

A decorative horizontal bar is located above the title. It starts with a solid blue segment on the left and transitions into a pattern of small white squares on a blue background, which then fades into a solid light green segment on the right.

Communities, Conservation & Carbon: Supporting Indonesia's Green-Blue Economy

Situation Analysis

The Republic of Indonesia is a unique nation-archipelago with some 279 million people from 300+ ethnic groups, spread over more than 17,000 islands. Its environmental resources have global as well as national significance, with vast amounts of both 'green' and 'blue' carbon sequestered in its forests and oceans, and exceptionally high levels of biodiversity and endemism. A large part of Indonesia's population depends on forest and marine resources, which provide economic and food security for the nation, and critical habitats for numerous land, air and sea species. Protecting Indonesia's natural resources is thus a way of conserving biodiversity, mitigating the effects of climate change (nationally and globally), protecting livelihoods, and supporting the economic resilience of the country.

For the past decade, Indonesia has committed to protect its vital ecological resources, address environmental challenges and sustainably manage national forests and oceans. Important achievements in recent years include the restoration of forest ecosystems, the expansion of marine protected areas, and a policy that bans the clearing of primary forests and peatlands. The Government has further established robust green goals (see below) to guide national development plans and to fulfil its international environmental commitments. These ambitions, as well as the new policy direction set out in the Forest and Land Use (FOLU) Net Sink 2030 are expected to continue under the leadership of President Prabowo Subianto, who took office in October 2024.

As part of the ForClimate project, training in the methodology of tree planting and agroforestry is conducted in Long Ayan village sub-district Segah, Berau District, East Kalimantan.



Indonesia's Environmental Commitments



Reduce deforestation rate to 320,000 hectares per year (2021 to 2030)



Increase reforestation to 800,000 hectares per year (2021 to 2030)



Achieve 23% renewable energy mix by 2025



Reduce CO2 emissions by at least 31% by 2030



Increase marine protected areas to 32.5 million hectares by 2030



Reduce plastic debris by 75% until 2025

KfW in Indonesia



Map showing KfW's projects in Indonesia (see list on page 6).

Indonesia is an important partner for KfW. The two countries have been cooperating on development issues since 1962. Today, our strategic alliance focuses on progressing shared priorities, including environmental protection, climate action and sustainable development. Our impacts help expedite progress towards the Sustainable Development Goals (SDGs), and fulfil the ambitions outlined in national development plans and frameworks including the FOLU Net Sink 2030 strategy to reduce carbon emissions.

KfW Development Bank works on behalf of the German Government to implement projects across Indonesia, with well over EUR 150 million in grant funding currently committed to the archipelago's 'green' and 'blue' (forest and ocean) sectors. Our environmental team includes management staff and technical experts, who work with Indonesian ministries and other key partners to create long-term economic, environmental and social benefits for the country and its communities.

Our shared Environmental Priorities

- Environmental Protection
- Climate Action
- Biodiversity Conservation
- Natural Resource Management
- Sustainable Forest Management
- Community Empowerment & Development
- Livelihoods Support & Poverty Alleviation



Our Commitment

KfW Development Bank is committed to the concept of sustainability, an economic system that safeguards our livelihoods and quality of life, as well as those of future generations. This is why KfW considers the promotion of ecologically-sound, socially-just and economically-robust developments in partner countries to be its core task, and works to drive change through 'green growth'.

"We are all interconnected. The environmental health of Indonesia affects Germany and vice versa. The strong and enduring partnership between our two countries therefore continues to help us achieve our strategic national objectives as well as fulfil our international environmental commitments."

Mrs. Ina Lepel
Ambassador of Germany to the Republic of Indonesia

Why We Do What We Do, and How Germany Benefits From It

Indonesia has incomparable natural resources, with 120 million hectares of rainforest and thousands of islands spread over 5.8 million kilometres of ocean. The country's land and sea are home to 37% of our planet's known fish species, 10% of our known plant species and 12% of the known mammals. The environmental health of Indonesia thus affects all global citizens. The conservation of its megadiversity and its wide variety of ecosystems is important for us all.

KfW – on behalf of the German Government – has been working with the Indonesian Government and other partners across the archipelago since the 1960s and promoting forestry programmes for around 25 years. Since 1979, over EUR 236 million have been channelled through our Development Bank to support both the Government and communities to conserve biodiversity, protect the billions of tonnes of 'green' and 'blue' carbon sequestered in national forests and oceans, and mitigate climate change impacts both in the archipelago and beyond.

Critical to such endeavours are the traditional custodians of these precious natural resources – the fishers, the forest communities, and the local people living around the oceans, swamps, mangroves and biodiversity hotspots. Respect for the rights of indigenous people – and the protection of the natural resources critical to their traditional way of life (soils, forests, food, water, medicines) – remain at the core of KfW's work. All our projects focus on creating social, economic and ecological benefits for local communities including new income streams, livelihoods, and long-term opportunities for economic prosperity and growth.

