BLUE FORESTS
Yayasan Hutan Biru

Blue Forests
Annual Report 2023

LIVING WITH OUR MANGROVES


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Yayasan Hutan Biru

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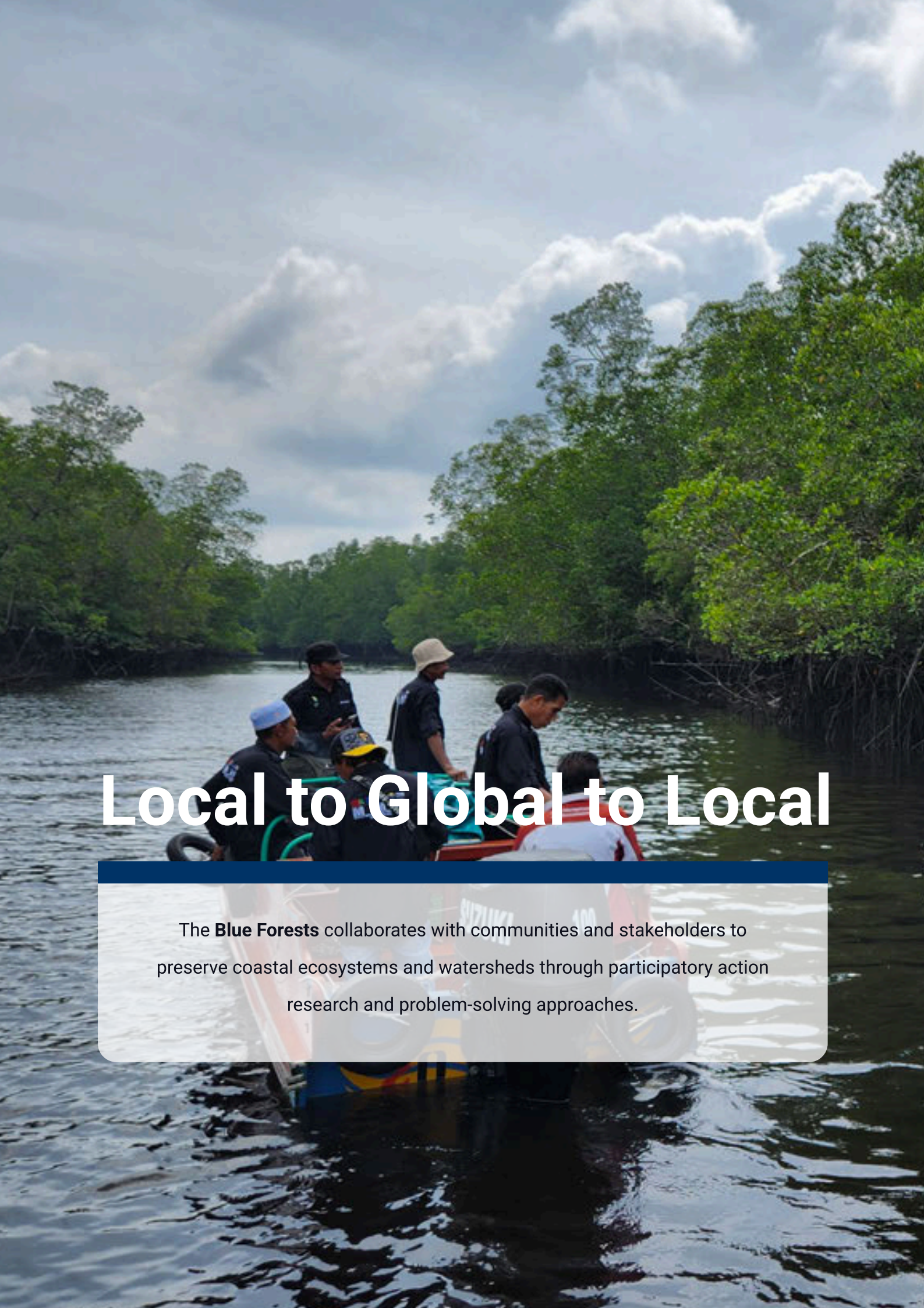
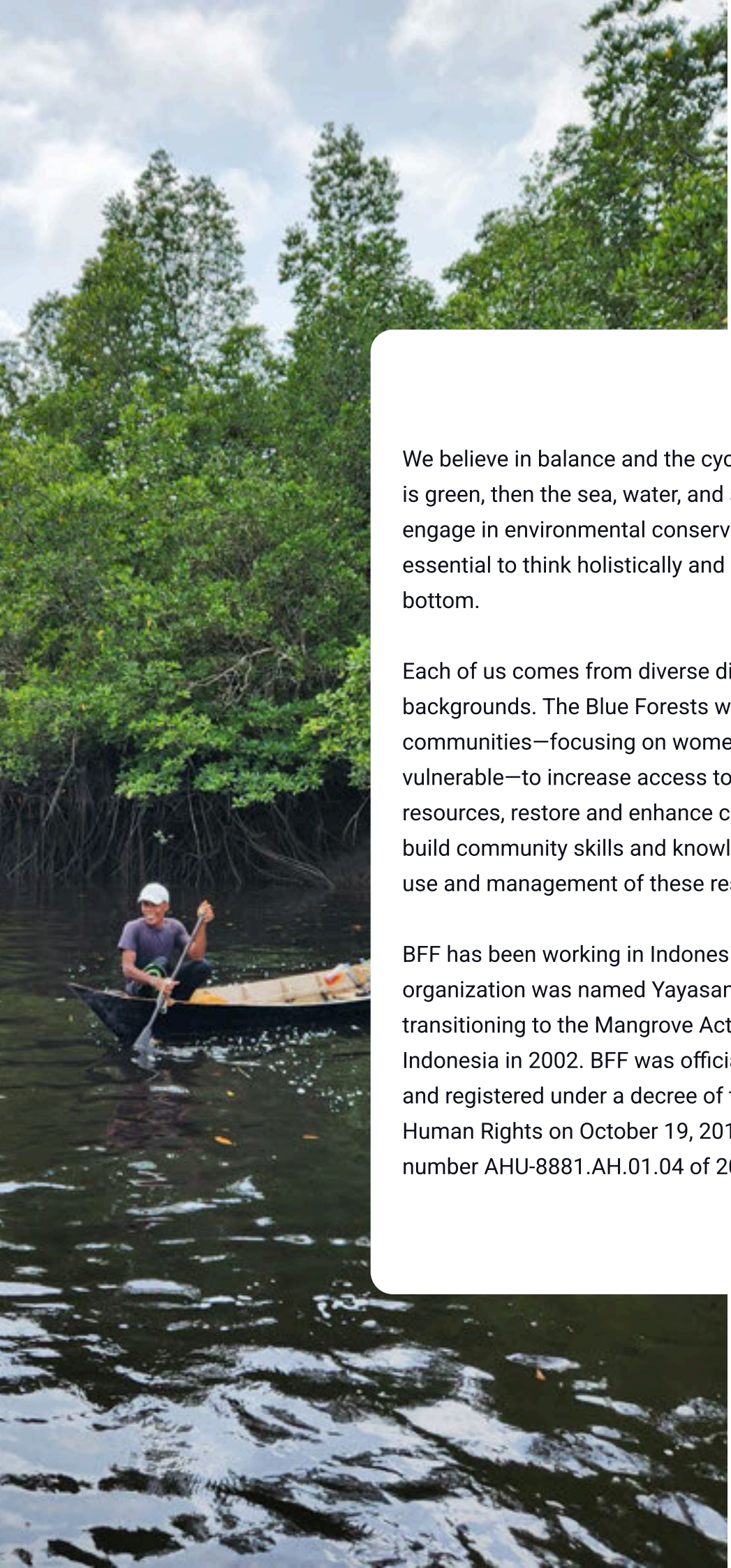


Local to Global to Local

The **Blue Forests** collaborates with communities and stakeholders to preserve coastal ecosystems and watersheds through participatory action research and problem-solving approaches.



