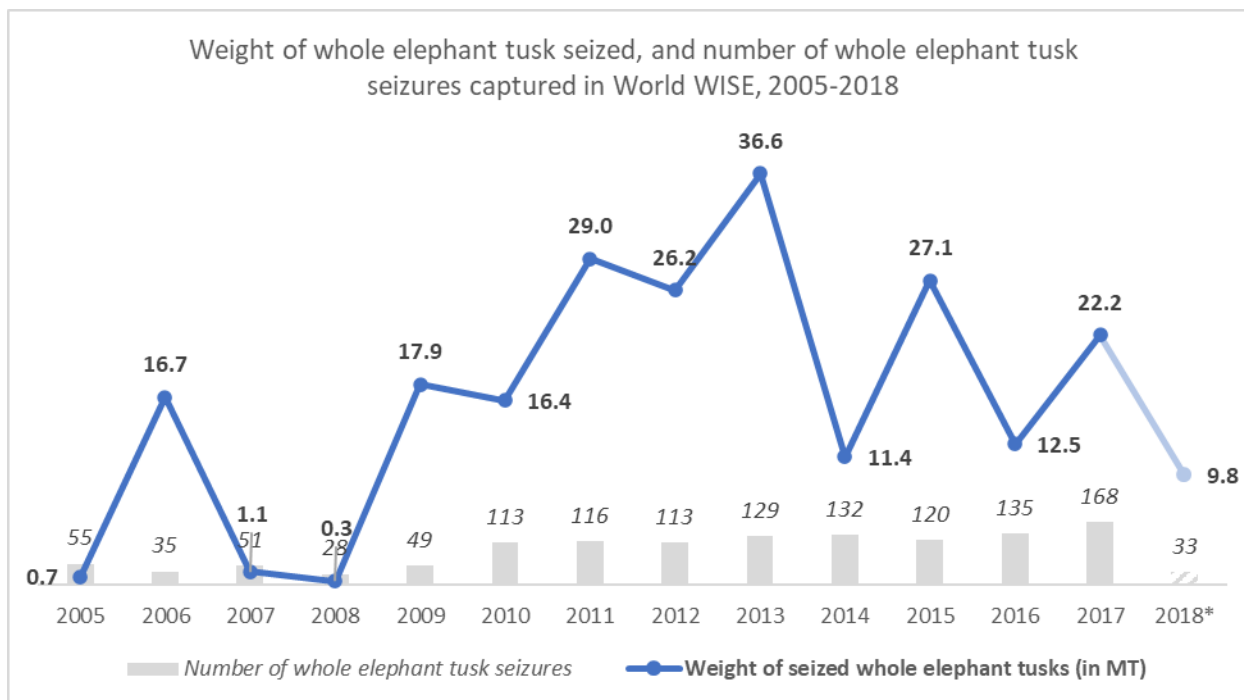


Figure 1: Weight of elephant tusk seizures and total number of seizures captured in World WISE, 2005-2018 (tons)

Additional resources, press releases, etc. with links:

- 2020 World Wildlife Crime Report (refers generally to the research work done on wildlife crime by the Research and Trend Analysis Branch).
 - Link: <https://www.unodc.org/unodc/en/data-and-analysis/wildlife.html>

Custodian agency(ies):

UNODC, CITES

Target 15.8: By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species

Indicator 15.8.1: Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species

Globally, there has been an increase in the response to invasive alien species, with nearly all countries now having national legislation relevant to their prevention or control, and most with alignment of national to global targets, but with wide variation between regions in the allocation of resources for these responses.

Invasive alien species are a serious challenge to sustainability around the world, negatively affecting livelihoods, economies, human health and well-being, and a major driver of biodiversity loss and species extinctions (as shown by the fact they are documented as a driver of extinction risk for more than a quarter of species assessed as threatened on the IUCN Red List). As an example, the Asian Giant Hornet (*Vespa mandarinia*) has recently arrived as an invasive alien species in North America, perhaps accidentally introduced with packing material of potted plants. It was first reported in 2019 in British Columbia, Canada, with ~30 sightings reported in Washington State, USA, in 2020. A native of Asia, the species is a known predator of arthropods, including honeybees, and poses a danger to human health with its venomous sting.

