BLUE FORESTS
Yayasan Hutan Biru



Blue Forests
Annual Report 2024

Coastal Protection Strengthening Lives


BLUE FORESTS
Yayasan Hutan Biru

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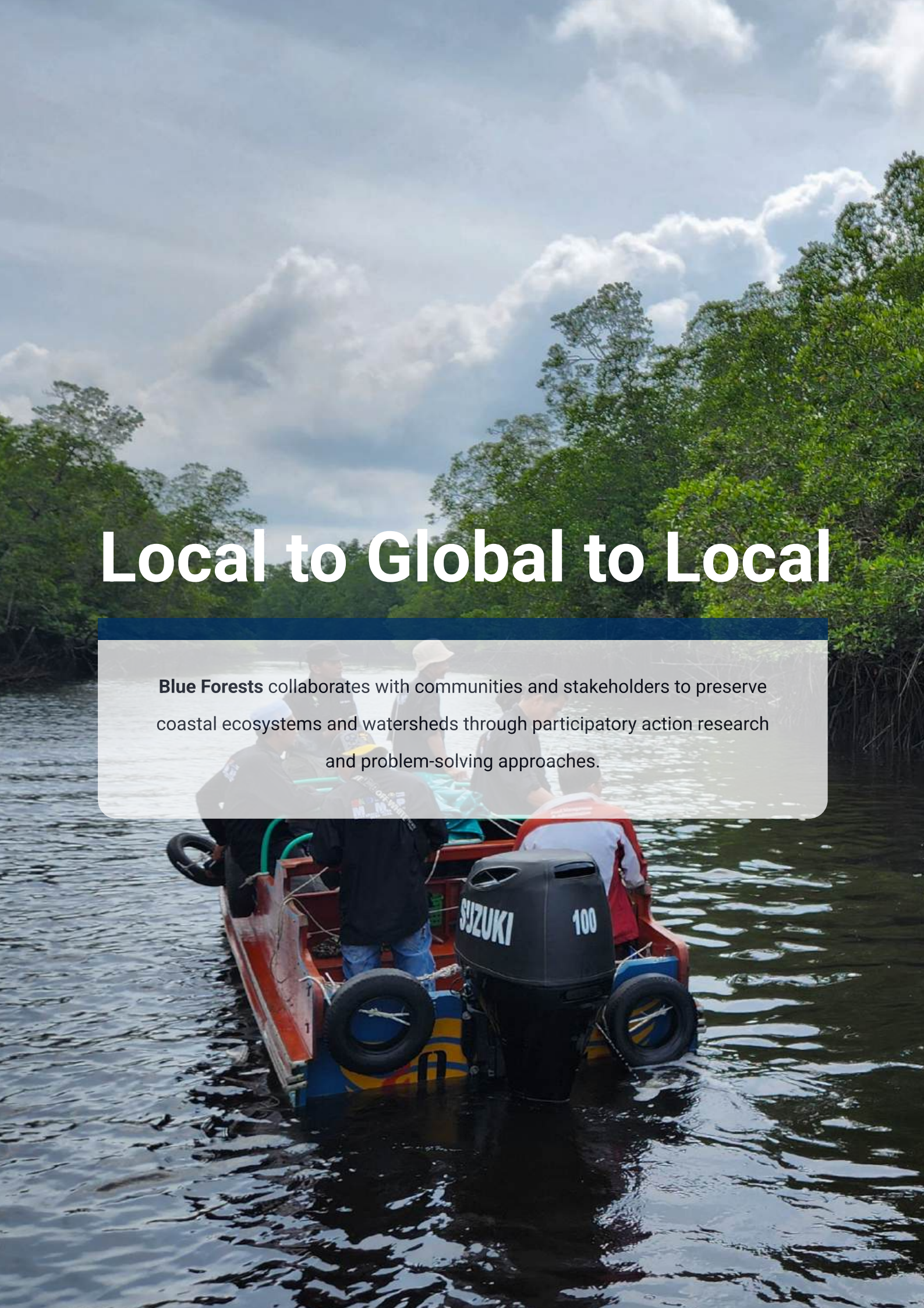
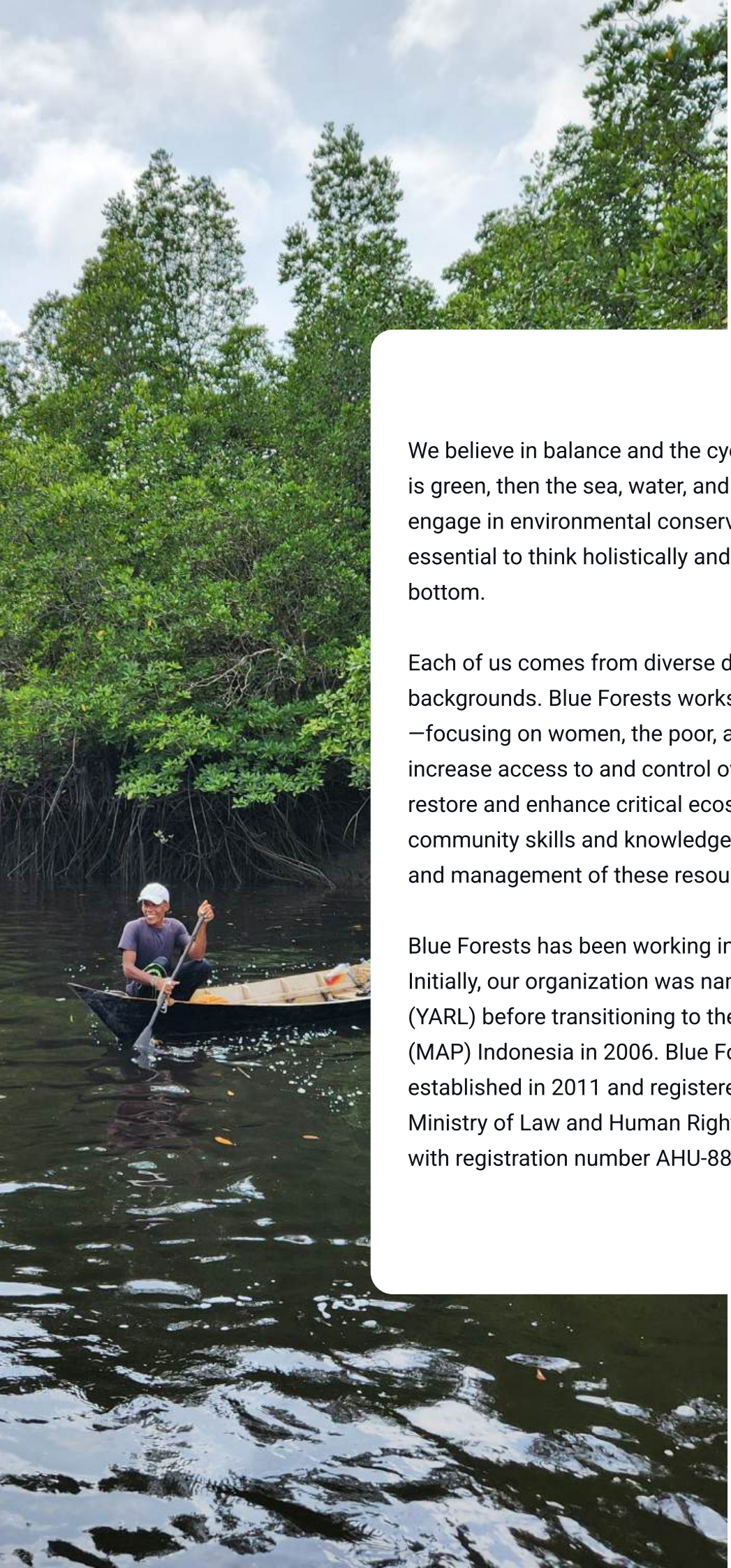


Local to Global to Local

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. 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.

Blue Forests 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 2006. Blue Forests 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 2024 brings us to a simple realization: the coast is not just a boundary between land and sea, but a living space where humans, nature, food, and the future are interconnected. In various supported regions, we see how climate change, economic pressures, and ecosystem degradation coexist in the lives of coastal communities. Yet at the same time, we also witness the growth of hope, solidarity, and the courage of communities to collectively safeguard their living spaces.

