



# Research & Development Priorities for National Forest Monitoring

2025 Global Survey

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# GLOBAL SURVEY ACROSS 34 COUNTRIES



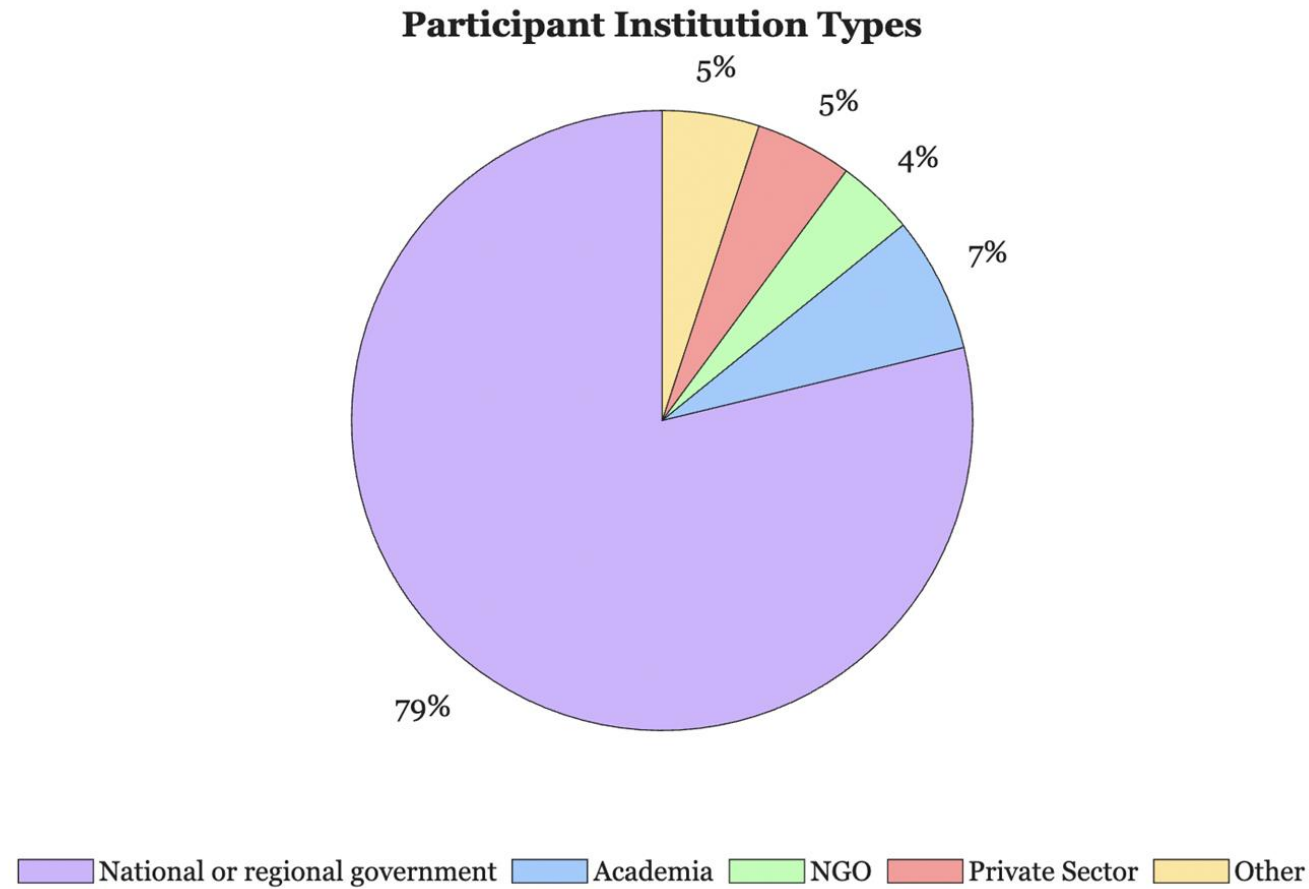
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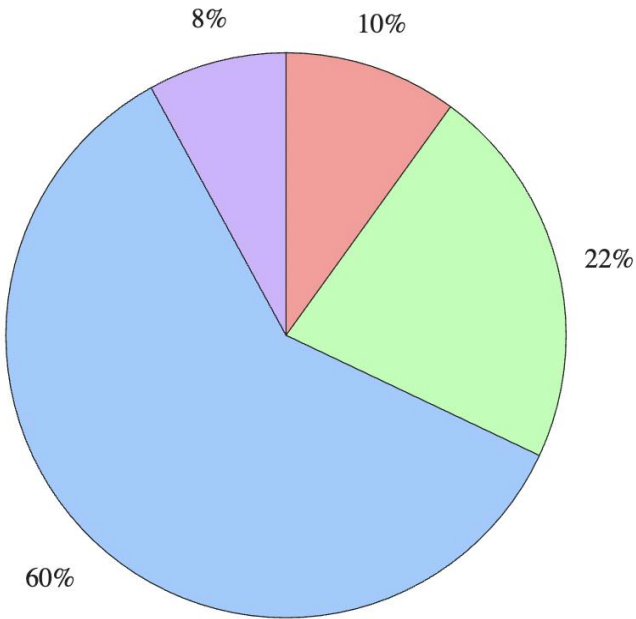
# 76 participants from various institutions



