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MINDANAO GRANTEES

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FoundationUSBONG Nature-based Solutions Forum 2026
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Technical Documentation of the Mindanao PCP4NbS Grantees

A Synthesis of Baseline Realities, Community Governance, and
Nature-based Solutions Across Mindanao Landscapes

USBONG: A Transdisciplinary Forum on Nature-based Solutions
NbS Forum 2026

June 30 - July 2, 2026 | Novotel Manila Araneta City

Non-Timber Forest Products Exchange Programme Asia

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Acronyms

AgriCOOPh	Philippine Family Farmers Agriculture Fishery Forestry Cooperatives Federation
BAMBOOST	Bamboo-based Solutions for Siguit Transformation
BARMM	Bangsamoro Autonomous Region in Muslim Mindanao
CLAFI	Conrado and Ladislawa Alcantara Foundation Inc.
CLUP	Comprehensive Land Use Plan
DAO	DENR Administrative Order
DENR	Department of Environment and Natural Resources
DepEd	Department of Education
DORSU	Davao Oriental State University
IUCN	International Union for Conservation of Nature
FFP	Forest Foundation Philippines
FLUP	Forest Land Use Plan
LCCAPs	Local Climate Change Action Plans
LDRRMPs	Local Disaster Risk Reduction and Management Plans
LGU	Local Government Unit
MENRE	Ministry of Environment, Natural Resources, and Energy
MINERGY	Mindanao Energy Systems, Inc.
MMR	Monitoring, Measuring, and Reporting
MOA	Memorandum of Agreement
MSU	Mindanao State University
NbS	Nature-based Solutions
NGO	Non-governmental Organization
NGP	National Greening Program
NRM	Natural Resource Management
NTFP	Non-Timber Forest Products
NTFP-EP Asia	Non-Timber Forest Products Exchange Programme Asia
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PALDFAVA	Pag-asa Licop District Farmers and Agri Vendors Association (PALDFAVA)
PCP4NbS	Philippines-Canada Partnership on Nature-based Solutions for Climate Adaptation
PCRA	Participatory Coastal Resource Assessment
PO	People's Organization
TEK	Traditional Ecological Knowledge
TLWOI	Teduray and Lambangian Women's Organization Incorporated
TWG	Technical Working Group
UPLB INREM	University of the Philippines Los Baños Interdisciplinary Studies Center for Integrated Natural Resources and Environment Management
VSLA	Village Savings and Loan Association
WEP	Watershed Enhancement Project

Executive Summary

The Nature-based Solutions (NbS) Forum is an annual event led by Forest Foundation Philippines under the Philippines-Canada Partnership on Nature-based Solutions for Climate Adaptation (PCP4NbS) Program. It serves as a national platform bringing together a diverse group of practitioners, policymakers, civil society organizations, communities, academia, and the private sector across Luzon, Visayas, and Mindanao, and international partners to address emerging issues, share best practices, and build strategic collaborations.

From **June 30 to July 2, 2026**, the Foundation, alongside the Department of Environment and Natural Resources (DENR), the NbS Support Network, and development partners, hosted **USBONG: A Transdisciplinary Forum on Nature-based Solutions (NbS Forum 2026)** at Novotel Manila Araneta City.

This three-day transdisciplinary forum marked a strategic transition from **PUNLA: NbS Forum 2025**, which planted and sowed the shared conceptual understanding of NbS, to **USBONG: NbS Forum 2026**, which showcased and emphasized actionable, locally rooted execution and structural mainstreaming across Philippine landscapes.

Grounded in the recognition that many nature-based practices are rooted in local and Indigenous systems, the forum aimed to:

1. Demonstrate existing practices in implementing NbS in the Philippines,
2. Develop mechanisms to support the mainstreaming of high-integrity NbS implementation beyond the Forum, and
3. Expand networks and collaborations among relevant stakeholders designing and implementing NbS.

The forum gained strong institutional momentum following the landmark of **DENR Administrative Order No. 2026-30 on June 29, 2026**, just a day prior to USBONG. As the country's first formal NbS policy framework, the order officially adopts the International Union for Conservation of Nature (IUCN) Global Standard for Nature-based Solutions. It directs the systematic integration and institutionalization of nature-based approaches across all DENR policies, plans, programs, projects, and activities, specifically targeting climate change adaptation, biodiversity conservation, and disaster risk reduction.

By shifting the national dialogue from conceptual frameworks to concrete actions, USBONG: NbS Forum 2026 aimed to **advance high-integrity, gender-responsive NbS across sectors while unlocking necessary financing to scale implementation**. The forum closed with a unified call for sustained, intersectional cooperation, which reaffirmed commitment to translate policy intentions into lasting impact for ecosystems and local communities.

Translating national policy mandates and forum outcomes into frontline community action requires robust institutional scaffolding. To support this mission, the Non-Timber Forest Products - Exchange Programme Asia (NTFP-EP Asia) served as a facilitating partner and technical documentation for the Mindanao PCP4NbS grantees and their project sites.

The Critical Role of NbS for Mindanao's Vulnerable Landscapes

Mindanao, the second largest island in the Philippines, faces complex, intersecting threats of climate and conflict-driven hazards. It is recognized as the country's breadbasket, supplying a significant share of national crops and agricultural exports. However, it is constantly challenged with severe climate vulnerability that directly threatens national food security alongside local livelihoods.

