IPB University
Bogor Indonesia

I-CAN
IPB Centre for Applied Research in Nature-based Solutions

Nature-based Solutions, Rooted in Science, Powered by People

Table of Contents

Connecting Conservation and Community Well-Being through Nature-Based Solutions

For decades, conservation approaches have sought to protect nature but often failed to meaningfully engage the communities living in and around forests or those who depend on forest resources. When conservation efforts do not deliver tangible socio-economic benefits to communities, they are difficult to sustain over the long term.

Nature-based Solutions (NbS) offer a powerful, adaptive, and cost-effective climate strategy by harnessing the power of nature to restore ecosystems, address climate change, and generate socio-economic benefits. NbS encompass actions to protect, sustainably manage, and restore natural ecosystems in order to address societal challenges such as climate change, human health, food and water security, and disaster risk reduction.

The effectiveness of NbS depends on how communities are mobilised to protect, restore, and manage ecosystems, enabling degraded landscapes to recover into productive, valuable, and sustainable systems.

Social Forestry: A Pillar of More Equitable Forest Governance

As a manifestation of NbS in Indonesia, the Social Forestry programme enables communities to directly manage forests, generate economic benefits, and reduce pressure on natural forests.

Over the past decade, the Government of Indonesia has granted communities access to more than **8.3 million hectares** of forest land through Social Forestry schemes, involving approximately **1.5 million households** nationwide. This policy represents a major leap toward more equitable, inclusive, and community-based forest governance.

Social Forestry reflects Indonesia's commitment to strengthening legal frameworks, governance, and the well-being of forest-dependent communities. The programme aims to allocate management rights over **12.7 million hectares** of state forest to communities in order to:

- ☑ reduce poverty,
- ☑ increase household income,
- ☑ strengthen local economies, and
- ☑ restore ecosystems.

Key Achievements of Social Forestry (2025)

8.32 million hectares under Social Forestry

11,065 legal access permits issued

1.42 million households benefiting

Estimated national economic value of **IDR 432.23 billion per year**

15,758 Social Forestry Business Groups (KUPS)

- 120 Platinum
- 1,350 Gold
- 5,732 Silver
- 8,556 Blue

288 Customary Forests, covering **268,215 hectare**, benefiting **56,035 households**

Source: Ministry of Environment and Forestry (KLHK), 2025

These achievements reflect the enormous potential of forest villages as engines of economic development and ecosystem stewardship. However, significant structural challenges continue to limit the ecological, economic, and social benefits promised by Social Forestry.

Fundamental Challenges in Achieving Productive and Inclusive Landscapes

Forest Degradation and Untapped Ecological Value

Despite expanded access, only **9%** of the **8.3 million hectares** of Social Forestry land is truly productive. The absence of integrated monitoring systems—such as a national carbon accounting framework capable of accurately capturing Social Forestry contributions—means this potential remains invisible to climate finance mechanisms and Payment for Ecosystem Services (PES). As a result, communities miss opportunities to receive ecological incentives.

What does this mean for Indonesia?
If managed effectively, Social Forestry can serve not only as a climate mitigation solution but also as a source of prosperity through multi-business forestry systems that combine timber, non-timber forest products (NTFPs), ecotourism, and environmental services.

Access Does Not Equal Capability: Knowledge and Productivity Gaps

Although legal access has been granted, many communities lack the technical skills needed to optimise land productivity. Key challenges include:

- limited agroforestry and NbS skills,
- dependence on low-value commodities,
- lack of demonstration sites showcasing best practices, and
- weak peer-learning networks between communities.

More than **15,000 Social Forestry Business Groups (KUPS)** have demonstrated real success, generating **IDR 415 billion per year** in economic value. However, these innovations remain fragmented and have not yet been transformed into a replicable national system.

At the same time, major economic opportunities from agroforestry and NTFPs—capable of increasing household income by **10–66%** and creating **2.39 jobs per hectare**—have not been fully realised by women, youth, and Indigenous communities.