Global challenges such as poverty, climate change, biodiversity loss, and ocean plastic pollution can best be tackled in diverse international partnerships, with committed and connected partners working at all levels (local, regional, national, global) through initiatives that are aligned and streamlined. KfW is committed to fulfilling its role in such partnerships, including by providing sustained, multi-year grants to address critical environ-

ment issues. Many of these issues have impacts well beyond Indonesia; however, the national Government cannot afford to finance them alone through costly loans. The success of such partnerships has been visible for some time, with deforestation across the archipelago declining since 2013, marine protected areas increasing, and local income levels rising.

Development cooperation has wider geopolitical dimensions and strategic benefits for Germany too. It strengthens our bilateral partnerships and foreign relations, contributes to our energy and raw materials security, safeguards global value chains, and opens doors for German companies to work overseas and spread technical expertise, technologies and environmental best practices.

This brochure sets out in detail Germany's contributions to Indonesia's goals regarding biodiversity, forestry and climate mitigation, our part in protecting global assets (as per the Asia strategy of BMZ or the Federal Ministry for Economic Cooperation), and our commitment to preserving Indonesia's forests and oceans for the benefit of local livelihoods, incomes and lives.

"Biodiversity is a global public good. It is dramatically shrinking. Its ecosystem services remain indispensable to all of us as well as to our children. The many local communities protecting biodiversity for the global community should not be charged twice: to protect biodiversity as well to repay loans. Grants remain vital for preserving our precarious remaining biodiversity. Once it is gone, it is gone forever."

Vibeke Christensen
Head of Division, Natural Resources
& Climate East/Southeast Asia

Overview of Projects

No.	Project Name	Location	Funding Amount in EUR	Implementation Period	General Focus /Objective	Project Partners
1.	Forest Programme III (Sulawesi)	Central Sulawesi	13.500.000	2017 – 2025	Reforestation, protected area management, social forestry	MoFor
2.	Forest Programme IV (Sulawesi) – Mamasa Watershed Support	West and South Sulawesi	23.500.000	2019 – 2026	Mamasa Watershed rehabilitation and biodiversity conservation	MoFor
3.	Forest Programme V: Social Forestry Support	Sikka, East Nusa Tenggara; Sanggau, West Kalimantan; Garut, West Java	11.500.000 10.000.000 (Phase II)	2019 – 2026	Social and sustainable forestry schemes to improve local livelihoods	MoFor
4.	Forest Programme VI: Mangrove Protection	Karang Gading, Berau, Delta Mahakam, Sorong, Sorong City	20.000.000	2020 – 2028	Conservation, restoration & sustainable management of mangrove forests; establishment of WMC	MoFor
5.	Integrated Tiger Habitat Protection Programme in Asia – Regional Project	Rimbang Baling, Kerinci Seblat, Berbak Sembilang, Leuser-Ulu Masen, Bukit Barisan Selatan, Gunung Leuser	5.800.000	2014 – 2025	Safeguarding Indonesia's priority tiger conservation landscapes	IUCN, WWF, Yapeka, WCS, FFI
6.	Priority Habitats Conservation at Bukit Barisan Selatan National Park	Lampung, South Sumatra	7.500.000	2017 – 2024	Protected area management, key species conservation, livelihood development	MoFor WCS Indonesia
7.	Ecosystem Restoration Concession for Tropical Forests	Bukit Tigapuluh, Sumatra, Jambi; Gorontalo, Sulawesi	10.100.000	Bukit Tigapuluh: 2013 – 2026 Gorontalo: 2013 – 2021	Biodiversity and landscapes conservation	Bukit Tigapuluh: ZGF Gorontalo: Burung Indonesia & NABU
8.	Marine Biodiversity and Coastal Livelihoods in Sulawesi / Coral Triangle	West Nusa Tenggara, North Sulawesi, North Sumatra (Aceh)	7.000.000	2018 – 2025	Marine protected area and sustainable fisheries management; livelihood development; sustainable financing and transnational cooperation	MMAF, WCS Indonesia
9.	Marine Biodiversity and Support of Coastal Fisheries in the Coral Triangle	North Sulawesi, North Maluku	9.275.701	2019 – 2026	Marine protected area and sustainable fisheries management; livelihood development; sustainable financing and transnational cooperation	MMAF, MoFo WCS Indonesia
10.	Hutan Harapan – Supporting the sustainability of the first Ecosystem Restoration Concession in Indonesia	Jambi Province, South Sumatra	7.000.000	2019 – 2026	Sustainable forest management for biodiversity conservation, community livelihoods, and ecosystem services	NABU RSPB

“Loss of biodiversity is dramatic and happening at an unprecedented rate, with direct feedback effects on climate, food security and – ultimately – on our living conditions.”