In response, governments adopt legislation relevant to the prevention and control of invasive alien species. Nearly all countries (98%) now report having such legislation in place. The sectoral coverage of invasive alien species -related national legislation varies widely however. Most countries have such legislation adopted that is relevant to agriculture (92% and 82% of countries with legislation relevant to plant and animal health respectively), but fewer with legislation focused towards other sectors such as environment (42%), or fisheries and aquaculture (27%).

Countries have also established global targets for invasive species response through the Multilateral Environmental Agreements. For example, Aichi Target 9 of the Strategic Plan for Biodiversity 2011–2020 mandated that “by 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment”. Countries have in turn increasingly been aligning their national invasive alien species -related targets, as formalised in their National Biodiversity Strategies and Action Plans, to this global target, with 84% now reporting alignment compared to 74% in 2016. There is substantial regional variation in this alignment. In Australia and New Zealand, Central America, Eastern Asia, Northern America, South-eastern Asia, and Southern Asia, 100% of countries now report such target alignment. By contrast, alignment is reported by less than 70% of countries in Central Asia, Northern Africa, Oceania, and Western Asia; this may be of particular concern given the vulnerability of island and dryland nations to the impacts of invasive alien species.

Adequate resourcing is crucial to enable effective invasive alien species response. Comprehensive evaluation of “adequacy” requires robust budgeting of national invasive species strategies and action plans, which has not yet been completed in many countries. However, some insight into the resourcing of invasive alien species responses is provided by national reporting of the sources of funding allocations. A total of 55% of countries report allocations towards invasive alien species prevention or control from their national budgets, while 37% of countries report that they have accessed global financial mechanisms. Again, there is wide regional variation. The majority of countries in Australia and New Zealand, Central America, Central Asia, Eastern Asia, Europe, Northern America, and South-eastern Asia report allocations from national budgets, while the majority of countries in Southern Asia and Sub-Saharan Africa report receiving allocations from global financial mechanisms. The majority of countries in the Caribbean and Oceania, and in Small Island Developing States overall, report receiving allocations from both sources, which is encouraging given the disproportionate urgency of addressing invasive alien species on islands.

Human interest story:

One example of such invasive alien species response is the Predator Free New Zealand initiative. Introduced mammalian predators in New Zealand such as rats (*Rattus rattus*, *Rattus exulans*), possums (*Trichosurus vulpecula*), and stoats (*Mustela erminea*) have had severe impacts on the country’s native biodiversity. Predator Free 2050 is a goal set by the New Zealand government to remove from the country the most harmful predators that have negative impacts on native and endemic species by 2050. Predator Free 2050 calls for collective action and is focused on mobilisation of people and resources, development of innovative tools, methods, and people engagement, and acceleration of progress across New Zealand’s landscapes. Collaborations of 5,000 communities, groups, and “iwi” (people) across the country, including 13 landscape partnerships, are working towards the eradication of these predators and thus conservation of native biodiversity.

While there is as-yet no systematic evidence, the COVID-19 pandemic will likely result in side effects upon both the spread and impact of invasive alien species, and on national responses to their prevention and control. For example, there have been increasing concerns for biosecurity (for example, in closure of production facilities for American Mink *Neovison vison*, a problematic invasive species, in Europe), as well as potential reductions in arrival of new alien species concurrent with reduced global transport. However, there have also been reports of reduced field enforcement and monitoring, which may risk increases in invasive species impacts on the ground. As post-COVID recovery plans advance around the world, maintaining any pandemic-driven increases in invasive alien species response will be an important priority, as will making sure to avoid any regression in existing responses.

Additional resources, press releases, etc. with links:

- IUCN SSC Invasive Species Specialist Group <http://www.issg.org/>
- IUCN Invasive Species <https://www.iucn.org/theme/species/our-work/invasive-species>
- IUCN Global Invasive Species Database <http://www.iucngisd.org/gisd/>
- Global Register of Introduced and Invasive Species <http://griis.org/>
- Biodiversity Indicators Partnership: Legislation for prevention and control of invasive alien species (IAS), encompassing “Trends in policy responses, legislation and management plans to control and prevent spread of invasive alien species” and “Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species” <https://www.bipindicators.net/indicators/adoption-of-national-legislation-relevant-to-the-prevention-or-control-of-invasive-alien-species>

- Zhu, G., Illan, J.G., Looney, C. & Crowder, D.W. (2020) Assessing the ecological niche and invasion potential of the Asian giant hornet. PNAS 117: 24646-24648; DOI: 10.1073/pnas.2011441117.
Animal and Plant Health Inspection Service U.S. Department of Agriculture (2021) Asian Giant Hornet.
Department of Conservation, Govt of New Zealand (2021) Predator Free NZ
<https://www.doc.govt.nz/nature/pests-and-threats/predator-free-2050/>.