This year's journey of Blue Forests Foundation is not just about implementing programs, but about being closer to listen, understand, and learn together with the communities and stakeholders. From this process, various collective actions continue to emerge: ecology-based mangrove rehabilitation (EMR), coastal field schools (CFS), livelihood strengthening, environmental education, area protection, and the involvement of youth in preserving the coast.

This year also highlights the strengthening interconnection between local learning in Indonesia's coastal areas and the global conversation about small islands, food security, and the future of coastal communities. Various collaborative spaces and knowledge exchanges open opportunities for the experiences of supported communities to connect with practices and learning across countries, while reinforcing the belief that solutions arising from the grassroots level hold significant value for broader change.

We increasingly believe that lasting change does not stem from uniform or instant solutions. It grows from maintained relationships, valued local knowledge, and collaborative spaces that allow communities to be an essential part of the change process itself.

This report is not just a summary of achievements, but a record of the journey of learning together with communities, partners, governments, donors, academics, and many others. Thank you for walking alongside us. We believe that when humans and ecosystems strengthen each other, the coast will remain vibrant, resilient, and full of hope for the future.

Rio Ahmad

Director of Blue Forests Foundation





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.

MISSION

Blue Forests 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

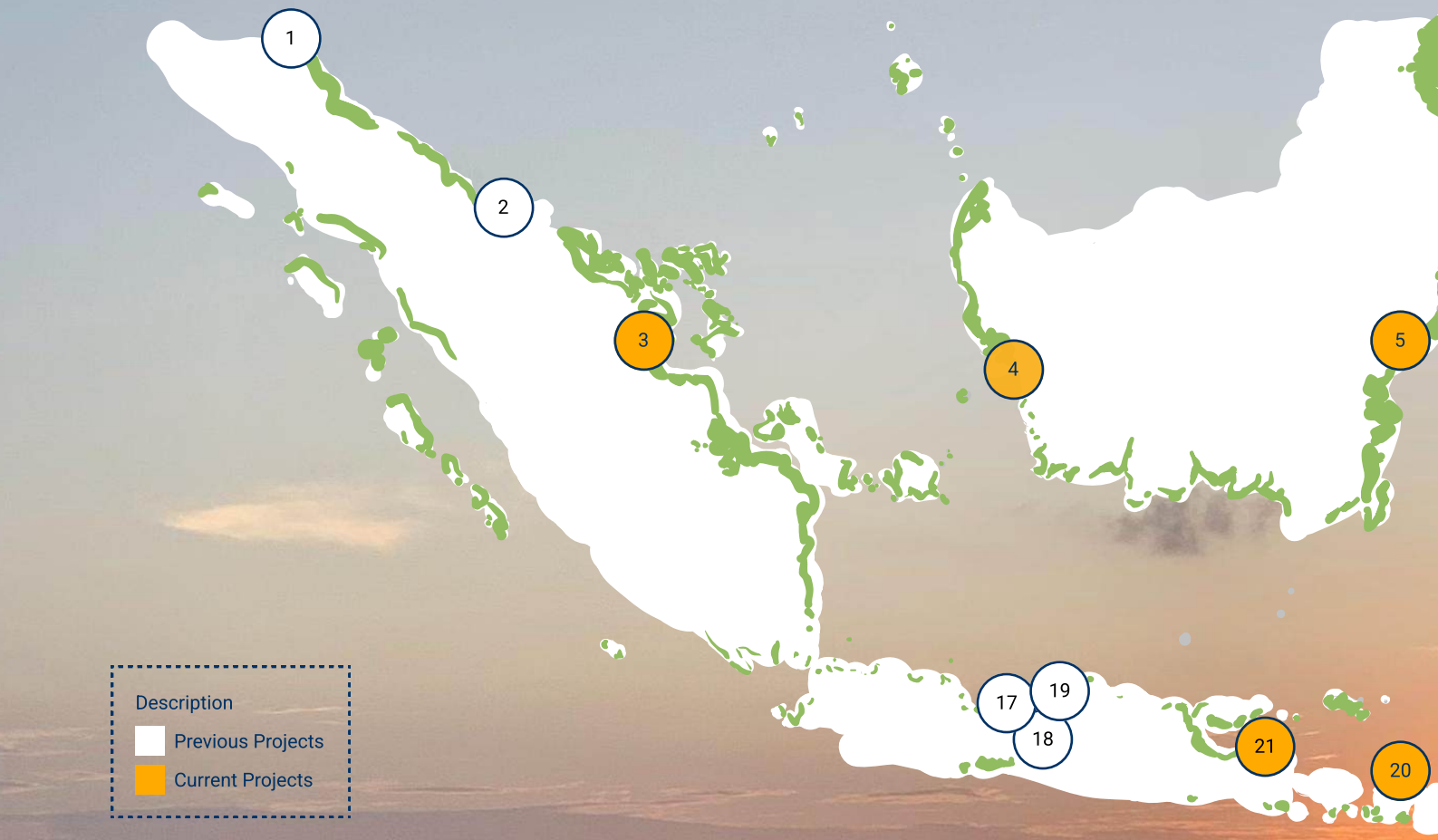
This process is known as action research and problem-solving and is embedded in all programs of Blue Forests Foundation. To achieve this, we have three interrelated goals:

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 WORKING AREAS



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 Forests 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 Livelihoods (RCL)

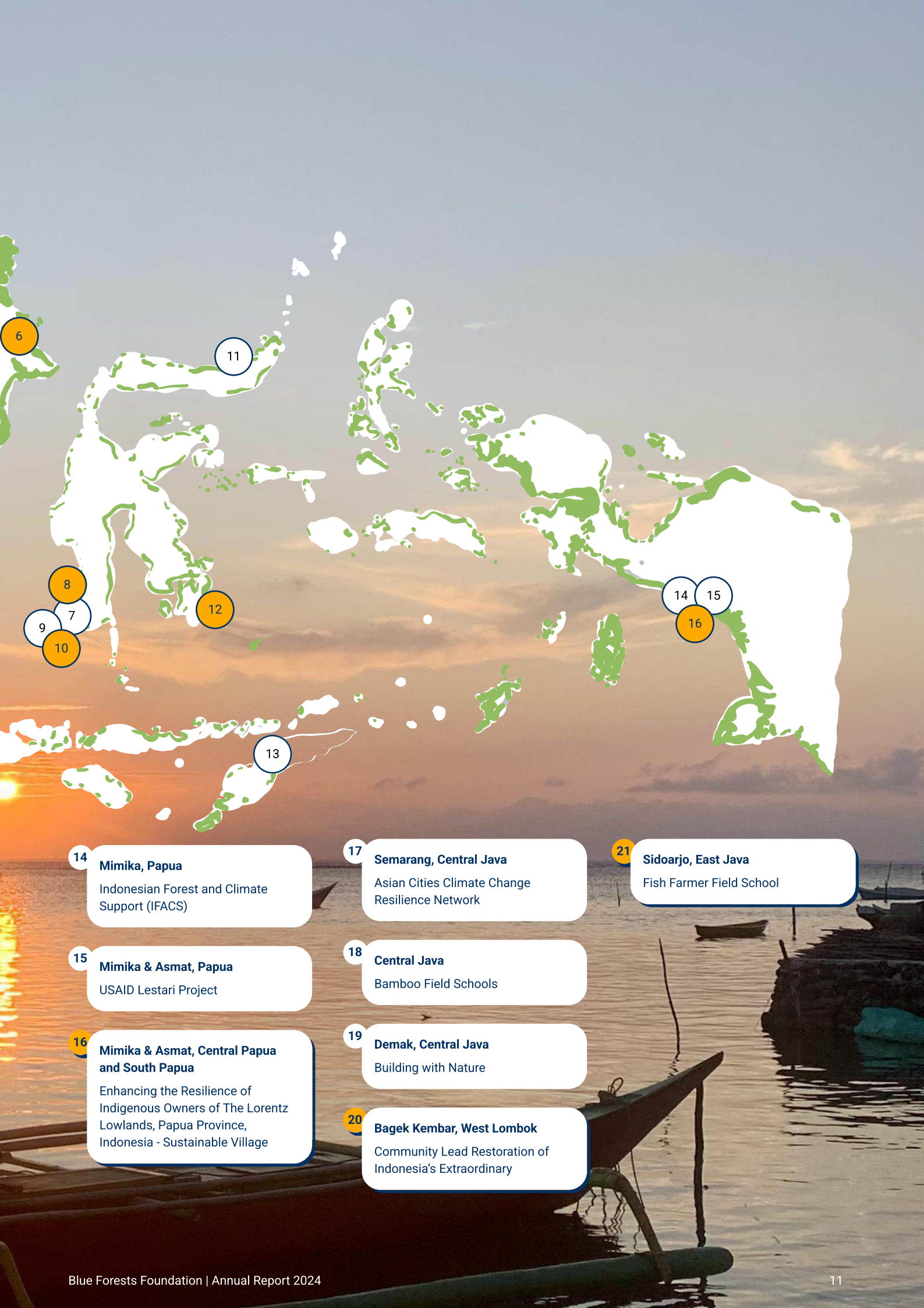
8 **Kuri Caddi and Bonto Manai, South Sulawesi**
Rehabilitation And Protection Of Mangrove On Tanakeke Island