We believe in balance and the cycles of change. If the forest is green, then the sea, water, and sky will be blue. We engage in environmental conservation efforts, making it essential to think holistically and long-term, from top to bottom.

Each of us comes from diverse disciplinary and cultural backgrounds. The Blue Forests works with coastal communities—focusing on women, the poor, and the vulnerable—to increase access to and control over natural resources, restore and enhance critical ecosystems, and build community skills and knowledge for the sustainable use and management of these resources.

BFF has been working in Indonesia since 2000. Initially, our organization was named Yayasan Akar Laut (YARL) before transitioning to the Mangrove Action Project (MAP) Indonesia in 2002. BFF was officially established in 2011 and registered under a decree of the Ministry of Law and Human Rights on October 19, 2011, with registration number AHU-8881.AH.01.04 of 2011.

PREFACE

The year 2023 reminds us all that change is inevitable, but how we respond to it truly defines the future. Like mangrove roots that do not merely endure the ups and downs of the tides and the onslaught of waves, we at Blue Forests continue striving to strengthen our foundation so that the benefits we create are broader and more deeply rooted.

With gratitude, this year we continue working with mangrove-landscaped coastal communities on 10 projects across eight provinces in Indonesia. More than just running programs, we are committed to strengthening mangrove ecosystems through restoration and protection efforts while supporting sustainable change. In every region where we work, we focus not only on the ecosystem but also on the people within it. Strengthening coastal resource-based economies is a key element in building resilience—ensuring that communities have access to sustainable livelihoods, the freedom to choose, and the independence to manage and conserve their environment. We believe that social-ecological resilience can only be achieved when there is a balance between environmental sustainability and community welfare.

The stark reality of climate change compels us to adapt, find innovative solutions, and build more resilient systems. We believe that protecting coastal ecosystems is not just about nature conservation—it is also about sustaining the livelihoods of coastal communities, ensuring their well-being, and preserving the biodiversity that is crucial to environmental resilience. The Local to Global to Local principle remains a guiding thread in every step we take: from local communities, we learn the wisdom of caring for ecosystems; we share these insights at a global level; and we bring them back to strengthen the sustainability of coastal communities in Indonesia.

We are deeply grateful for the dedication and synergy fostered with communities, partners, researchers, the government, and our entire team, who tirelessly work with intelligence and passion to drive meaningful change. This journey is far from over. Together, we continue planting hope, building resilience, and securing a better future for ecosystems and communities through nature-based solutions.

Thank you for being part of this journey. Let's keep moving forward together—from local to global—and give back to all.

Rio Ahmad

Director of Blue Forests

About **Blue Forests**

Blue Forests is a non-profit organization with a mission to collaborate with communities and stakeholders to enhance the social, economic, and ecological systems of coastal ecosystems and watersheds by strengthening their capacity for adaptation. This, in turn, increases their resilience to change.

From west to east, we work across diverse landscapes throughout Indonesia. A primary focus, addressed holistically from the watershed to the coast, is the mangrove landscape.

VISION

Linkage of healthy, resilient communities and ecosystem, flowing from upper to mid to lower watershed.

MISSIONS

Blue Forests Foundation uses an action research approach and problem solving process based on the “local to global to global” paradigm. Across the mountains and out to the ocean, we hope to strengthen the socioeconomic and ecological resilience of important coastal and watershed systems.

Our Objective

This process is known as action research and problem-solving and is embedded in all programs of the Blue Forests Foundation. To achieve this, we have three interrelated goals:

Learn about the community's environmental challenges, as well as the characteristics of the watershed and nearby coastal areas, while gaining real-world experience in social, economic, and ecological studies related to these regions.

Promote intercultural communication and understanding to foster awareness of the global context, starting from local environmental issues, and highlight the importance of cultural perspectives in selecting effective problem-solving strategies.

Improve the social, economic, and ecological conditions of river basins and the communities within them. This can be achieved through: Community organizing with a focus on gender issues (social strengthening); The development of small and medium-sized businesses based on the sustainable use of watershed resources (economic strengthening); The restoration of ecological habitats; The creation of adaptive watershed and coastal management strategies, both cooperative and environmentally strengthening.

OUR WORK REGION

1 **Langkat, West Sumatra**
Advocating Community Based Mangrove Management

2 **Bengkalis Island, Riau**
Ecological Mangrove Rehabilitation And Livelihoods Program

3 **Indragiri Hilir, Riau**
Climate Collective Initiatives

3 4 **Indragiri Hilir, Riau & Kubu Raya, West Kalimantan**
Blue Forestss Program

5 **Samboja, East Kalimantan**
Blue Forests - ELTI Programs

6 **Berau, East Kalimantan**
Coastal Field Schools (CFS) Of Shrimp Carbon Aquaculture (SECURE)

7 **South Sulawesi**
Restoring Coastal Livelihood (RCL)

8 **Kuri Caddi, South Sulawesi**
Educational Tourism (Edutourism)

9 10 **Tanakeke Island, South Sulawesi**
Rehabilitation and Protection of Mangrove on Tanakeke Island

11 **Tiwoho, North Sulawesi**
Ecological Mangrove Rehabilitation

12 **West Muna & Muna, Southeast Sulawesi**
Climate Collective Initiative

13 **Timor Leste**
Coastal Community Learning Center

14 **Mimika, Papua**
Indonesian Forest and Climate Support (IFACS)

15 **Mimika & Asmat, Papua**
USAID Lestari Project

16 **Mimika & Asmat, Central Papua and South Papua**
Enhancing the Resilience of Indigenous Owners of The Lorentz Lowlands, Papua Province, Indonesia - Kampung Lestari

17 **Semarang, Central Java**
Asian Cities Climate Change Resilience Network

18 **Central Java**
Bamboo Field Schools

19 **Demak, Central Java**
Building with Nature

20 **Bagek Kembar, West Lombok**
Community Lead Restoration of Indonesia's Extraordinary

Batu Ampar Village, Kubu Raya, West Kalimantan

OUR IMPACT

For 22 years, we have accompanied coastal communities in building resilience for both communities and coastal ecosystems in Indonesia through science-based innovation, local wisdom, inclusivity, and collaboration. From the restoration and protection of mangrove ecosystems to sustainable economies, this initiative ensures a sustainable ecosystem and increasingly independent communities. We remain committed to nurturing coastal life with a deeper, adaptive, and empowering approach.