Christiane Laibach
Executive Board, KfW



There are 41 Cendrawasih or 'Bird of Paradise' species in Indonesia. Thirty-seven species live in Papua.

Innovative Partnerships

National: The Government of Indonesia has expanded its development partnerships in recent years, pursuing a wider and more collaborative approach that engages local communities and the private sector, as well as more traditional partners (bilaterals, NGOs etc.). KfW also favours multi-stakeholder engagement and works with diverse actors to pilot innovative models and programmes that can support national and community partners, promote results-based conservation, and in time be replicated and scaled up.

Regional: KfW has also been involved in pioneering new partnership models in the wider region such as the Legacy Landscape Fund (which combines public funding with private philanthropy to support biodiversity hotspots), and the Blue Action Fund (where a consortium of partners work to integrate traditional and conventional knowledge to protect marine resources). Where necessary we liaise across international boundaries to

protect key regional habitats (for example through our EU-funded Coral Triangle project - see page 16) or to foster improved regional coordination.

International: In 2010, 13 countries adopted a landmark agreement aiming to double the number of wild tigers by 2022 through the Global Tiger Recovery Programme. IUCN's Integrated Tiger Habitat Conservation Programme began in 2014 in response to this and is supported by KfW with remarkable success. The programme currently runs two projects in Indonesia (one through Yapeka and one through WCS) and is a great example of multi-country multi-stakeholder partnerships, where governments, NGOs, and communities – through grant funding – implement science-based conservation action to synergistically protect species, habitats and people. The Global Tiger Forum estimated that between 2010 and 2023, the number of tigers living in the wild doubled globally, with around 390 tigers currently estimated to be living in the wild in Indonesia.

Government partners



NGOs & others



Tiger populations declined by almost 97% in the 20th century, due to poaching, habitat destruction and human-wildlife conflict. KfW partners with Frankfurt Zoological Society (FZS) and its local Wildlife Protection Units in the Bukit Tiga Puluh ecosystem to protect an estimated 30 tigers – some of the very last of their species – that live in and around the national park.



Staff from Frankfurt Zoological Society collecting data on flora.

Our Contribution to National Plans and Global Frameworks Through Proven Approaches

Sustainable cooperation

Over the past decade, KfW has built strong partnerships with Indonesian ministries, working particularly closely with the Ministry of Environment and Forestry, the Ministry of National Development Planning (Bappenas) and the Coordinating Ministry for Maritime and Investment Affairs. Our work is aligned with government strategies, frameworks, development plans and targets including the emission reductions outlined in the FOLU Net Sink 2030 strategy. We also contribute to regional and international development frameworks, supporting (among others) the objectives of BMZ's ASEAN strategy, the Sustainable Development Goals (SDGs), the Kunming-Montreal Global Biodiversity Framework, and the Paris Agreement.



Proven approaches

We want to understand the impact of our financial cooperation, which is why KfW's projects and programmes have been analysed for their success, effectiveness and impact since the 1960s, with results publicly available since the 1990s through our transparency portal www.transparenzportal.bund.de/en.

All our projects are evaluated on completion and rated on six key criteria¹ (relevance, coherence, effectiveness, efficiency, overarching developmental impact and sustainability). This helps us identify what worked, what did not and whether a project achieved its goals. Rigorous assessments allow us to safeguard the quality of our work, ensure value for money for the German public, and share lessons learned / best practices for more effective future development cooperation. To date, over 80% of our global projects are assessed as successful. Read evaluations from our projects in Indonesia and elsewhere here: kfw-entwicklungsbank.de/ideal

Our Key Evaluation Criteria

- ✓ Relevance
- ✓ Coherence
- ✓ Effectiveness
- ✓ Efficiency
- ✓ Impact
- ✓ Sustainability

"In Indonesia, environmental protection, climate mitigation and biodiversity are inextricably linked. Projects like KfW's – which protect natural carbon sinks, mangroves and forests – therefore have enormous potential, not least to mitigate the challenges associated with the energy transition."

Burkhard Hinz
Director of the KfW Office in Jakarta

¹ As agreed by the DAC of the OECD.

Our Results: Best Practice Examples for Learning and Replication

Impact study 1

Conserving biodiversity and protecting the Leuser Ecosystem

Between 2014 and 2022, KfW financed a project in the Leuser Ecosystem (Aceh, North Sumatra) supporting local communities to delineate, (re)establish and extend boundaries and patrols, including around the ecologically-important Rawa Singkil Wildlife Reserve and Gunung Leuser National Park.