Storyline author(s)/contributor(s):

IUCN, ISSG

Custodian agency(ies):

IUCN

Target 15.9: By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts

Indicator 15.9.1: (a) 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

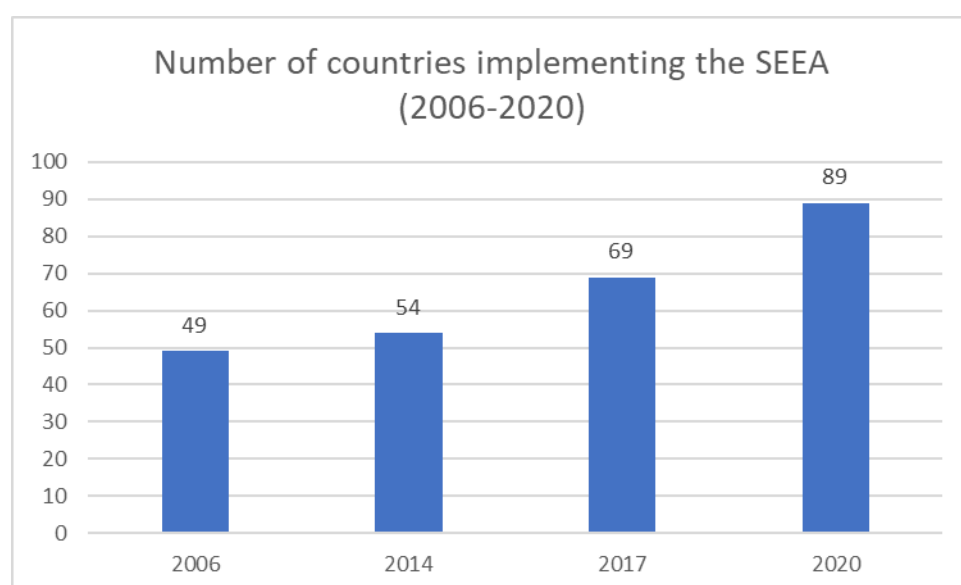
More and more countries turn to natural capital accounting to go beyond-GDP and make nature count

Climate change and biodiversity loss have made policymakers realize that the economic progress of the last decades have not come without a cost. As a result, they are increasingly looking to move beyond-GDP. The System of Environmental-Economic Accounting (SEEA) is the international statistical standard for natural capital accounting and provides a way for governments to go beyond-GDP and make nature count in their national accounts. According to the results of the 2020 Global Assessment on Environmental-Economic Accounting and Supporting Statistics, 89 countries have implemented the SEEA as a way to integrate biodiversity values into economic policy and decision making. This number is an increase of 29 per cent from the number of countries implementing the SEEA in 2017 (69). A majority of these 89 countries (62, or 70 per cent) have integrated the SEEA into their regular statistical production process and compile and publish the accounts on a regular basis. In addition, 11 countries (12 per cent) compile and disseminate the accounts (though not on a regular basis) and 16 countries (18 per cent) compile, but do not disseminate the accounts.

Despite the relatively new concept of natural capital accounting, the SEEA is compiled in developed and developing countries alike. In fact, slightly more than half of all countries compiling the SEEA are developing countries (53 per cent). In terms of geographical region, SEEA compilation is still most prevalent in Europe, with a total of 37 countries implementing the SEEA. This is due to the fact that the compilation of several SEEA accounts are mandated by law in the European Union. At the same time, implementation is growing significantly in Asia and Africa. Africa, in particular, has seen a large increase in implementation, though measuring implementation in the region remains a challenge due to survey non-response.

