About the Philippines

An archipelago with over 1,700 islands, the Philippines is a wondrous country. It is one of the world's 17 megadiverse nations with more than 25,000 endemic species in its mountains, forests, coastal waters and lowlands, as well as fields and farms.

It is also one of Southeast Asia's fastest-growing economies, expanding about 6% a year since 2021 and recording more than 30 years of poverty reduction: Today, 15.5% of its people live below the national poverty line, down from 18.1% in 2018 (Philippine Statistics Authority, 2025).

However, poverty rates are far higher for farmers (27.0%), fisherfolk (27.4%), and particularly Indigenous Peoples (IPs) (32.4%). IPs number about 17 million, about 15% of the Philippines' population of around 118 million. Most of the 110 ethnolinguistic groups live in geographically isolated upland areas, where they retain much of their traditional culture (UNOPS, 2025).

Concerningly, pressure on landscapes, and the search for cultivable land, will not abate. Although the fertility rate has fallen from 7.16 children per woman in 1960 to 1.91 today, the population will continue to grow until 2050 and then level out,

according to the Philippine Statistics Authority (2024).

Also worrying, the Philippines tops the rankings of countries facing extreme natural hazards. "In the Philippines, natural disasters are almost a part of everyday life," writes the 2024 World Risk Report. Moreover, supercharged by climate change, the typhoons for which the Philippines are so well-known are becoming more frequent and intense.

Finally, land-use governance is complex, and the Philippines grapples with its natural resources. Policies often conflict on ancestral domain, protected areas, and land-use zoning, triggering increased resource exploitation.

Before intense human settlement, 92% of the country was covered in forests, including the world's richest dipterocarp forests, with giant trees 50 metres tall with straight trunks often 2 metres in diameter. These became the envy of

everyone who encountered them, starting with Spanish explorers in 1521.

Fast-forward through 333 years as a Spanish colony, almost half a century as a US colony, World War II, independence in 1946, several decades during which the country became a supplier of logs to the world, and by 1980, forest cover had fallen to a shocking 24.5%.

Since then, governments have made strenuous efforts to conserve and restore forest. Industrial logging and clear felling are no longer widespread, but forest continues to be lost, due to drivers such as mining, expansion of urban areas, shifting cultivation (*kaingin*), illegal encroachment, fires, commodity-driven deforestation, and wood extraction. "Old-growth dipterocarp forests have almost entirely disappeared," states the Philippine Field Museum. Of inordinate concern to the Philippine government, today forest cover is 23%.

Our forests are essential life-support systems that regulate climate, support biodiversity, and provide basic needs. The choices we make today will determine the quality of life of generations to come. We must save these ecosystems.

 Secretary Maria Antonia Yulo Loyzaga, Department of Environment and Natural Resources (DENR), International Day of Forests, 2025





A well-treed multifunctional landscape in the Mountain Province, Cordillera Region, including woodlands, bench terraces, and natural forest remnants. However, soil loss is visible due to intensive vegetable cultivation, and trees could be planted on bunds and in fields. Credit: Zarrel Gel Noza/CIFOR-ICRAF. Map: Courtesty Freepik

CIFOR-ICRAF in the Philippines

ICRAF has been in the Philippines since 1993, and CIFOR-ICRAF since early 2019, when the agroforestry and forestry centres merged. In more than 70 research-in-development projects over 32 years, it has become well-known for its work on rural livelihoods; climate change mitigation and adaptation; land restoration; biodiversity conservation; multifunctional watersheds; and landscape governance.

Forest loss is never far from the thoughts of CIFOR-ICRAF Philippines.

"The country has forest cover of 7.22 million hectares," says senior scientist Rachmat Mulia. "This is way below the 17.8 million hectares we had in 1934 and shows just how much we have lost. It is part of our mission to 'bring back' native and endangered trees."

The Philippines has around 50 species of dipterocarps, 21 of which are endemic while 31 are considered threatened, as are many native non-dipterocarps. Critically endangered trees facing extinction include Narra (*Pterocarpus indicus*); Kamagong (*Diospyros mindanaensis*), a very valuable and rare hardwood; Cebu cinnamon (*Cinnamomum cebuense*), which is losing out to habitat loss and overexploitation; Kaladis narig (*Vatica elliptica*); Malayakal (*Shorea seminis*) and Mindanao narek (*Hopea brachyptera*).

CIFOR-ICRAF actively supports the Philippine Biodiversity Strategy and Action Plan (PBSAP) 2015–2028; the National Climate Change Action Plan 2011-2028, which prioritizes ecosystems and biodiversity; the Philippines'
Nationally Determined Contribution
(2021), which includes increasing forest
cover to improve carbon sink capacity;
and the Philippine National REDD-plus
Strategy. CIFOR-ICRAF is continually
gaining new knowledge to feed into
these base documents.

Agroforestry remains at its core.

Multipurpose trees on farmlands can offset dependence on natural forests, support biodiversity and conserve water and soil

The team works closely with subnational and national governments, as well as local communities, including IPs.