The project has achieved impressive results through collaborative management approaches with central, provincial and local conservation authorities and communities, safeguarding an estimated one million hectares of forest and protected area, and helping stabilise or increase populations of four unique species (elephants, tigers, rhinos, and orangutans). Most significantly, the project helped to conserve the forest cover in and around the

national park as well as the carbon sequestered in local soils and vegetation. This safeguarded one billion tonnes of carbon stored in the Rawa Singkil Wildlife Reserve – equivalent to the annual carbon emissions of Germany – as well as the much larger amounts stored in the wider Leuser Ecosystem (an estimated 1.9 to 2.4 billion tonnes²). Key to the success of the project was the involvement of the local communities and authorities from the outset. Participatory land use planning combined alternative or additional economic opportunities with nature conservation measures. The community's ownership bodes well for the long-term and sustainable protection of the area: a very satisfactory result for an investment value of EUR 8.46 million.

Other key results

The project



Helped conserve **95%** of the Rawa Singkil Wildlife Reserve **40%** of the Gunung Leuser National Park, and **100%** of the Kluet swamp, to the west of the park



Helped stabilise or increase populations of four flagship species – elephants, tigers, rhinos, and orangutans³ – a positive indicator of the health of the wider ecosystem



Reforested and restored over **12,100 hectares** of land



Increased border patrols from **1,000 km (in 2014)** to **22,000 km (in 2022)**



Established over **2,750 km** of GPS-surveyed boundaries



Contributed to the creation of **17** provincial / national social forestry decrees and **52** village conservation agreements

Impact study 2

Sustainability through social forestry

KfW's twelve-year ForClime forest project (2010-2022) worked across 79 villages in Kalimantan to pilot and test an innovative poverty-oriented approach aimed at Reducing Emissions from Deforestation and Forest Degradation (REDD+). For an investment of EUR 20 million, the project was able to improve forest protection over 475,000 hectares of land (an area greater than Germany's largest National Park⁴). Furthermore, by supporting communities to obtain social forestry licenses, the project helped establish the legal and institutional foundations for long-term sustainable management of the Kalimantan forests. By close-out, the project had directly benefitted 10,000 people, indirectly reached 57,000, and led to socio-economic improvements in over 70% of participating villages: a huge win for people and for forests!

The project demonstrated the technical and economic feasibility of a multifunctional approach and proved that local livelihoods, incomes and forest environments can be improved concurrently and synergistically when partners work together to create impactful solutions. Scaling up such initiatives will be critical in the years ahead – for forests, for communities and for Indonesia's Paris Climate Accord commitments.

Project wins

By the end of the project



19 village forest licenses (Hutan Desa) had been facilitated, protecting an area of **103,401 hectares**



FSC FM certification was made possible for an active forest concession on **63,550 hectares**



430,760 hectares of terrestrial forests and **6,000 hectares** of mangroves were being sustainably managed



166,000 hectares of forest (terrestrial and mangrove) had been protected from harmful activities (coal mining, oil palm, shrimp farming)



10,000 people were using new techniques and innovations by the end of the project



The project had directly invested **€5.8 million** in local villages, including to support livelihoods and to contribute to **financial sustainability**. That money to date has generated a further **€4.1 million** through the sale of commodities and non-timber products

² Based on recent surveys from Bukit Lawang (2020), and the North Sumatera University (2023).

³ As per biomonitoring by the Taman Nasional Gunung Leuser.

⁴ The Schleswig-Holstein Wadden Sea National Park is estimated at just over 440,000 hectares.

Case Studies

Case study 1 Forests for the future: establishing legal protection for communities

Indonesia's forests provide critical economic, social and cultural resources for millions of its people, and in 2016, the Government designated 12.7 million hectares – around 10% of national state forests – for indigenous or community management. Rural communities awarded tenure of 30 years are now able to legally access local forests, develop sustainable livelihoods, and help protect the vital ecosystems on which they depend.

Since 2016, KfW has been supporting the Government to implement this policy commitment, including by helping local communities to identify and prepare village forest licenses (*Hutan Desa*) and establish village forests. The foundational steps required to obtain licenses – including community capacity for sustainable land-use planning and border mapping – are useful processes in themselves, which can help resolve long-running land disputes and improve the security necessary for development investments.

Licenses, once issued, provide legal protections for local communities and foster their ability and willingness to draw up long-term plans and actions for the sustainable management of forests. 62 villages were supported to obtain licenses through our first two forest programmes, 96 licenses were issued, and 149,691 hectares of forests are now being sustainably managed by local communities.

The experiences, knowledge and lessons from Forest Programmes I and II (commencing 2010) have informed our subsequent four programmes (extending to 2028), and best practices will continue to be presented to the Government and other stakeholders to help inform the ongoing scale-up of social forestry across the archipelago.