2,199
Ha mangrove area rehabilitated

623,161
Haof mangrove area improved management

126,097
Ha of Improved Marine Protected Areas (MPA) management

+90
Village partners

+79,500
Community partners

📍Tompotanah Village, Takalar, South Sulawesi

ECOLOGICAL MANGROVE REHABILITATION (EMR)

Capacity Building

5
EMR Training of Trainers (ToT)

127
participants took part in the EMR ToT program

45 Women
82 Men

EMR Implementation

34,7
hectares of degraded mangroves have been successfully restored

187
people were involved in mangrove rehabilitation efforts.

60 Women
127 Men

73
people were involved in monitoring rehabilitation sites

42 Women
31 Men

Together with the community and other stakeholders, we are working to restore degraded mangrove ecosystems using the **Ecological Mangrove Rehabilitation (EMR)** approach. Instead of simply planting seedlings, as most rehabilitation activities do, we focus on helping nature restore itself. Guided by the concept of Nature-Based Solutions (NbS), we prioritize removing natural barriers that hinder the natural regeneration of mangroves, allowing the ecosystem to recover on its own—diverse, healthy, and lush, like a natural mangrove forest.

One of the key principles of EMR is maintaining the functionality and natural flow of tidal streams. This is crucial because mangrove ecosystems are not just about trees; they also provide habitat for a wide variety of flora and fauna that depend on balanced environmental conditions. Since 2001, we have implemented this approach across various mangrove landscapes in Indonesia, helping nature return to its natural state while supporting the livelihoods of local communities.

Members of WoMangrove (Woman Mangrove Group) of Tanakeke Island are spreading *Avicennia marina* seeds at the rehabilitation site.

Discussion on EMR design plan in Parit 18, Sapat Village, Indragiri Hilir

In 2023, Blue Forests implemented EMR in five mangrove areas across Indonesia: Muna and West Muna in Southeast Sulawesi, the Tanakeke Islands in South Sulawesi, Indragiri Hilir in Riau, Bagek Kembar in Lombok (West Nusa Tenggara), and Berau in East Kalimantan. Activities included capacity-building training through Training of Trainers (ToT), facilitation of the Restoration Opportunity Assessment Method (ROAM), and the implementation and monitoring of EMR. This program follows the Community-Based Ecological Mangrove Rehabilitation (CBEMR) approach, in which EMR initiatives are primarily driven and managed by local communities in collaboration with various stakeholders.

In Muna, several key initiatives were undertaken, including a mangrove rehabilitation planning synchronization workshop that resulted in a potential mangrove habitat map covering 219 hectares. Additionally, an opportunity mapping workshop and validation of the mangrove rehabilitation potential map further strengthened district-scale rehabilitation planning. The Free, Prior, and Informed Consent (FPIC) process in six villages ensured community consent and active participation. Other activities, such as EMR ToT, equipped communities and stakeholders—including FMUs, district technical agencies, and NGOs—with the skills needed to plan and implement mangrove rehabilitation based on each site's specific needs.

EMR implementation in Tanakeke covers two locations, namely Lantangpeo Hamlet in Minasa Baji Village and Tompotanah Village, which feature typologies of abandoned ponds and sparsely logged mangroves.

Mangrove rehabilitation in Lantangpeo Hamlet, covering an area of 25 hectares, involved the propagation and planting of thousands of seedlings from three mangrove species: *Rhizophora stylosa*, *Bruguiera gymnorrhiza*, and *Ceriops tagal*. Scientific and participatory monitoring is conducted every three months to assess the progress and achievements of EMR.

In Tompotanah Village, more than 16,000 mangrove seedlings from four species (*Rhizophora stylosa, Bruguiera gymnorrhiza, Avicennia marina*, and *Ceriops tagal*) were propagated. This was followed by regular monitoring to evaluate the progress of rehabilitation.

Mangrove rehabilitation at the other three sites demonstrated collaborative efforts involving various stakeholders in planning, training, and the implementation of Ecological Mangrove Rehabilitation (EMR).

In Indragiri Hilir, 14.7 hectares of mangrove rehabilitation was carried out with the active involvement of local communities, with ongoing monitoring every three months.

Monitoring conducted every three months at the Tanakeke and Indragiri Hilir rehabilitation sites to track the progress and achievements of rehabilitation, one of which is the density of mangroves.

Additionally, a series of Training of Trainers (ToT) sessions enhanced the capacity of communities and stakeholders in planning and implementing mangrove rehabilitation. In Berau, the EMR ToT activity involved participants from three villages (Tabalar Muara, Suaran, and Pegat Batumbuk), the mangrove ecotourism manager of Teluk Semanting, as well as academics, NGOs, and related agencies. This initiative strengthens collaboration between the community, development partner NGOs, and other stakeholders.

Meanwhile, in Bagek Kembar, training on Ecological Mangrove Rehabilitation (EMR) was attended by various sectors, including government representatives, communities, and academics, with the goal of enhancing their knowledge and skills in planning and implementing EMR.

In Balikpapan, the EMR ToT was conducted at Graha Indah Mangrove Center. The training aimed to raise awareness and equip potential trainers with the necessary skills in Ecological Mangrove Rehabilitation (EMR). It also helped stakeholders involved in mangrove rehabilitation — including communities, the private sector, government, and project managers — understand the concept of EMR and the importance of key biological and biophysical factors in successful mangrove restoration.

EMR ToT participants present the results of their group work based on data collected from their field practice at Graha Indah Mangrove Center


Indragiri Hilir, Riau

CONSERVATION AND PROTECTION

123,161
hectares of mangrove area protected

277,471
hectares of indigenous peoples' management areas protected and monitored

126,097
hectares of Indragiri Hilir Regional Conservation Area are conserved

13
species were released, including 5 species of Aves and 2 species of Reptiles

3
forest guard groups routinely conduct patrols and monitoring in customary management areas

2
guard posts established for forest protection

6
community monitoring group (Pokmaswas), Community forest managers (LPHD), and other monitoring groups routinely conduct patrols and monitoring

1
FMLG (Forests Management Learning Group) established

We believe that protecting coastal ecosystems and biodiversity is not just the responsibility of a few parties but a shared duty. Through our Conservation and Protection approach, we encourage local communities to take an active role in managing natural resources sustainably.

We integrate a community-based model with an adaptation of the Government-Based Management system by implementing a collaborative management (**co-management**) scheme. This approach ensures strong cooperation between communities and stakeholders within the management area.

This approach is based on the principle of **adaptive collaborative management**, where the community is not only the manager but also the frontline of ecosystem protection. They play a direct role in community-based patrolling and monitoring, strengthening customary institutions, and integrating customary protection mechanisms into village and conservation area governance. This ensures that **monitoring, control, and surveillance** functions operate more effectively, aligning with various initiatives, including those from the government, area managers, and communities.

