GFOI Global Forest Observations Initiative

GFOI R&D Country Needs Assessment

July 2025 – June 2026

Sylvia Wilson and Daniela Requena

Methodology

Since August 2025

4	25	∞	✓
Workshops Completed	Countries Reached	Informal Conversations	Survey & Interviews

Informal Conversations

Discussions across 25 participating countries

Survey

Structured questionnaire distributed to all participants

Formal Interviews

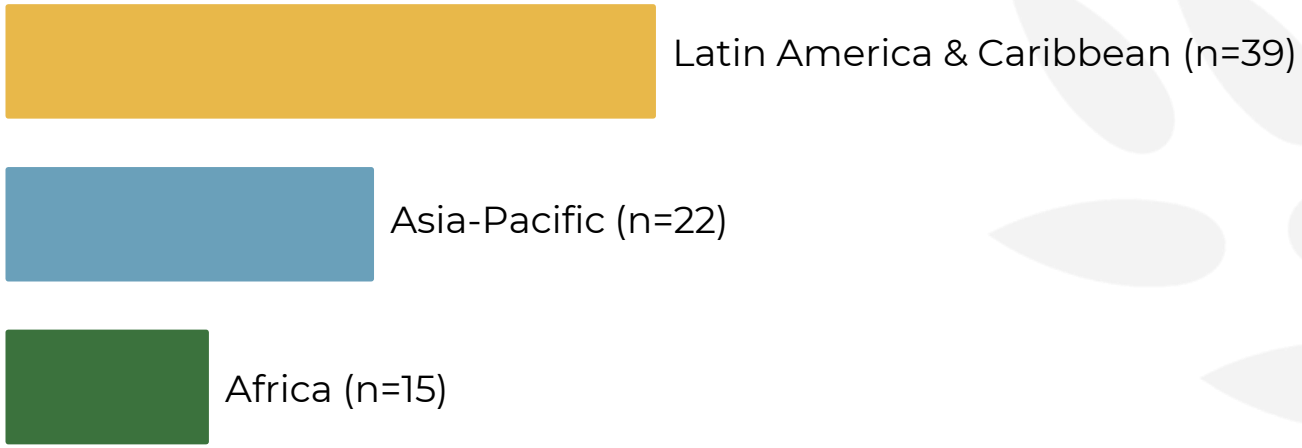
1-hour Teams interviews conducted with key stakeholders