9 10 **Tanakeke Island, South Sulawesi**
Building a Sustainable 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 - Sustainable Village

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

21 **Sidoarjo, East Java**

Fish Farmer Field School

OUR IMPACT

For 23 years, we have worked alongside coastal communities to strengthen the resilience of Indonesia's coastal communities and ecosystems through science-based innovation, local wisdom, inclusivity, and collaboration. From mangrove ecosystem restoration and protection to sustainable livelihoods and economic development, our work continues to support more resilient and sustainable coastal futures.

These efforts help ensure healthy and sustainable ecosystems while strengthening community self-reliance. We remain committed to nurturing coastal life through approaches that are deeper, more adaptive, and empowering.

2,356
Hectares of mangrove ecosystem rehabilitated.





628,075
Hectares of mangrove areas improved

126,097
Hectares of Marine Protected Areas (MPAs) improved





+100
Partner villages

+80,000
Community partners



2024



📍Tompotanah Village, Takalar, South Sulawesi

ECOLOGICAL MANGROVE REHABILITATION (EMR)

EMR Implementation

177

hectares of degraded mangroves have been successfully rehabilitated

125

people were involved in mangrove rehabilitation efforts.

40 Women
85 Men

40

people were involved in monitoring rehabilitation sites

40 Women

Together with communities and stakeholders, we continue to rehabilitate degraded mangrove ecosystems through the Ecological Mangrove Rehabilitation (EMR) approach. Rooted in the understanding that mangroves have the capacity to recover naturally when their supporting biophysical conditions are restored, EMR worksby reestablishing the ecological processes that enable long-term ecosystem recovery. This approach aligns with the principles of Nature-Based Solutions (NbS), where interventions are designed to work with natural processes, allowing mangrove ecosystems to regenerate into more diverse, healthy, and functional landscapes that closely resemble natural mangrove forests.

One of the key principles of EMR is maintaining the connectivity and function of tidal hydrological flows, which form the foundation for mangrove growth and the sustainability of coastal habitats. Mangroves are not merely stands of trees, but complex ecological systems that support diverse flora and fauna, sustain coastal productivity, and underpin community livelihoods.

Our experience has shown that when environmental conditions are restored, mangroves are capable of regenerating naturally. This approach is implemented through Community-Based Ecological Mangrove Rehabilitation (CBEMR), which places local communities at the center of planning, restoration, and long-term stewardship to ensure both ecological sustainability and community resilience.



Community-led construction of hydrological channels to improve tidal water flow in the rehabilitation site in Latawe Village, Muna.



Monitoring of rehabilitation sites through the collection of ecological data (mangrove density) and hydrological data (water flow patterns).

Through CBEMR, communities are positioned as the primary actors in planning, implementation, and monitoring, ensuring that ecosystem rehabilitation goes hand in hand with strengthening local capacities and stewardship.

This year, EMR implementation was carried out across several key landscapes, including Tanakeke, Muna, Indragiri Hilir, Berau, and Bagek Kembar. Each site presented distinct ecological and social characteristics, requiring context-specific approaches in both technical interventions and community engagement strategies.

At least three typologies of mangrove rehabilitation areas were addressed throughout the year. The first typology consisted of abandoned ponds in Muna, Tanakeke, and Bagek Kembar. Rehabilitation efforts in these areas focused primarily on restoring hydrological connectivity through strategic breaching and improvement of tidal creeks. These interventions aims to reduce waterlogging during low tide and improve tidal flows that naturally transport propagules into abandoned pond areas.

The second typology involved sparse mangrove areas in Indragiri Hilir, Tanakeke, and Muna, where enrichment planting approaches were prioritized through propagule dispersal, wilding (the transplantation of natural regeneration), and direct planting. In several locations in Indragiri Hilir, hydrological improvements were also implemented to support more favorable conditions for mangrove growth and recovery.

The third typology consisted of active aquaculture ponds in Berau, where portions of the landscape remained under aquaculture use while other sections were rehabilitated into mangrove ecosystems. In these areas, hydrological management became a key intervention, including water gate regulation and pond water level management to create suitable growing conditions for mangroves while maintaining productive pond functions.

EMR activities in Tanakeke were concentrated in Lantangpeo Hamlet and Tompotanah Village, areas largely characterized by abandoned ponds and sparse mangrove cover. During the midterm



rehabilitation improvement phase in Lantangpeo, 134 community members participated in rehabilitation activities, contributing to the dispersal of 19,620 propagules, predominantly *Rhizophora* spp., along with a smaller proportion of *Bruguiera gymnorrhiza*.

In addition, the rehabilitation area was expanded by approximately 3 hectares through the dispersal of 4,600 *Rhizophora stylosa* propagules. These efforts were carried out to strengthen areas that had already demonstrated strong potential for natural recovery and ecosystem regeneration.

Monitoring of the rehabilitation site in Lantangpeo Hamlet, Tanakeke, conducted by Womangrove

Monitoring activities were conducted in a participatory manner as part of a collective learning process. In Lantangpeo Hamlet, monitoring was carried out twice (T0+9 and T0+12), involving 18 participants, the majority of whom were women.

In Tompotanah Village, monitoring was conducted five times with the participation of 22 community members. This active involvement is essential to ensure that communities understand the ecological changes occurring within the rehabilitation sites, while also strengthening local knowledge, ownership, and long-term stewardship of restored mangrove ecosystems.

In Muna, EMR implementation was carried out on a larger scale, covering approximately 142.93 hectares and involving 70 community members. A total of 100,710 propagules were dispersed, consisting of several mangrove species, including *Rhizophora mucronata*, *Rhizophora apiculata*, *Ceriops tagal, Bruguiera parviflora*, and *Sonneratia alba*.

The rehabilitation approach applied at this site emphasized species–site suitability. Field experience demonstrated that species diversity plays an important role in increasing the likelihood of successful rehabilitation, particularly in landscapes with varying environmental conditions and hydrological characteristics.



Community-led removal of *Acrostichum* spp. at the rehabilitation site in Perigi Raja Village, Indragiri Hilir.



Rehabilitation activities using heavy equipment (excavators) in Pegat Batumbuk Village, Berau, to construct hydrological channels.

In Indragiri Hilir, rehabilitation activities were implemented in Perigi Raja Village across approximately 5.02 hectares, involving 40 community members. Activities included propagule collection, removal of invasive vegetation such as *Acrostichum sp.*, construction of tertiary channels, and direct planting. These interventions were particularly important as much of the site had experienced hydrological disturbances. By restoring water flow conditions first, the area became more suitable for supporting mangrove establishment, growth, and long-term ecosystem recovery.

In Berau, rehabilitation activities were implemented across 3.83 hectares of pond areas using a combination of major and minor EMR approaches. These efforts were integrated with pond management practices as part of our support for the SECURE program implemented by Yayasan Konservasi Alam Nusantara.

