IRBM PROJECT NEWSLETTER

EDITION 6 | JAN-MAR 2025

GEF/UNDP/ASEAN Project on Reducing Pollution and Preserving Environmental Flows in the East Asian Seas through the Implementation of Integrated River Basin Management (IRBM) in ASEAN Countries

Threads of Resilience

Photo by Orange Omengan/PEMSEA

The Women of Sasmuan: Sustaining Life Along the River

The Sasmuan Pampanga Coastal Wetlands is located downstream of the Pasac-Guagua Watershed, which drains into Manila Bay. *(Photo by Orange Omengan/PEMSEA)*

Life Along the River

Sasmuan, Pampanga, Philippines – At the break of dawn, the river stirs to life. Boats cut through the water, fishing nets are untangled, and voices murmur over the steady rhythm of daily labor. Along the riverbanks, women fix fishing nets, sort crabs, and prepare their harvests for market—each movement a routine part of life in this coastal wetland.

Christina Guevarra carefully removes crabs from the fishing nets, sharing that she has been doing this for 25 years. While the men head out to the brackish waters as early as 3:00 AM to fish, the women take charge of harvesting and sorting the crabs from the day's catch.

"*From February to May, we are grateful,*" says Christina Guevarra, carefully removing a blue swimming crab from the net. "*But after these months, especially when the rainy season begins, we have to find other ways to earn.*"

Like many in Sasmuan, her family depends on the river's bounty, but as fish populations and other aquatic resources decline, and threats to the river persist, this fishing community's livelihood remains precariously seasonal.

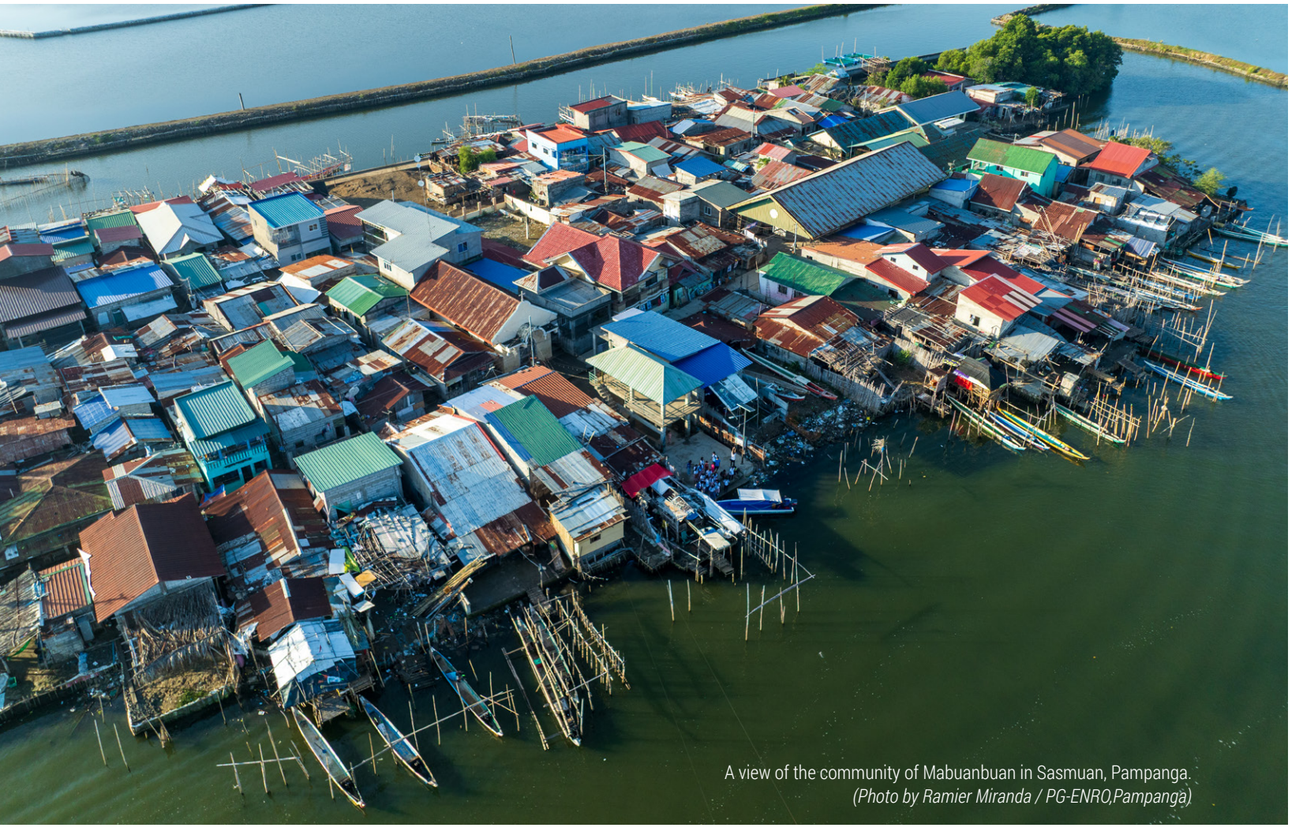
"It's difficult in coastal communities like ours because we are so dependent on the river's harvests," Christina shares as she continues untangling crabs. *"Life for us fisherfolk is simple, but it's also hard,"* she adds.