As part of this commitment, we support the establishment and improved management of **Marine Protected Areas (MPAs)** connected to mangrove landscapes. This ensures that ecosystems remain sustainably protected while providing tangible benefits to coastal communities. For us, conservation success means that local communities are not only stewards of nature but also directly benefit from the resources they protect. In addition to conserving mangrove, lowland swamp, and coastal ecosystems, this approach also safeguards key species that inhabit these areas.

By 2023, efforts to protect and conserve mangroves and surrounding waters in various locations will focus on three main areas: (1) patrolling and monitoring to ensure area protection, (2) releasing animals to support the conservation of endangered species, and (3) facilitating Marine Protected Areas (MPAs) to maintain mangrove ecosystems and surrounding waters. The approach in each location varies according to the type of ecosystem and the social dynamics of the community, including both local and indigenous populations. These three approaches are actively promoted by communities, management groups, and other stakeholders in each location.

Patrol and Monitoring

Patrolling and monitoring are core activities in the protection and conservation of mangroves and surrounding waters, aimed at overseeing resource utilization, identifying threats, and detecting potentially damaging activities. In various locations, these activities are conducted regularly and involve multiple stakeholders, including local communities, management groups, and relevant agencies.

Patrols and monitoring of mangrove utilization and potentially destructive activities in Muna Regency are conducted in collaboration with various stakeholders, including KPH Unit VIII Gantara, KTH Passibula, KTH Kobuta, KTH Hijau Barokah, village government, Babinsa, and Polsek. These patrols aim to ensure the sustainability and protection of mangrove areas in the region.

In Tanakeke, coordination for the formation of POKMASWAS was carried out in Tompotanah Village and Minasa Baji Village to strengthen mangrove monitoring and management. Additionally, patrols involved the participation of two Participatory Action Research (PAR) groups from these villages, consisting of local youth.

The Community Forestry Ranger Partner Group (MMP) of Pulau Cawan Village, Indragiri Hilir, monitors the condition of the mangrove forests around the village to improve efforts to protect the mangrove area.

In Indragiri Hilir, two monitoring and patrol activities were conducted in Pulau Cawan Village and Igal Village, involving POKMASWAS/MMP and various related stakeholders. In addition to identifying potential threats, these activities have also enhanced the capacity of members in using monitoring and patrol tools. Furthermore, two capacity-building sessions were conducted for FMU staff, and one FMLG (Natural Resource Management Group) unit was established, focusing on mangrove and fisheries management as well as support for ecotourism in Sapat Village.

In Kubu Raya, patrol and monitoring activities were carried out in two villages, Batu Ampar and Medan Mas, with the formation of patrol monitoring groups involving local communities. In Batu Ampar, two patrols were conducted, while in Medan Mas, four monitoring sessions took place to ensure mangrove forest protection. A total of 26,611 hectares of mangrove forests are protected in this area, with 26,429 hectares managed by LPHD Batu Ampar Village Forest and the remaining mangrove areas under the jurisdiction of Medan Mas Village. Additionally, conservation initiatives are strongly supported by two FMLG groups—Madu Mangrove and the Batu Ampar Mangrove Forest Management Group—both focusing on the sustainable utilization and conservation of mangroves.

In Kampung Lestari, Papua, the construction of two guard posts in Nayaro and Mioko has strengthened the protection and monitoring of customary management areas. Regular patrols and monitoring activities have been conducted, particularly focusing on significant customary sites, such as sacred locations and community-managed areas within their customary territories.

These activities are carried out by the Forest Guard Group (KJH), customary elders, village government, and representatives from BKSDA and the Forestry Service Branch in three villages—Nayaro, Mioko, and Yepem—covering a customary area of 277,471 hectares. Their efforts aim to ensure the sustainability and protection of the mangrove ecosystem and its biodiversity.

The Forest Guard Group (KJH) conducts monitoring to ensure the sustainability and protection of mangrove ecosystems and biodiversity

Animal Release

Animal releases, particularly for endemic and protected species (both by the state and customary law), are conducted to support conservation efforts in community-managed conservation areas (CCAs).

In Kampung LESTARI, 13 animals from various rare species were successfully released in significant customary sites protected by the Mioko/Kamora indigenous community. These included the Great Yellow Bird of Paradise (*Paradisaea apoda*), Sulphur-crested Cockatoo (*Cacatua galerita*), Eclectus Parrot (*Eclectus roratus*), Wompoo Fruit Dove (*Ptilinopus magnificus*), Double-wattled Cassowary (*Casuarius casuarius*), Red-bellied Short-necked Turtle (*Emydura subglobosa*),

Animal releases, particularly for endemic and protected species (recognized by both the state and customary law), are conducted as part of conservation efforts in community-managed conservation areas (CCAs).

and Papuan River Turtle (*Elseya rhodini*).

This release was a collaborative effort involving the community, BBKSDA SKW II Timika, and PT. FI, with full support from the village government and customary elders. These animals are not only protected by national and global conservation laws but also hold cultural and spiritual significance within adat traditions.

Marine Protected Area (MPA)

Efforts to conserve and protect mangroves and surrounding ecosystems in Indragiri Hilir have been further strengthened by the establishment of a Regional Conservation Area (KKD Inhil), covering 126,097.64 hectares, as designated by the Decree of the Minister of Marine Affairs and Fisheries Number 107 of 2023.

Blue Forests, in collaboration with the Riau Province Marine and Fisheries Service (DKP), BPSPL Padang, and various related stakeholders, is working to promote inclusive governance of Regional Conservation Areas (KKD), ensuring local community involvement in the management and sustainable use of natural resources.

This approach aims not only to protect mangrove areas and surrounding waters but also to enhance community well-being through responsible and environmentally friendly resource utilization.

The Riau Province Marine and Fisheries Service (DKP) promotes the sustainable management and utilization of natural resources through inclusive governance of Regional Conservation Areas (KKD)

📍Kampung Yepem, Asmat, South Papua

SUSTAINABLE LIVELIHOOD

5

ToT Coastal Field School (CFS)

64

participants took part in the Coastal Field School ToT program

20 Women
44 Men

10

coastal field School units with themes covering organic ponds, organic farming, seaweed cultivation, fisheries and mangrove product processing, home gardening, and animal husbandry

359

individuals participated in Sustainable Livelihood initiatives through CFS

212 Women
147 Men

14

business units were supported in their development, including compost production, processed fishery products, processed coconut products, KUB, kelulut honey, fish crackers, ecotourism, and ironwood nurseries.

3

start-up capital provided to business groups

We work with coastal communities to build livelihoods that are in harmony with nature—utilizing resources without depleting them. This approach emphasizes ecosystem-based livelihood diversification, including sustainable fisheries, non-timber forest product (NTFP) management, eco-friendly aquaculture, and value-added local products.

