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The 3rd Collaborative Endeavors to Strengthen Forest Firefighting Capabilities in AFoCO Member Countries

: A Specialized Training of Trainers Program for Institutional Readiness

BACKGROUND

The increasing frequency and severity of forest and wildland fires, exacerbated by climate change, pose growing risks to ecosystems, human health, and the regional economy in Asia. In particular, transboundary haze, biodiversity loss, and damage to critical forest carbon stocks have emerged as major regional concerns.

Effective suppression and management of such fires require not only trained personnel and adequate equipment, but also strong institutional coordination and strategic leadership. Among the essential competencies, a scientific understanding of fire behavior and ignition conditions forms the backbone of both tactical response and long-term risk mitigation.

In response to these challenges, the Asian Forest Cooperation Organization (AFoCO), in collaboration with the French Ministry for Europe and Foreign Affairs (MOEFA) and the Korea Forest Service (KFS) has launched a series of regional Training of Trainers (ToT) programs on forest fire suppression. These programs are designed to build both foundational and advanced capacities among government frontline officers who can serve as multipliers in their respective countries, while strengthening practical readiness through shared standards and applied learning.

Following the successful implementation of the first and second ToT programs in Thailand in 2023 and 2024, the third ToT, held in 2025, further strengthened field-based capabilities by expanding hands-on training components, especially Fire Behavior Analysis (FBA), fireline construction, prescribed burning techniques, and remote sensing practice. This third training also introduced improvements in field simulation exercises, trainer-to-trainer learning exchanges, and personal protective equipment (PPE) usage protocols to enhance operational discipline and safety.

While these efforts have contributed to tangible improvements in training design and delivery, recent training experiences have also highlighted persistent operational and institutional gaps across Member Countries, including uneven access to technologies and equipment, limited harmonization of incident command systems and field protocols, and challenges in consistently translating classroom-based training into operational readiness. These observations point to the importance of complementing stand-alone training activities with more integrated, operationally anchored, and regionally aligned capacity-building approaches under the FFMA framework.

Box 1. Key Messages

- Shared command protocols and strong field leadership are essential for safe and consistent operations across Member Countries.
- Science-based firefighting and minimum technology access should become a common regional baseline for joint response and mutual support.
- Operational partnerships, field exercises, and field ready support should be prioritized to translate training into measurable readiness.

The 3rd Training of Trainers on Forest Fire Suppression ©AFoCO

POLICY HIGHLIGHTS

Effective coordination requires shared command protocols and strong field leadership.

Under the FFMA framework, leadership competencies among trainers and front-line responders should be strengthened alongside technical fire suppression skills to enable consistent command and safe field execution. This will be pursued through structured modules on emergency decision-making under pressure, inter-agency communication, and crisis management ethics. By integrating simulation-based training and leadership case studies, AFoCO seeks to strengthen participants' ability to lead field operations, coordinate multi-agency response, and mentor junior staff within their respective institutions, particularly in complex incident settings where safety critical decisions shape response effectiveness.

In parallel, drawing on lessons from the 3rd TOTFFS, harmonization of incident command systems, operational terminology, and field communication protocols should also be advanced across the region. Common operating procedures, safety checklists, and shared training curricula will improve coordination and reduce confusion during joint operations and simulation-based exercises. Operational standardization will further support safer deployment by reducing procedural ambiguity in joint or multi-agency incidents, supporting the conditions for potential future regional joint response arrangements under the FFMA framework.

Technology gaps weaken regional joint response, so science-based firefighting must become a shared regional baseline.

Despite growing fire risks, the training revealed uneven scientific understanding of fire behavior, fire ecology, and suppression strategies across participating countries. These gaps directly shaped operational decision making, risk assessment, and safety management during field exercises. Without a common scientific baseline, coordinated response, mutual assistance, and joint learning remain limited, particularly in transboundary fire and haze contexts. Establishing shared science-based competencies is therefore essential to improving both national response quality and regional coordination.

At the same time, field exercises and peer exchanges exposed major disparities in access to remote sensing data, mapping tools, communications systems, and situational awareness technologies. These gaps reduced participation in scenario-based practice, constrained the comparability of operational approaches, and slowed time critical information sharing. In transboundary fire and haze situations, where common situational awareness underpins coordinated action, such disparities materially weaken the foundations for joint response. These technology and capacity gaps should be addressed in parallel with science-based training to enable effective regional cooperation under the FFMA framework (Figure 1).

Operational partnerships and field-ready support must rebalance theory-heavy training to achieve real readiness.

The training experience demonstrated that classroom-based instruction alone does not consistently translate into field level competence. Participants showed significantly stronger performance and confidence during simulations, field drills, and scenario-based exercises than during classroom-centered modules. This contrast underscored the limits of capacity building approaches that prioritize knowledge transfer without sufficient operational immersion. Achieving reliable readiness requires a deliberate shift from theory heavy delivery toward sustained, field anchored training that reflects the realities and constraints faced by front line responders.