Institutional Fragmentation and Weak Coordination

One of the root problems of Social Forestry is that support often ends once permits are issued. Government agencies, universities, and the private sector frequently operate in silos, without:

- shared data systems,
- integrated monitoring,
- sustained mentoring, or
- cross-ministerial coordination mechanisms.

Overlapping mandates, weak incentives for collaboration, and limited integration with national targets such as **FOLU Net Sink 2030** have resulted in slow and inconsistent implementation on the ground.

Inequitable Access and the Need for More Inclusive Governance

Social Forestry programmes are often allocated to the most vulnerable groups, yet without sufficient capacity-building support. Without inclusive strategies, this can lead to:

1. low productivity,
2. marginalisation of women and youth,
3. uneven distribution of economic benefits, and
4. declining community motivation.

Equity can only be achieved when communities are provided not just access, but also knowledge, market connections, leadership opportunities, and technical support.

Weak Public Narratives: Large Potential, Poorly Communicated

Social Forestry is often perceived merely as a permit distribution programme, rather than as a strategic investment in rural welfare, climate mitigation, green economic growth, and food and ecosystem resilience.

The lack of data-driven communication has made Social Forestry's concrete contributions to development and climate action less visible to the public, policymakers, and potential investors.

Communities as the Driving Force of Nature-Based Solutions

Placing communities at the centre of NbS implementation is key to a sustainable future. Restoring ecosystems while strengthening the economies of forest-dependent communities requires structured, science-based strategies.

Too often, research findings on forest restoration and utilisation do not align with the real needs of communities living near forests.

I-CAN (IPB Centre for Applied Research in Nature-based Solutions) serves as a bridge between scientific evidence and on-the-ground action, ensuring that data and research truly inform meaningful change.

Through rigorous data analysis, advanced monitoring tools, and technical support, I-CAN helps Indonesia transition toward more inclusive, climate-resilient forest governance. This approach enables a new forest economy—one no longer dependent on extractive practices, but on proven NbS that sustain ecosystems while improving livelihoods.

All I-CAN initiatives are designed to strengthen national policies such as Social Forestry, which grants communities legal rights to manage forests sustainably and productively.

Indonesia's forests are strategic assets—home to Indigenous communities, pillars of rural economies, and reservoirs of global biodiversity. Yet despite legal access, these assets remain under-optimised due to limited skills, market access barriers, and poorly coordinated support systems.
I-CAN addresses these gaps by integrating scientific data, policy relevance, community empowerment, and enterprise development—enhancing technical skills and connecting communities to business ecosystems to ensure their forest products reach viable markets.

In doing so, I-CAN catalyses the transformation of Indonesia's forests:

- from degraded land to restored ecosystems,
- from access alone to productive enterprises, and
- from fragmented policies to integrated, evidence-based management.

We believe NbS are the foundation of a sustainable future—**rooted in science and powered by people.**

Our goal is to create real-world outcomes through restored ecosystems, thriving microenterprises, and resilient livelihoods for those who live in and around the forests.

Our Vision

I-CAN becomes a leading centre of excellence in the Global South for advancing nature-based climate solutions and contributing meaningfully to the achievement of the Sustainable Development Goals (SDGs).

Our Mission

1. **Develop innovative, gender-responsive NbS through interdisciplinary applied research**
   Designing and testing cutting-edge NbS through field research that integrates diverse scientific perspectives to advance environmental sustainability and socio-economic equity.

2. **Mobilise knowledge to deliver real, impactful solutions for communities**
   Translating research into actionable recommendations, models, and initiatives applicable at both site and policy levels.

3. **Build capacity and facilitate knowledge exchange**
   Bringing together researchers, policymakers, businesses, and communities through dialogue, training, and learning networks to strengthen NbS implementation.

4. **Strengthen partnerships and multi-sector collaboration**
   Working with national and international research institutions, think tanks, and development organisations to pool expertise and resources in support of NbS.