Social forestry activities across programmes

- Community awareness & education
- Conservation-oriented participatory village planning
- Land use & border mapping
- Licensing & designating forested areas
- Community-based sustainable forest management
- Conflict management
- Monitoring & SMART Patrols

“By developing community forests, we can support the growth of small businesses and expand the critical roles that women play in forest management.”

Yani Septiani
Senior Sector Coordinator, KfW Office, Jakarta



An Indonesian farmer planting a coffee seedling.

What is social forestry?

Social Forestry' aims to manage, preserve, and protect forests, with the involvement and empowerment of local communities. It may include strengthening land access rights, addressing conflicts around tenure, or developing employment opportunities. Social forestry tries to address environmental and community issues concurrently, and so provide a broad array of benefits (ecological, social, and economic).

Indonesia at a glance: forest, emissions and climate change

Indonesia's vast forests – which cover **120 million hectares** – provide critical carbon storage both for the nation and the world

More than **20%** of the world's mangroves are located in Indonesia

37.2 million Indonesians live in or around forest areas, depending on them for vital resources

Indonesia has **16,131 villages** (19% of its total) highly vulnerable to climate change impacts

The average annual rate of deforestation between 2013–2020 was **459,000 hectares**

Indonesia pledges to reduce GHG emissions by **31.89% til 2030**

Data: The State of Indonesia's Forests, 2020 (MoFor).



Indonesia's forests play a vital role in reducing greenhouse gas emissions, mitigating climate change, protecting watersheds, and conserving biodiversity. They are also critical if Indonesia is to reach its FOLU Net Sink 2030 goals, which depend on three key action streams: environmental governance, carbon management and sustainable forestry.

Case study 2 Sustaining communities through social forestry

KfW supports projects across Indonesia using a REDD+ approach (Reducing Emissions from Deforestation and forest Degradation), and is testing models to determine how best to incentivise communities to sustainably manage local forests. Our projects have demonstrated that social forestry can profoundly improve the health of ecosystems, especially where there is community buy-in, legal protection for land, and where communities are incentivised and benefitting from local natural resources.

Social forestry often requires sustained investments in the capacity of people, and KfW employs participatory SMART approaches that can build community confidence, capacities, livelihoods and investments. We support communities through:

- **Conservation education** – to ensure awareness and buy-in.
- Participatory **land-use planning** – to define, delineate and demarcate key borders, reduce future land-tenure conflicts, set rules for land use and promote sustainable options.
- Village forestry licenses – for legal protections and development security.
- Regular **community patrols** – to monitor the forests, mitigate human-wildlife conflict and detect illegal encroachment, poaching, logging etc.
- **Restoring ecosystems** – including through (re)forestation and enrichment planting.
- **Alternative revenue streams and livelihoods** – including agroforestry, ecotourism, and payments for environmental services.
- **Community investments** (such as improved infrastructure, facilities, institutions, water supply, retention dams, etc.) – to incentivise local people and provide concrete benefits for the protection of nearby natural resources.



Farmers bringing in their harvest as Mensiau village (Kapas Hulu). Elsewhere, as part of our social forestry approach, KfW supports coffee as an alternative to palm oil, as well as prawn farming in select mangrove forests.

"The aim of all KfW's cooperation is to improve living conditions for the local population. You cannot protect forests whilst working against the people or without the people."

Hubertus Kraienhorst
Senior Forestry Expert, Natural Resources and Climate Asia, KfW

These critical **pillars** of social forestry have helped to establish the sustainable long-term management of natural resources within project landscapes and contributed – together with the work of other partners – to the national reduction of deforestation since 2013. In recent years, Indonesia has taken successful steps to combat what was once the world's highest deforestation rate, reducing annual forest loss from over one million hectares in 2015-2016 to 110,000 hectares in 2020-2021. Social forestry is intended to both support these efforts while serving as a model for other regions, demonstrating how forests and communities can be sustained together and for the long-term.

Challenges to sustainable forest management

- Land use pressures & tenurial conflicts
- Encroachment
- Illegal logging, mining and mineral exploitation
- Poaching
- Forest and land fires
- Illegal trade in plants and wildlife
- Climate change
- Poverty and food insecurity
- Forest degradation
- Industrial agriculture and oil palm plantations
- Pollution of water sources

Case study 3 Managing mangroves & protecting blue-carbon wealth

Indonesia has the most extensive mangroves on earth – around three million hectares or 23% of the world's total. An acre of mangrove stores five to 10 times as much carbon as an acre of rainforest, making these dynamic, resilient, biodiverse ecosystems critical for the sequestration of 'blue carbon'. The Indonesian Government recognises mangroves as a vital tool not only to mitigate climate change but to address a whole range of national environmental issues (see below) and had set an ambitious target to rehabilitate 600,000 hectares of severely degraded mangrove forest by 2024 to restore functional ecosystems.