Within the 10-hectare pond landscape, portions of the site were rehabilitated back into mangrove ecosystems through hydrological restoration. Major hydrological restoration interventions included the construction of secondary channels using heavy equipment, while minor EMR interventions were carried out by communities through the construction of tertiary channels. A total of 15 community members participated in these rehabilitation activities.

Monitoring was conducted during the T0+3 and T0+6 periods to assess early progress and ensure that hydrological restoration interventions were functioning as planned. The approach applied primarily emphasized hydrological restoration and site condition design to support natural regeneration processes.

In Bagek Kembar, rehabilitation activities were implemented across 25 hectares of abandoned pond areas, involving local communities and partners in the restoration process.

Monitoring results at T0+6 showed an increase in mangrove density, particularly for *Avicennia marina*, indicating that environmental conditions had begun to support natural regeneration without the need for intensive planting interventions.

Overall, this year's experience once again demonstrated that EMR approaches implemented consistently and adapted to site-specific conditions produce stronger and more sustainable outcomes. Community involvement remains a critical factor, not only in implementation but also in ensuring the long-term sustainability and stewardship of rehabilitation results.



📍Yepem Village, Asmat

CONSERVATION AND PROTECTION

±120.000
hectares of mangrove and coastal areas are under collaborative protection and management

±270.000
hectares of customary managed areas are monitored and sustainably managed

±126.000
hectares of Conservation Area (KKD) in Indragiri Hilir are in the process of strengthening management

1916 individuals

8 wildlife species

species released into important customary areas in Papua.

8
community groups (Pokmaswas, LPHD, MMP, etc.) actively conduct patrols and monitoring

15
villages that undertake better protection/ management efforts for coastal ecosystems

3
Forest Management Learning Group (FMLG) as a learning platform for mangrove management

We believe that safeguarding coastal ecosystems and biodiversity is a shared responsibility among communities, government institutions, and other stakeholders. Through our Conservation and Protection approach, we promote community-based management systems that are closely connected with formal governance structures. This approach combines community management practices with government-based management frameworks, forming adaptive and context-specific co-management systems that respond to the social and ecological dynamics of each landscape.

The approach is grounded in the principles of adaptive collaborative management, where communities serve as the primary actors in ecosystem protection. This role is strengthened through the development of local institutions such as Pokmaswas, LPHD, and other community management groups, alongside participatory patrol and monitoring practices. These monitoring systems function not only as mechanisms for oversight, but also as spaces for collective learning that continue to evolve through multi-stakeholder forums and learning groups such as FMLG.

The integration of local and customary mechanisms into village and landscape governance further ensures that protection efforts are supported by strong social legitimacy. As part of this approach, we also support the strengthening and management of Marine Protected Areas (MPAs) that are ecologically connected to mangrove and coastal landscapes. Assistance is provided throughout the processes of designation, effectiveness assessment, and governance strengthening of local conservation areas, ensuring that management is not fragmented between terrestrial and marine ecosystems. This integrated approach helps maintain the ecological functions of mangroves, coastal waters, and fisheries habitats as interconnected systems that support one another.

In 2024, our efforts focused on strengthening community-based patrol and monitoring systems, advancing collaborative governance mechanisms, and supporting the management of conservation areas. This approach ensures that ecosystem protection not only maintains ecological functions and key species, but also delivers tangible benefits to local communities. Conservation is most effective when communities become both the primary stewards and the beneficiaries of the systems they sustain over the long term.





Patrols and Monitoring

In 2024, efforts to strengthen community-based protection systems focused on consolidating local institutions and reinforcing on-the-ground monitoring practices. In Tanakeke, the formal establishment of two Pokmaswas groups, each consisting of 18 members, laid the foundation for strengthened community-based protection. This was followed by capacity-building activities and at least five patrol and monitoring activities across two partner villages. These efforts were further reinforced through the organization of the Pokmaswas Jamboree on Lanjukang Island, which brought together Pokmaswas networks from various coastal areas across South Sulawesi. The initiative also supported the development of island-based governance systems connected to the process of establishing regional marine conservation areas at the district and provincial levels.

A similar approach was implemented in Muna through patrol and monitoring activities across several locations, including West

The patrol monitoring team conducting surveillance in the mangrove forest area of Muna Regency

Muna, South Wakorumba, Batukara, and Baluara Village. At least three major monitoring activities were conducted, strengthening field-based oversight and maintaining the continuity of protection efforts within mangrove areas that had previously become part of local management systems.

In Indragiri Hilir, protection efforts were strengthened through a more integrated approach involving capacity building, collaborative multi-stakeholder patrols, and multi-stakeholder forums that generated shared learning and monitoring recommendations. Monitoring practices were reinforced through independent monitoring and joint patrol activities in Igal Village and Pulau Cawan, involving multiple actors, including Polhut and the UPT PSDKP. These practices helped connect protection efforts with sustainable management and utilization

at the site level

In Kubu Raya, village-based patrol and monitoring systems demonstrated significant contributions to ecosystem protection, covering more than 17,581 hectares of mangroves in Batu Ampar and 182.19 hectares in Medan Mas through at least six patrol and monitoring activities.

These efforts were supported by the development of standard operating procedures (SOPs), dissemination of monitoring results, and capacity strengthening activities that also encouraged the emergence of mangrove-based economic initiatives.

Meanwhile, in Papua, ecosystem protection was carried out through three community forest guard groups consisting of a total of 82 members who regularly conducted patrols within customary management areas. These efforts were further strengthened through participatory mapping, utilization zoning, and the development of community-based management documents that now serve as the foundation for local decision-making processes.

Overall, patrol and monitoring activities not only contributed to safeguarding ecosystems, but also strengthened governance systems and the long-term sustainability of coastal and mangrove management across multiple landscapes.

Wildlife Release

Conservation efforts were also carried out through wildlife release initiatives as part of maintaining ecosystem balance and biodiversity. In Papua, a total of 1,900 individuals



The release of Pig-nosed Turtles (*Carettochelys insculpta*) in Nayaro Village, Mimika



Southern Cassowary *(Casuarius casuarius)*

pig-nosed turtles (*Carettochelys insculpta*) were released, along with 16 individual wildlife from 7 key wildlife species, including the Greater Bird-of-Paradise (*Paradisaea apoda*), Sulphur-crested Cockatoo (*Cacatua galerita*), Eclectus Parrot (*Eclectus roratus*), Southern Cassowary (*Casuarius casuarius*), Wompoo Fruit Dove (*Ptilinopus magnificus*), Red-bellied Short-necked Turtle (*Emydura subglobosa*), and Papua Snapping Turtle (*Elseya rhodini*).

The release took place in the customary sacred area of Tinaruma Hamlet, Mioko Village. These animals were translocated from the Balai Besar KSDA Jawa Timur, BKSDA Kalimantan Tengah, and the Balai Karantina Hewan, Ikan dan Tumbuhan Provinsi Papua Tengah as part of broader collaborative conservation efforts.

This initiative strengthened efforts to restore populations of key species while



Posters installed within the conservation area serving as information and outreach media for the Indragiri Hilir Regional Marine Protected Area.



Members of the FMLG Mangrove Honey Group in Batu Ampar, Kubu Raya, preparing for the honey harvest.

complementing habitat protection measures that have been implemented through Indigenous community-based monitoring and protection systems in Papua.

Marine Protected Area (MPA)

Efforts to strengthen ecosystem protection were also carried out through support for the management of Marine Protected Areas (MPAs) in Indragiri Hilir covering an area of 126,097 hectares. The Effectiveness Evaluation of Conservation Areas (EVIKA) recorded a score of 54.15%, achieving a silver status that reflects a relatively effective level of management at the early stage of implementation.

This process was supported by the collection of biophysical and socio-economic data, as well as stakeholder outreach and engagement activities. As a result, conservation area management was strengthened not only through formal designation, but also through the development of adaptive and collaborative management systems.

At the same time, the initiative to establish the Tanakeke Island Committee in South Sulawesi began to take shape through a series of multi-stakeholder meetings linked to the socialization process for the establishment of Regional Conservation Areas (KKD) at the village, district, and provincial levels.