# MAJOR FINDINGS

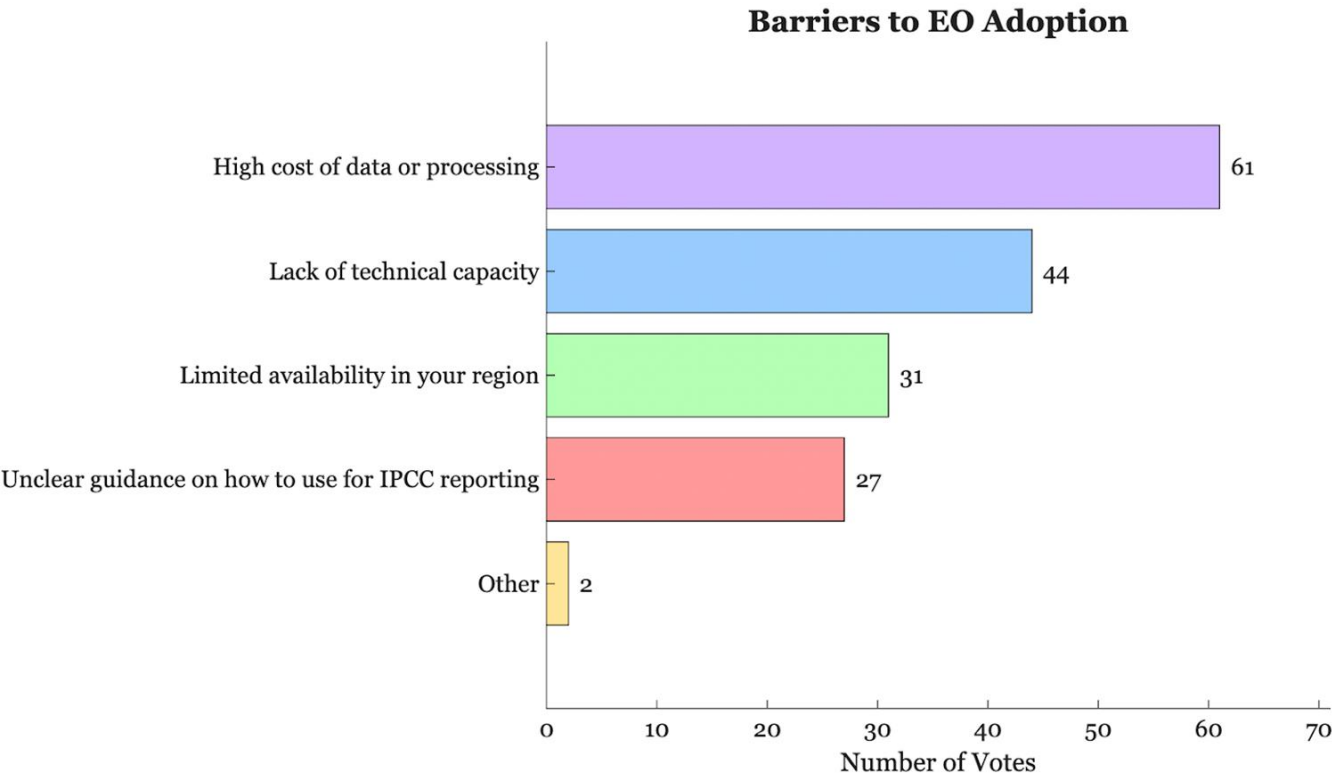
Only 8% achieved full EO-field integration