Shifting rainfall patterns consistently trigger crop failures for farming households, while rising sea levels and warming ocean temperatures degrade marine ecosystems, directly impacting small-scale fisherfolks. In regions with underlying socio-economic and post-conflict challenges, such as the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), climate vulnerability is deeply intertwined with sociopolitical dynamics surrounding land and resource tenure. As water and fertile land become increasingly scarce, resource competition risks worsening community displacement, economic hardship, and local tensions.¹

Between January and August, a series of severe natural hazards struck Mindanao, testing the strength of its communities and ecosystems. In early February, Tropical Storm Basyang unleashed rainfall that exceeded Northern Mindanao's 100-year return period, according to the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA).² The storm caused heavy coastal swells, landslides, and heavy sediment runoff that affected over 30,000 residents in Misamis Oriental,³ and displacing tens of thousands more across Caraga and Surigao del Sur. Shortly after, from February 19 to 21, intense shear line rainfall triggered fatal landslides in the City of Mati and buried residential areas in Davao de Oro, displacing over 2,000 people.⁴

Another crisis on June 8, 2026, happened when a massive magnitude 7.8 earthquake struck off the coast of Maasim, Sarangani.⁵ The severe shaking cracked roads, triggered mountain landslides, and damaged critical infrastructure across Sarangani and the Davao Region. This was followed by a magnitude 6.2 earthquake that struck Davao Oriental on June 15, 2026.⁶

As communities were recovering, Super Typhoon Inday and the enhanced southwest monsoon (*Habagat*) brought continuous torrential downpours on July 9.⁷ These heavy rains flooded towns across BARMM, SOCCSKSARGEN, and Northern Mindanao. Then, on August 5, a powerful magnitude 7.0 tremor off Sarangani placed even more stress on the region's already unstable slopes.⁸

These compounding shocks underscore the urgent necessity of nature-based solutions. As defined by the IUCN, NbS are cost-effective actions that protect,

¹ <https://www.crisisgroup.org/cmt/asia-pacific/philippines/islands-storm-climate-change-and-conflict-philippines>

² <https://www.gmanetwork.com/news/weather/content/975776/basyang-rains-exceed-rare-100-year-level-in-northern-mindanao-pagasa/story/>

³ <https://www.sunstar.com.ph/cebu/basyang-claims-5-lives-thousands-displaced-across-mindanao-cebu>

⁴ <https://newsinfo.inquirer.net/2184765/7-dead-over-2000-displaced-as-rains-batter-mindanao>

⁵ <https://reliefweb.int/report/philippines/philippines-78-sarangani-earthquake-response-snapshot-13-july-2026>

⁶ <https://www.gmanetwork.com/regionalnews/114426/magnitude-62-earthquake-hits-davao-oriental/story/>

⁷ <https://www.gmanetwork.com/regionalnews/114744/rains-from-habagat-indayph-flood-parts-of-soccsksargen-barmm/story/>

⁸ <https://newsinfo.inquirer.net/2277926/magnitude-7-earthquake-jolts-parts-of-mindanao>

restore, and sustainably manage natural and modified ecosystems to address societal challenges effectively and adaptively, while simultaneously providing human well-being and biodiversity benefits.⁹

While NbS is not a new concept, having long been practiced across the Philippine archipelago through traditional and Indigenous knowledge systems, building a unified, shared understanding among diverse stakeholders remains an ongoing effort. This alignment is vital in regions such as Mindanao, where historically faced unequal access to capacity-building, national policy platforms, and long-term climate financing.

When implemented across entire landscapes, from upland watersheds down to coastal communities, NbS mitigates localized hazards through strategies anchored in local ecosystems and livelihoods. Crucially, a central pillar of these solutions is equity. It requires identifying who bears the burdens of climate change and ensuring that vulnerable, frontline communities are at the center of solution design, policy-making, and long-term governance.

Through the Philippines-Canada Partnership on Nature-based Solutions for Climate Adaptation (PCP4NbS), funded by the Government of Canada, Forest Foundation Philippines operationalizes NbS across Mindanao. The program seeks to contribute to strengthening climate resilience of communities, particularly rural and indigenous women, while ensuring mutual co-benefits from, and for, natural resources and healthy ecosystems.¹⁰

The Foundation supports five grantee partners, spanning from the ridge to reef, across BARMM, Northern Mindanao, SOCCSKSARGEN, and the Davao Region. These local projects address severe climate vulnerabilities, conflict dynamics, and ecological degradation by applying rights-based, gender responsive, and intersectional approaches in natural resource management (NRM).

The map below highlights the project location and their respective implementing organizations.

⁹ <https://portals.iucn.org/library/sites/library/files/documents/2020-020-En.pdf>

¹⁰ <https://www.forestfoundation.ph/news/the-philippines-takes-nature-based-solutions-from-local-practice-to-national-policy/>

Mindanao PCP4NbS Grantees



C-Grass: Creating Gender-Inclusive Resilience Actions for Seagrass Sustainability
Barangay Mambayaan, Balingasag, Misamis Oriental
Region X Northern Mindanao



Strengthening Roles of Women Teduray Indigenous Peoples in Climate Change Adaptation, Resilience, and Peacebuilding

Barangays Romongaob, Itaw and Kuya in South Upi, Maguindanao del Sur
Bangsamoro Autonomous Region in Muslim Mindanao (BARMM)



Conrado & Ladislawa Alcantara Foundation

Bamboo-based Solutions for Siguil Transformation (BAMBOOST)

Barangays Nomoh and Amsipit, Maasim, Sarangani Province
Region XII SOCCSKSARGEN



Improving Climate Resilience of Headwater Barangays in Sumlog-Cuabo River Watershed

Barangay Bagong Silang, Maragusan, and Brgy. Tagugpo,
Pantukan, Davao de Oro City
Region XI Davao Region



Forestry and Ecosystem Restoration through Sustainable Tree Cultivation and Community-based Agroforestry for Resilience and Equity (FOREST CARE)