Our goal is simple: to create a resilient economic system for coastal communities. By expanding sustainability-based business opportunities, communities can reduce their reliance on destructive exploitation practices while improving their well-being through more sustainable business models.

To achieve this, we developed the **Coastal Field School**—a participatory learning method based on hands-on experience. Here, communities learn to conduct **agroecosystem analysis**, apply environmentally friendly cultivation techniques, and implement local wisdom-based resource management. We also support them in business development, from designing **community-based business models** to strengthening local product value chains.

Through this approach, we aim to ensure that the livelihoods of coastal communities not only adapt to change but also remain sustainable for future generations.

Business groups in Napalakura Village are discussing plans to develop a compost business to support the growth of the agricultural sector and organic pond cultivation

This year, we implemented livelihood and enterprise development activities in Muna, Tanakeke, Berau, Kubu Raya, and Kampung Lestari. The key activities include capacity building through Training of Trainers (ToT) and Coastal Field School sessions, as well as business group mentoring to enhance the capacity and sustainability of local resource-based businesses.

Livelihood and enterprise assistance in Muna included two ToT sessions, the implementation of Coastal Field Schools covering three SL units, and support for three business groups. The ToT provided participants with an understanding of coastal ecosystems, guiding techniques, and the development of changing trends and village seasonal calendars as a foundation for livelihood and enterprise strengthening planning.
Furthermore, the Coastal Field School assisted three villages in developing fishery and mangrove-based businesses in Latawe, organic ponds in Napalakura, and seaweed cultivation in Lasama. The assistance also focused on three business groups: compost business development in Napalakura Village, processed fishery products in Latawe Village, and processed coconut products in Labunia Village.

Each business group has established business legality, developed business plans, and strengthened their marketing networks and business partnerships.

Coastal Field School participants in Berau and Muna measuring and observing pond water quality

Activities in Tanakeke included the implementation of a Coastal Field School and business mentoring. In Tompotanah Village, the SLP theme was 'Village Business,' conducted through seven meetings to enhance participants' capacity in managing local businesses.

In Berau, the main activities included Training of Trainers (ToT) and Coastal Field School (CFS), focusing on SECURE pond management. The ToT training was attended

by community representatives from villages such as Pegat Batumbuk, Suaran, and Tabalar Muara, as well as Fisheries PPLs. Three SECURE Pond Field School units were held in three villages to equip participants with environmentally friendly pond management skills.

Additionally, a SECURE Pond CFS curriculum was developed to support the sustainability of fisheries businesses.

Furthermore, learning-sharing activities through the Farmer Field Day strengthened participants' knowledge and skills, fostering collaboration to improve pond business outcomes in the region.

In Kubu Raya, various initiatives have been undertaken to support local business development and the sustainability of coastal ecosystems.

In Batu Ampar Village, four Joint Business Groups (KUB) and one Processing and Marketing Group (Poklahsar) were established and supported in producing KUSUKA as well as conducting daily data collection on mangrove crabs. Additionally, business capital assistance of 15 million rupiah per group was provided to three business groups: Kelulut Honey, Amplang Ayu, and Pokdarwis.

Support also focused on the preparation of proposals and Business Model Canvas (BMC) for 12 business groups. Capacity-building training covered financial literacy, group management, and market opportunities, aiming to strengthen the local economy and promote the sustainability of coastal-based businesses.

Amplang Ayu Business Group in Kubu Raya showcases their products

The Kampung Lestari program in Papua supports communities in meeting their food and livelihood needs through both the sustainable use of forest resources and the application of agricultural and cultivation practices.

Through the Coastal Field School, participants—mostly women—learn about animal husbandry and agriculture to enhance self-reliance in meeting their food needs. Additionally, the Kelompok Jaga Hutan (KJH) developed an ironwood nursery business in Nayaro and Yepem, serving both customary forest rehabilitation efforts and external market demands.

In Yepem, fisheries and virgin coconut oil (VCO) processing businesses are also expanding with the active involvement of indigenous women, while in Nayaro, sago starch processing businesses are primarily managed by women. This initiative focuses on local resource-based economic empowerment and strengthening family food security.

Coastal Field School participants in Papua practicing agriculture to increase self-reliance in meeting their food needs

📍 Pekanbaru City, Riau

INCLUSIVE GOVERNANCE

Institutionalization

3

draft Medium Term Development Plan (RPJM) documents for coastal villages are prepared inclusively

3

Government Work Plan (RKP) documents for coastal villages prepared inclusively

Capacity Building

3

Indigenous Field Schools in Papua implemented

For us, effective natural resource governance must be inclusive, evidence-based, and capable of balancing the interests of all parties—especially local communities who live alongside coastal ecosystems. That is why we promote **inclusive governance**, an approach that integrates customary mechanisms, village institutions, and formal policies to make natural resource management more participatory, adaptive, and sustainable.

We apply this principle by strengthening local institutions, ensuring active community involvement in natural resource management, and facilitating cross-sector collaboration. This approach includes inclusive planning, capacity-building for village governments and governance units, and fostering synergies between communities, governments, and other stakeholders.

Our goal is clear: to strengthen the rights, access, control, and role of communities in natural resource governance. This way, prosperity can be achieved through sustainable and equitable management while respecting local wisdom. We believe that communities are not just beneficiaries of policies but also key actors in maintaining ecosystems. When local knowledge and traditional practices—proven effective over generations—are integrated into management systems, governance becomes more resilient, adaptive, and capable of withstanding future challenges.

Inclusive Governance in Muna

In Muna, Blue Forests has promoted inclusive natural resource governance by involving local communities in sustainable village development planning. One key achievement has been assisting in the preparation of the Village Medium-Term Development Plan (RPJMDes) in Baluara Village, which involved the active participation of the village community. This process ensures that village planning reflects the needs and aspirations of local communities while considering the potential and sustainability of existing natural resources. Additionally, village meetings for the preparation of the Village Government Work Plan (RKP) were facilitated in three villages—Kombikuno, Wambona, and Napalakura.

Mangrove Governance in Berau

Blue Forests promotes inclusive mangrove governance in three villages in Berau by engaging local communities and government stakeholders in village-level mangrove management and protection. One of the key achievements was the Local Training on Village-Level Mangrove Management and Protection, which involved various stakeholders, including LPHD, communities, village governments, and partners such as Sigap, TML, and YKAN. This training aimed to strengthen the capacity of village-level managers in designing sustainable, participation-based mangrove management plans. As a result, a draft mangrove management and protection plan was developed for the three assisted villages —Batumbuk, Suaran, and Tabalar. These plans are expected to serve as a foundation for preserving mangrove ecosystems while improving the welfare of local communities through an inclusive and evidence-based approach.

Custom-Based Governance in Papua

Blue Forests is implementing a custom-based governance approach in Papua through Customary Field Schools in three villages: Mioko, Nayaro, and Yepem. This initiative focuses on understanding and applying the seven pillars of Indigenous Legal Communities to explore and strengthen customary arrangements that can be internalized into village government mechanisms. Additionally, the installation of information boards on customary territories is an important step toward clarifying the boundaries of customary management areas, marking significant customary sites, and supporting the recognition of customary management areas. These activities aim to enhance the capacity of indigenous communities to manage and protect their natural resources, ensuring the sustainability of customary governance systems while securing recognition of their local rights by external stakeholders.