Percentage of NFMS with fully integration EO and field data

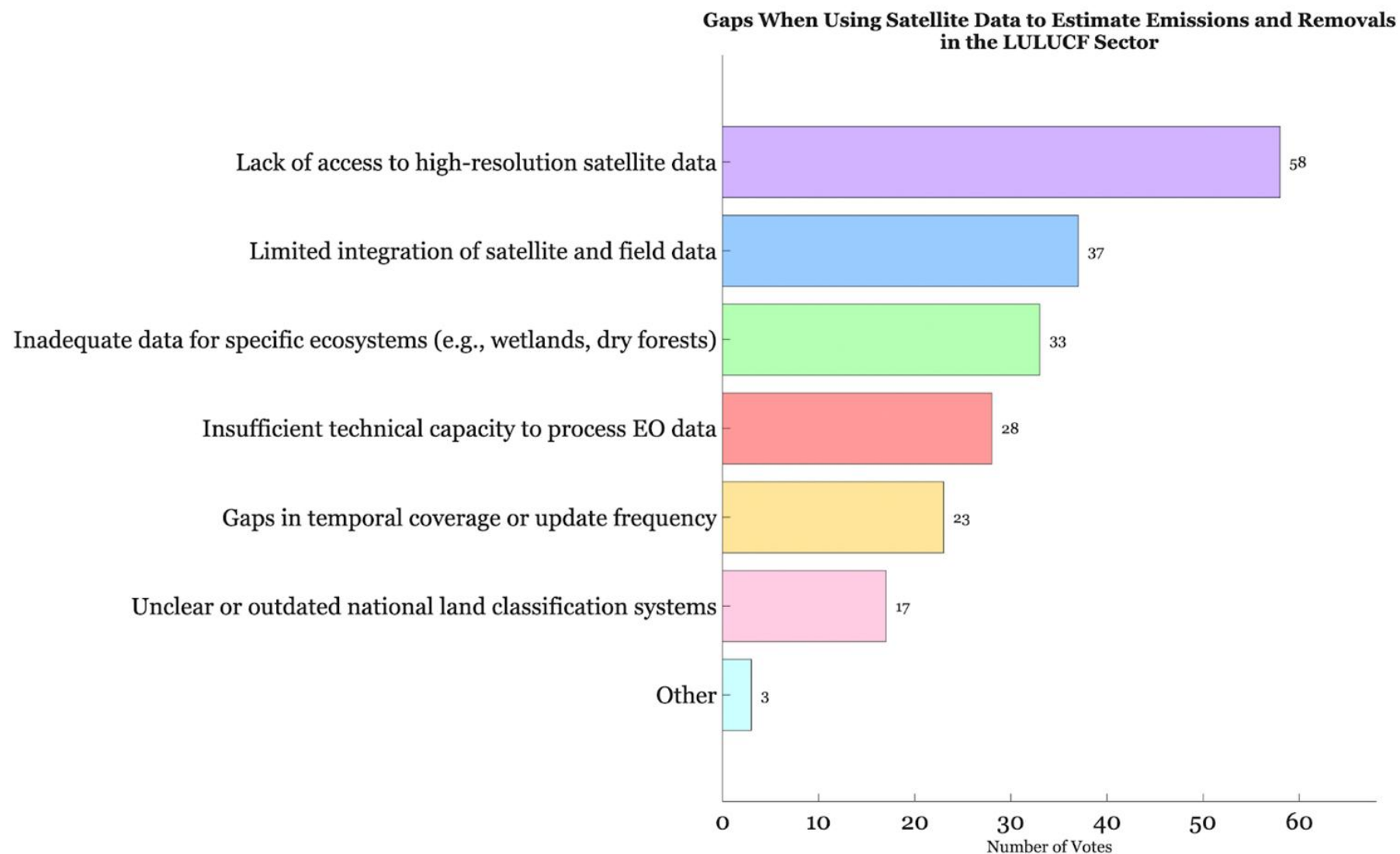


Fully Integrated Partially