Barangay Sainz, City of Mati, Davao Oriental
Region XI Davao Region

Figure 1. Map of the Mindanao PCP4NbS landscapes

Table 1. Overview of the Mindanao PCP4NbS Projects

Project Title	Organization	Location	Duration	Project Information	NbS	Hazards	Climate Vulnerabilities and Impacts	Societal Challenges	Gender Challenges
Strengthening Roles of Women Teduray Indigenous Peoples in Climate Change Adaptation, Resilience, and Peacebuilding	Teduray Lambangian Women's Organization, Incorporated (TLWOI)	Barangays Romongaob, Itaw and Kuya in South Upi, Maguindanao del Sur Bangsamoro Autonomous Region in Muslim Mindanao (BARMM)	August 1, 2025 to July 31, 2027	Focused on vulnerable Teduray and Lambangian women and communities, this project leverages NbS, through targeted reforestation and agroforestry, to strengthen climate adaptation and disaster risk reduction. The interventions stabilize soil, manage erosion, and restore degraded landscapes to combat severe flooding, landslides, and extreme heat. Crucially, the initiative builds the capacity of Teduray and Lambangian women, empowering them as key drivers of climate resilience and peacebuilding.	Reforestation and agroforestry	• Flood • Landslides	• Increased landslide and flooding risks due to forest degradation • Displacement and resource shortages that may lead to conflict	• Climate change adaptation and mitigation • Reversing ecosystem degradation and biodiversity loss • Social and economic development • Gender Equality and Women Empowerment	• Women's caregiving roles affected during disasters and displacement • Greater security risks as women perform reproductive roles • Limited participation of women in forest decision-making despite involvement in reforestation and agroforestry
C-Grass: Creating Gender-Inclusive Resilience Actions for Seagrass Sustainability	Philippine Family Farmers Agriculture Fishery Forestry Cooperatives Federation (AgriCOOPh)	Barangay Mambayaan, Balingasag, Misamis Oriental Region X Northern Mindanao	August 1, 2025 to July 31, 2027	This project addresses coastal erosion and flooding NbS, such as seagrass habitat protection and sustainable sea cucumber farming. These strategies enhance marine biodiversity and shoreline protection while strengthening community livelihoods in Misamis Oriental. Leveraging community-led initiatives and gender-inclusive approaches, the project fosters activate participation among women and youth in conservation efforts, empowering local organizations to integrate marine stewardship and youth in conservation efforts, empowering local organizations to integrate marine stewardship with sustainable aquaculture.	Seagrass habitat restoration and protection and sustainable sea cucumber farming	• Coastal Flooding • Coastal Erosion	• Illegal fishing practices (trawl fishing, generator fishing, beach seining) • Degradation of corals, mangroves, and seagrass • Decline of fish catch and low incomes • Unregulated coastal development • Inappropriate aquaculture practices	• Climate change adaptation and mitigation • Reversing ecosystem degradation and biodiversity loss • Social and economic development • Gender Equality and Women Empowerment	• Limited opportunities for women's participation and decision-making • Multiple burdens on women
Bamboo-based Solutions for Siguil Transformation (BAMBOOST)	Conrado and Ladislawa Alcantara Foundation, Inc. (CLAFI)	Barangays Nomoh and Amsipit, Maasim, Sarangani Province Region XII SOCCSKSARGEN	September 1, 2025 to August 31, 2027	This project aims to enhance the climate and ecological resilience of the Siguil River watershed and its adjacent communities through bamboo-based NbS that integrate biodiversity conservation, riverbank stabilization, and community-led enterprise development. In response to the increasing risks of rain-induced landslides and flooding, the initiative establishes riparian buffers using native and naturalized bamboo species to stabilize riverbanks, restore ecosystem functions, and strengthen overall watershed health.	Establishment of a bamboo riparian greenbelt	• Flood • Landslides • Riverbank collapse	• Drastic decline in bamboos due to unregulated harvesting • Decreasing groundwater recharge • Fragmentation of biodiversity corridors, threatening local extinction of endangered species	• Climate change adaptation and mitigation • Reversing ecosystem degradation and biodiversity loss • Water Security • Social and economic development • Gender Equality and Women Empowerment	• Indigenous women are underrepresented in decision making • Limited livelihood options for women

				Crucially, this project empowers Tboli women, youth, and upland farmers through capacity development in bamboo propagation, nursery management, slope stabilization, and biodiversity integration. It establishes community-managed bamboo nurseries and a community-based bamboo nurseries and enterprises while promoting Indigenous knowledge and multi-stakeholder partnerships to support sustainable livelihoods and long-term watershed stewardship.					
Forestry and Ecosystem Restoration through Sustainable Tree Cultivation and Community-based Agroforestry for Resilience and Equity (FOREST CARE)	City of Mati Peoples Council Inc	Brgy. Sainz, City of Mati, Davao Oriental Region XI Davao Region	October 15, 2025 to October 14, 2027	The FOREST CARE project is a community-led, gender-responsive NbS initiative that aims to restore degraded forestlands and riparian ecosystems. It achieves this through diversified agroforestry, the planting of native and wildlife-attracting species in riparian zones, capacity building, and integration of Indigenous knowledge systems. This ultimately promotes the active stewardship of Indigenous Peoples and women in forest governance.	Agroforestry and riparian restoration	• Rain-induced landslides • Floods	• Forest fragmentation • Unsustainable farming methods degrade the habitat of keystone species and reduce ecosystem services, such as erosion control and water regulation	• Climate change adaptation and mitigation • Reversing ecosystem degradation and biodiversity loss • Social and economic development • Gender Equality and Women Empowerment	• Women's lack of access to formal leadership roles, agricultural extension services, and capital support • Limited participation in project
Improving Climate Resilience of Headwater Barangays in Sumlog-Cuabo River Watershed	Kasilak Development Foundation Inc.	Brgy. Bagong Silang, Maragusan, and Brgy. Tagugpo, Pantukan, Davao de Oro City Region XI Davao Region	June 1, 2026 to October 31, 2027	This project implements integrated, community-driven NbS to enhance climate resilience and biodiversity conservation in the headwaters of Sumlog-Cuabo River Watershed. In response to the forest degradation, biodiversity loss, and the heightened risks of rain-induced landslides and flooding, the initiative engages local communities and <i>Bantay Kalikasan</i> in reforestation and enrichment planting of agroforestry systems, rehabilitation. Furthermore, it strengthens the protection of critical forest and river ecosystems through community-based forest monitoring and enforcement.	Reforestation, agroforestry, and riparian restoration	• Rain-induced landslides • Floods	• Prevalence of kaingin (slash and burn agriculture) • Upland farmers' dependence on farming for livelihood	• Climate change adaptation and mitigation • Social and economic development • Water security • Gender Equality and Women Empowerment	• Women's limited meaningful participation in environmental conservation