Moving forward, the number of countries implementing the SEEA is only expected to increase. In 2021, the United Nations Statistical Commission adopted the SEEA Ecosystem Accounting (SEEA EA) and encouraged countries to implement the accounts. A global implementation strategy is currently being developed and aims to strengthen collaboration and capacity building, mainstream the use of the accounts for policy, and more. In addition, calls for a green recovery from COVID-19 are expected to promote SEEA implementation. Similar to how policymakers used the System of National Accounts to measure economic progress after WWII, today's policymakers will need to use a measurement system that provides them with the information needed to plan and track a green recovery.

Number of countries implementing the SEEA (2006-2020)



Additional resources, press releases, etc. with links:

- Report of the 2020 Global Assessment on Environmental-Economic Accounting and Supporting Statistics: https://unstats.un.org/unsd/statcom/52nd-session/documents/BG-3f-2020_GA_report_%20draft_%20ver7_nomap-E.pdf
- SEEA website: seea.un.org

Storyline author(s)/contributor(s):

Alessandra Alfieri, DESA
Jessica Ying Chan, DESA

Custodian agency(ies):

CBD-Secretariat, UNEP, UNSD, UNEP-WCMC

Target 15.a: Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

Indicator 15.a.1/15.b.1: (a) Official development assistance on conservation and sustainable use of biodiversity; and (b) revenue generated and finance mobilized from biodiversity-relevant economic instruments

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

Indicator 15.b.1/15.b.1: (a) Official development assistance on conservation and sustainable use of biodiversity; and (b) revenue generated and finance mobilized from biodiversity-relevant economic instruments

In 2019, DAC members' ODA in support of biodiversity was USD 6.6 billion, a decrease of 14% in real terms over 2018. Biodiversity aid is widely spread: the largest two recipient countries were India (USD 215 million) and Myanmar (USD 165million).

Biodiversity-relevant economic instruments can provide critical incentives for the conservation and sustainable use of biodiversity – they can also generate revenue and mobilise finance. Such instruments are not being used to their full potential however.

Biodiversity-relevant economic instruments, such as taxes, fees and charges, tradable permit schemes and biodiversity-relevant positive subsidies, are key policy instruments that can be used to foster the conservation and sustainable use of biodiversity. They provide incentives for more sustainable consumption and production patterns, and are also able to generate revenue and mobilise finance for biodiversity. Based on OECD's Policy Instruments for the Environment (PINE) database, which covers data from 122 countries, in 2021, a total of 232 biodiversity-relevant taxes are in force, spanning 62 countries. Biodiversity-relevant fees and charges in force total 195 and span 50 countries, while 37 biodiversity-relevant tradable permit systems are in operation across 26 countries. Biodiversity-relevant positive subsidies total 151, and are active in 26 countries. In OECD countries in total, biodiversity-relevant taxes generate approximately USD 7.6 billion a year (average 2017-2019) in revenue. However, this amounts to only 0.9% of the revenue generated from all environmentally-relevant taxes in OECD countries.

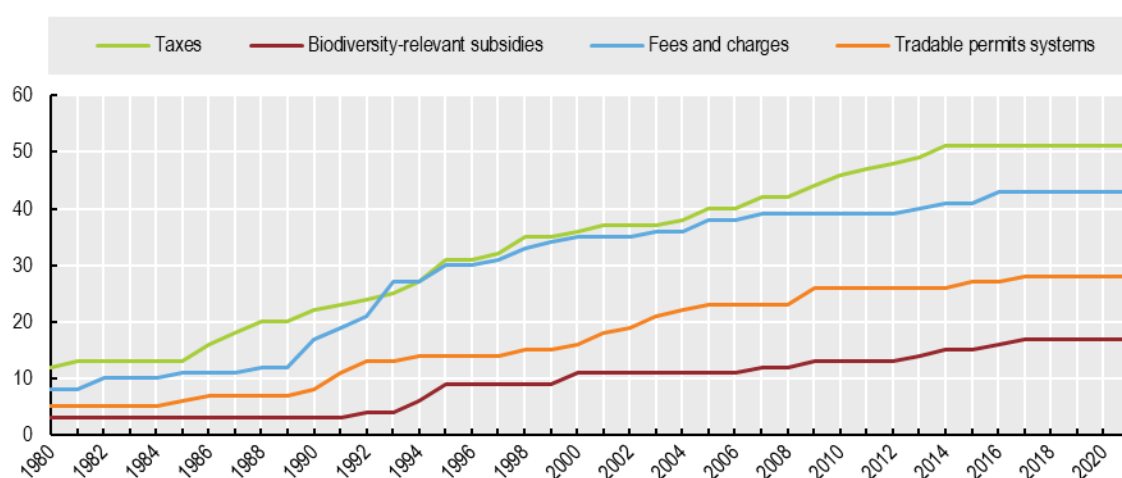
In comparison, on average (2016-2018), an estimated USD 7.5 billion per year was generated by biodiversity-relevant taxes across OECD countries and a total of USD 7.7 billion per year across all countries (including OECD) as reported in the OECD PINE database (to which 110 countries were reporting to in 2020) (OECD, 2020a)*.