Forest Management Learning Group (FMLG)

Forest Management Learning Groups (FMLG) were developed as community learning platforms for forest management that are closely connected with aquatic ecosystems, enabling their sustainable use and stewardship. In Indragiri Hilir, the FMLG in Perigi Raja Village strengthened community

learning on mangrove management and enterprise development, while also contributing to the formulation of the Riau Mangrove Regional Action Plan (KKMD).

Meanwhile, in Kubu Raya, FMLG activities through the Forest Honey group and community tourism groups (Pokdarwis) promoted community-based management practices, including innovation in tikung honey production through the installation of 23 artificial bee nests across 10 rivers. These efforts also contributed to strengthening the local economy, reflected in Medan Mas Village receiving third place in the district-level Anugerah Desa Wisata Indonesia (ADWI) competition.

Overall, these initiatives strengthened the sustainability of mangrove and coastal protection systems that had been developed previously by ensuring that monitoring and protection efforts continue consistently at the site level while remaining connected to broader landscape governance systems. This approach not only safeguards ecological functions, but also strengthens community capacity, legitimacy, and leadership as the primary stewards within sustainable conservation systems.



Ardea sumatrana - Cangak Laut

SUSTAINABLE LIVELIHOOD

2

Training of Trainers Coastal Field School (CFS)

54

participants of the Training of Trainers CFS

19 Women
35 Men

10

Coastal Field School (CFS) unit with themes of home gardens, NTFP (VCO & mangrove processing), local food processing, integrated agriculture, and organic aquaculture

196

individuals involved in implementing Sustainable Livelihood through CFS

123 Women
73 Men

12

business units/groups supported in their development, including fishery product processing, VCO, compost, and community-based enterprises

9

business groups receive start-up capital support

Blue Forests' sustainable livelihood approach is grounded in a resilience framework that views communities as part of dynamic social-ecological systems that continuously adapt to change. Livelihoods are developed by balancing local potential, environmental carrying capacity, and economic needs, while also promoting equity and inclusivity. Diversification plays a key role in reducing dependence on destructive practices and strengthening the resilience of coastal communities.

We work together with communities to build nature-aligned livelihoods through ecosystem-based enterprises such as sustainable fisheries, non-timber forest product utilization, environmentally friendly aquaculture, and the development of value-added local products. This approach aims to create resilient local economic systems while ensuring the long-term sustainability of natural resources.

These processes are implemented through participatory action research, with the Coastal Field School (CFS) serving as a shared learning platform. Through experiential learning approaches, communities strengthen their technical capacities and decision-making abilities in managing both natural resources and livelihoods. At more advanced stages, facilitation focuses on enterprise strengthening, ranging from the development of community-based business models to strengthening local product value chains.

While each landscape demonstrates its own unique dynamics and context, they share a common thread: the gradual development of more adaptive livelihood systems that are closely connected to institutional support and long-term community resilience.

Facilitation efforts in the Tanakeke Islands, South Sulawesi, focused on home garden development through one Coastal Field School unit in Tompotanah Village involving 42 participants, with women serving as the primary actors. This process strengthened the sustainable use of resources surrounding



The process of creating planting beds by a group of women participating in the organic coastal agriculture training school in the Tanakeke Islands, Takalar.



The production of compost during the Organic Coastal Agriculture Field School session in Baluara Village, Muna

households and was supported through joint evaluation activities involving the village government, the Family Welfare Empowerment Team (TP PKK), and sub-district authorities.

developed included non-timber forest products such as VCO and mangrove-based products, local food processing, and integrated agriculture. Three community enterprise units were established and have



A supported community enterprise that has grown in Medan Mas Village: Amplang Ayu.



A supported community enterprise that has grown in Batu Ampar Village: Mangrove Honey.

In the Muna landscape, a similar approach was developed through three Coastal Field School units in Baluara Village, Wambona Village, and Labunia Subdistrict, involving a total of 56 participants. The themes

begun production activities in Latawe, Labunia, and Napalakura, focusing on fisheries-based products, VCO production, and compost processing. These initiatives represent an important first step in linking

community learning processes with enterprise development at the site level.

In Kubu Raya, economic strengthening efforts focused on supporting community enterprises that had already begun to grow in Batu Ampar and Medan Mas Villages. Assistance included seed capital support for nine community groups, combined with capacity strengthening in production planning, digital marketing, and business

also strengthening the position of community enterprises within the local economic ecosystem.

Livelihood development in Sidoarjo focused on the aquaculture sector through two Organic Aquaculture Field School units in Kedungpeluk and Banjar Kemuning Villages, involving 57 participants from various stakeholder groups. The program integrated capacity strengthening through Training of



Participants of the Organic Tambak Coastal Field School in Banjar Kemuning Village, Sidoarjo, showcase the harvested shrimp from the demonstration plot.

management. Business networking forums involving local government agencies such as DISPERINDAKOP, private sector actors including retail businesses, and regional financial institutions created opportunities for partnerships and market access, while

Trainers (ToT) activities and field-level implementation, with the involvement of local government agencies such as the Marine and Fisheries Agency (Dinas Kelautan dan Perikanan), Bappeda, and private sector partners. Farmer field day activities were also



Salinity measurement practices of participants from the SECURE Coastal Field School in Suaran village, Berau.

conducted, creating spaces for shared learning and exchange among stakeholders to directly observe and discuss the practices being implemented.

In Berau, learning activities were carried out through one Coastal Field School unit focused on organic aquaculture in Pegat Batumbuk Village, involving 15 participants. The process was complemented by aquaculture practice sessions in ponds located across Pegat Batumbuk, Suaran, and Tabalar Muara Villages, allowing participants to test and adapt practices according to the local conditions of each village.

Meanwhile, in Papua, livelihood strengthening efforts were implemented in the Mimika area through capacity building for local facilitators and community assistance in Mioko, Yepem, and Nayaro Villages. A Training of Trainers (ToT) activity involved 26 participants consisting of staff members, extension workers, and community representatives, followed by Coastal Field School activities involving 79 participants. The themes developed included home gardens and mangrove-based fisheries, reflecting the local ecological and socio-economic context. The establishment of the Koperasi Lestari Alam Mimika marked an important initial step in strengthening community economic institutions and promoting collective business management.

Overall, these initiatives demonstrate that livelihood development is a gradual and adaptive process—beginning with capacity strengthening, evolving into practical implementation, and in several contexts becoming increasingly connected to enterprise development and market access. This approach provides an important foundation for building livelihood systems that are more resilient and responsive to the changing dynamics faced by coastal communities.


📍Sapat Village, Indragiri Hilir

INCLUSIVE GOVERNANCE

Institutionalization

2
Workshops and stakeholder meetings are conducted

4
Village FGD and routine Regional Mangrove Working Group (KKMD) meetings are held

328
Participants involved

88 Women
240 Men

Capacity Building

1
Multi-stakeholder agreements on mangrove and fisheries management are drafted

1
Training for preparing coastal RPJMDes is conducted

1
Documents for village mangrove and fisheries management recommendations are prepared

Effective natural resource governance must be inclusive, evidence-based, and capable of balancing the interests of multiple stakeholders, particularly local communities who live in close connection with coastal ecosystems. We promote an inclusive governance approach that integrates customary institutions, village governance systems, and formal policies into a participatory, adaptive, and sustainable management framework.

This approach is implemented through strengthening local institutions, enhancing the capacities of village governments and management units, and ensuring the active participation of communities throughout all stages of resource management. Planning processes are carried out participatorily and supported through collective learning processes, enabling communities to directly understand local conditions, define priorities, and carry out collective actions.

We seek to ensure that the governance systems developed strengthen community rights, access, control, and participation, including for women and vulnerable groups. This contributes to a more equitable distribution of benefits while reinforcing the role of communities as key actors in the sustainable protection and management of natural resources.

Within a social-ecological systems framework, resource management is developed by connecting local knowledge, traditional practices, and data-driven approaches. This integration creates governance systems that are responsive to change, grounded in local contexts, and capable of maintaining a balance between ecosystem sustainability and community well-being.



The signing of an MoU by the Acting Governor of South Sulawesi together with eight NGOs in South Sulawesi, including Blue Forests, as a form of government support for the programs and activities being implemented.



