Event Report

Seeds of resilience: Innovations for restoring biodiverse and productive forests

Asia-Pacific Forestry Week 2025

4 November 2025

Shangri-La Hotel, Chiang Mai, Thailand

Alliance Bioversity & CIAT

APAFRI

APFORGEN

FORRU

TROPICAL RAINFOREST CONSERVATION & RESEARCH CENTRE

United Kingdom Mission to ASEAN

UK International Development

Partnership | Progress | Prosperity

CGIAR

Background

A side event entitled *Seeds of Resilience: Innovations for restoring biodiverse and productive forests* was organized in Chiang Mai, Thailand, on 4 November 2025, to highlight the importance of functional tree seed systems for achieving regional and national forest restoration targets. The event was part of the Asia-Pacific Forestry Week 2025 and held in conjunction with the 31st Session of the Asia-Pacific Forestry Commission, the highest intergovernmental decision-making body on forestry in Asia and the Pacific.

The event had the following objectives:

- Highlight the implications of capacity gaps in tree seed supply to restoration implementation
- Provide concrete examples of approaches, methods and tools that are filling capacity gaps in tree seed systems South and Southeast Asian countries
- Provide a regional forum for exchanging experiences and discussing recommendations

The event was jointly organized by the Alliance of Biodiversity International and CIAT, Asia-Pacific Association of Forestry Research Institutions (APAFRI), Asia Pacific Forest Genetic Resources Programme (APFORGEN), ICFRE-Institute of Forest Genetics and Tree Breeding, India; Forest Restoration Research Unit (FORRU), University of Chiang Mai, Thailand; and the Tropical Rainforest Conservation and Research Centre (TRCRC), Malaysia. The event was made possible by funding support from the UK Mission to ASEAN through the initiative "Seed to Tree: Value chains and partnerships for resilient restored forests", and by the CGIAR Science Program on Multifunctional Landscapes. It was attended by 25 participants from 12 countries.

Highlights

The side event started with opening remarks by Dr Riina Jalonen from the Alliance of Bioversity and CIAT. She highlighted how the success of forest and landscape restoration in Asia and the Pacific depends on the availability of diverse, high-quality, and well-adapted tree seed. This issue was identified in the Second Report on the State of the World's Forest Genetic Resources (FAO, 2025) as a major global bottleneck to further accelerating restoration. Investing in strong tree seed systems is essential for achieving resilient, biodiverse, and productive restored forests across the region.

A Slido session was conducted to understand the background and interest of the participants, revealing widespread concerns of seed availability and especially quality. With a shared vision to restore biodiverse and productive forests, three innovations were then presented by FORRU, ICFRE and TRCRC respectively:

- **Species Selection in a Changing Environment** – Dr *Pimonrat Tiansawat (FORRU, Thailand)* introduced the Framework Species Method and decision-support tools such as D4R to guide species selection under current and future climates. She emphasized genetic diversity, locally adapted seed sourcing, and collaboration for effective forest restoration.
- **Information systems to address seed availability gaps for restoration in Asia** – Dr *Rekha R. Warrier (ICFRE-IFGTB, India)* discussed gaps in native seed production, highlighting the need for

governance, standardization, and digital tools to manage seed zones and registries. She shared successful capacity-building initiatives that trained nearly 1,000 forestry personnel across India.

- **Digital innovations for documenting and incentivizing community-led restoration efforts** – *Teng Yu He, TRCRC (Malaysia)* presented the Seed to Tree Project and its *MyFarmTrees* app, a blockchain-enabled MRV tool that ensures traceability in restoration supply chains. The initiative empowers Indigenous Peoples and Local Communities (IPLCs) to document seed sources and apply traditional knowledge in restoration planning.

Discussion:

- Participants showed strong interest in the *MyFarmTrees* platform, particularly regarding its function in ensuring traceability of restoration activities.
- A question was raised about the platform's usability without internet access and accessibility for Indigenous Peoples and Local Communities (IPLCs) without mobile devices. The team clarified that *MyFarmTrees* can operate offline, with data automatically synchronized once connectivity is restored. Most IPLC partners in Malaysia own mobile phones, and government initiatives have helped strengthen digital infrastructure in rural areas.
- Participants sought lessons from the rollout of *MyFarmTrees* in Sub-Saharan Africa. The platform has over 12,000 users in Kenya and Cameroon, mainly smallholder farmers. Scaling was supported through training of community facilitators who assist other community members in using the platform.
- The challenge of locating and protecting mother trees was also discussed. TRCRC and FORRU both emphasized that partnering with IPLCs is essential, as their indigenous knowledge and familiarity with forest landscapes enable the identification of mother trees deep within reserves.
- Questions were raised on where pilot testing is being conducted in Malaysia. The team explained that pilots are being implemented alongside existing restoration projects of partner organizations, with locations determined by the partners' restoration sites.