To convert training gains into sustained operational capability, FFMA will expand structured operational partnerships with national fire agencies, protected area authorities, and local response units. These partnerships will institutionalize joint field exercises, supervised trainer deployment, and pilot application of training content in high risk landscapes. Field ready support mechanisms, including equipment familiarization, standard operating procedure coaching, and after action review loops, will further align training with real deployment conditions. By embedding capacity building within operational practice, FFMA aims to ensure that training outcomes translate into measurable improvements in front line preparedness and coordination across agencies.

Hands-on Training on Torch Use for Prescribed Burning ©AFoCO

AFoCO RETC Training of Trainers on Forest Fire Suppression (TOTFFS) in Thailand, Indonesia, and Kazakhstan

Fire Behavior and Suppression Training:

1: Field Operations Fundamentals — Fire behavior analysis, prescribed burning basics, safety protocols, discipline, and PPE use (hands on field drills).

2: Fire & Smoke Informatics and Navigation — Informatics basics, map reading, compass navigation, radio procedures, and drone operations (practical field exercises).

Forest Fire and Smoke Informatics System:

3: Member Country Fire Informatics Systems Setup — Initiating cloud based and local level systems for fire monitoring and response across Member Countries.

Train more forest firefighters and improve basic suppression capability.

Build core skills in fire science, suppression, and safety management.

Strengthen practical use of fire and smoke informatics for coordinated response.

Figure 1. Thematic Focus Areas of the Training of Trainers on Forest Fire Suppression

Cross fire burning simulations at the Training of Trainers on Forest Fire Suppression 2025 ©AFoCO

THE WAY FORWARD

Building on the FFMA Initiative, AFoCO will shift from one-off activities to a continuous support model that Member Countries can embed in their national systems. The priority is to make adoption easier and more consistent through clear sequencing, practical guidance, and routine follow up.

To support this shift, AFoCO will develop a simple FFMA implementation package that Member Countries can localize. This package will include: (i) a small set of priority operational standards to adopt first, (ii) step by step guidance for integrating them into national procedures and training mandates, and (iii) a light monitoring approach to track uptake and identify where additional support is needed. To maximize coherence and avoid duplication, the package will be designed to align with and leverage ongoing AFoCO forest fire projects.

In parallel, AFoCO will strengthen regional information sharing arrangements that build on existing national tools. The focus will be agreement on what information to share, how to format it, how often to update it, and who can access it, so that Member Countries can exchange incident information quickly during large scale and transboundary events. A modular approach will allow countries to adopt components at different speeds, depending on readiness and connectivity.

Finally, AFoCO will work with Member Countries and partners to identify a realistic pathway for stronger FFMA coordination during major events. As an initial step, AFoCO will consider establishing a light coordination arrangement, such as designated contact points, basic activation guidelines, and a simple coordination roster. Cooperation can then expand over time through joint planning and learning opportunities, and, where feasible, periodic exercises as demand and capacity allow. This gradual approach can strengthen regional coordination when it matters most, while keeping expectations aligned with current readiness. AFoCO welcomes collaboration with a broader set of operational agencies, technical institutions, and development partners to co-develop this pathway.

Sand table simulation practice at the Training of Trainers on Forest Fire Suppression 2025 ©AFoCO

Box 2. Summary of the Training

The third Training of Trainers on Forest Fire Suppression (TOTFFS) was held in Kanchanaburi Province, Thailand, from 25 January to 6 February 2025. Building upon lessons learned from the previous TOT sessions, the program provided a balanced combination of classroom lectures, field-based simulation, and practical hands-on training.

Trainers and Institutions:

- Expert trainers from the French MOEFA, VALABRE, and the KFS delivered the training in close coordination with AFoCO.
- Interpretation and localized facilitation were provided to support multilingual communication and context-specific learning.

Trainees:

- 19 government officials from 4 AFoCO Member Countries participated (Cambodia, Lao PDR, Myanmar, and Thailand).
- All trainees were mid-level government officers nominated for future roles as national forest fire trainers.

Key Components:

- **Fire Behavior Analysis (FBA)**
  Trainees analyzed factors influencing fire spread, such as wind, topography, and fuel type, through lectures and team-based mapping exercises, including sandbox simulations.
- **Fire Simulation Exercises**
  Participants engaged in structured practice on fireline construction, topographic navigation, cross-fire burning, and prescribed fire techniques.
- **Scenario-Based Management**
  Realistic response scenarios were introduced to build decision-making, coordination, and safety protocol skills under simulated emergency conditions.
- **National Experience Sharing**
  Country presentations facilitated the exchange of institutional experiences, challenges, and collaboration opportunities in forest fire management.

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Asian Forest Cooperation Organization (AFoCO)

AFoCO is a treaty-based intergovernmental organization that is committed to strengthening forest cooperation and taking concrete actions to promote sustainable forest management and address the impacts of climate change.

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