While the use of biodiversity-relevant economic instruments has increased since 1980, there has been a general plateau since 2010 [see the figure below] and they remain underutilised (OECD, 2020a)*.

Biodiversity-relevant fees and charges generated USD 1.2 billion in revenue per year (2015-2017 average), though these data are not yet reported comprehensively by countries (OECD, 2020b)*

*OECD (2020a), [Tracking Economic Instruments and Finance for Biodiversity – 2020](#).
OECD (2020b), [A Comprehensive Overview of Global Biodiversity Finance](#).

Biodiversity-relevant economic instruments – country coverage. Number of countries with biodiversity-relevant economic instruments



Note: Countries are not included in this figure if the start date of their instrument is unknown.

Source: OECD PINE database. Accessed March 2021.

Additional resources, press releases, etc. with links:

- To help UNSD find additional information on the indicator, please indicate any additional reports, press releases and/or other resources.
- Please note that while the information above reflects data as of March 2021, we have not yet updated our brochure for 2021, and intend to release this later on in the year, prior to CBD COP15.
- The 2020 version is available at OECD (2020), [Tracking Economic Instruments and Finance for Biodiversity – 2020](#) which includes a lot more detail.
- This report may also be of interest: OECD (2020), [A Comprehensive Overview of Global Biodiversity Finance](#).

Custodian agency(ies):

OECD, UNEP, World Bank

Target 15.c: Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

Indicator 15.7.1/15.c.1: Proportion of traded wildlife that was poached or illicitly trafficked

Traffickers are adapting to market dynamics, shifting away from ivory as prices decline and moving to more lucrative products like pangolin scales