Call to Action

A draft Call to Action on strengthening tree seed systems was presented, and participants were invited to provide comments on it. Comments highlighted the need to monitor flowering and fruiting phenology, as these are affected by climate change. Additional comments from APFW participants were welcomed until 6 November.

The final Call to Action (Annex 2) was published on APFORGEN website on 7 November, having received backing from organizations and experts from 19 countries across the Asia-Pacific.

Annex 1. List of participants

No	Name	Organization	Country
1	Anita Diedrichsen	WWF	Brazil
2	Alivereti Naikatini	Ministry of Fisheries and Forestry	Fiji
3	Rumiko Ito	FAO	Italy
4	Keu Keomuanvong	GIZ	Laos
5	Khin Saw Htay	Forest Trends	Myanmar
6	Asmita Prudel	FAO	Nepal
7	Niraj Babu Bhatta	RECOFTC	Nepal
8	Tatiana Myachina	The Federal Agency for Forestry	Russia
9	Philippe Brunet	Swiss Agency for Development and Cooperation	Switzerland
10	Kunnaree Pakkad	FORRU	Thailand
11	Lee Wei Hsien	IUCN	Thailand
12	Mattis Hausig	FORRU	Thailand
13	Patriaa Klein	FORRU	Thailand
14	Patrick Durst	International Society of Tropical Foresters	Thailand
15	Ratchanon Insuphan	FORRU	Thailand
16	Satrio Wicaksono	IUCN	Thailand
17	Stephen Elliott	FORRU	Thailand
18	Thuy Dang	RECOFTC	Thailand
19	Heimuli Likiafu	Forestry Department	Tonga
	Organisers and speakers		
20	Rekha R Warrier	ICFRE-Institute of Forest Genetics and Tree Breeding	India
21	Smitha Krishnan	Alliance Bioversity-CIAT	India
22	Charmaine Sze Ka Mei	Tropical Rainforest Conservation & Research Centre	Malaysia
23	Teng Yu He	Tropical Rainforest Conservation & Research Centre	Malaysia
24	Riina Jalonen	Alliance Bioversity-CIAT	Malaysia
25	Pimonrat Tiansawat	FORRU	Thailand

Annex 2.

Call to Action: Strengthening Tree Seed Systems for Resilient and Inclusive Forest Restoration in Asia and the Pacific

The Asia-Pacific Forest Genetic Resources Programme (APFORGEN) calls upon governments, development partners, and restoration practitioners to prioritize the strengthening of tree seed systems as a foundation for achieving national and regional goals on forest restoration, biodiversity conservation, and sustainable livelihoods.

Despite major investments in forest and landscape restoration over the past decade, success and sustainability remain constrained by a lack of diverse, high-quality, and well-adapted tree seeds, seedlings and other planting materials. Neglecting seed origin undermines the resilience of restored ecosystems and overlooks opportunities to develop value chains that engage indigenous peoples, local communities, and small enterprises in seed production and restoration delivery. Due to species biology, improving capacity for seed production takes years, and so investments are needed now if the national, regional and global restoration targets for 2030 are to be met.

To achieve healthy, biodiverse and productive forests that can thrive under changing environmental conditions, we urge countries and regional partners to:

1. **Build the infrastructure and data systems needed for adaptive seed sourcing** to support climate-resilient restoration, including information on climate change impacts on species and target landscapes, dynamic seed zone maps and phenology monitoring systems
2. **Support the development and use of evidence-based species selection frameworks and decision-support tools** to align local restoration objectives with the right species, genetic diversity, and adaptive traits
3. **Establish and maintain public registries** of seed sources and suppliers to strengthen seed value chains by improving producers' access to markets and customers' access to suitably adapted quality seed
4. **Enable equitable participation of Indigenous Peoples and local communities in seed supply chains,** including through accessible registration of seed sources on private and communal lands, support for local seed and seedling producer networks, and recognition of local ecological knowledge
5. **Promote supportive policy and legislative frameworks** that create consistent demand for quality native seed through restoration regulations, seed quality standards, and public procurement policies while promoting inclusivity
6. **Foster regional collaboration** on research, capacity building, and digital innovation to strengthen tree seed systems, to accelerate learning and delivery of restoration targets.

Strengthening tree seed systems will improve the outcomes of restoration, enhance species conservation, generate livelihood opportunities, and ensure that forest restoration contributes effectively to the Kunming–Montreal Global Biodiversity Framework targets.

About APFORGEN: The Asia-Pacific Forest Genetic Resources Programme (APFORGEN) is a regional network of 15 countries dedicated to conserving, restoring, and sustainably managing forest and tree genetic resources since 2003. Through its network of genetics experts, forestry professionals and funding partners, APFORGEN shares knowledge and good practices, implements multi-country research and development projects, operates a Regional Training Centre and serves as a one stop-centre on forest genetic resources information and initiatives in the Asia-Pacific.

This Call to Action was prepared by APFORGEN in consultation with participants of the Asia-Pacific Forestry Week 2025, with contributions from experts and institutions representing 19 *countries across the Asia-Pacific region*.