KfW has been supporting the Government to advance its national agenda since 2010, first piloting a community mangrove restoration project in Berau (East Kalimantan) through our first forest programme (see boxed section below), and then using lessons from Berau to inform our sixth forest programme (2020–2028). The latter has expanded mangrove protection initiatives into a further 40 villages across three provinces and will reach an estimated 34,000 people. Experiences and lessons from this programme are expected to influence and inform national guidelines for mangrove management.

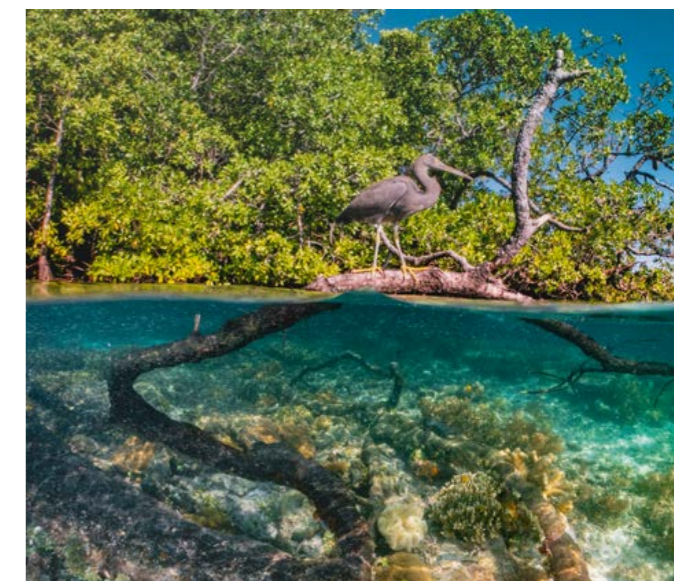
Our sixth forest programme is also helping establish an Indonesian-based World Mangrove Center that will connect, coordinate, and foster collaboration between stakeholders across national boundaries, provide a critical platform for policy dialogue and research, and help integrate and align global efforts to sustainably rehabilitate and manage mangrove forests.

Improving environments and local incomes

Our pilot project in Berau, implemented through the ForClime programme (2010-2022), showed that even relatively small financial investments (community training, livelihood inputs, packaging / marketing advice etc.) could help develop new mangrove-based enterprises that could boost restoration, whilst significantly increasing local income streams. This demonstrated once again that local livelihoods, incomes and environments can be improved concurrently and synergistically.

"A dollar invested in mangroves yields better carbon impacts than most comparable environmental investment. That is why it remains an important sector for KfW."

Saskia Berling
former Head of Division, Natural Resources & Climate, East/Southeast Asia



Mangroves are highly useful and productive ecosystems, not only protecting against tsunamis, storm surges and coastal erosion, but sequestering large amounts of carbon.

Why mangroves matter

- Store carbon
- Filter nutrients
- Maintain water quality
- Provide nesting and breeding habitats for thousands of species
- Protect healthy fisheries and therefore food & livelihoods
- Expand land availability
- Support Coastal development
- Climate change
- Conserve biodiversity
- Stabilise shorelines
- Provide coastal defences
- Provide local resources such as medicines

Case study 4

Ocean optimism: Marine conservation & sustainable fishing in the Coral Triangle

The Coral Triangle spans 5.7 million square kilometres, crosses the territorial waters of six nations (Indonesia, Malaysia, the Philippines, Papua New Guinea, Timor Leste and the Solomon Islands) and is home to the highest marine biodiversity in the world. Its economic and social power is no less mighty, with the region providing food for millions of people and generating billions from coastal tourism.

KfW supports two major marine biodiversity conservation/sustainable fisheries projects in the triangle, one funded by Germany's International Climate Initiative (IKI, 2019–25) and one by the EU (2020–26). Both projects work to strengthen important small-scale fisheries through a co-management approach (see below), as well as to develop alternative livelihoods (seaweed farming, ecotourism, dried fish products etc.) that can help fishers, women's groups and others move away from destructive fishing practices and the damaging marine wildlife trade.

The two projects also support the better management of 21 Marine Protected Areas (MPAs) across Indonesia, which stretch over five remote and scattered regions and safeguard over a million hectares of ocean. That protection in turn contributes to the Ministry of Marine Affairs and Fisheries' goal to designate and effectively manage 97.5 million hectares of MPAs across the archipelago by 2045⁵. Such efforts are also helping Indonesia fulfil its international commitment to Sustainable Development Goal 14 (Life below water, currently severely underfunded), and to the targets of the Kunming-Montreal Global Biodiversity Framework. The latter aims to conserve and protect 30% of terrestrial and marine habitats by 2030 and restore 30% of degraded ecosystems. The EU project provides regional support to the Coral Triangle Initiative including on managing climate-smart and the fisheries, sustainable financing of ecosystems. It also manages as well as promotes and pilots integrated land-sea management approaches across the Coral Triangle region.