Stories of Nature-based Solutions Across Mindanao

Cross-project learning reveals that human relationships, including deep community trust, cultural immersion, conflict resolution, and gender integration, are essential bedrock to sustaining long-term project success. While traditional monitoring reports often capture quantifiable metrics such as hectares restored, seedlings planted, or training sessions conducted, the vital relational work required to sustain these interventions over time are regularly overlooked.

For the Mindanao PCP4NbS partners, effective gender-responsive environmental management requires engaging and transforming residents beyond simple participation into full partners and advocates. As local champions and equal decision makers, people's organizations and community members actively mitigate climate vulnerabilities and safeguard shared landscapes.

Elements like trust, cultural awareness, and shared ownership cannot be fully captured in quarterly spreadsheets, yet they determine whether an NbS project endures beyond a funding cycle. Across these landscapes, environmental degradation is not an abstract concept. It is an active disaster risk that directly threatens lives, ancestral security, and daily sustenance.

The following stories detail how the five grantee partners sowed their seeds, established their roots, and plan to further flourish their expertise in navigating NbS execution within these ground realities across Mindanao.

A photograph of two women in a rural, hilly landscape. One woman, wearing a grey hoodie and dark pants, is using a shovel to plant a small green sapling into the soil. The other woman, wearing a maroon shirt and a white headscarf with a colorful pattern, is kneeling and observing the process. The background is filled with lush green vegetation and trees.

Strengthening Roles of Women Teduray Indigenous Peoples in Climate Change Adaptation, Resilience, and Peacebuilding

Barangays Romongaob, Itaw and Kuya in South Upi, Maguindanao del Sur
Bangsamoro Autonomous Region in Muslim Mindanao (BARMM)

Teduray Lambangian Women's Organization, Incorporated (TLWOI)

Teduray and Lambangian Women Are Reviving South Upi's Forests and Future

The elders of South Upi remember what the forest landscape used to look like before the trees were turned to charcoal.

Now the Teduray¹¹ Lambangian¹² Women's Organization, Incorporated (TLWOI) is replanting across the barangays of Romongaob, Itaw, and Kuya in South Upi, Maguindanao del Sur. The project, Strengthening Roles of Women Teduray Indigenous Peoples in Climate Change Adaptation, Resilience and Peacebuilding, was shaped as much by disaster as by ambition, carved by flash floods, riverbank siltation, and the memory of Typhoon Paeng.¹³

Their goal is to plant trees precisely because certain areas are prone to landslides, and reforestation is the most direct answer the community has. The community needed no convincing as they had watched the lush mountains disappear before.

Project Manager Ronie Ampok oversees TLWOI's work across the wider Bangsamoro Autonomous Region. He has originally proposed a project site of 75 hectares. Forest Foundation Philippines encouraged the team to scale down as the figure was too ambitious for the budget and timeline. The number came down to 45 hectares, then finally settled at 13. Seven hectares allocated for agroforestry planted with coffee,¹⁴ marang,¹⁵ and avocado,¹⁶ and 6 hectares of reforestation planted with kamagong,¹⁷ bayug,¹⁸ and wildlings of atipolo,¹⁹ anonang,²⁰ and ipil-ipil.²¹

Three nurseries are now established with two being funded through the PCP4NbS project and the third built with counterpart funding the organization secured on its own. Alongside the trees, the team is building in a livelihood layer of upland rice and of rattan²² and nito²³ handicrafts.

TLWOI was established in 2013, and this is its third environmental project, each one carrying an intent that runs deeper than trees: peacebuilding. There is no active insurgency in the area, but a longstanding land dispute. This remains part of the context the organization works within.

¹¹ They are an Indigenous Lumad people in southwestern Mindanao. The name comes from tedu, which means place of origin, and ray, which is upper part of a stream.

¹² They are an indigenous ethno-linguistic group in southwestern Mindanao. They trace their ancestry formed from the traditional reconciliation agreement between warring Teduray and Dulangan Manobo peoples.

¹³ Severe Tropical Storm Nalgae, locally known as Paeng, that had its landfall in the Philippines around October 29, 2022

¹⁴ Arabica (*Coffea arabica*) and Robusta (*Coffea canephora*)

¹⁵ *Artocarpus odoratissimus* Blanco

¹⁶ *Persea America* Mill.

¹⁷ *Diospyros blancoi*

¹⁸ *Bambusa merrilliana*

¹⁹ *Artocarpus blancoi*

²⁰ *Cordia dichotoma*

²¹ *Leucaena leucocephala*

²² *Calamys merrillii*

²³ *Lygodium circinnatum*



Figure 2. TLWOI members planting avocado seedlings at the agroforestry site. (Photo courtesy of Josephine Mama/ TLWOI)

Twelve members steward the project sites, and eight of them are women, who now make up an estimated 60 percent of the project's activities overall. *"Hindi lang po pwede na lalaki lang. Kung ano ang kaya ng lalaki, kaya rin ng mga babae,"* Project Officer Josephine Mama asserts that what men can do, women can do too.

The organization has also moved to formalize its standing with local government, with public consultations and engagement with the Ministry of Environment, Natural Resources, and Energy (MENRE) leading to a signed Memorandum of Understanding with the LGU in 2025.