Latawe Village, Muna Barat, Southeast Sulawesi

ENVIRONMENTAL EDUCATION

3
Environmental Education implemented

40
teachers involved in Environmental Education ToT

22
schools (elementary, junior high, and high school) implemented the Environmental Education

1,374
students participated in the Environmental Education

Environmental education is not just about raising awareness but also about fostering a critical mindset and a sense of collective responsibility in protecting ecosystems. We apply the **Participatory Action Research (PAR)** approach and **problem-solving** methods, emphasizing the Kolb Learning Cycle of experiential learning. This approach enables communities to learn directly from experience, reflect on the environmental challenges they face, and design and test concrete solutions to address them.

We promote **community-based learning**, where communities—including children and youth—actively participate in environmental observation, natural resource mapping, and threat analysis of coastal and mangrove ecosystems. **Cross-generational dialogue** is also a key element, ensuring that traditional knowledge of environmental management is preserved and passed down through customary mechanisms and open discussions.

We integrate environmental education into both **formal and non-formal** learning systems. In collaboration with schools and village governments, we have developed a curriculum that incorporates coastal ecosystem conservation—particularly mangroves—into formal education. Public awareness campaigns, environmental literacy programs, and the involvement of the younger generation in ecosystem rehabilitation and conservation efforts are part of our broader strategy to build a more aware, adaptive, and proactive community in protecting the environment.

Program assistance in Muna and Kubu Raya prioritizes the integration of mangrove conservation and natural resource management into formal education through the review and development of the Environmental Education curriculum. Additionally, the program aims to enhance the capacity of educators to effectively facilitate and integrate conservation and mangrove-related topics into school subjects.

In Muna, two Training of Trainers (ToT) sessions were facilitated by Blue Forests, attended by teachers from six elementary and

Students learn to recognize and identify the types of mangroves

junior high schools. The trained teachers then applied their learning by incorporating EE into their respective schools, working alongside the Blue Forests team. Environmental Education learning was implemented in six schools: SMPN 1 Wakorumba Selatan; SMPN 2 Wakorumba Selatan; SDN 3 Napabalano; SMPN Satu Atap 3 Tikep; SDN 3 Tikep; and SMPN 1 Napano Kusam.

Meanwhile, in Kubu Raya, one ToT session was conducted, attended by teachers from seven schools, where Environmental Education learning was also implemented.

Unlike the previous two locations, in Papua—particularly in Mimika and Asmat—we facilitate Environmental Education by integrating it with efforts to strengthen local governance based on customary practices. Environmental Education serves as a platform for indigenous youth to introduce traditional forest and natural resource management practices to the younger generation.

Additionally, the Environmental Education in the cities of Timika and Agats acts as a bridge for dialogue between indigenous peoples at the village level and young people in Papua's small towns. The goal is to ensure that the younger generation in urban areas understands the wisdom behind sustainable forest management in villages.

Environmental Education mentoring is conducted in three elementary schools in each village. Indigenous youth participating in the Customary Field School—primarily members of the Forest Guard Group (KJH)—share and teach traditional nature management practices to elementary school children through both classroom learning and field-based activities.

Forest Guard Group (KJH) also plays a central role in Environmental Education initiatives at six high schools and vocational schools in Timika and Agats. They introduce high school students to indigenous environmental management practices and take them into the forest to participate in patrolling and monitoring activities alongside KJH members. This direct interaction and dialogue aim to build awareness and instill a deep understanding of customary conservation practices in the next generation.

Medan Mas Village, Kubu Raya, West Kalimantan

COASTAL COMMUNITY LEARNING CENTER (CCLC)

We recognize that access to information, technology, and training remains a challenge for coastal communities. To address this, we established the **Coastal Community Learning Center (CCLC)**—an interactive learning hub that provides a space for communities to share experiences, develop skills, and access innovations in coastal resource management.

CCLC is more than just a place to learn about the environment; it is also a platform for economic empowerment, community health improvement, and strengthening local leadership. Through this center, communities receive technical training, natural resource-based business incubation, and participate in discussion forums to collaboratively design solutions to the challenges they face.

In some locations, Coastal Community Learning Centers (CCLCs) are also driving community-based business models, such as sustainable fisheries processing and the production of non-timber forest products (NTFPs) that provide added value to local communities. Through this approach, we aim to ensure that coastal communities not only improve their environmental management but also build stronger and more sustainable economic resilience.

CCLC's coastal community learning and empowerment activities at Medan Mas Village

Through collaboration with Seacology Foundation, Coastal Community Learning Center (CCLC) in Kubu Raya has been established in a mangrove forest and pond area, designed to serve as a hub for learning and empowering coastal communities. The center consists of three main buildings: a meeting room, a pavilion for small activities, and an Eco Filum for environmentally-based health education. Additionally, it features a healthy garden and a household waste management system.

CCLC also actively involves the Kelompok Sadar Wisata (Pokdarwis) in every stage of development and activities. Furthermore, in collaboration with academics, CCLC conducts biodiversity assessments of the mangrove area through the exploration of plant species, fauna, and coastal ecosystems. This makes it a key learning space for the sustainable management of coastal and mangrove areas while also supporting the economic empowerment of natural resource-based communities.


Yepem Village, Asmat, South Papua

FOOD RESILIENCE AND COMMUNITY HEALTH

42
cadres actively conduct household visits for health counseling.

581
communities participated in counseling and health checks in collaboration with the Puskesmas.

140
households received health education in two villages.

2
waste management task forces formed and developed a list of issues for village regulation.

We believe that **food resilience** is essential to the well-being of coastal communities. Therefore, we support communities in optimizing food sources from forests, the sea, and surrounding land, reducing dependence on external supplies that are vulnerable to disruption. With this approach, communities can independently meet their families' nutritional needs while maintaining ecosystem balance.

We integrate **ecosystem-based farming** practices, responsible catch management, and local wisdom into food production. This approach includes sustainable fisheries, coastal agriculture, and the utilization of non-timber forest products (NTFPs) such as nypa and various marine resources. Additionally, we provide community support in building healthy consumption patterns, including education on food safety, food processing based on local resources, and the implementation of village policies that support food security.

In some locations, we are also strengthening the capacity of village health cadres to promote public health initiatives, waste management, and improved health services. Through this strategy, we aim to ensure that coastal communities not only have access to sufficient and high-quality food but are also more resilient to environmental changes and socio-economic challenges.

One of the locations where this approach has been implemented is Kubu Raya, where community empowerment activities have focused on food security and coastal community

Health checks are carried out with the support of the health center

A healthy garden in the backyard to meet the family's food requirements

health. A total of 42 health cadres, mostly women, actively promoted health awareness by visiting 140 households to educate residents on the importance of a healthy lifestyle. More than 580 people, including 495 women, participated in health checks and counseling in the village.