Along the Mabuanbuan alley, women of all ages gather each morning to untangle crabs from the nets. On average, families harvest around 10 kilos of crabs per day.

The blue swimming crab (*Portunus pelagicus*) is a species of the crab family abundant in the Sasmuan Pampanga Coastal Wetland, a brackish water habitat.

Photos by Orange Omengan/PEMSEA

A resident weaving a fishing net on a Friday morning in the coastal barangay of Mabuanbuan in Sasmuan. Pampanga. *(Photo by Orange Omengan/PEMSEA)*



A view of the community of Mabuanbuan in Sasmuan, Pampanga. *(Photo by Ramier Miranda / PG-ENRO,Pampanga)*

Scattered plastic waste along the canals of barangay Mabuanbuan in Sasmuan, Pampanga. *(Photo by Orange Omengan/PEMSEA)*

A River in Crisis

For generations, the *Kapampangans*—people of the river—have depended on the Sasmuan Pampanga Coastal Wetlands, a critical habitat that forms part of the Pasac-Guagua Watershed, draining into Manila Bay and sustaining not only Pampanga but also neighboring provinces. Yet, pollution, mismanaged wastes, and unsustainable practices threaten both biodiversity and the economic security of those who rely on it.

"*The wastes we see in the river also come from upstream communities. Even with proper waste disposal and waste management policies in place, enforcement remains a challenge,*" explains Irene Villar, Assistant Department Head of Pampanga's Provincial Government Environment and Natural Resources Office.

Improper waste disposal poses a threat to Sasmuan's waterways and coastal areas. *(Photo by Orange Omengan/PEMSEA)*

From L-R: Edna Bilacog and Rose Ann Tungol have been supporting their families as waste segregators employed by the Municipal Government of Sasmuan.

For women like Edna Bilacog and Rose Ann Tungol, who segregate wastes at the Materials Recovery Facility (MRF) and sell their collected recyclables, household waste translates into economic opportunity—but at a disadvantaged cost.

"*What we earn barely meets our needs*," they share while sorting through freshly delivered sacks of waste under the midday sun. Earning as little as PHP 175 (USD 4) a day, far below Sasmuan's minimum wage of PHP 420 (USD 7) they struggle to provide for their families.

Sacks of waste are sorted into biodegradable and non-biodegradable, including recyclable plastics and metal, which are sold for extra income.

Residual wastes are transported to a nearby sanitary landfill in Porac, Pampanga.

Photos by Orange Omengan/PEMSEA

Maricar Gueverra weaves a fishing net, locally known as *panti*, in her home in Mabuanbuan, a daily routine she carries out to earn a living.

