

# Indonesia



**Organization:** Yayasan Komunitas Penjaga Pulau (YKPP)  
**Location:** Labuhan Bajo Village, Sumbawa District, West Nusa Tenggara Province, Indonesia  
**Solution:** Establishing a climate-smart coastal village through community-based spatial planning technology in Indonesia  
**Factsheet Period:** First round of UNDP AFCIA funding (16 months)



The YKPP team conducting activities for the climate-smart coastal village initiative in Indonesia @YKPP

Nearly 60% of Indonesia's population lives in coastal areas on its 17,000 islands, relying on fisheries, agriculture or tourism for their livelihoods. Climate resilience amongst coastal communities is vital, with rising sea levels projected to decrease economic returns to from fisheries by between 15 and -26% by 2050 (World Bank, 2023). With a population of 2,245, where 50% of men work as fishers, Labuhan Bajo Village is transforming into a climate-smart community. This initiative strengthens local fishing practices through spatial planning technology, science-based silvofishery, and data-driven early warning systems. The solution is particularly interested in empowering women, primarily housewives, by providing equal opportunities to participate in fishery management, knowledge management and income-generating activities.



## Key achievements

- Trained 16 people (nine women) in spatial planning technology and drone operations to monitor land-use, environmental changes and deforestation
- Engaged 57 locals in community members in discussion around sea level rise, coastal erosion and land-use change
- Designed site plan for ecotourism development, signed by Village Head, Director of YKPP and the University of Mantaram
- Constructed a multi-species mangrove nursery cultivating 10,000 seedlings of seven species
- Planted 5,000 seedlings in the mangrove silvo-fishery with a 90% survival rate
- Harvested fish equivalent to US\$955 in value



## Social impact

- Silvofishery practices provide a sustainable income source for the community, reducing dependence on financial aid.
- Women empowered to play an active role in land management and agricultural activities
- Seeking to establish a women-led cooperative to manage silvofishery operations.



## Funding snapshot

- UNDP AFCIA grant: \$60,000 (initial grant)



## Adaptation benefits

- Increased community awareness of climate risks like coastal erosion and sea level rise
- Improved decision-making through access to spatial data
- Enhanced coastal protection through mangrove restoration
- Sustainable income generation through optimized silvofishery practices



## Innovation

- Access to spatial planning technology and science-based silvofishery management practices has empowered communities to make informed decisions in response to climate change risks, including coastal erosion
- New revenue streams created for silvofishery and nursery outputs (for examples selling seedlings to organizations planting mangroves)



## Replication potential

- Training villagers in spatial technology empowers them to become trainers for future projects, facilitating wider adoption in other coastal communities in Indonesia
- Online dashboard for the early warning system can be a model for sharing data and best practices across regions

## Investability

Revenue per year	From August 2023 to December 2024, the solution generated \$2,625 in revenue: 15% from mangrove seedling sales, 35% from harvested milkfish sales, and 50% from drone operations consultancy services
Sustaining criteria	<p>Local participation in training, planning, and monitoring fosters community ownership</p> <p>Equipping villagers with skills in spatial technology and silvofishery management ensures long-term effectiveness</p> <p>The focus on training future trainers strengthens the initiative's sustainability and replicability</p>
Financial innovation	<p>Silvofishery practices provide a sustainable income source for the community, reducing dependence on external funding</p> <p>Actively exploring opportunities to access additional climate finance, such as establishing a cooperative or village-owned enterprise</p>