Additionally, food security research was conducted by researchers from Charles Darwin University (CDU), who assisted the community in optimizing local resources and establishing healthy, sustainable consumption patterns—aligning with efforts to maintain coastal ecosystem balance. Food sufficiency and the ability to produce food locally are fundamental to building resilience in coastal communities. This is achieved through a Field School approach, which teaches ecosystem-based farming practices, including sustainable fisheries and coastal agriculture. Through this program, communities are empowered to produce food independently, enhance food security, and sustain the balance of coastal ecosystems.

Further details on these achievements, particularly those related to Field School initiatives, are provided in the *Sustainable Livelihood* Strategy.


Prigiraja Village, Indragiri Hilir, Riau

RESEARCH, CAPACITY BUILDING AND TECHNICAL ASSISTANCE

We play an active role in conducting **research, capacity-building, and technical assistance** to support the sustainable management of coastal ecosystems and watersheds. We adopt the **Participatory Action Research (PAR)** approach to develop community-based social, economic, and ecological assessments, ensuring that any solutions produced are truly relevant to local needs.

Additionally, we implement capacity-building programs that include technical training, environmental education, and the strengthening of formal governance and policies. We also provide technical assistance to governments, communities, and partners in various areas, including planning, mapping, and implementing ecosystem recovery strategies.

Through this approach, we promote multi-stakeholder collaboration, connecting various elements within social and environmental ecosystems to enhance their resilience and sustainability. We believe that effective ecosystem management not only preserves the environment but also generates long-term benefits for communities that rely on natural resources.

Blue Forests-ELTI Indonesia Program

The Environmental Leadership and Training Initiative (ELTI) is an initiative of The Forest School at the Yale School of the Environment. ELTI supports community efforts to design and implement a suite of land use practices and initiatives that conserve and restore tropical forests and native forest cover in human-dominated landscapes rich in biodiversity. In late 2022, the Blue Forests established a partnership with ELTI through the Blue Forests-ELTI program in Indonesia and began implementing the program in early 2023. The Blue Forests-ELTI program focuses on training and capacity building programs.

The Blue Forests-ELTI training landscape is located in East Kalimantan as a demonstration site with a target audience of participants from across Indonesia. Currently the Blue Forests-ELTI program focuses efforts on the conservation, restoration and sustainable use of Indonesia's carbon- and biodiversity-rich mangrove ecosystems. This training landscape is where the BF-ELTI team conducts field training focused on building local capacity to implement conservation and

restoration projects. Training activities include a wide range of participants including local community groups, government agencies, non-governmental organizations, the private sector and other important stakeholders.

In the period April 2023 to March 2024, the Blue Forests-ELTI program has implemented several training activities and leadership programs as described below:

Online training on conflict management

A two-day online training on conflict management in the forestry sector, particularly in coastal areas. The training covered three main topics: an introduction to conflict management, Free, Prior and Informed Consent (FPIC) and grievance mechanisms. The training also included case study analysis by each group of participants. The groups presented their analysis to all participants and received feedback from other participants and the trainers. The training was attended by 50 participants consisting of 29 male and 21 female participants

Capacity Building Training for Ecotourism Groups in Sungai Hitam

A two-day field training on mangrove ecotourism and rehabilitation for Pokdarwis (Tourism Awareness Groups) managing the Black River ecotourism in Samboja, East Kalimantan. The training was conducted on June 11 and 18, 2023 at Sungai Hitam Lestari Ecotourism Area (Samboja District, Kutai Kartanegara Regency) and Balikpapan Mangrove Center. The purpose of this training is to increase the capacity of the Sungai Hitam community in managing sustainable mangrove ecotourism and proboscis monkey conservation in Sungai Hitam. The training was conducted through a comparative study with Balikpapan Mangrove Center, field practice on assessing potential mangrove restoration areas, and classroom presentations on how to develop mangrove nurseries, and manage sustainable mangrove ecotourism. In this training, we involved women's groups (PKK) and youth groups (Karang Taruna) to support mangrove conservation and ecotourism in Sungai Hitam. The training was attended by 25 participants consisting of 10 male and 15 female participants.

Training on High Conservation Value- High Carbon Stock (HCV-HCS) management & monitoring and tree species identification at PT. Sumalindo Lestari Jaya IV

A three-day field training program on HCV-HCS management & monitoring and tree species identification at PT Sumalindo Lestari Jaya IV in Berau, East Kalimantan. As part of Blue Forests - ELTI's efforts to support landscape conservation in East Kalimantan, the training aimed to improve sustainable forest management practices in the landscape. The training materials include: Introduction to HCV and HCV areas, HCV management and monitoring plan, tree species identification, and field practice on tree species identification and HCV-HCS management and monitoring. The training was attended by 25 participants consisting of 22 male and 5 female participants.

Training on sustainable mangrove honey utilization in Kubu Raya

This three-day training consisted of two days of face-to-face training in Batu Ampar village and one day of field practice on sustainable mangrove honey harvesting. The training focused on reducing community economic dependence on mangrove charcoal production by increasing community livelihood options from non-timber forest products (NTFPs), particularly mangrove honey. The training was attended by 14 participants consisting of 8 male and 6 female participants.

Alumni-led projects Establishment of mangrove nursery

Kusnadi, an alumnus of the Blue Forests-ELTI training led a project to establish a mangrove nursery in Sungai Hitam to support recovery and rehabilitation efforts in Sungai Hitam, and to develop a mangrove nursery business that can be sold to mangrove rehabilitation projects in other areas.

Alumni-led project for mangrove honey business unit development

The mangrove honey business unit in Batu Ampar led by Suheri received leadership program support from Blue Forests-ELTI to build a mangrove honey business unit and production house. Suheri is one of the Blue Forests - ELTI alumni who has been harvesting mangrove honey as his livelihood. The Blue Forests - ELTI program supports Suheri to develop a mangrove honey business unit by establishing a production house, while other product developments such as product licensing, product certification, and equipment provision are supported by the Blue Forests program through BAF (Blue Action Fund) and ICF (International Climate Fund) funding.

Training of trainers on Ecological Mangrove Rehabilitation (EMR)

The training of trainers on Ecological Mangrove Rehabilitation (EMR) took place over two and a half days at the Graha Indah Mangrove Center in Balikpapan, East Kalimantan, Indonesia. The training of trainers aimed to raise awareness and train potential trainers on Ecological Mangrove Rehabilitation (EMR) and help stakeholders working in mangrove rehabilitation including communities, private sector, government and project managers understand the concept of EMR and the importance of understanding key biological and biophysical factors in mangrove rehabilitation. Participants in this training came from various stakeholders, including government officials, communities, private sector, Non-Governmental Organizations and academia. A total of 19 participants (12 men and 7 women) participated in this training.