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For me nature is the ultimate teacher, just like seed sprouting through concrete or a river carving its path through rock. It learns to adapt to its environment rather than fight it. It shows that survival belongs to the most adaptable.

Josephine Mama, Project Officer

Their primary objective in joining the USBONG NbS Forum is to learn how to better integrate women, youth, and Indigenous peoples into forest landscape governance and management. They aim to emphasize Indigenous women's participation in forest protection and highlight how their care for ancestral domains improves ecosystem health. Furthermore, they aspire to showcase their Indigenous way of life, such as planting and securing daily sustenance, where women now play a more active, growing role in conservation practices, all while preserving the generational, place-based wisdom of their communities.

At USBONG, TLWOL's ambitions were looking into ready-made materials they could adapt and reproduce back home, and a chance to hear how other projects had succeeded. What shifted for the team, in Mama's words, was broadening the intended impact of their work into the economic, health, and policy dimensions surrounding it. The clearest strategic takeaway she carried home was about who gets to decide. Decision-making processes and project documents must be accessible to everyone, and establishing an impartial, community-based monitoring body is critical rather than assuming trust will hold on its own.

Mama offered five words when asked to summarize her reflections on the entire experience into a single line: "Be women with a goal."



C-Grass: Creating Gender-Inclusive Resilience Actions for Seagrass Sustainability

Barangay Mambayaan, Balingasag, Misamis Oriental
Region X Northern Mindanao

Philippine Family Farmers Agriculture Fishery Forestry Cooperatives Federation (AgriCOOPh)

C-Grass Nurtures Seagrass and Sea Cucumbers, Lifts Fisherfolk, and Amplifies Women's Voices in Balingasag

Sixty-five sea cucumbers went into the breeding tank, and only three came out female.

It was not the ratio the project team at Balingasag, Misamis Oriental had hoped for, but it did not discourage them. From that lopsided batch came 40,000 juveniles, enough that the team could keep 20,000 for their own grow-out pens and still send 20,000 back to Camiguin, the island they had sourced their broodstock from in the first place.

This is C-GRASS: Creating Gender-Inclusive Resilience Actions for Seagrass Sustainability, which is a project of the Philippines Family Farmers Agriculture Fishery Forestry Cooperatives Federation (AgriCOOPh) along Balingasag's nine coastal barangays. C-GRASS sits on a stretch of water that project lead Lourdes Diocson described as where some areas, specifically in the Mariculture Park portion, are already polluted.

The coasts are suffering from anthropogenic activities and climate impacts that include illegal fishing methods including dynamite fishing, which the community estimates accounts for seventy percent of the illegal catch in the area, alongside beach resort development, unregulated aquaculture, and the slow degradation of the corals, mangroves, and seagrass meadows that used to hold the shoreline and the fish stocks together.

The conceptualization of environmental sustainability as a priority trace back to 2022, with AgriCOOPh's partnership with TRIAS, a Belgian NGO. By 2023, AgriCOOPh had partnered with Mindanao State University's (MSU) Naawan campus and the Local Government Unit of Balingasag to conduct a Participatory Coastal Resource Assessment (PCRA) across the nine barangays.²⁴ Mayor Alexis Quina, whose administration had already been focused on aquaculture practice, saw an opening which is seagrass restoration. This could rebuild marine biodiversity, when done right, while giving the municipality's aquaculture ambitions a healthier foundation to grow from.

The assessment not only revealed ecological realities, but also the social dynamics of the fisherfolk communities. The focus group discussions showed that women, mostly the wives of fishermen, carry the heavier burden of selling the catch, yet decision-making at community events tends to default to the men, even when the men are out at sea and unable to attend.

²⁴ <https://agricooph.coop/agricooph-marks-milestone-in-coastal-livelihoods-with-sea-cucumber-juvenile-turnover-in-balingasag/>



Figure 3. Citizens of Barangay Mambayaan working together to transplant seagrass. (Photo courtesy of Lourdes Diocson/ AgriCOOPh)

The project's answer borrows a word already familiar to the community: *tabangay*.²⁵ It is a system of helping each other, which the team is now trying to extend into something closer to gender equity, giving women more *tingog*²⁶ in decisions that have long been made without them.

The heart of the project's nature-based solution is a five-hectare seagrass sanctuary, divided into three zones, alongside a quarter-hectare community-managed pilot sea cucumber farm. This supports 195 members and non-members of the Silver Bay Producers Cooperative and indirectly benefiting 800 families of small-scale farmers and fishers.



Figure 4. Sixty-day old sea cucumber (left) and community women of Barangay Mambayaan conducting the first Monitoring, Measuring, and Reporting (MMR) (right). (Photo courtesy of Lourdes Diocson/ AgriCOOPh)

²⁵ A Visayan word that translates to teamwork or mutual cooperation

²⁶ A Visayan word that translates to voice.

The species they are nurturing is *Holothuria scabra*, locally known as balat.²⁷ Highly prized for its quality, balat is valued across luxury food markets, traditional medicine, and modern cosmetic and pharmaceutical industries. Locally, it is traditionally prepared as *kinilaw*. It is a Filipino dish where the seafood is cooked in vinegar or citrus instead of heat



Figure 5. Barangay Mambayaan residents at the grow out pen or *hapa*. (Photo courtesy of Lourdes Diocson/ AgriCOOPh)

Their farming setup uses fine-mesh enclosures called a *hapa*. It is a two-by-five-meter mosquito-net cage with six two-by-five grow-out pens, each holding 600 to 700 sea cucumbers, planted through an 8x8 grid of seagrass. These pens are cleaned every three to five days to keep ahead of bottom-feeding shell that preys on the stock.

The sea cucumbers consume algae, locally called *lumot*. Bhong Obsioma Ducto, Barangay Captain of Barangay Mambayaan, frames the whole effort as an exchange between FFP, the LGU, the academe, and the fisherfolk community. He described their work as “*tabang kinaiyahan, tabang kahago*,” which translates to supporting the environment, helping through hard work.