Women at the Heart of Sasmuan's Crab Fishery

Beyond waste segregation, Sasmuan's women contribute extensively to its fishery economy. In the coastal barangay of Mabuanbuan, almost every woman has mastered *pagbabasal* or net-weaving and repair, a skill passed down through generations out of necessity.

Maricar Guevarra, a weaver for over 20 years, earns PHP 250 (USD 4) per repaired net and PHP 750 (USD 13) for weaving a large *panti* or fishing net, a process that would take her four days. "*This has been my main source of income, especially when my husband fell ill,*" she shares. To supplement her earnings, she took on home-based services like laundry and selling home-cooked meals.

Susan Bautista repurposes old nets, cutting them in preparation for repair, while her daughter-in-law weaves in the background.

The nets, with a diameter set at 4 inches, are designed to catch only crabs of a certain size, allowing smaller fish and crabs to escape.

According to the locals, the yellow part of the crab is its roe or eggs. Crabs with eggs are returned to the river to lay eggs and reproduce.

Ericka Buenafe is harvesting crabs from her family's catch, a task she's used to, though the occasional crab bite still makes it challenging.

Photos by Orange Omengan/PEMSEA

Women also dominate the crab trade, other than detangling crabs from the nets, they are in charge of cooking and packaging them for the market.

"*Cooking or steaming freshly harvested crabs helps preserve the catch longer, keeping them fresh for transport and sale to buyers in nearby communities,*" explains Vivian Manalo, who operates the crab cooking business. Most of the crabs are sold to middlemen for crab meat canning for export in countries such as Indonesia, Taiwan, and Japan, while others are sold to neighboring local markets. However, their business faces threats from the unsustainable aquaculture practices of nearby fishpond operators.

During peak season, crab traders can sell an average of 400 kilos of cooked and fresh crabs daily.

"When water from bangus or milkfish ponds is released, which happens every six months, it makes the brackish water turbid affecting our crab harvest," shared by Nina Diosa, one of the crab traders. *"We've noticed that crabs don't thrive in this kind of turbid water, which leads to a decline in our harvest."*

Fisherfolk sell their crabs to traders who then transport them to the neighboring municipality of Orani, Bataan.

Photos by Orange Omengan/PEMSEA

Women of barangay Batang 2nd gather sea purslane (*Sesuvium portulacastrum*), locally known as *dampalit*, along the riverbanks.

With mounting environmental and economic challenges, Sasmuan's women are diversifying their sources of income. During the off-season, they seek work in nearby urban communities as household helpers, laborers, or employees in grocery stores and shops.

In the village of Batang 2nd, a women's group produces *atchara* (pickled sea purslane), transforming an abundant riverbank weed into a marketable delicacy. "*We only produce per order, but having a stable market would help us sustain this alternative source of livelihood*," one member shares.

In this small kitchen, mothers prepare pickled *dampalit*. They share their hopes for better support such as regular buyers and assistance in branding and marketing their products to help sustain their livelihood.

Photos by Orange Omengan/PEMSEA

A portrait of Patricia Culala outside her home.

Patricia manually separates the crab fat, then cooks it in a large pot with oil and other ingredients, simmering it until it reaches the desired consistency.

On the mainland of Sasmuan, Patricia Culala, a mother of two, has turned crab paste production into her family's main source of income. "*The fat from the crab is the tastiest part—that's what I preserve and sell in bottles. Through this business, I was able to send my children to school,*" she explains.

Kapampangans are known as skilled cooks, and she is a testament to this. Her crab paste is highly sought after in the community. Through government-led training, Patricia has also shared her knowledge with other women, helping them diversify their income streams.

Crab fat preserves sell for around PHP 500 to PHP 1,000 (USD 8-17) per bottle

Photos by Orange Omengan/PEMSEA

Sunset view from barangay Batang 2nd which is part of the Sasmuan Pampanga Coastal Wetlands. *(Photo by Cris Cea/PG-ENRO, Pampanga)*

Sasmuan's Potential for Ecotourism

Beyond fishing and aquaculture, Sasmuan's wetlands hold immense ecotourism potential. The Sasmuan Bangkung Malapad Critical Habitat and Ecotourism Area, a sanctuary for migratory birds, is home to species like the Black-faced Spoonbill, Chinese Egret, and the endangered Far Eastern Curlew.