Technical Assistance

Blue Forests provides technical assistance and consultancy assistance to a number of organizations to conduct studies, feasibility studies and program designs. These services are provided in accordance with Blue Forests' expertise and experience especially related to mangrove rehabilitation, socio-economic ecological studies of mangrove and hinterland systems and carbon studies. In 2023, Blue Forests provided expertise services Landesa and other partners to conduct studies in several mangrove landscapes in Indonesia including Nunukan Mangrove Landscape, North Kalimantan; Kubu Raya, West Kalimantan; Nagekeo, East Nusa Tenggara; Nusantara Capital City (IKN), East Kalimantan and Mempawah, West Kalimantan.

Nunukan Mangrove Carbon Potential Survey

Blue Forests provided technical support in assessing mangrove carbon potential in Nunukan, North Kalimantan. This study aims to understand the potential of mangrove ecosystems in supporting climate change mitigation, especially in carbon sequestration and storage, and to identify potential areas for mangrove protection and rehabilitation efforts.

Mangrove Rehabilitation Feasibility Assessment Kubu Raya-West Kalimantan

Blue Forests supported in assessing the feasibility of mangrove rehabilitation in Kubu Raya, West Kalimantan. The study aimed to assess the potential for restoring degraded mangrove ecosystems by considering ecological, social, economic, and policy aspects. In addition, the study identified appropriate rehabilitation techniques and methods to be applied to the identified potential areas.

Landesa Indonesia mangrove Initiative

Blue Forests supported Landesa to conduct community assessments in three mangrove landscapes in Indonesia, namely Nagekeo District (NTT), Nusantara Capital City (IKN), and Mempawah (West Kalimantan). In the initial design and implementation phase, Blue Forests worked closely with Landesa to ensure the effectiveness of the assessment. The assessment focused on the condition of local mangrove ecosystems, the threats facing mangrove forests, and community property rights and resources, particularly with regard to mangrove management. In addition, the assessment highlighted community livelihoods, with special attention to the role of women, and how their economic activities contribute to the preservation or degradation of mangrove forests.

Nagekeo coastal landscape, East Nusa Tenggara

📍Yepem Village, Asmat, South Papua

KNOWLEDGE PRODUCTS

Coastal Field School Module

This module was developed based on the Coastal Field School learning that was carried out in six villages of the YHB project location in Muna and West Muna Districts. There are six modules with different learning themes, namely: Labunia Coconut SLP Module, Organic Agriculture and Napalakura Compost, Integrated Agriculture, Wambona Coconut, Floating Net Cages, and Organic Ponds. The modules contain stages in carrying out SLP mentoring activities.

Guidelines for ecological mangrove rehabilitation (EMR Manual)

This guide outlines the stages of ecological mangrove rehabilitation (EMR) that can serve as an option for mangrove rehabilitation practitioners in designing, implementing, and monitoring mangrove rehabilitation projects..

This guide can be downloaded from our website: blue-forests.org

Guidelines for monitoring mangrove rehabilitation sites

This guideline was developed considering that monitoring is an important point in answering the need for information on changes over time in rehabilitation efforts, monitoring the rate of recruitment and settlement of mangrove seedlings, identifying problems that hinder seedling growth, strengthening community involvement and can inform future mangrove area management strategies. The guide contains the steps in conducting monitoring in rehabilitated locations.

This guide can be downloaded from the website: blue-forests.org

Indragiri Hilir's mangrove wood fact shee

Contains facts about the use of mangrove timber as building materials in the housing development in Indragiri Hilir Regency.

The factsheet can be downloaded from our website.: blue-forests.org

Protected animal posters in three villages

This poster contains information on animals that are customarily protected by communities in Mioko and Nayaro Villages, Timika and Yepem Village, Asmat.


Cawan Island Village, Indragiri Hilir, Riau

OPERATIONS, FINANCE AND HR

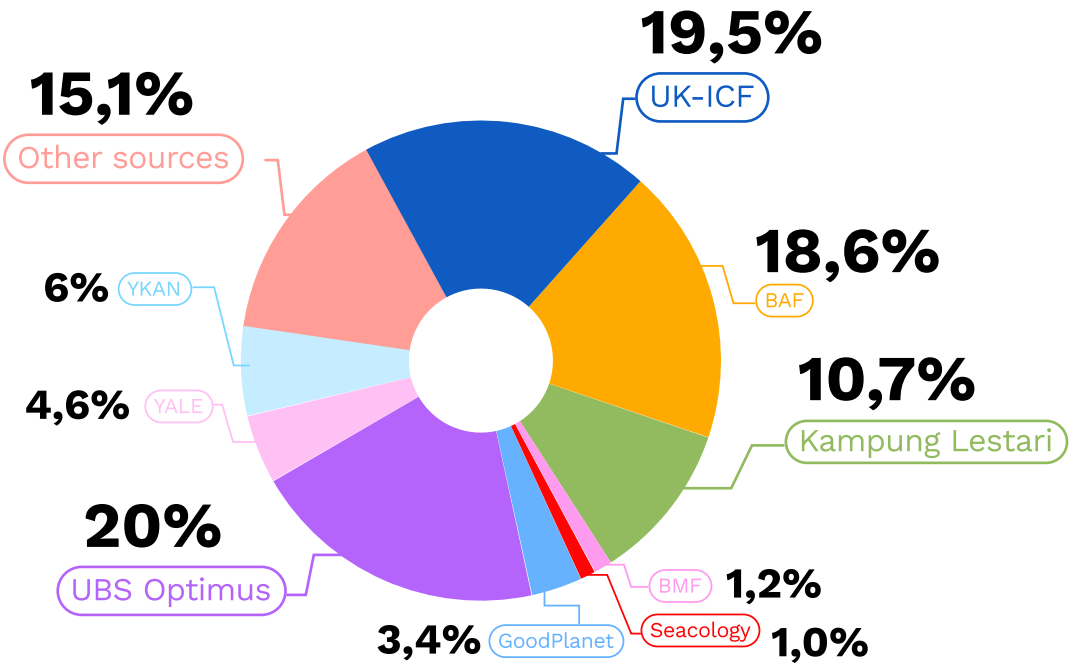
FUNDS MANAGED AND FUNDING PARTNERS

In 2023 Blue Forest Foundation managed 11 projects with total revenue of

IDR 17,293,005,048.00

We work in 8 provinces namely Riau, West Kalimantan, East Kalimantan, Southeast Sulawesi, South Sulawesi, West Nusa Tenggara, Central Papua and South Papua with 9 funding partners from institutions and philanthropy. The largest receipt is from UBS Optimus Foundation. In addition to long-term implementation projects we also work on several consulting projects that are included in other sources, one of which is from Landesa Indonesia.

The annual financial report can be accessed at:



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Yolanda Julita

OUR TEAM

21
Women

24
Men

6 personnel
Mimika & Asmat

4 personnel
Jakarta, Jogja, Darwin, & Samboja

5 personnel
Muna, Southeast Sulawesi

5 personnel
Indragiri Hilir, Riau

3 personnel
Berau, East Kalimantan

7 personnel
Kubu Raya, West Kalimantan

15 personnel
Home Office, Makassar

BLUE FORESTS
Yayasan Hutan Biru

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