The workshop activities serve as a platform to unite the synergy of various parties, realizing a sustainable Tanakeke Island.

This inclusive governance approach was implemented across multiple landscapes by adapting to local contexts, engaging diverse actors, and strengthening spaces for dialogue and collective decision-making.

In the Tanakeke Islands, South Sulawesi, natural resource governance was strengthened through workshops and multi-stakeholder meetings involving communities, village governments, and other key stakeholders. One workshop was conducted with 85 participants (58 men and 27 women), followed by a multi-stakeholder meeting attended by 80 participants (66 men and 14 women). These processes created space for coordination and helped build shared understanding for the collaborative management of coastal resources.

In the Muna landscape, the inclusive mangrove governance process focused on strengthening planning mechanisms and multi-stakeholder forums. Two village-level focus group discussions (FGDs) were conducted involving 52 participants (32 men and 20 women), serve as references for coastal resource and were further reinforced through two regular KKMD meetings attended by a total of 111 participants (84 men and 27 women). These activities strengthened the role of local forums in connecting community interests with those of other stakeholders in natural resource management.

In Kubu Raya, this approach was advanced through multi-stakeholder meetings involving local government agencies, universities, the private sector, NGOs, and Blue Forests Foundation. These meetings resulted in shared agreements related to mangrove management, sustainable fisheries, and community economic development, which were formally documented through meeting proceedings The process was further strengthened through training on the

preparation of Village Medium-Term Development Plans (RPJMDes) in Batu Ampar Village. This training enhanced the capacity of village governments to integrate mangrove and fisheries management into local development planning processes. The outcome was a set of recommendation documents that now management at the village level.



Elementary school students in Nayaro Village are learning about the ecosystems surrounding their school.

ENVIRONMENTAL EDUCATION

8
The Environmental education activities were conducted (5 schools in Muna, 3 villages in Mimika-Asmat)

1
ToT Environmental education was conducted

2
Environmental education camp activities

1
The initiative to form conservation cadres was carried out together with BKSDA

1
The smart mangrove house is utilized as a learning center

892
Participants involved
473 Women
419 Men

Environmental education is not only about raising awareness, but also about shaping critical thinking and collective responsibility in safeguarding ecosystems. We apply Participatory Action Research (PAR) and problem-solving approaches that emphasize experiential learning cycles, including the Kolb Learning Cycle framework. This approach enables communities to learn from direct experience, reflect on environmental challenges, and design and test practical solutions in response to issues they face.

We promote community-based learning in which communities, including children and youth, are actively involved in environmental observation, natural resource mapping, and the analysis of threats to coastal and mangrove ecosystems. Intergenerational dialogue is an essential part of this process, ensuring that traditional environmental knowledge continues to be preserved and passed on through customary mechanisms and open discussion spaces such as the Sekolah Lapang Adat (Customary Field School).

Our environmental education initiatives are integrated into both formal and non-formal learning systems. In collaboration with schools and village governments, we support the development of curricula that incorporate coastal ecosystem conservation, particularly mangrove conservation, into formal education. Public awareness campaigns, environmental literacy programs, and youth engagement in rehabilitation and conservation activities are also part of our efforts to build communities that are more environmentally aware, adaptive, and proactive in protecting their surroundings.

In Muna, Environmental Education (Pendidikan Lingkungan Hidup / PLH) was implemented through activities in five primary and secondary schools across the South Wakorumba and Batukara sub-districts. Each school conducted one learning session, involving a total of 119 students. The materials focused on mangrove ecosystems and waste management, including the introduction of different waste types and their decomposition periods. These activities provided students with a foundational understanding of the relationship between human activities and the condition of the surrounding coastal environment.



Elementary school students in Muna Regency are learning about mangroves through direct visits to the mangrove forest, where they observe the characteristics of different mangrove species

In addition, one Training of Trainers (ToT) activity was conducted involving 23 participants, aimed at strengthening the capacity of local facilitators to deliver environmental education materials. This approach supports the long-term sustainability of the program by empowering local actors who can continue the learning process within schools and communities.

In Kubu Raya, the implementation of Environmental Education (Pendidikan Lingkungan Hidup / PLH) focused on strengthening learning systems and youth engagement through a range of thematic activities. The Mangrove Learning Center (Rumah Pintar Mangrove) in Medan Mas Village was utilized as a learning space for primary and junior secondary school students to better understand mangrove ecosystems in a more contextual and experiential way.

The Mangrove Youth Camp, organized in commemoration of International Mangrove Day, involved student and teacher representatives from seven partner schools. The activity strengthened both understanding and inter-school networks around coastal conservation issues. In addition, the Technology Super Camp (TSC) at SMPN 02 Batu Ampar reached broader participation, involving 404 participants. This activity served as a collaborative learning platform that integrated environmental education with youth engagement and capacity development approaches.

In Papua, PLH activities were implemented through facilitation in three villages in collaboration with the Forest Guard Groups (Kelompok Jaga Hutan / KJH), involving 369 students. Learning materials focused on mangrove ecosystems and the protection of protected wildlife species, reflecting the local ecological context. This process strengthened young people's understanding of the importance of maintaining the interconnected relationship between forests, coastal ecosystems, and biodiversity.

In addition, collaboration with the Balai Konservasi Sumber Daya Alam (BKSDA) supported the establishment of conservation youth cadres in Timika and Asmat, focusing on senior high school and vocational school students. This initiative was designed to foster environmental awareness and encourage active youth participation in the protection of forests and Papua's endemic wildlife, while also strengthening the long-term sustainability of community-based conservation efforts.



Teachers participating in the ToT PLH in Muna Regency are conducting field visits to identify types of mangroves.


Medan Mas Village, Kubu Raya, West Kalimantan

FOOD SECURITY AND HEALTH

100

Families are reached through home visits by health cadres, expanding access to health education in Batu Ampar Village.

260

The community is involved in strengthening nutritional resilience through FGD and Environmental and Cultural Culinary Jambore in Medan Mas Village.

128

The community receives counseling and health check-up services through collaboration with the community health center and health cadres in two villages.

2

The village strengthens the capacity of health cadres and basic services through cadre refreshment and the implementation of Posyandu.

1

The Village Regulation on Waste Management has been enacted and is being implemented, encouraging behavioral change and environmental governance in Medan Mas Village.

We view food security as a fundamental pillar of well-being for coastal communities. Therefore, we work alongside communities to optimize food sources available from forests, coastal waters, and surrounding lands, helping reduce dependence on vulnerable external supplies. This approach enables communities to meet household nutritional needs more independently while maintaining ecological balance.

The approach we develop integrates ecosystem-based cultivation practices, responsible fisheries management, and the use of local knowledge within food production systems. This includes sustainable fisheries, coastal agriculture, and the utilization of non-timber forest products such as nipa palm and other coastal resources. At the same time, facilitation efforts also encourage healthier consumption patterns through food safety education, local resource-based food processing, and the strengthening of village policies that support food security.

In several locations, efforts were also directed toward strengthening the capacity of village health cadres to support public health initiatives, waste management, and improved access to basic services. Through this strategy, coastal communities are expected not only to have access to sufficient and nutritious food, but also to become more resilient in facing environmental changes and socio-economic pressures.

In Kubu Raya, efforts to strengthen food security and community health were implemented through an integrated approach connecting health services, nutrition education, and community capacity strengthening. Household visits reached 100 families in Batu Ampar Village and were supported by refresher activities for community health cadres in Medan Mas and Batu Ampar Villages, including training on supplementary food preparation (Pemberian Makanan Tambahan) conducted together with the Padang Tikar Community Health Center (Puskesmas).



Community of Mioko Village, Mimika, are watering vegetable plants grown in their yards to meet their daily vegetable needs.



Health check-up activities in Medan Mas Village, Kubu Raya involving the local health center.

These efforts were further strengthened through focus group discussions on ecosystem-based household food security and nutrition linked to mangrove ecosystems, as well as the Environmental and Cultural Culinary Jamboree involving 260 participants. In addition, health screening activities in Medan Mas and Batu Ampar Villages reached 128 community members.

Together, these initiatives strengthened the role of communities in maintaining family health while encouraging behavioral changes toward healthier and more sustainable lifestyles.