With proper investment, ecotourism could provide an alternative livelihood for fisherfolk. "*The mangrove forests not only shield us from storm surges but also support the local crab population and could be developed for well-planned ecotours. If harnessed responsibly, ecotourism can sustain livelihoods,*" says Villar.

A view of the Sasmuan Bangkung Malapad Critical Habitat and Ecotourism Area (SBMCHEA), which is part of the Sasmuan Pampanga Coastal Wetlands, designated as a Ramsar Site in February 2021. The SBMCHEA was also declared as a critical habitat and ecotourism area by the DENR in 2021. *Photo by Ramier Miranda/PG-ENRO, Pampanga*

The Sasmuan Pampanga Coastal Wetlands is home to migratory birds and is becoming an increasingly popular tourist attraction.
Photo by Ramier Miranda/PG-ENRO, Pampanga

Navigating the Path to Sustainability

Recognizing the environmental and economic challenges faced by coastal communities like Sasmuan, the Integrated River Basin Management (IRBM) Project is collaborating with the Provincial Government of Pampanga through its Environment and Natural Resources Office and the Department of Environment and Natural Resources Region III along with the Provincial Environment and Natural Resources Office to develop sustainable solutions for the Pasac-Guagua Watershed. The Subcommittee on Environment of the Regional Development Council of Region III provides the platform for consultation and decision making for the project.

This initiative aims to conserve waterways while fostering economic opportunities, particularly for women and other vulnerable groups.

At the policy level, the IRBM Project promotes proper river management through the "Source-to-Sea Continuum" approach, which safeguards upstream water sources to ensure the sustainability of downstream communities. To guide conservation efforts, a State of the River Basin Report is being developed using a 32-indicator framework to assess the watershed's health and inform future strategies.

A boat glides along the Sasmuan Pampanga Coastal Wetlands at sunrise. *(Photo by Orange Omengan/PEMSEA)*

Women aboard the boat heading home after harvesting *dampalit* or sea purslane.

Strength in Every Tide

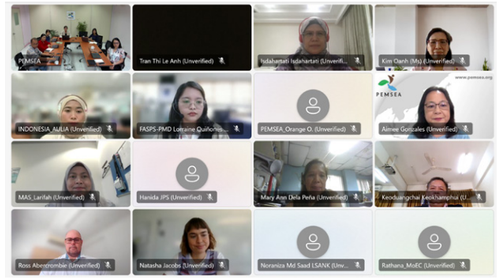
The women of Sasmuan are resilient and resourceful. With every net they weave, every crab they harvest, and every piece of waste they segregate, they help sustain their families. However, the larger challenge lies in sustainability.

Ensuring fair wages, investing in sustainable practices, and fostering community-led conservation efforts are crucial to preserving both Sasmuan's economy and environment. With strategic conservation efforts, the waters of Sasmuan will continue to sustain the *Kapampangans*—just as its women have sustained their families for generations.

A sunset view from the Sasmuan Bangkung Malapad Critical Habitat and Ecotourism Area, known for its rich mangrove ecosystems and biodiversity.

Photos by Orange Omengan/PEMSEA

IRBM Project Collaborates with EnviroStrat to Develop a Framework and Solutions Templates for Pilot Project Development in the Seven Priority River Basins



The IRBM Project, together with representatives from the six participating countries and EnviroStrat, during the online inception meeting on 12 February 2025.

Quezon City, Philippines — The IRBM Project convened local governments and national and regional partners from the six participating countries on 12 February 2025 in an online meeting, to discuss the scope, objectives, methodology and timeline for the development of framework and solutions templates and their application in the seven priority river basins.