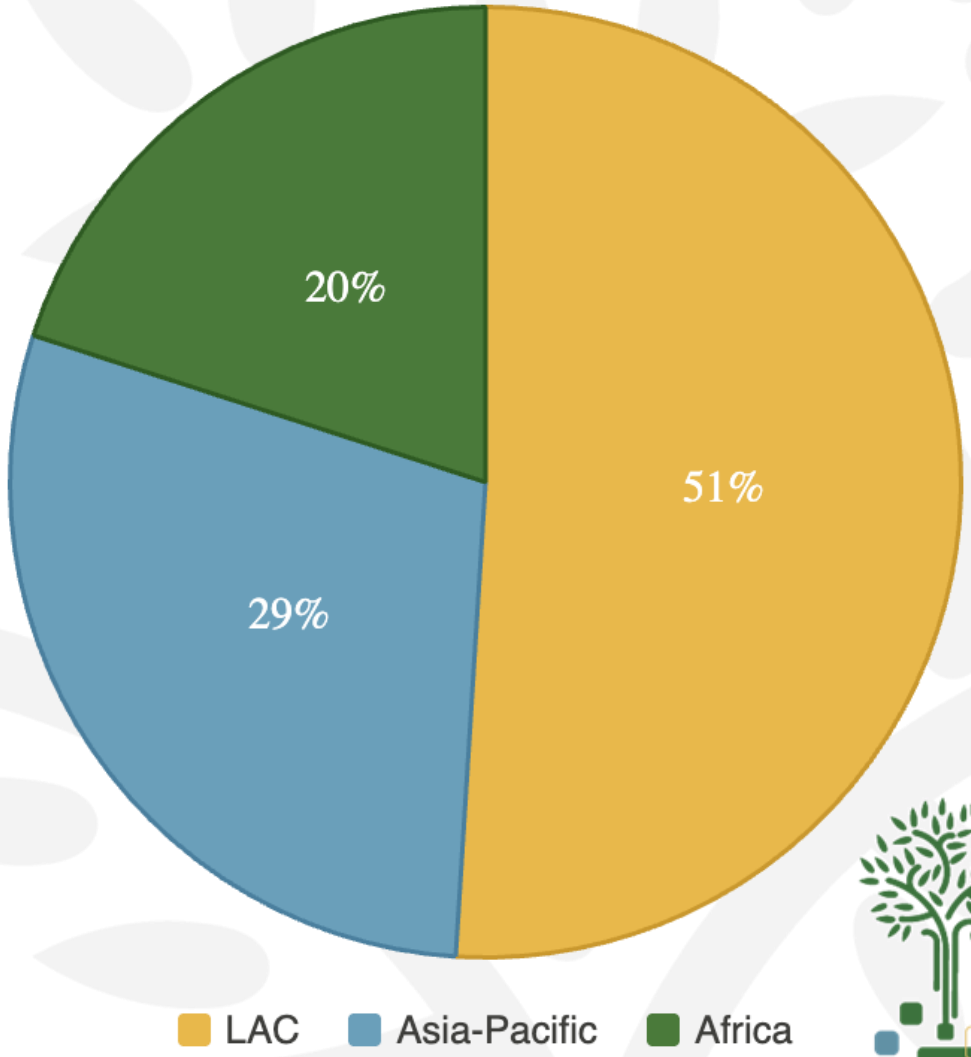
Global Forest Observations Initiative

Survey Overview

76 respondents · 3 regions · 8 country interviews

Respondents by Region:





Global Forest Observations Initiative

Central Finding

National Forest Monitoring Systems are technically mature but institutionally fragmented

- Countries can identify what they need
  - They can describe good practice and articulate gaps clearly
- What they cannot do is reach operational scale
  - Blocked either by lack of access to existing tools, or by science that hasn't yet produced usable guidance
- The International system keeps them offering the same solutions to structurally different problems
  - Access vs. methodology constraints require different responses

Two Constraint Framework

Access Constraints

- High data costs
- Limited satellite coverage
- Inadequate infrastructure
- Binding issue: access to existing tools
- Solution: data access, infrastructure, open-source tools
- Africa = clearest example