Every fifteen days, the faculty and staff from MSU Naawan visit to measure the weight and height of the sea cucumbers. It is continuously monitored. And there is also a separate schedule for mixed batches of ten men and women visiting together through their boats and checking the *hapa* and balat in goggles and life jackets on. Mindanao Energy Systems, Inc. (MINERGY), which operates Balingasag's power station, has also stepped in as a corporate environmental partner.

²⁷ One of the most high-value commercially important sea cucumber species

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There can be no excellent work of research, no science, that can ever be perfect if it does not find its way to the tables of community, government, or institutional decision makers, to be integrated into policies for implementation. Nature-based Solutions should find its way into governance and policy making, into ways of conducting business, into our daily lives.

Lourdes Diocson, Project Lead

Barangay Captain Bhong also argued that their ongoing aquaculture research and practice only matters if it reaches various offices and shows the local economy what the buy-in is. They are eyeing for their next phase toward the business side, which is on building value chains for dried sea cucumber. Fresh sea cucumber ranges from PHP 200 to PHP 500 (around \$3 to \$8) per kilo. Dried sea cucumber as a commodity range from PHP 5000 to PHP 10,000 (about \$82 to \$164) per kilo into markets as far as Cebu and Surigao and potentially international buyers.

To give the women members direct access to finance while building leadership skills through the organization's own structure, AgriCOOPh aims to integrate a Village Savings and Loan Association (VSLA) into their project. Looking ahead, the cooperative is already preparing to expand to its next seagrass restoration site.

For now, they remain optimistic that progress grows one hapa at a time, and for Balingasag's fisherfolk and women, that hapa is truly where the hope resides.



Bamboo-based Solutions for Siguil Transformation (BAMBOOST)

Barangays Nomoh and Amsipit, Maasim, Sarangani Province
Region XII SOCCSKSARGEN

Conrado and Ladislawa Alcantara Foundation, Inc. (CLAFI)

BAMBOOST Restores Bamboo and Tboli Tradition Along the Siguil Watershed

For the Tboli,²⁸ bamboo is not merely a material. It forms the wall of their house, functions as a cooking pan over the fire, and sets the cadence of their cultural performances.

Bamboo is so woven into daily Tboli life that its presence can easily be taken for granted. That importance is now urgent, as bamboo itself is disappearing from the Siguil Watershed.

The Conrado and Ladislawa Alcantara Foundation, Inc. (CLAFI) has run strategic climate adaptation work in the watershed before, through its earlier Siguil Watershed Enhancement Project (WEP). It is now aiming to scale that bamboo-based reforestation through its PCP4NbS project, Bamboo-Based Solutions for Siguil Transformation (BAMBOOST).

BAMBOOST's deploy bamboo as a nature-based solution to curb soil erosion across fragile riparian zones and gullies. The goal is to establish a 10-hectare model bamboo zone, focusing on propagating native species, like iron bamboo, through enrichment planting in an upstream buffer zone to anchor broader agroforestry efforts.

Training is vital to how the project intends to make that stick. Local Tboli women, youth, and upland farmers are set to go through a six-cycle modular training program covering nursery establishment and management, bamboo propagation and field planting, slope stabilization and soil conservation, and biodiversity integration grounded in Traditional Ecological Knowledge (TEK).



Figure 6. Establishment of two community-based bamboo nurseries, each with the capacity to produce 8,000 bamboo propagules annually. (Photo courtesy of Joselito Chavez Jr./ CLAFI)

²⁸ An indigenous Austronesian group living in southern Mindanao. The name comes from the native word tau, meaning people, and bilil, which means mountain side or hills.

Tboli women are involved from its conception, contributing both to environmental stewardship and community safety. To lead this effort directly, two Tboli community organizers, Raymond, a teacher, and Precious, an agribusiness professional, have begun gathering traditional stories and cultural knowledge with the community. Collaborating with neighboring Indigenous communities in Sarangani, including the Blaan²⁹ and Tagakaulo³⁰ communities, with the aim to have a folklore reading program.

For its second year, the project plans to establish nursery management and a propagation bank designed in direct consultation with the community's elders.

BAMBOOST contextualizes bamboo scarcity within broader pattern of socioeconomic vulnerability. Rural poverty frequently forces communities into *kaingin*, or slash-and-burn farming, and charcoal production for immediate survival. Systemic barriers compound the problem, including conflicting and overlapping policies on land tenure and management, internal and external land disputes among community members and other stakeholders, and a broader policy tilt that favors short-term economic development over environmental protection.



Figure 7. A bamboo seedling within the 7.21-hectare planting site. (Photo courtesy of Joselito Chavez Jr./ CLAFI)

The project site sits on a boundary barangay between Tboli, South Cotabato and Maasim, Sarangani Province, the kind of location that, by the team's own account, doesn't usually draw the local government's attention, and no local official has visited the site yet.

²⁹ An indigenous group in Southern Mindanao. The name literally translates to "counterpart tribe."

³⁰ An indigenous ethnolinguistic group in Mindanao. They primarily reside in the highlands and headwaters. Their name translates to "people living at the head of the river."

Executive Director of CLAFI Ryan Vidanes noted that the lesson he drew directly from engagements with the landscape is blunter than any training manual. It is that nature provides only if it is allowed to regenerate, otherwise, there is nothing left to draw from.

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Working with IP communities goes beyond project design and templates, it requires more relationship building, immersion and empathizing with the community. NbS can only work and be sustainable if the communities are engaged.

Ryan Vidanes, Executive Director

For the team, the knowledge they are most afraid of losing isn't merely the planting technique, but an entire way of living and place-based ecological wisdom. Indigenous conservation knowledge developed over centuries, which they believe deserves to be documented and returned to, not simply admired from a distance. None of this has been easy to build.