Members of the Medan Mas Waste Management Group (Poksamas) showcase bags made from plastic waste collected from households.

RESEARCH, LEARNING, CAPACITY BUILDING, AND TECHNICAL ASSISTANCE

We play an active role in advancing research, capacity building, and technical assistance to support the sustainable management of coastal ecosystems and watersheds. Through the application of Participatory Action Research (PAR), we facilitate the development of community-based social, economic, and ecological studies, ensuring that the solutions developed are grounded in local contexts and community needs.

At the same time, capacity-building programs are implemented through technical training, environmental education, and the strengthening of governance and policy systems. Technical assistance is provided to governments, communities, and partners across various stages, ranging from planning and mapping to the implementation of ecosystem restoration strategies. This approach strengthens multi-stakeholder collaboration by connecting different elements of social and environmental systems in a more integrated manner. Sustainable ecosystem management is pursued not only to maintain ecological functions, but also to ensure long-term benefits for communities that depend on natural resources for their livelihoods and well-being.

Online Training

The Blue Forests–ELTI Program organized a series of online trainings aimed at improving the understanding of stakeholders across Indonesia on mangrove ecosystems and their management, mangrove rehabilitation techniques, and blue carbon.

A total of four online training series were conducted covering the following topics: Mangrove 101, Best Practices on Mangrove Rehabilitation: Practitioners' Experiences, Cost-Benefit Analysis and Conservation Approaches, and Blue Carbon.



Participatory Impact Assessment (PIA) of Batu Ampar Village

In 2024, research strengthening and technical assistance efforts in Kubu Raya focused on improving the understanding of program impacts and strengthening the data foundation for decision-making processes. A Participatory Impact Assessment (PIA) was conducted in Batu Ampar Village involving multiple stakeholders, including Blue Forests, PIA consultants, LPHD, village governments, and community groups such as KUPS, KUB, Poklahsar, and community health cadres. This process resulted in a final PIA report that now serves as an important reference for defining and measuring program impacts in a more systematic and evidence-based manner.



Fisheries Decline Study



Data strengthening efforts were also carried out through a fisheries decline study conducted in collaboration with the Ocean Policy Research Institute (OPRI)–The Sasakawa Peace Foundation. The study applied structured interviews involving 100 respondents from fishing communities, government institutions, NGOs, the private sector, and academia across several locations, including Kubu Raya, Tanakeke, Berau, and Timika. The data collected provided a comprehensive understanding of local perceptions, underlying causes, and the broader dynamics contributing to fisheries decline at the site level.

Feasibility Study for Mangrove Rehabilitation (South Kalimantan)

Blue Forests, together with Terra Thrive Bakti Indonesia, conducted a mangrove rehabilitation feasibility assessment in South Kalimantan, particularly within the operational areas of PT Suri Tani Pemuka (Japfa). The assessment included the identification of mangrove rehabilitation and conservation opportunities, the development of recommendations for rehabilitation strategies and techniques, and an evaluation of implementation readiness covering motivational factors,



Mangrove Camp – World Mangrove Day



As part of efforts to strengthen capacity and raise public awareness, Blue Forests, together with various stakeholders, organized a Mangrove Camp in commemoration of International Mangrove Day in Kuri Caddi Hamlet, Nisombalia Village, Maros Regency. The activity involved 26 participants representing communities, government institutions, and youth groups. Through the theme “Mangroves and Us: Harmony for Sustainability,” the event encouraged a shared understanding of the important role mangroves play in supporting coastal resilience, climate change mitigation, and the sustainability of natural resources that coastal communities depend

Webinar and Journalism Training - Muna

An online webinar, journalism training, and journalism competition were organized to strengthen understanding of mangrove management and broader environmental issues among journalists and the wider public, particularly in Muna and West Muna Regencies.

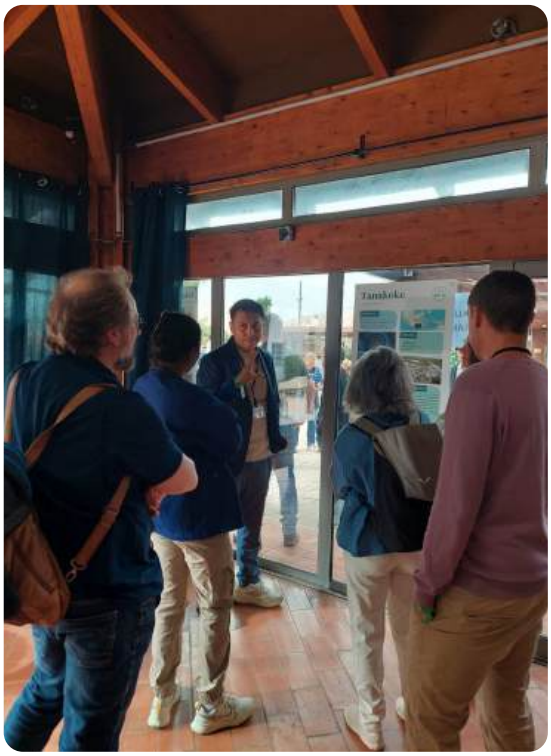
The webinar involved 56 participants, consisting of 29 men and 27 women from various backgrounds, including journalists, university students, and NGOs. As an outcome of the program, 20 written articles were submitted by participants. These works reflected an improved understanding of mangrove-related issues and demonstrated enhanced capacity in communicating environmental messages and awareness to the public.



From Coastal Villages to Global Conversations

Throughout 2024, Blue Forests continued to strengthen connections between local coastal learning in Indonesia and wider global conversations on resilience, small islands, food systems, ecological restoration, and blue carbon. These exchanges became important spaces not only for sharing experiences, but also for reflecting on how community-based practices from Indonesia can contribute to broader discussions on coastal futures.

Small Island, Coastal Stewardship, and Global Partnership



Learning from small island communities in Indonesia was shared through international exchanges on sustainable island stewardship and biodiversity, including participation in the SMILO Meet-Up 2024 in Marseille, France, in October 2024. The engagement highlighted how local governance, ecological restoration, and cultural connections continue to shape resilience in vulnerable coastal areas. During the same period, Blue Forests also strengthened collaboration and learning exchanges with several international partners through visits to GoodPlanet Foundation in Paris, Wetlands International and Tilapia Foundation in the Netherlands, and Blue Action Fund in Germany, reinforcing long-term partnerships around coastal resilience, community stewardship, and ecosystem restoration.

EMR, blue carbon & academic exchange



In parallel, Blue Forests contributed to academic and practitioner discussions in the United States through participation in the Blue Carbon Ecosystem Workshop at Yale University in New Haven, organized together with the Environmental Leadership & Training Initiative (ELTI) in October 2024. During the exchange, Blue Forests shared long-term field experiences on Ecological Mangrove Rehabilitation (EMR) and community-based restoration practices in Indonesia, while also engaging in broader discussions on the opportunities, challenges, and global context of blue carbon initiatives from the perspective of local coastal landscapes and communities.

Coastal food systems & regional collaboration

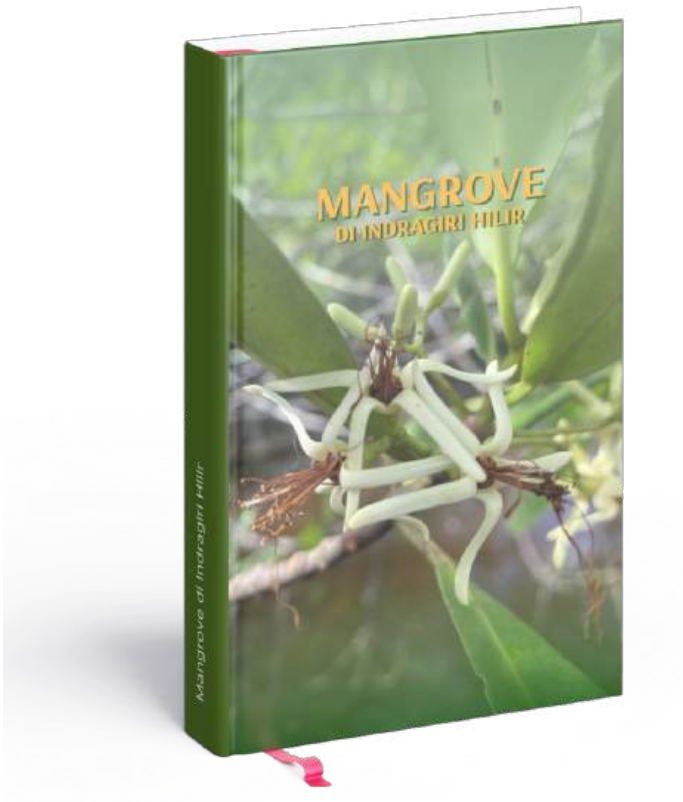
At the regional level, Blue Forests participated in the Regional Consultation on Climate-Resilient Agricultural Practices in Rice Cultivation held in Thailand in November 2024. The engagement strengthened regional dialogue and shared learning on sustainable agriculture, aquaculture, and food systems in Southeast Asia, while highlighting the importance of connecting coastal livelihoods, ecosystem resilience, and food security in responding to climate change.