Methodology Constraints

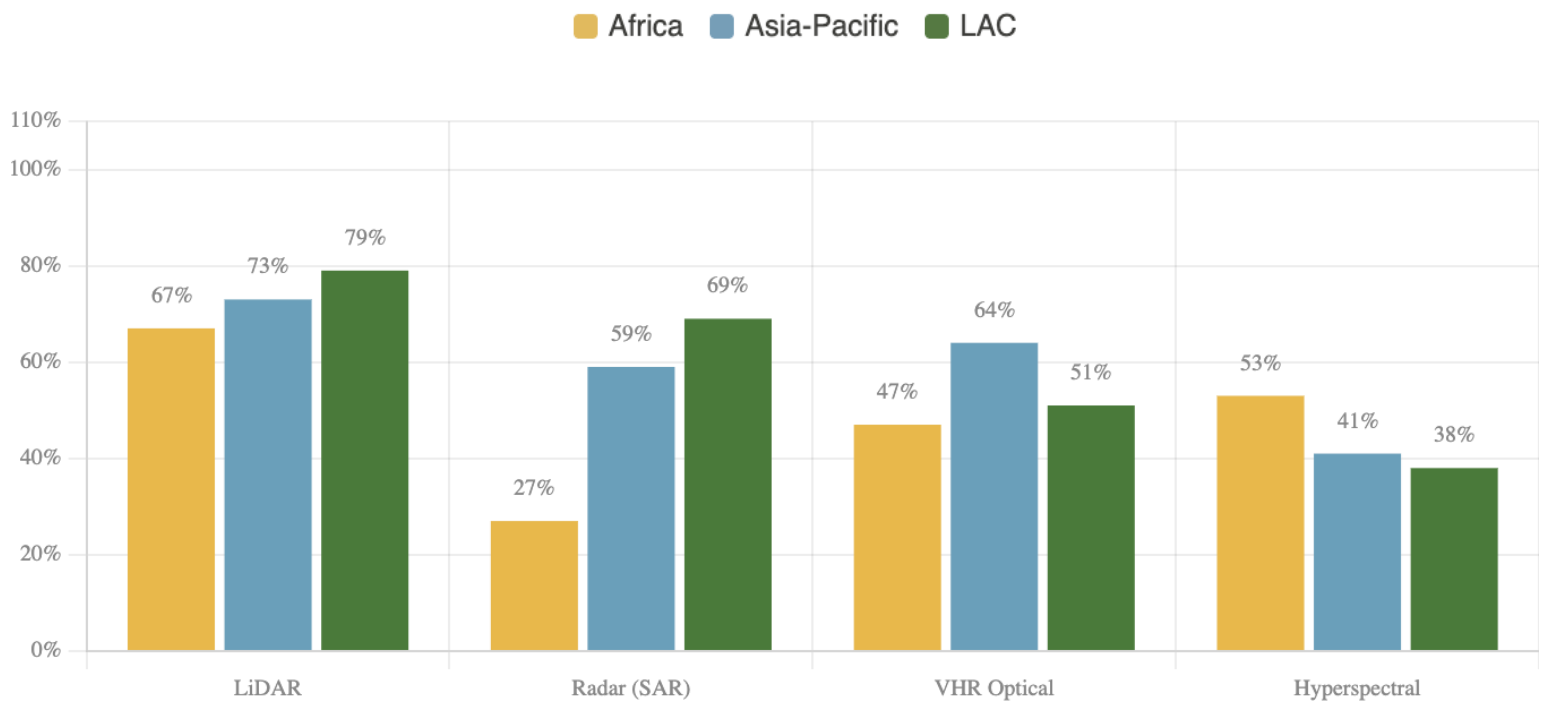
- Institutional capacity exists
- Reaches limit of IPCC guidance
- Gaps: removals, peatlands, tropical wetlands, non-CO2
- Solution: R&D investment, new methods
- LAC and parts of Asia-Pacific = exemplars

Most countries exhibit elements of both constraint types, strong deforestation monitoring alongside incomplete removals methodology at all. The framework is applied at the level of specific functions, not entire countries.

Areas Analysed

- Gaps and Utilization of Earth Observation Data
  - Underutilized Sensor Types:
  - Reasons for underutilization
- Space Data and Field Data Integration
  - Current Integration Status
- Innovation Priorities for Tier 2/3 Readiness
- Priority Ecosystems and Missing Methods
  - Ecosystem Gaps Across Regions
  - Missing in situ data
- International Collaboration
  - Preferred Collaboration Mechanisms:
  - Top R&D Funding Priorities
  - Most urgent R&D needs related to non-CO_2 greenhouse gases in the AFOLU sector

Earth Observation Gaps: Underutilized Sensors



Key Findings:

LiDAR

Most underutilized (67–79%). Critical gap for removals monitoring, canopy structure cannot be replaced by optical satellites.