"IPs are forest stewards with profound knowledge. They rely on agriculture and forests and live in upland areas. They are among the most effective ambassadors of sustainable land management," says CIFOR-ICRAF communication and extension expert Zarrel Gel Noza.

In line with global goals, the Philippine team aims to also empower women and youth while helping smallholder farmers become more resilient to market uncertainties and climate change.

Results on the ground

- Capacitated about 3,500 farmers and local agricultural technicians since 2018 on sustainable forest management and nature-based solutions.
- Established 6,465 agroforestry demonstration farms as learning hubs under INREMP and SFITAL.
- $\cdot \ \, \text{Facilitated integrated watershed}$

Diversifying incomes and enhancing the resilience of small-holders are at the heart of our work.

- Rachmat Mulia, CIFOR-ICRAF senior scientist, the Philippines

assessment, stakeholder negotiations, and a reward mechanism for provisioning services for upland communities in Mindanao under Rewarding Upland Poor for Environmental Services (RUPES) (2002 to 2012).

 Facilitated the Roadmap of Sustainable Cacao Development in Davao de Oro Province for 2025–2030, Vision to 2050.

Major achievements

- Contributed to Five-year Philippine Forest and Landscape Restoration Action Plan
- Contributed to Philippine Development Plan 2023–2028 to ensure ecological integrity is a core plank
- Co-produced the Green Climate Fund's Philippine Country Programme
- Facilitated a theory of change for the Philippine Enhanced National Greening Program 2016–2028, which aims to reforest the country's 7.1 million ha of unproductive, denuded, degraded forestland
- Authored ASEAN guidelines for agroforestry development (2018) and was lead author of State and outlook of agroforestry in ASEAN: Status, trends and outlook 2030 and beyond (2021)











L-R: CIFOR-ICRAF team members Rachmat Mulia, Grace Salvan and Erwin Albios with cacao and coconut farmer Jun Villahermosa at a SFITAL project learning site, Davao. Photo: Isabelle Dela Paz/CIFOR-ICRAF; signs indicating the importance of Philippine plant diversity; dipterocarps in Makiling Botanic Gardens, University of the Philippines; Manila palm (Adonida merrillii), assessed by IUCN as "near threatened" due to habitat loss; Dipterocarp seed collection at site of Rainforestation, a restoration method developed by Visayas State University, ELTI and others. Photos: CWatson/CIFOR-ICRAF.













L-R: In the face of climate change, single-age and single-species plantations, as seen here, are more vulnerable to extreme storms than forests of mixed indigenous species; a landslide destroys buildings after heavy rains in Cabucgayan; soil and water conservation in Cansungay; women preparing seedlings; Cacao growing with an indigenous tree in Visayas; rice and coconuts growing together, the most prevalent rice agroforestry system. Photos: CWatson/CIFOR-ICRAF/DENR.

Select projects

Funded by US Agency for International Development (USAID), From reef to ridge: An ecosystem-based approach to biodiversity conservation and development in the Philippines (2011-2013) examined how to safeguard coastal and terrestrial ecosystems in Mindanao region. Key outputs were business cases of payment for ecosystem services (PES) and capacities of local NGOs and government units strengthened to facilitate PES. Led by ICRAF, partners included Southeast Asian Regional Center for Graduate Study and Research in Agriculture, Kalahan Educational Foundation, and FishBase Information and Research Group. EB-ABCD Philippines Project

Funded by Australian Centre for International Agricultural Research, Watershed evaluation for sustainable use of sloping agricultural land in the southern Philippines (2011–2015) was implemented by ICRAF and the Department of Environment and Natural Resources (DENR). Seeking to improve livelihoods while maintaining upland watersheds, it co-developed sustainable agricultural plans with stakeholders and produced a methodology for assessing watersheds and monitoring community land-use plans. Partners included Philippines Bureau of Soils and Water Management and Landcare Foundation of the Philippines. Watershed southern Philippines Project

Funded by USAID, Biodiversity and watersheds improved for stronger economy and ecosystem resilience (B-WISER) (2012-2017), implemented

by DENR with ICRAF in the technical working group, aimed to restore degraded forests in priority watersheds and increase local capacity to manage disasters. Achievements included the formulation of national REDD+ safeguards; a greenhouse gas inventory of forestry land use and changes; and a draft national executive order on PES. Biodiversity and Watersheds Resilience Project

Funded by International Fund for Agricultural Development (IFAD), Climate-smart, tree-based coinvestment in climate change adaptation and mitigation in Asia (2014–2017) identified local solutions for mitigating the impacts of climate change on female and male farmers by leveraging public and private funds. It developed a PES business plan with local communities, which was upscaled to other provinces, and institutionalized. The regional project was led by ICRAF and co-funded by the CGIAR Research Program on Forests, Trees and Agroforestry. Philippine partners included University of the Philippines Los Baños and Kitanglad Integrated NGOs. https://www.worldagroforestry.org/ project/smart-tree-invest