Realising Community-Driven Nature-Based Solutions

Nature-based Solutions, Rooted in Science and Powered by People

Positioning communities as the primary drivers of NbS is essential for a sustainable future. Restoring ecosystems while strengthening forest-based economies requires structured steps—from proven models and strong institutions to inclusive governance and policies.

I-CAN supports Indonesia's transition toward a greener, more inclusive future through five strategies that strengthen community capacity as NbS drivers.

Five Strategic Approaches

Field-Tested NbS Models

Restoration, innovation, and multi-business forestry models tested directly on the ground and supported by standardised monitoring systems, carbon/ PES frameworks, and climate-friendly business models.

Data and Policy Integration

Integrated monitoring and restoration systems that align data with policy to strengthen coordination, accountability, and community empowerment.

Inclusive Governance and Strong Institutions

Collaborative monitoring and restoration through living labs and capacity building that connect data, policy, and communities for coordinated climate and forest action.

Integrated Knowledge Systems

Translating data, field evidence, best practices, and lessons from NbS and Social Forestry into policy insights shared through multi-stakeholder forums.

Technical Support and Capacity Building

Technical assistance, training, mentoring, and network strengthening for community enterprises.

Translating Strategy into Action: I-CAN's Pillars of Work

Field-Tested NbS Models

I-CAN facilitates applied research and innovation to design, test, and refine NbS models in priority landscapes such as peatlands, mangroves, and forest-edge villages—producing:

- restoration models proven through living labs,
- ecological monitoring data,
- community enterprises integrated into NbS value chains, and
- carbon and PES schemes that incentivise restoration.

Technical Assistance and Capacity Strengthening

Direct support for forest farmer groups, cooperatives, and local governments, including:

- agroforestry, silvofishery, and regenerative practice training,
- enterprise consulting for timber and non-timber products,
- production and processing improvements,
- market and value-chain development, and
- tools ensuring social inclusion of women, youth, and Indigenous groups.

Integrated Frameworks for Carbon, Restoration, and Policy

I-CAN develops frameworks that link carbon accounting, ecosystem restoration, and policymaking to improve cross-sector coordination and evidence-based decision-making.

Inclusive Governance and Local Institutional Strengthening

I-CAN strengthens forest governance institutions to be more inclusive, evidence-based, and responsive to on-the-ground realities—empowering farmers, women, youth, and local leaders to actively shape NbS and Social Forestry.

Integrated Knowledge Systems

By connecting communities, governments, researchers, and the private sector, I-CAN builds coherent, adaptive ecosystems for decision-making, investment, and innovation—scaling local successes into national solutions.

How I-CAN Works

I-CAN connects research, policy, and field action through three main pillars. These pillars translate five strategies into concrete programmes that deliver measurable impact for people and the environment.

Applied Research and Innovation

I-CAN establishes living labs to test and refine land restoration practices, develop restoration frameworks, and monetise ecosystem services through Payment for Ecosystem Services (PES) schemes.

Capacity Building and Networks

I-CAN strengthens the capacity of communities, farmer groups, and relevant stakeholders to improve land management productivity and reinforce community enterprises through training, business mentoring, and production quality improvement. I-CAN's support connects community enterprises to markets, strengthens value chains, and ensures that women, youth, and marginalised groups benefit socially and economically.

Knowledge Mobilisation

I-CAN translates field-based evidence into policy recommendations, promotes adaptive governance, and builds a stronger public narrative on the potential of Nature-based Solutions to support Social Forestry. Through multi-stakeholder forums, data, and stories of success and good practices, I-CAN strengthens cross-sector coordination and supports governments in making better, evidence-based decisions.

I-CAN Transform

Scalable Nature-based Solutions models (restoration blueprints) accelerate ecosystem recovery in critical landscapes while increasing land productivity and attracting investment, including eligibility for climate and carbon finance schemes.

I-CAN Transform

Improved productivity for forest farmers with legal land management rights creates sustainable prosperity, ensuring that economic benefits are shared inclusively across the entire community.