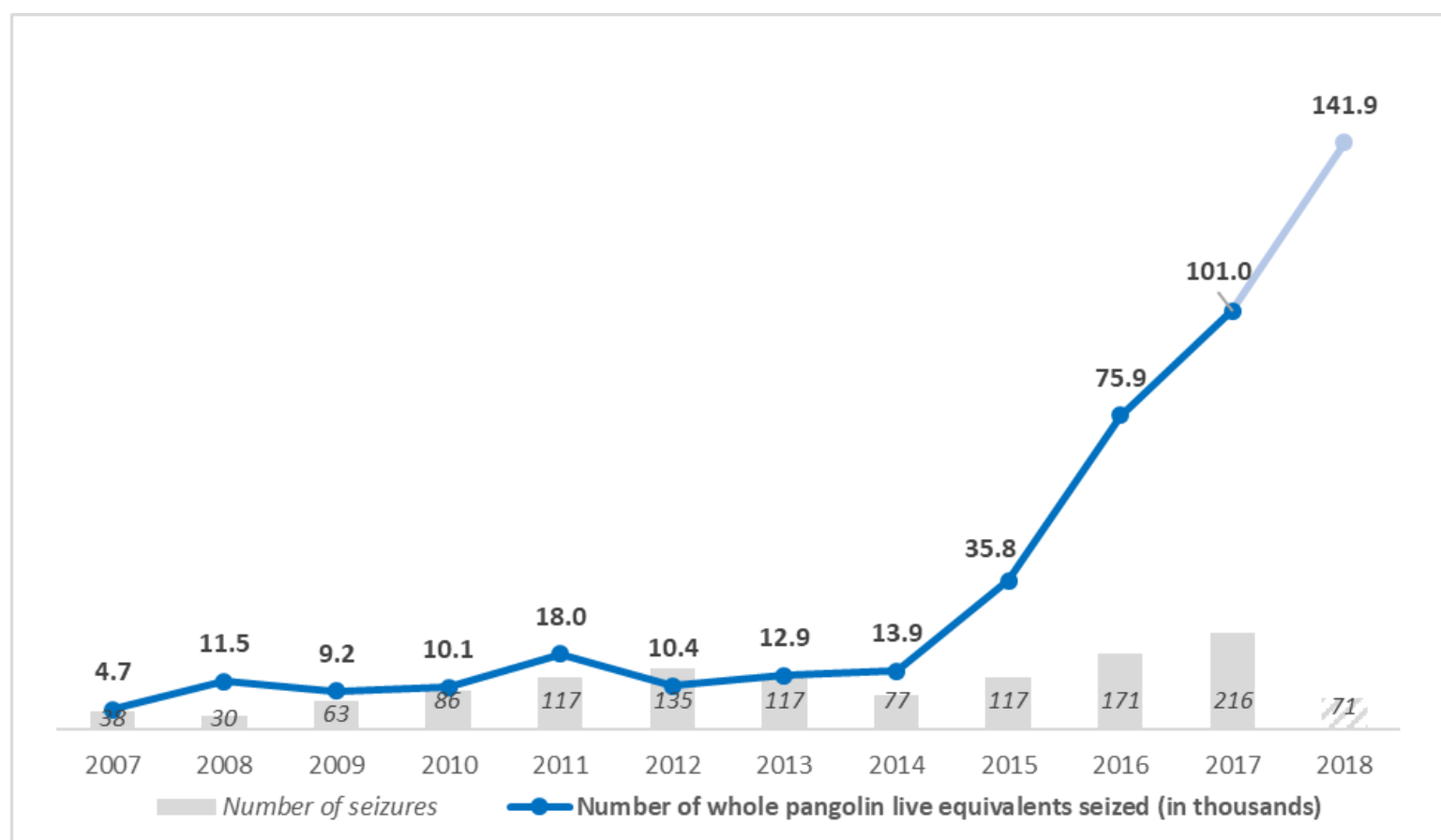
While it is too early to declare success in curbing the illegal trade in ivory, a combination of overall decreasing numbers of poached elephants and ivory seizures, and dropping prices suggest that the market for ivory is in decline. The primary poaching indicator – the Percentage of Illegally Killed Elephants (PIKE) of the Convention on International Trade in Endangered Species’ Monitoring the Illegal Killing of Elephants (MIKE) program – has declined every year from 2011 to 2019. The volume of ivory tusks seized globally has declined overall from 2013, despite fluctuations from year to year. Its less supply with the same demand or an increase in demand, would suggest a rise in prices, but on the contrary, prices for ivory have declined since 2014. African market prices in 2018 were one-half to one-third of the ivory prices payed in 2014. Asian market prices have also seen a parallel decline in the price of illicit raw tusks, from a high of about 2,000 USD per kg in 2014 to a low of about 700 USD per kg in 2018. Consumer demand surveys in Southeast and East Asia, ivory’s main destination markets, confirm declining interest in ivory, with consumers saying they feel buying the product is shameful. There are several possible explanations for the downward trend, but it seems likely that at least part of the decline can be attributed to tightened domestic market controls in East and South East Asia.

Meanwhile, there has been a 10-fold increase in the number of whole pangolin equivalents seized since 2014 and the size of individual seizures has also increased. Before 2016, the largest seizures intercepted amounted to less than 10,000 live pangolin equivalents while in 2019, just three major seizures were equivalent to more than twice that number. The years 2019 and 2020 also saw a rise in mixed shipments of ivory and pangolin scales (6 of the 11 largest pangolin scale seizures in 2019 involved mixed shipments) with a preference towards the pangolin trade because of lower perceived enforcement risk and higher profits given declining prices paid for ivory.