Fisherman repairing a net.

Tackling plastic oceans

350,000 tons of plastic waste are discharged into Indonesia's waters every year, damaging marine ecosystems, fish stocks, food security and coastal livelihoods. In 2018 the Government of Indonesia committed to an ambitious target of reducing plastic debris leakage (to marine ecosystem) by 70% by 2025⁶. In phase 1, KfW and its close partners - the Asian Development Bank (ADB) and Agence Française de Développement (AFD) - provided a policy-based loan amounting to more than one billion EUR to support Indonesia's policy and institutional reforms on marine debris. Important areas of reform include the improvement of the plastic waste management system, the reduction of problematic plastic production and consumption as well as strengthening data and monitoring tools for proper policy making. This initiative is led by KfW (with a loan of EUR 400 million) in close partnership with ADB and AFD (providing USD 500 million and EUR 200 million respectively). This critical partnership will help reduce plastic waste in the world's most biodiverse marine area. A second high volume policy-based loan of the three partners is currently under preparation to further support the important reforms undertaken by the Government of Indonesia.



What is our co-management approach?

KfW – on behalf of the German Government – is committed to open communication, community engagement, and a participatory co-management approach to fisheries. This ensures that the expertise of local fishers and traditional marine management systems, like the Panglima Laot are supported by the latest scientific research. Such an approach ensures that specialist stakeholders (local and international) work, plan and strategise effectively together, so that Indonesia can best protect its fertile fishing grounds and fish stocks for future generations.



Indonesia has some of the most biodiverse oceans on earth, with around 8,500 fish species, 555 seaweed species, and 950 species living on the coral reefs. Plastic waste, however, threatens sensitive habitats both here and across the wider Coral Triangle.

Case study 5

Conserving biodiversity including through conflict mitigation

Indonesia is one of the most biodiverse countries on earth. Its 17,000+ islands, located between two continents (Asia and Australia) and between two oceans (the Pacific and Indian) are home to thousands of rare, threatened and endangered species, including endemics such as the Sumatran tiger and the Komodo dragon. In recognition of their global significance, Indonesia's conservation areas include four natural World Heritage sites; twenty-two Biosphere Reserves; seven ASEAN Heritage Parks, eight Ramsar Wetland sites and ten Global Geoparks.

The Government of Indonesia protects biodiversity through 566 designated conservation areas, which stretch over 22 million hectares of land and 35.9 million square hectares of sea. KfW and its partners support vital aspects of conservation in biodiversity hot spots like Sumatra, Java and Papua, where they are achieving important results.

Mitigating conflict between human and wildlife is critical when protecting biodiversity. The communities that live closest to wild animals need to understand how to manage interactions with them, in order to reduce damage to their crops, homes, livelihoods, and lives. Elephants cause the greatest harm and are the biggest cause of conflict with local farmers (see here), which is why our work entails support for community education, elephant monitoring, ranger training, forest and anti-poaching patrols, and an elephant information / conservation centre.

Interventions like these in our Forest Programme II between 2015 and 2022 and Leuser Ecosystem project between 2014 and 2023 helped double the successful resolution of conflicts in key landscapes⁷, and stabilise elephant and tiger populations that had been previously declining. In Sulawesi, Forest Programme III supports stabilisation of endemic species of maleo and tarsier.

The Government acknowledges that conservation areas are the 'final fortress for biodiversity protection', which is why KfW's assistance – including for the protection of endangered Sumatran orangutans, elephants, rhinos and tigers – will continue to be critical in the years ahead.



Rafflesia flowers in Bukit Barisan Selatan National Park. Indonesia is a biodiversity hotspot with over 1,500 endemic plant and animal species.



Protecting habitats and managing the coexistence of humans, wild fauna and flora is critical to preserving genetic diversity, sustaining ecosystems and stabilising animal and plant species as per BMZ's core commitments.

KfW's environmental monitoring & protection activities

- Sensitising communities
- Mitigating human-wildlife conflict
- Training rangers
- Patrolling
- Biological monitoring
- Managing habitats
- Rescuing, rehabilitating and releasing illegally captured wildlife
- Monitoring pollution of water sources

Biodiversity in Indonesia at a glance



Villages located in or around these conservation areas:
c. 7,043
with a population of 9.5 million people



Total species endangered, threatened or vulnerable:
4,381



Number of visitors (foreign and domestic) to conservation areas (2022):
c. 5.2 million

⁵ Announced at the 9th Our Ocean Conference in Athens in 2024.