Cost

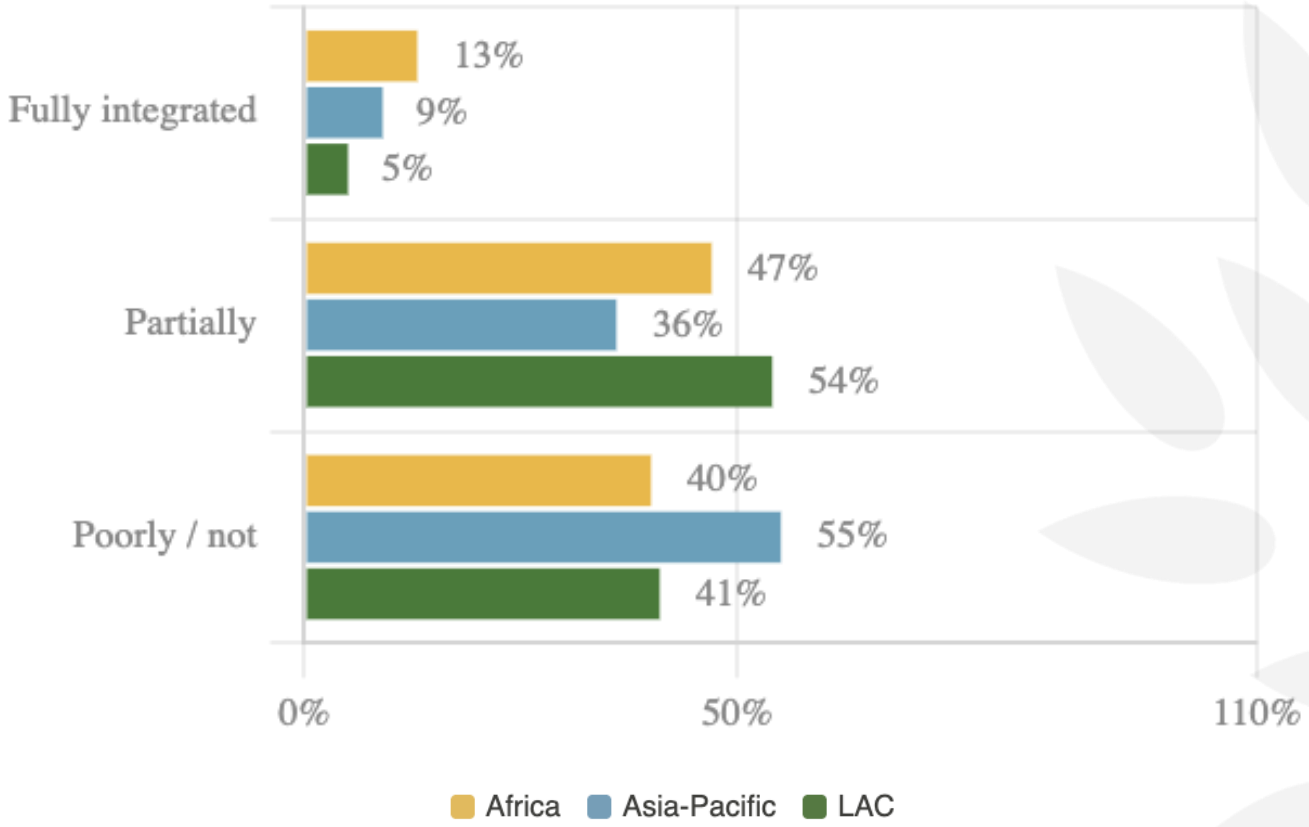
Dominant barrier: LAC 85%, Asia-Pacific 82%. Africa adds limited regional availability (60%).

IPCC Guidance

Unclear guidance is a significant secondary barrier in LAC (46%) and Asia-Pacific (36%), a methodology signal.