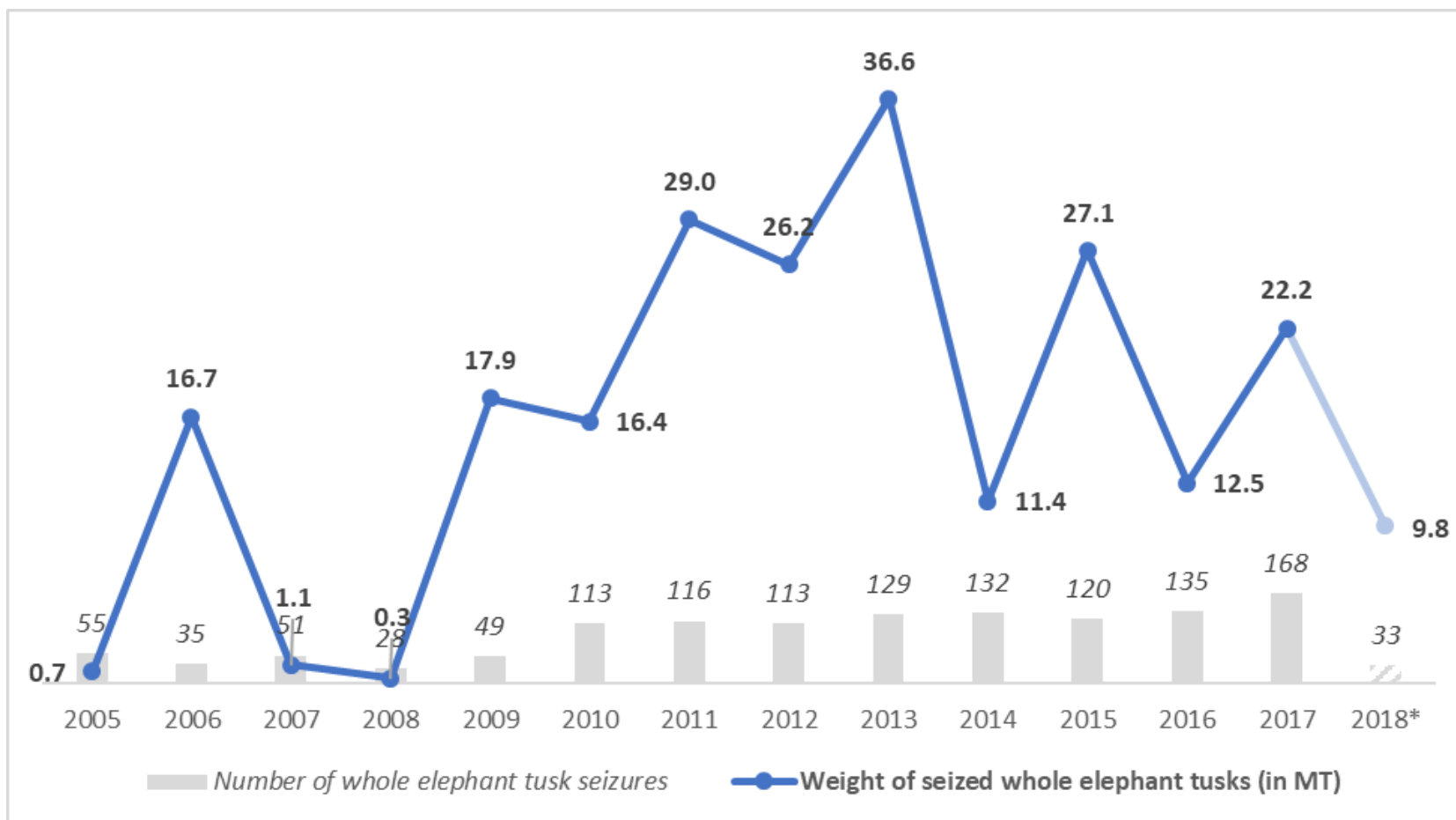
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Number of whole pangolin equivalents seized and number of seizures annually, 2007-2018



Weight of whole elephant tusk seized, and number of whole elephant tusk seizures captured in World WISE, 2005-2018 (tons)



Additional resources, press releases, etc. with links:

- 2020 World Wildlife Crime Report (refers generally to the research work done on wildlife crime by the Research and Trend Analysis Branch).
- Link: <https://www.unodc.org/unodc/en/data-and-analysis/wildlife.html>

Custodian agency(ies):

UNODC, CITES