Integrated Poorly Integrated Not at All / Other

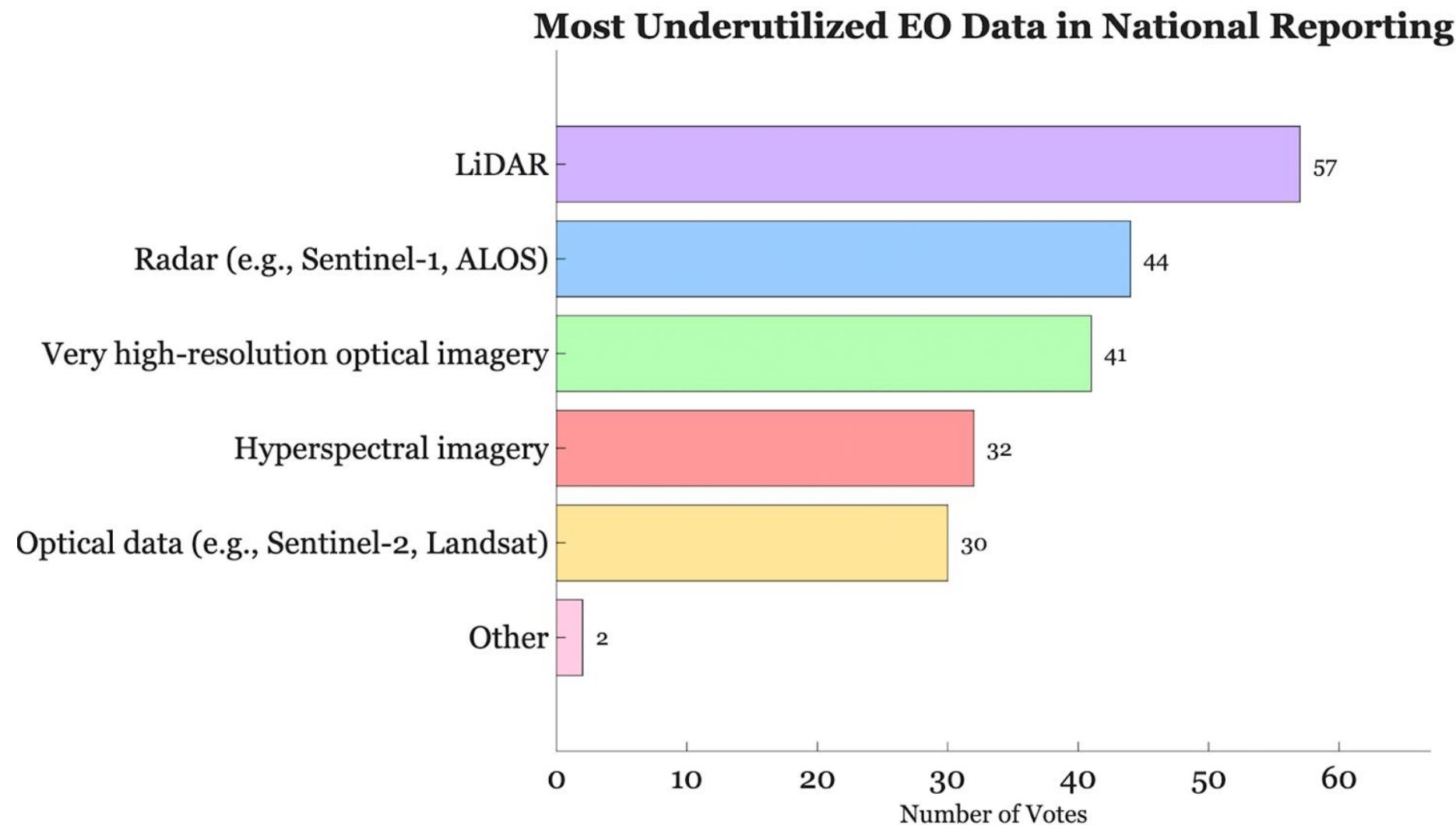
61 respondents cite high cost as a barrier