This collaborative effort aims to develop a framework and solutions templates to support the establishment of pilot projects in the seven river basins to reduce pollution, sustain environmental flows and alleviate climate vulnerability. In partnership with EnviroStrat, a leading natural resource management firm, the initiative will receive technical guidance for designing and implementing these solutions.

The pilot initiatives are expected to provide sustainable, replicable models for improved river basin management and resilience building, contributing valuable insights to the broader East Asian river basin management across the region.

Lao PDR PSC Approves 2025 Work Plan and SORB Report for Nam Tha River Basin

The National Project Steering Committee convened in Luang Nam Tha on 20-21 February 2025. *(Photo courtesy of the Department of Water Resources, Lao PDR)*

Luang Nam Tha, Lao PDR - The Lao National Project Steering Committee (PSC) convened on 20-21 February 2025, to review and approve the 2025 work plan and budget for the IRBM Project. During the meeting, the PSC also approved the draft State of the River Basin (SORB) report for the Nam Tha River Basin.

Mr. Chanthanet Boulapha, Vice Minister of the Ministry of Natural Resources and Environment, chaired the PSC Meeting. *(Photo courtesy of the Department of Water Resources, Lao PDR)*

Chaired by Mr. Chanthanet Boulapha, Vice Minister of the Ministry of Natural Resources and Environment, the meeting gathered 169 participants from national and local agencies, including 36 women representatives.

The PSC's approval of the 2025 work plan ensures that priority activities identified for 2025, including the resource requirements are well in place for the effective and timely implementation of the IRBM Project in Lao PDR.

The PSC also appraised the comprehensive information on the status of Nam Tha River Basin, which can serve as basis in updating the 2021-2025 Nam Tha River Basin Action Plan. As a new reporting mechanism in Lao PDR, the SORB has the potential to be applied to other river basins across the country.

32 SORB indicators based on the data/information gathered, the data gaps and the actions required to ensure accurate interpretation of the status of the river basins/watershed.

The SORB is a key tool developed through the IRBM Project, offering an indicator-based system to monitor and evaluate river health. Findings provide critical data to guide management decisions, highlight areas for improvement, and ensure data-driven governance and river basin management.

By validating the SORB findings, stakeholders are ensured that the interpretation of the 32 indicators is backed by credible data and information; their insights and perspectives are captured, and more importantly, it conveys the importance of their engagement in the SORB reporting process.

IRBM Project Holds Stakeholder Validation Workshops for the State of River Basin Reports for the Imus-Ylang Ylang, Rio Grande Rivers, and Pasac-Guagua Watershed

The IRBM Project conducted stakeholder validation workshops in the Philippines focusing on the progress made in data collection and analyses for the development of the State of River Basin Reports of Imus-Ylang Ylang-Rio Grande Rivers in Cavite Province and Pasac Guagua Watershed in Pampanga, Province.

The workshops brought together 132 representatives, including 60 women participants, from national, provincial, and municipal governments, private sector, and other stakeholders on 26 February 2025, in Cavite and 7 March 2025, in Pampanga. Facilitated by UPLB Foundation, Inc., the sessions reviewed the results of preliminary analyses conducted for the

Participants of the SORB validation workshop for the Imus-Ylang Ylang, Rio Grande Rivers in Cavite on 26 February 2025. *(Photo by Orange Omengan/PEMSEA)*

Participants of the SORB validation workshop for the Pasac-Guagua Watershed in Pampanga on 7 March 2025. *(Photo by Orange Omengan/PEMSEA)*

Women in Focus

In celebration of Women's Month, we shine a spotlight on the remarkable women leaders driving environmental change across Southeast Asia. From Cambodia to Lao PDR, the Philippines, and Viet Nam, these women are working on river basin management and governance, empowering communities, and tackling some of the region's most pressing environmental challenges.

Through innovative strategies, policy advocacy, and grassroots engagement, they are not only protecting vital water resources but also inspiring a new generation of women to take charge of the future. Their voices are a testament of hope, guiding the path to sustainable water management and resilient communities.

How can young women leaders in Cambodia contribute to protecting rivers and water?