These experiences reaffirmed an important lesson for us: solutions rooted in local realities and community practice hold valuable knowledge for global conversations. At the same time, global exchanges continue to enrich our reflections and strengthen our commitment to bring learning back to the communities and ecosystems where this journey began.




📍Yepem Village, Asmat, South Papua

KNOWLEDGE PRODUCTS



Mangrove in Indragiri Hilir

This book provides a field guide designed to support the identification of various mangrove species found in Indragiri Hilir Regency. Each species is described in detail, including its morphological characteristics, habitat, and ecological as well as economic roles. The book is also complemented with illustrations and photographs to assist field-based identification and learning processes.

This book can be accessed through the following link Mangrove Identification Guide of Indragiri Hilir

Action Research fo Mangroves

This module presents a methodology that can be used to facilitate school-age groups and coastal community members in actively investigating and addressing local environmental issues. The methodology was specifically developed for use in mangrove forest landscapes and is therefore titled “Action Research for Mangroves.”

The module can be accessed through the following link: PAR



Participatory Village Resource Assessment

Participatory Rural Appraisal (PRA) techniques are used to strengthen the capacity of communities and village governments to effectively manage decentralized governance systems through improved local governance practices. At the same time, this empowerment approach enables communities to better understand their own conditions and to exercise appropriate control and management over local resources and development processes. PRA techniques also serve as an entry point for community empowerment while supporting the collection of village-level information and baseline data.



The module can be accessed in the following link PRA



Forest Management Learning Group, Mangrove Honey

Forest Management Learning Groups (FMLG) are a participatory learning approach that engages communities in sustainable forest management by strengthening knowledge, skills, and awareness. Within coastal contexts, the FMLG approach has been adapted to support the participatory utilization of mangrove non-timber forest products (NTFP). FMLG helps ensure that communities understand the ecological, social, and economic values of mangrove ecosystems while building their capacity to sustainably manage mangrove NTFP without degrading the environment, thereby supporting long-term ecosystem sustainability and community livelihoods. The module can be accessed through the following link: FMLG Mangrove Honey



The Coastal Field School on Mangrove Fisheries

The Coastal Field School on Mangrove Fisheries serves as an effective platform for strengthening community capacity in sustainable capture fisheries management through a participatory action research approach that is both practical and contextually relevant. The program includes learning materials on environmentally friendly practices, fish stock management, monitoring aquatic environmental conditions, and adapting to changing coastal and marine environments. It also supports the development of processing and entrepreneurship skills, mentoring in sustainable fishing practices, and the strengthening of participants' sense of care and solidarity. Most importantly, the program helps build community confidence and self-reliance.

The module can be accessed through the following link: Coastal Field School on Mangrove Fisheries

Wildlife Diversity

This book is more than just documentation, it is also an effort to preserve and revive the traditional knowledge of Indigenous communities about sea spirits and the values that once guided how people respected and protected nature.

Although these stories and beliefs are no longer widely passed down from one generation to another, this book presents them in a more accessible and engaging format so they can continue to be remembered, appreciated, and shared with wider audiences.

The module can be accessed in the following links:

- Wildlife Diversiy Yepem Village
- Wildlife Diversity Kamora Village





📍Pulau Cawan Village, Indragiri Hilir, Riau

OPERATIONS, FINANCE, AND HUMAN RESOURCES

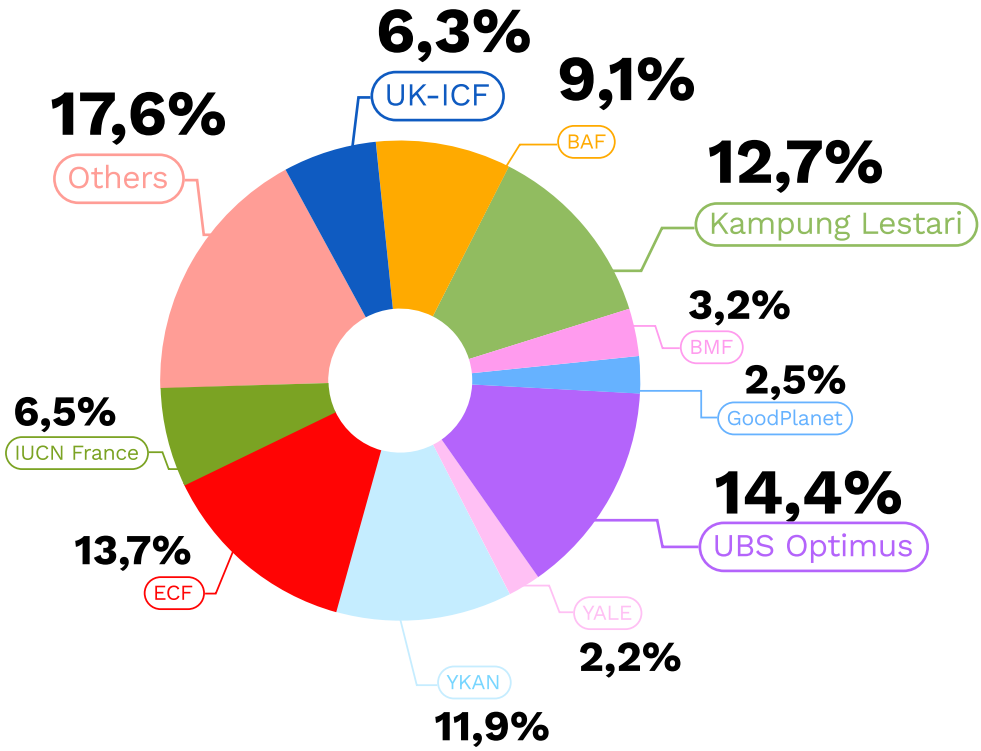
MANAGED FUNDS AND FUNDING PARTNERS

In 2024 Blue Forests Foundation managed 13 projects with total revenue of

IDR20.049.383.482

We worked across 9 provinces in Indonesia: Riau, West Kalimantan, East Kalimantan, East Java, Southeast Sulawesi, South Sulawesi, West Nusa Tenggara, Central Papua, and South Papua, supported by 11 funding partners from various institutions and philanthropic organizations. Our largest source of funding was UBS Optimus Foundation. In addition to long-term implementation projects, we also carried out several consultancy projects, which are reflected under other sources of income.

The annual financial report can be accessed at:





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MEL and Knowledge Specialist
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Silviculture Specialist
Lely Puspitasari

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Fransiska

HR Manager
Rieski Kurniasari

Grant and Partnership Officer
Rahmat Hidayat

Administration & Procurement
Andi Zaenab Astriani

Finance and Administration Assistant
Yolanda Julita

OUR TEAM

20 Women

21 Men



4 personnel
Mimika & Asmat

5 personnel
Berau, East Kalimantan

2 personnel
Jakarta

4 personnel
Kubu Raya, West Kalimantan

4 personnel
Muna, Southeast Sulawesi

2 personnel
Sidoarjo, East Java

3 personnel
Indragiri hilir, Riau

26 personnel
Home Office-Makassar, Yogyakarta, Darwin-Australia



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