# 58 respondents reported lack of access to high-resolution EO data

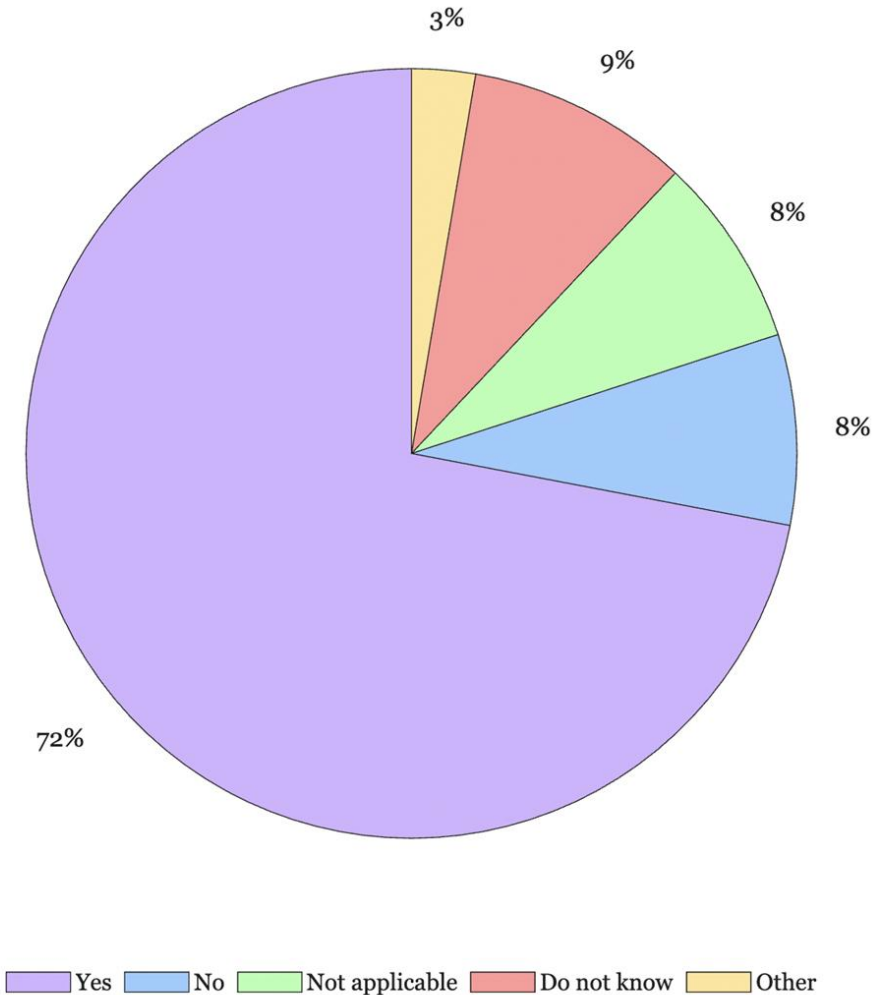


# 57 respondents identified LiDAR and 44 radar as underused

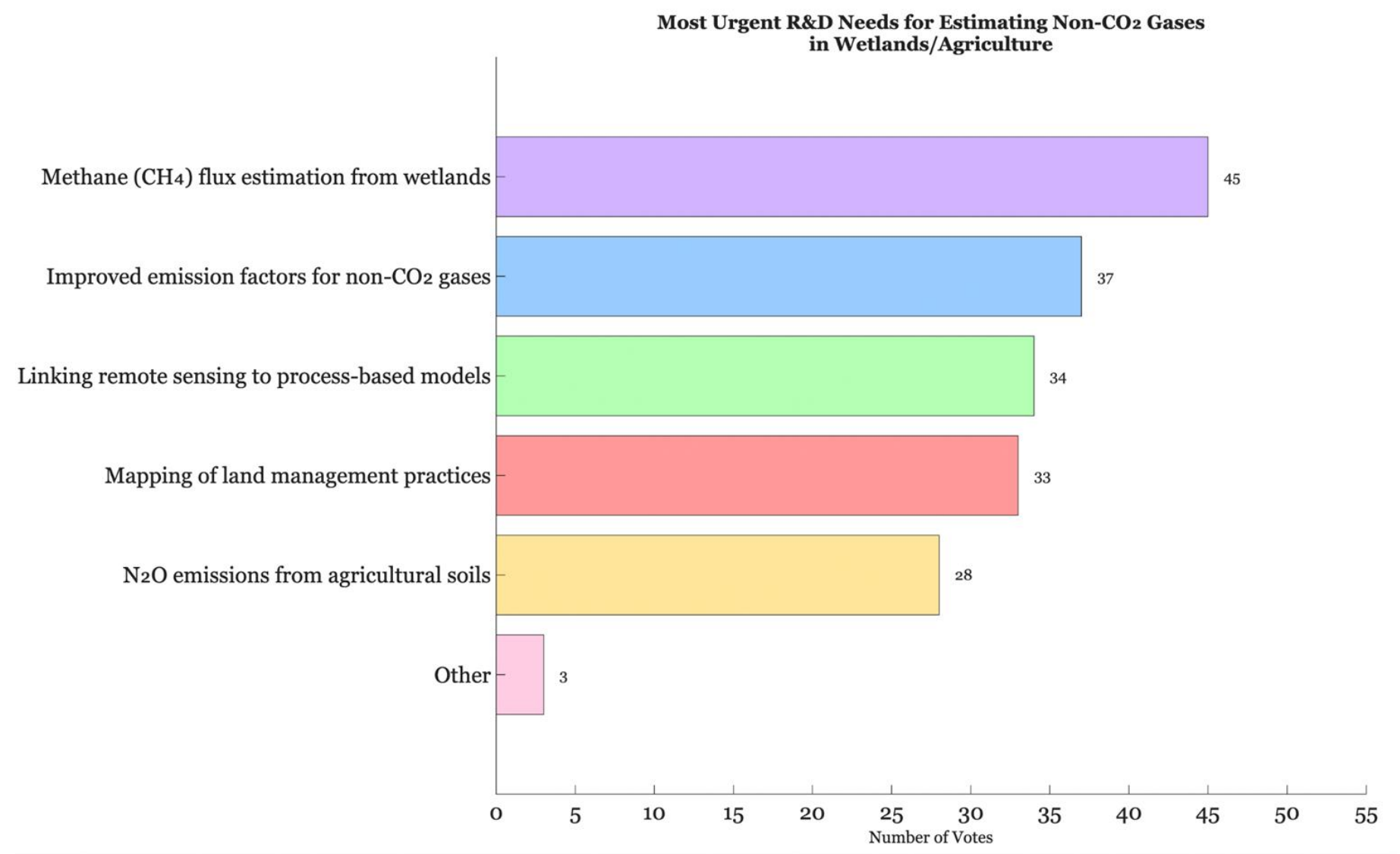


# 72% of respondents confirmed use of Planet or commercial imagery for validation

Did Planet or other commercial data help address challenges validating satellite-derived data?



# 45 respondents prioritize wetland methane flux R&D





# EO DATA ACCESS & UTILIZATION

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- Access to consistent high-resolution, multi-sensor data = top barrier
- Underutilized datasets: LiDAR (57), Radar (44), VHR Optical (41)
- VHR data seen as essential for validation, degradation monitoring, and restoration
- Loss of Planet mosaics increased technical burden



# EO-FIELD INTEGRATION & DATA GAPS

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- Only 8% have full EO-field integration
- Barriers: siloed institutions, outdated software, lack of calibration data
- Critical gaps in peat carbon, mangrove soils, degradation, and inventory plots



# INNOVATION PRIORITIES FOR TIER 2/3

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- Top R&D priorities:
  - Automated EO–field integration (52 responses)
  - National biomass estimation tools (47)
  - EO-based emission factor models (35)
  
- Support needs:
  - Training (92%)
  - Funding (80%)
  - Interoperable platforms (76%)
  - Peer learning (55%)