⁶ Read more here: <https://www.kfw.de/stories/environment/nature-conservation/plastic-waste-corals-mangroves/>

⁷ I.e. Kerinci Seblat National Park, Bukit Tiga Puluhan and Tebo, Jambi.

Case study 6

Money from honey & other financial sustainability incentives

The Indonesian Government is committed to building a prosperous, equitable and sustainable nation, and to boosting economic resilience and wealth through community-driven development. KfW – working on behalf of the German Government – supports this national agenda and promotes community resilience through an array of project activities that support entrepreneurship, income-generating enterprises and forest-based businesses.

Alternative livelihoods: Creating, developing and supporting alternative incomes streams is also a key part of our work. Current pilot agroforestry projects – including those with the Frankfurt Zoological Society (FZS) on the high-value cash crop vanilla in Jambi – are showing great promise and carbon offset certification has even greater potential to generate large new sources of incomes that can allow forests and their guardian communities to thrive.

Payments for Environment Services (PES): KfW also uses the PES model to fund environmentally-friendly investments. Project villages that sign community conservation agreements, and pass annual performance evaluations, are granted a fixed amount each year (e.g. EUR 3,000), which they can use for community patrols, reforestation, agroforestry activities etc. Such schemes have yielded concrete results in the Gunung Leuser landscape (and elsewhere), where there has been a significant reduction in encroachment, illegal logging, poaching and deforestation.

Revolving funds: Since 2012, for example, villages participating in our forestry projects have been receiving initial commodity inputs to support and develop low-impact, non-shifting livelihoods (e.g. in honey, rubber, livestock, agroforestry and fishponds). Once products are sold, a proportion of profits (up to 80%) are placed in a community revolving fund, and subsequently reinvested in local crop production, tree planting and forest enrichment. Repeated cycles and revolutions of the fund ensure that livelihoods continue to grow in participating communities.



Women are critical custodians of natural resources, and ensuring their engagement in forest management is essential. This woman from the Dayak tribe is producing traditional crafts from non-timber forest products, in Mensiau Village, Kapuas Hulu.

Results-based payments: KfW is pursuing new models of cooperation that can incentivise communities and governments to protect and regenerate natural resources through internationally-financed reimbursements for results (as per the REDD+ approach). Our new project – ‘Investing in Emission Reductions for FOLU Net Sink’ (2025 –2030) – for example, will use an existing monitoring and verification protocol to help remunerate Indonesia for its recent reductions in deforestation (see below) and to further incentivise it to build up and maintain carbon stocks in the forestry sector, as per the FOLU Net Sink 2030 operational plan. Results-based payments that are internationally financed can reduce the pressure on national forestry budgets, achieve significant ecological and economic impacts, and help protect Indonesia’s unique green treasures.

Sustainable financing mechanisms and models – like KfW’s revolving funds – demonstrate that investments in low-impact livelihoods can significantly strengthen local incomes and financial management, and that reforestation, climate protection and community development can go hand-in-hand.

Revolving funds are showing excellent results in pilot districts like Berau and Kapuas Hulu, where 23 villages collectively earned c. EUR 28,400 in the second half of 2020 through the sales of environmental services (water treatment) and non-timber forest products. Other new pilots, for example with FZS on the high-value cash crop vanilla in Tebo, Jambi have even greater potential.

Financial sustainability activities

- Community education & empowerment (including through women’s groups)
- Provisions of commodities & initial inputs
- Linkages to investment/business partnerships
- Support for value-added (production, packaging)
- Sales & marketing support



A farmer inspecting the ripening coffee beans.



Villages supported by KfW have reinvested revolving funds in clean water supplies, community forest patrols and aquaculture, with sales from horticultural products funding a farmers’ market, a coffee shop and an internet hub in various project villages.

The Government of Indonesia is committed to rescuing and rehabilitating wild animals who have been held in captivity or lost their homes and released over 100,000 individuals back into the rainforest between 2015–19.

The 'Jungle School' in Bukit Tiga Puluh is one of the nation's 29 special conservation institutions, and prepares rescued orangutans for their new life in the wild, teaching them everything they need to live independently in the rainforest, including what to eat, how to climb and how to build a sleeping nest. The jungle school is run by FZS, and supported by KfW / IKI landscape conservation programme which is helping to build a sustainable population of Sumatran orangutans through habitat protection.



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Responsible banking

KfW is one of the world's leading promotional banks. It applies its decades of experience to improve economic, social and environmental living conditions across the globe on behalf of the Federal Republic of Germany and the federal states. Its global network includes around 80 local and representative offices.



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