Funded by Asian Development Bank (ADB), Integrated natural resources and environmental management project (INREMP) (2018–2021) was led by DENR. Technical partner ICRAF recommended 16 agroforestry, conservation farming and commercial tree plantation models, which were showcased in 61 demonstration sites across four basins. About 2,000 people from local government and people's

organizations were capacitated; PES business cases were mainstreamed along with supporting incentivebased private financing. https:// worldagroforestry.org/project/inremp

Funded by ADB, Investing in climate change adaptation through agroecological landscape restoration: A nature-based solution for climate resilience (2020–2024) was implemented by CIFOR-ICRAF, International Centre for Environmental Management, and Landcare Foundation of the Philippines. It promoted agroforestry, conservation farming, and analogue forestry in the buffer zone of Mount Kitanglad Range National Park and watershed; established learning farms; and conducted awareness-raising and capacitation with Indigenous Peoples, upland migrants, and subnational and national stakeholders, such as the River Basin Control Office. The Lantapan Manupali Watershed Management Committee was created to promote restoration. Philippines: Landscape Restoration Country Profile

Funded by IFAD, Sustainable farming in tropical Asian landscapes (SFITAL) (2020-2025) is focused on environmentfriendly, climate-resilient cacao production. Led by CIFOR-ICRAF, it has produced a technical guide and curriculum of cacao agroecological practices and capacitated about 500 farmers (47% women and 20% youth), local field extensionists and government staff. Its approaches, including the monitoring and evaluation framework, are scalable across cacao-growing areas in the country. https://www.cifor-icraf. org/project/SFITAL/

Resources

Agroforestry in rice production landscapes in Southeast Asia: A practical manual (2017) notes that the region's rice "is part of a complex system in which trees, other crops and livestock are connected." It details one Philippine agroforestry system where rice grows with nipa palms that shelter it from typhoons and provide feed for ducks and pigs as well as habitat for crabs, which families harvest. Trees can be grown on bunds that separate paddy fields or in rice fields. https://openknowledge.fao. org/handle/20.500.14283/i7137e

Growth and aboveground carbon of trees estimated using the FORCASTREE (2023) describes a tool to simulate aboveground carbon storage. Tree-crop combinations tested were: #1, a mix of dipterocarps, generated high carbon storage with relatively slow sequestration; #2, a mix of exotic and native non-dipterocarps, accumulated high carbon with quick early sequestration; #3, a mix of dipterocarps,

fruit trees and cacao; and #4, a mix of dipterocarps, native non-dipterocarps, fruit trees and cacao, were "good options for high carbon storage with potential economic co-benefits." At 400 trees/ha, estimations assuming no tree mortality were 18-30 ton C/ha, 84-106 ton C/ha and 160-225 ton C/ha at years 10, 30 and 50. https://www.cifor-icraf.org/knowledge/ publication/35339/

Landscape restoration country profile: Philippines (2025) highlights weaknesses in landscape management, such as the low ratio of one forest guard for each 4,000 ha of forest and timber agreements that provide greater access to forestlands to commercial interests at the expense of forest-dependent communities. It also highlights successes, such as: the transformation of deforested areas invaded by Imperata cylindrica grass into woodlots for livelihoods; ICRAF and Landcare's work on natural vegetative contour strips to which farmers add trees such as rubber, Acacia mangium, durian, coffee and

Philippine mahogany (Lauan, Shorea spp.); and the Rainforestation approach, which uses exclusively native trees and can repair impaired ecological functions and bring back faunal species that increase natural regeneration. Philippines: Landscape Restoration Country Profile

Integrating the principles of ecological agriculture into upland farming systems of the Manupali watershed in the Philippines (2025) examines how ecological agriculture might improve sustainability in a notable biodiversity reserve that is losing forest due to encroaching cultivation. Taking five farms as demonstrations, proposed measures include increasing vegetational diversity to reduce pests and disease and tree density to improve use efficiency of nutrients. "The designs can be considered for other upland watersheds in the Philippines or other countries," it states. Philippines: Integrating the Principles of Ecological Agriculture into Upland Farming Systems of the Manupali Watershed









L-R: Deforestation in uplands, which make up more than 60% of the Philippines' land; a restoration site map divided into production, protection and agroforestry areas; the tree species for the agroforestry area; and researchers walk through grasslands and into Acacia auriculiformis, an Australian wattle, planted in the production area. Photos: RFinlayson/CWatson/CIFOR-ICRAF.

Ambition of CIFOR-ICRAF in the Philippines

CIFOR-ICRAF's ambition is to continue to deliver high-quality research, policy and technical recommendations, multi-stakeholder engagements, capacity development, and knowledge sharing that make a difference to people and nature in uplands and other terrestrial areas as well as to focus on mangroves and other shorelines in all their complexity and importance, including their blue carbon potential.

Our wish is for a Philippines with increasing forest cover, growing livelihoods, and resilience, and where climate, biodiversity and poverty pledges become reality.

- Sonya Dewi, Director for Asia, CIFOR-ICRAF

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CIFOR-ICRAF

The Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF) harnesses the power of trees, forests and agroforestry landscapes to address the most pressing global challenges of our time - biodiversity loss, climate change, food security, livelihoods and inequity. CIFOR and ICRAF are CGIAR Research Centers.



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