EO & Field Data Integration

Space-Field Integration Status



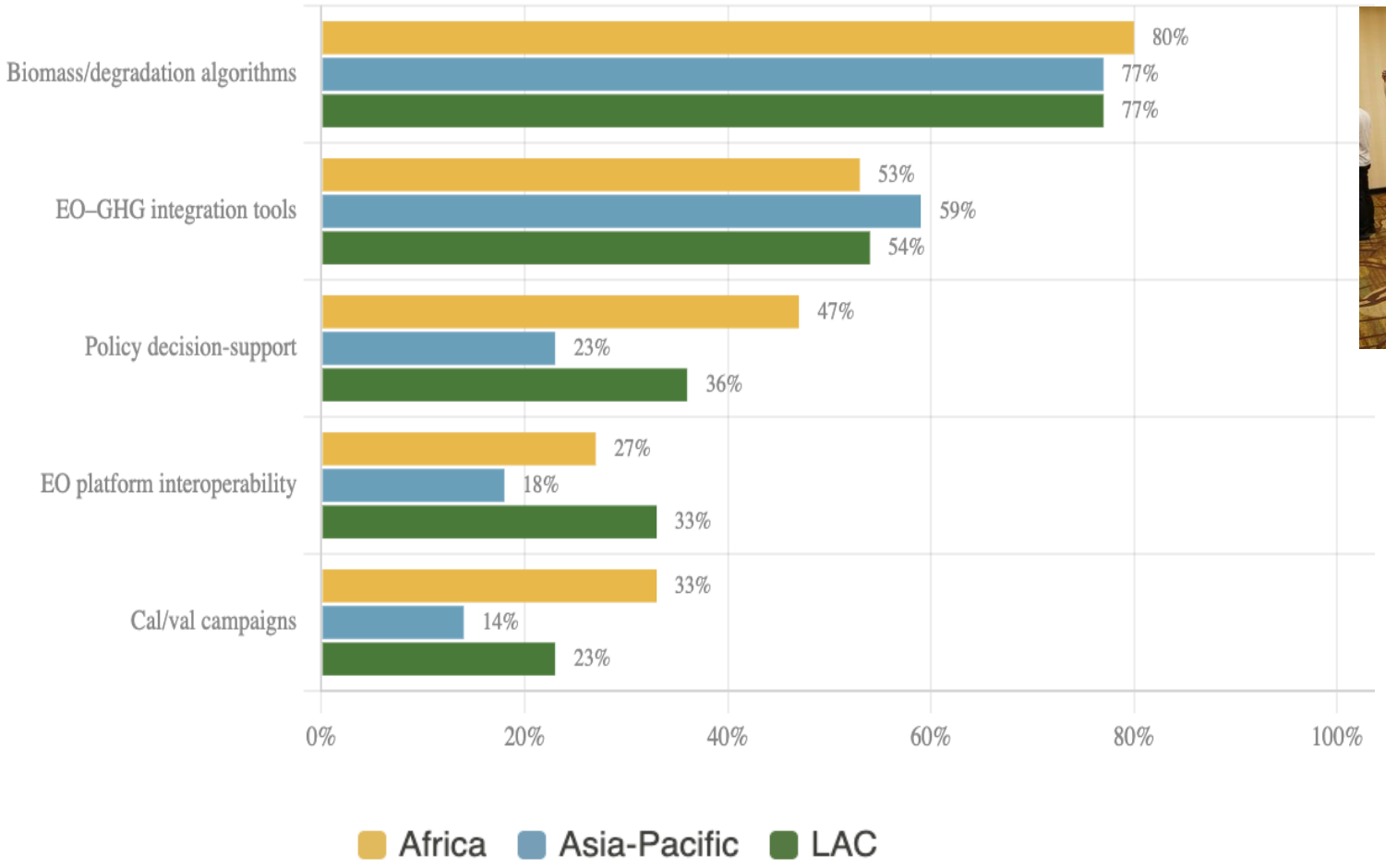
Three compounding barriers: funding gaps (69–87%), technical skills (54–73%), inconsistent data formats (40–59%)

Global Forest Observations Initiative

R&D Funding Priorities

TOP PRIORITY

Biomass / degradation algorithms ranked #1 across all regions



Global Forest Observations Initiative

LAC Regional Meetings on Removals, regional workshop and consultations

Focus:

- Challenges estimating emissions/removals in degraded and recovering forests
- Shift from REDD+ focus to inclusion of removals
- Highlighted need for EO-based annual monitoring
- National Monitoring Systems track emissions not removals

Why this matters now

ART-TREES, NDC reporting cycles, and results-based payments are raising the bar on removals accounting, making this gap a direct obstacle to climate finance.

Global Forest Observations Initiative

Thank you

Sylvia Wilson

Daniela Requena