"As young women and future leaders, we are taking the initiative to shape our perspectives and actions in river and water management through several approaches. First, we are implementing effective mechanisms and policies that positively impact our communities, particularly by educating and encouraging the younger generation to actively protect and preserve water resources and to foster a deeper appreciation for the environment as a whole.

We also work to raise public awareness through innovative strategies and widespread communication efforts that highlight the significance of protecting our water. By participating in decision-making processes in water management and related sectors, we ensure that our voices are heard and contribute to preventing threats to water security and quality.

In addition, we are engaging and educating communities to encourage their participation in water and river management efforts. We prioritize stakeholder engagement to enhance the effectiveness and efficiency of water management practices.

Strengthening and developing strong policies, along with reinforcing the existing legal framework for sustainable water management, are also key actions we pursue.

Furthermore, we welcome and strengthen collaboration and networking with partners and NGOs to gain greater support for water management initiatives, particularly in promoting women's leadership in this field."

CAMBODIA
Rathana Nai
Vice Chief Official, Department of Water Quality Management, Ministry of Environment

What are the biggest challenges facing rivers in Lao PDR today? In your experience, how do women in the Department of Water Resources help address these challenges?

"Rivers in Laos face several major challenges today. Climate change is significantly affecting rainfall patterns and temperatures, which disrupts river flow and increases the risks of both floods and droughts. Deforestation, soil erosion and agricultural expansion, contribute to increased sedimentation. This, in turn, reduces water quality and negatively impacts aquatic life. Pollution remains another serious threat, with industrial waste, mining runoff, and plastic pollution degrading water quality and endangering both human health and biodiversity.

Women in the Department of Water Resources are playing a crucial role in addressing these challenges. They actively contribute to the development of water management policies that promote sustainability and equitable distribution of resources. They lead community engagement efforts by organizing awareness programs on water conservation and pollution prevention, often with a focus on involving local communities and empowering women. Through research and monitoring, they conduct environmental impact assessments and track water quality to provide essential data for informed decision-making. Moreover, they work closely with regional and global organizations to strengthen transboundary water governance, particularly for the protection and sustainable river basin management."

LAO PDR
Soukphaphone Soodtharavong
Deputy Director, Water Resources Assessment Division, Department of Water Resources, Ministry of Natural Resources and Environment

How can you create awareness programs in Pampanga that inspire women, especially your generation, to get involved in conservation? What would make these programs engaging and relevant to our local communities?

"Inspiring women to engage in conservation starts by making the cause relatable and accessible. Women need to see how environmental protection directly impacts their families, livelihoods, and communities. Instead of relying on technical data or policies, we should prioritize storytelling, real-life experiences, and hands-on activities that transform conservation from abstract concepts into meaningful action.

Beyond participation, we must create pathways for women to lead. This means ensuring their voices are heard in decision-making spaces where they are often underrepresented. Programs should equip them with the knowledge, skills, and platforms needed to drive sustainable environmental initiatives within their communities.

To make these initiatives engaging, we can organize interactive workshops with women's groups, sustainability storytelling sessions, and mentorship programs led by female environmental leaders. Digital platforms should be leveraged to amplify success stories and inspire action. Most importantly, we must create safe spaces where all women, regardless of background, feel empowered to contribute and take the lead.

We aim to transform women's roles in conservation from beneficiaries to being active leaders and change-makers. By uplifting their voices, we aim to strengthen our province's path to a more inclusive and sustainable future."

PHILIPPINES
Irene Villar
Assistant Department Head, Provincial Government-Environment and Natural Resources Office, Province of Pampanga

How can women in Viet Nam best encourage people to protect rivers and water?

"Like many other developing countries, Viet Nam faces numerous consequences from declining water quality caused by industrial pollution and harmful living habits that pollute the environment and water sources. To help address these challenges, the Viet Nam Women's Union, through its nationwide network, has actively launched and participated in various initiatives to raise public awareness of environmental protection, with a particular focus on water resource conservation.