Alongside the core restoration, CLAFI is connecting local artisans with the Zero Extreme Poverty Movement and NGO partners focusing on water, sanitation, and hygiene.

Attending the USBONG NbS Forum transformed the team's strategic vision. As Project Officer Lawton Lao reflected, “I didn't realize how broad NbS actually was.” Moving beyond small-scale livelihoods, BAMBOOST is now exploring the possibility of developing an industry-scale enterprise, such as armchairs with bamboo components, for Department of Education classrooms.

A photograph of two women standing in a lush tropical forest. The woman on the left is wearing a blue t-shirt with a skull design and a black jacket. The woman on the right is wearing a pink and white striped shirt and a pink headscarf. Both are holding small saplings in black plastic bags. The background is filled with various tropical plants, including banana trees and palm trees, under a blue sky with some clouds.

Forestry and Ecosystem Restoration through Sustainable Tree Cultivation and Community-based Agroforestry for Resilience and Equity (FOREST CARE)

Brgy. Sainz, City of Mati, Davao Oriental
Region XI Davao Region

City of Mati Peoples Council Inc.

The Peoples' Council Is Growing Trees and Cultivating Policies in the City of Mati

The City of Mati Peoples Council Inc. does not merely plant trees; it actively cultivates the people's organizations (POs) in its network.

Formed prior to the COVID-19 pandemic and legally registered in 2023, the Peoples Council facilitates local advocacy and environmental initiatives by funneling funding and technical support to accredited POs across the City of Mati.

Under the PCP4Nbs project, the Council leads the initiative Forestry and Ecosystem Restoration through Sustainable Tree Cultivation and Community-based Agroforestry for Resilience and Equity. Located in the Sumlog-Cuabo watershed area within Barangay Sainz, where two community-based POs, Pag-asa Licop District Farmers and Agri Vendors Association (PALDFAVA) and the Magpikit Tree Planters Association, serve as its on-the-ground practitioners.

The 10-hectare project site, covers 8 hectares of degraded land allotted to agroforestry and 2 hectares specifically designated as riparian buffer, carries a complex history. Once part of a commercial logging concession active from 1960s through the 1980s, the land is now stewarded by community members holding formal stewardship certificates.

Infrastructure is reshaping the area further. The provincial road and proposed national highway are set to cross three municipalities, with Barangay Sainz serving as a central boundary point along the route. To close the knowledge gap at the center of the problem, the Council has partnered with Davao Oriental State University (DOrSU) on an ecological and biodiversity assessment, identifying native and endemic species suited to the site. Among them are ipil,³¹ banaba,³² molave,³³ pine, and bayug³⁴ and the fruit-bearing trees such as durian,³⁵ mangosteen,³⁶ and rambutan³⁷ that gives the agroforestry side of the project its livelihood value.

Because the fruit-bearing trees will take four to five years to bear fruit, the Council and the farmer members are turning to alternative sources of income, including crafts such as cacao leaves wrapped in abaca as lei.

The project has shifted local community dynamics, significantly expanding the participation of women and youth in planting, monitoring, and decision-making. The women actively lead stewardship activities, passing down place-based ecological knowledge to younger generations who are drawn to the project's relevance to climate resilience.

³¹ *Instida bijuga*

³² *Lagerstroemia speciosa*

³³ *Vitex parviflora*

³⁴ *Bambusa merrilliana*

³⁵ *Durio zibethinus*

³⁶ *Garciana mangostana* L.

³⁷ *Nephelium lappaceum*

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Nature-based Solutions are not only about restoring ecosystems but also about empowering communities to become active stewards of the environment. True sustainability happens when people, nature, and partnerships work together toward a resilient future.

Alexander T. Balanay III, Executive Director

At the USBONG NbS Forum 2026, the Council focused on deepening their technical understanding of nature-based solution practices and the policies around them. They plan to pursue and build platforms for intergenerational and cultural exchange, where traditional know-how and newer technical practice can meet.

Through their exhibit at the PalengKultura USBONG marketplace, interest opened potential partnerships and new value-chain ideas for the Council's community-based enterprises, while networking sessions connected the team with fellow NbS practitioners they intend to stay in touch with.



Figure 8. Woven product showcased at the PalengKultura USBONG Marketplace (left) and the City of Mati Peoples Council Inc. wooden keychain (right). (Photo courtesy of Forest Foundation Philippines)

The first lesson the Council intends to bring home is an orientation rather than a single technique, which is applying a landscape-based, inclusive approach that strengthens community participation, improves monitoring, and promotes collaboration among stakeholders. To support this, the Council aims to identify government agencies, NGOs, and private partners that are already supporting POs and communities doing this kind of environmental and sustainability work, including tie-ins with the National Greening Program (NGP). On the policy side, the Council is pushing to institutionalize NbS within Mati's local governance, with an ordinance currently being drafted that would give local government a formal basis to fund NbS work going forward.

Beyond its own site, the Council hopes their project can set off a domino effect, encouraging other organizations across the Davao region to take up non-timber forest products (NTFP) of their own. The ambition is to build a legacy model for NbS. One with enough structure and visibility that others can recognize and replicate it.

A photograph of two men in a meeting. The man on the right, wearing a light blue polo shirt, is seated at a table and writing on a document with a pen. The man on the left, wearing an orange t-shirt, is standing and looking towards the camera. The background is a plain, light-colored wall. The image is overlaid with a semi-transparent dark grey filter.

Improving Climate Resilience of Headwater Barangays in Sumlog- Cuabo River Watershed

Brgy. Bagong Silang, Maragusan, and Brgy. Tagugpo, Pantukan, Davao de Oro City
Region XI Davao Region

Kasilak Development Foundation Inc.

Kasilak Strengthens the Climate Resilience of Sumlog-Cuabo Headwaters

Barangays Bagong Silang and Tagugpo are among the most critical headwater communities of the Sumlog-Cuabo River Watershed.