# ARTICLE 6 ALIGNMENT & READINESS

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- 50%+ struggle to align EO data with Article 6 carbon market standards
- Barriers: inconsistent baselines, lack of MRV methodologies
- Need harmonization with IPCC 2019, ART-TREES, Verra JNR frameworks



# STRATEGIC RECOMMENDATIONS

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## Short-Term Recommendations

- In country  
Institutionalize EO–MRV integration
- Open-access data & donor-subsidized licenses

## Medium-Term Recommendations

- Establish regional R&D hubs
- Develop Article 6 methodologies
- Scale interoperable platforms



# PATHWAYS TO READINESS

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- Build interoperable, open NFMS platforms
- Link EO directly to GHG inventories
- Focus on long-term institutional learning, not one-off training
- Foster South–South collaboration and open science
- Fund end-to-end MRV systems for transparency and carbon credibility





# Thanks!

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Daniela Requena

26. What is the name of your institution?

67  
Responses

Latest Responses  
"forestry commission"  
...

10 respondents (15%) answered del for this question.

Ministry of Environment  
la consultor  
Bosque para  
Forest Sciences  
Production Control  
Ambiente  
Forest Department  
General Directorate  
del de Ministerio  
y  
Forest Management  
Forest Service  
ARCHIAC ENG  
Forestry  
Nacional Forestal  
Directorate of Agriculture  
Forest and Environment

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