Mobilizing women's participation through regular activities of women's associations at all levels has proven highly effective in raising awareness about waste management, waste separation at the source, and initiatives on recycling and reusing (3R, 4R). These efforts also promote water conservation and the responsible use of natural resources.

Traditional Vietnamese society has inherited and continues to uphold a strong and valued cultural tradition: the vital role of women, particularly mothers, in both the family and society. This historical and cultural foundation reinforces women's leadership and active participation in initiatives to protect water resources in Viet Nam."

VIET NAM
Kim Oanh
IRBM Project National Coordinator, Viet Nam

Reviving the Vibrance of Ciliwung River

The Ciliwung River Basin, located in Indonesia, originates in the Bogor Regency and flows 118.25 kilometers to the Java Sea, passing through the cities of Bogor, Depok, and Jakarta. Covering 421.47 square kilometers, it supports over 3,852,000 people and provides essential resources for agriculture, livelihoods, and transportation. The Ciliwung Dam, constructed in 1911, irrigates 333 hectares of rice fields and contributes to the region's renowned tea plantations. The river basin faces significant pollution challenges from domestic and industrial waste. The IRBM Project aims to mitigate these issues through improved governance, community engagement, and sustainable waste management practices.

Visitors river raft along the Ciliwung River in Depok City, Indonesia.

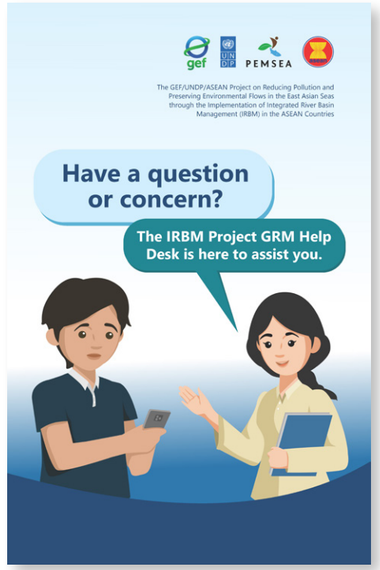
Read the full story here.

The headwater of the Ciliwung river basin lies in the hilly lands of Bogor Regency, in between the lush green forest and tea plantation.

Photos by John Castillo/PEMSEA

IRBM Project Launches Grievance Redress Mechanism to Ensure Project Partners' Voices Are Heard

The IRBM Project has established a Grievance Redress Mechanism (GRM) to enhance transparency and accountability. The GRM provides project partners and affected communities a structured platform to voice concerns and seek timely resolutions, reflecting the project's commitment to social and environmental safeguards. It encourages individuals, groups, and communities who believe they are or may be negatively affected by project activities to submit concerns confidentially and without fear of reprisal. By fostering open communication and protecting stakeholder rights, the GRM strengthens trust and collaboration with the communities and stakeholders the project serves.



Learn more here.

***

Upcoming Events

IRBM Project Launch in Viet Nam
18 April 2025 | Da Nang, Viet Nam

24th Annual Large Marine Ecosystems Consultative Meeting
14-16 May 2025 | Athens, Greece

3rd Regional Steering Committee Meeting of IRBM Project
3 June 2025 | Bali, Indonesia

Regional Orientation Workshop on the WEFE Toolkit
June 2025

United Nations Ocean Conference
9-13 June 2025 | Nice, France

About the Integrated River Basin Management (IRBM) Project

Supported by the Global Environment Facility, the Integrated River Basin Management (IRBM) Project aims to set-up functional management mechanisms in priority river basins of six ASEAN countries to reduce pollution and sustain freshwater environmental flows as well as adapt to climate change vulnerabilities. The Project is being implemented by the United Nations Development Programme, and executed by Partnerships in Environmental Management for the Seas of Seas Asia, in collaboration with ASEAN.

(+62) 02 892 92992

info@pemsea.org

PEMSEA Building, DENR Compound,
Visayas Avenue, Quezon City 1165,
Philippines

PEMSEA **pemsea** **pemsea.rf**

www.pemsea.org

Learn more about the IRBM Project