Together, they hold at least 4,545.59 hectares of forest and 472.98 hectares of agricultural land that supply essential ecosystem and food services to the wider downstream area. However, according to a 2025 Vulnerability and Risk Assessment conducted by UPLB-INREM under the PCP4NbS program, this same landscape faces significant exposure to rain-induced landslides and flooding.

The pressures on the landscape are complex. While rich in biodiversity, the area contends with invasive species, timber poaching, small-scale mining, and the continued practice of kaingin (slash-and-burn) farming. This is driven largely by upland farmers' reliance on the land for daily survival. According to both the UPLB-INREM assessment and the 2016–2025 Forest Land Use Plans of Maragusan and Pantukan, this combination has steadily accelerated forest degradation and biodiversity loss.

Kasilak Development Foundation, Inc. is addressing these challenges head-on through its project, Improving Climate Resilience of Headwater Barangays in Sumlog-Cuabo River Watershed. The initiative delivers integrated Nature-based Solutions directly across both target barangays, focusing interventions at the watershed's source to build climate resilience and safeguard biodiversity where environmental impacts originate.

Kasilak's involvement builds on decades of trust shared. As Area Coordinator Genebirth "Don" T. Cuadrasal shared, Forest Foundation Philippines invited the organization to lead the project based on a long-standing partnership dating back to the early 2000s and a strong track record in community work.

The communities served by the project form a diverse cultural mosaic, home to Indigenous Mansaka³⁸ and Mandaya³⁹ peoples alongside Bisaya settlers, many with roots in Bohol. This diversity directly shapes how Kasilak approaches project design and community consultations. For instance, early plans call for establishing a community nursery to be built and managed by women and youth. This is a deliberate move to center groups historically excluded from forest management.

³⁸ They are an indigenous ethnolinguistic group native to Mindanao. The word means "people of the clearings."

³⁹ They are an indigenous group native to Mindanao. Their name means "first people upstream."



Figure 9. Consultation meeting of Kasilak Development Foundation Inc. with the Mansaka community. (Photo courtesy of Jaime Makinano/ Kasilak Development Foundation Inc.)

The team was candid about how the USBONG NbS Forum deepened their strategic vision. They noted that their prior understanding of the IUCN Global Standard for NbS was raw. The forum sessions manifested how local practices connect to international frameworks. However, there is a need to make conservation approaches more thorough through localization.

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It was only now that I understand there are global standards to align with.

Jaime "Maki" Makinano, Project Officer

Moving from local instinct alone toward aligning with recognized global standards was one of the team's key takeaways. Alongside this shift came an insight shared by many PCP4NbS grantees, that nature-based solutions represent holistic, community-centered development rather than profit-driven motives, which is a principle they feel still needs stronger institutional backing in field implementation.

For Kasilak, the path forward requires most is not further technical training, but sustainable financing mechanisms and enterprise development models. It is the crucial link that transforms ecological restoration into a viable, long-term livelihood for local communities.

Distilling their key takeaway into four words, the team summarized their mission: "Share and reflect NbS."



Barriers to Scaling Nature-Based Solutions

With the launch of DAO 2026-30, the Philippines established a national policy framework for Nature-based Solutions (NbS) to scale ecosystem restoration nationwide, emphasizing high integrity, equity, and measurability.⁴⁰ The policy mandates using IUCN self-assessment tool, developing localized NbS indicators, and forming a dedicated Technical Working Group (TWG) to manage nationwide rollout, monitoring, evaluation, and reporting. To ensure long-term financial sustainability, funding streams will draw from carbon finance, government appropriations, development partners, and payments for ecosystem services.⁴¹

Even with this milestone policy in place, field implementers highlight critical challenges affecting the scalability and long-term viability of NbS projects. To address these operational barriers, grantees underscored the need for peer learning networks and strategic partnerships centered on three key priorities:

1. **Increasing Product Buy-In.** Building stronger linkages with local government units (LGUs) and private buyers is essential to elevate the market value of community-produced goods, including bamboo products, artisanal handicrafts, and harvested sea cucumber.
2. **Operational Knowledge Sharing.** Establishing horizontal exchange channels across grantees enables practitioners to share practical strategies for managing local governance friction and site access constraints.
3. **Mainstreaming Nature-based Solutions.** Stakeholders must transition NbS interventions from isolated pilot projects into regional development plans across the BARMM, as well as Northern and Southern Mindanao.

To ensure long-term durability, implementers underscored that municipal LGUs must formally embed earthquake and flood-resilient NbS zones directly into formal governance frameworks, including Comprehensive Land Use Plans (CLUPs), Local Climate Change Action Plans (LCCAPs), and Local Disaster risk Reduction and Management Plans (LDRRMPS).

⁴⁰ <https://tinyurl.com/denradoptsiucnstandardforNbS>

⁴¹ <https://www.green.earth/news/philippines-launches-national-nature-based-solutions-policy>

The NbS Growth Trajectory from Usbong to Yabong

Nature-based Solutions are no longer merely an option. They represent a core strategy for climate resilience, biodiversity conservation, sustainable development, and a just transition in the Philippines. To achieve lasting transformation, NbS must be embedded deeply within governance systems, institutional scaffolding, and physical infrastructure.

The evolution of Nature-based Solutions in the country reflects a profound movement from intent to impact. As the seeds (**punla**) planted in 2025 have sprouted (**usbong**) into grounded field action and policy landmarks in 2026, the pathway forward is clear and compelling. By strengthening multi-sectoral collaboration, elevating place-based stewardship, and institutionalizing local resilience, fertile ground is being cultivated where these community-led solutions will truly flourish (**yabong**) for generations to come.

Explore program updates through [**pcp4nbs.forestfoundation.ph**](https://pcp4nbs.forestfoundation.ph).