I-CAN Transform

Evidence-based environmental and climate policies, together with innovation and the replication of successful Nature-based Solutions across Indonesia, directly drive more equitable and responsive forest governance.

About I-CAN

The **IPB Centre for Applied Research in Nature-based Solutions (I-CAN)** is a hub for research, innovation, and implementation of NbS. Its programmes focus on testing NbS models—including Multi-Business Forestry—knowledge mobilisation, and capacity strengthening for forest managers, enabling replication across Indonesia.

I-CAN was established through a partnership between **IPB University** and the **University of Waterloo** under the **FINCAPES Project,** funded by **Global Affairs Canada**. With IPB University's long-standing expertise in tropical forests, peatlands, and mangroves, and strong institutional links with national ministries and international partners, I-CAN is strategically positioned to strengthen policy and accelerate NbS implementation in Indonesia.

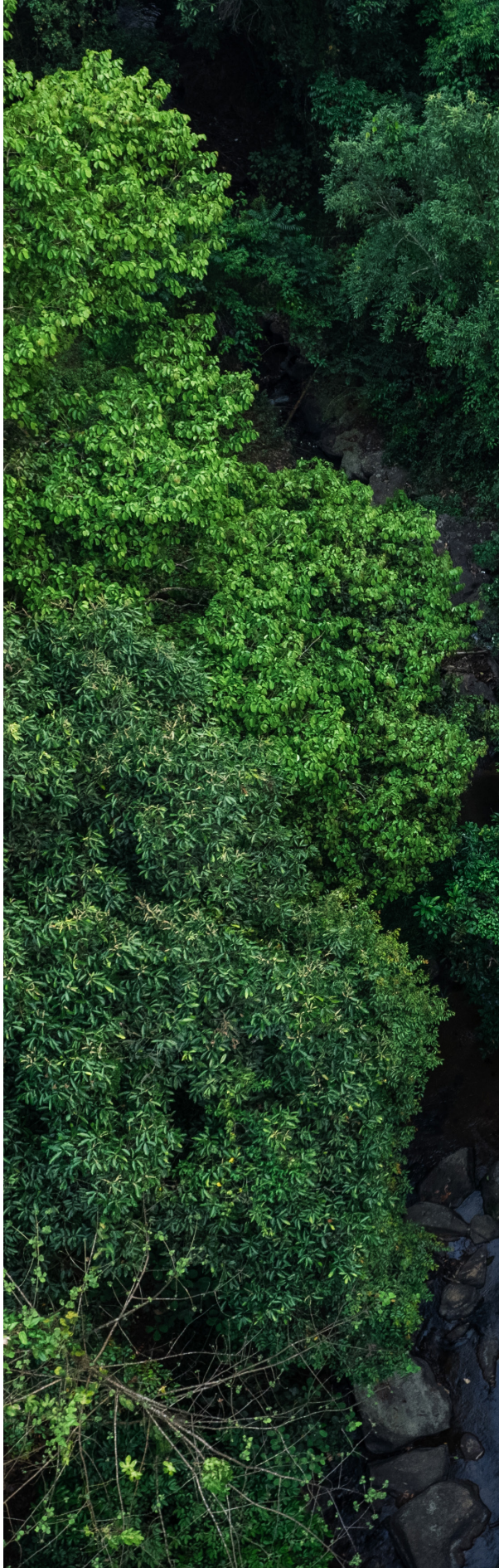
Partner With Us

By partnering with I-CAN, you invest in ecosystems that directly support community well-being, nature, and future generations.

We invite:

- **Donors** to fund pilot projects, applied research, and community-led innovation.
- **Government partners** to scale effective NbS models through national policy and implementation.
- **Private sector and investors** to co-develop impact-driven forest enterprises.
- **Universities and NGOs** to collaborate on applied research and field initiatives.
- **Media and communities** to amplify evidence, best practices, and public dialogue.

Together, we can redefine Indonesia's forest landscapes—transforming extractive practices into regenerative ones, vulnerability into resilience, and degraded ecosystems into productive systems.



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