

# Support EO-driven forest monitoring in Central Africa



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**Preserving African forest contributes to Global climate change challenge. Earth Observation (EO) techniques are essential in monitoring forest changes and supporting REDD (Reducing Emissions from Deforestation and forest Degradation) negotiations for climate change mitigation.**

## Users requirement analysis

### State-of-the-art

The REDDiness approach refers to existing projects and initiatives in the Congo Basin. REDDiness responds to the EC call for increased collaboration between Africa and Europe within Specific International Cooperation Action (SICA).

International agreements on REDD must rely on operational national and regional forest monitoring systems that accurately measure, map, report and verify (MRV) timely changes in forest state and carbon emission. Up-to-date EO techniques are seen as essential tools in MRV systems. While regional or large remote sensing projects already exist in the region, REDDiness decided to focus on one specific topic less addressed by other initiatives : forest degradation.

### End-user questionnaire

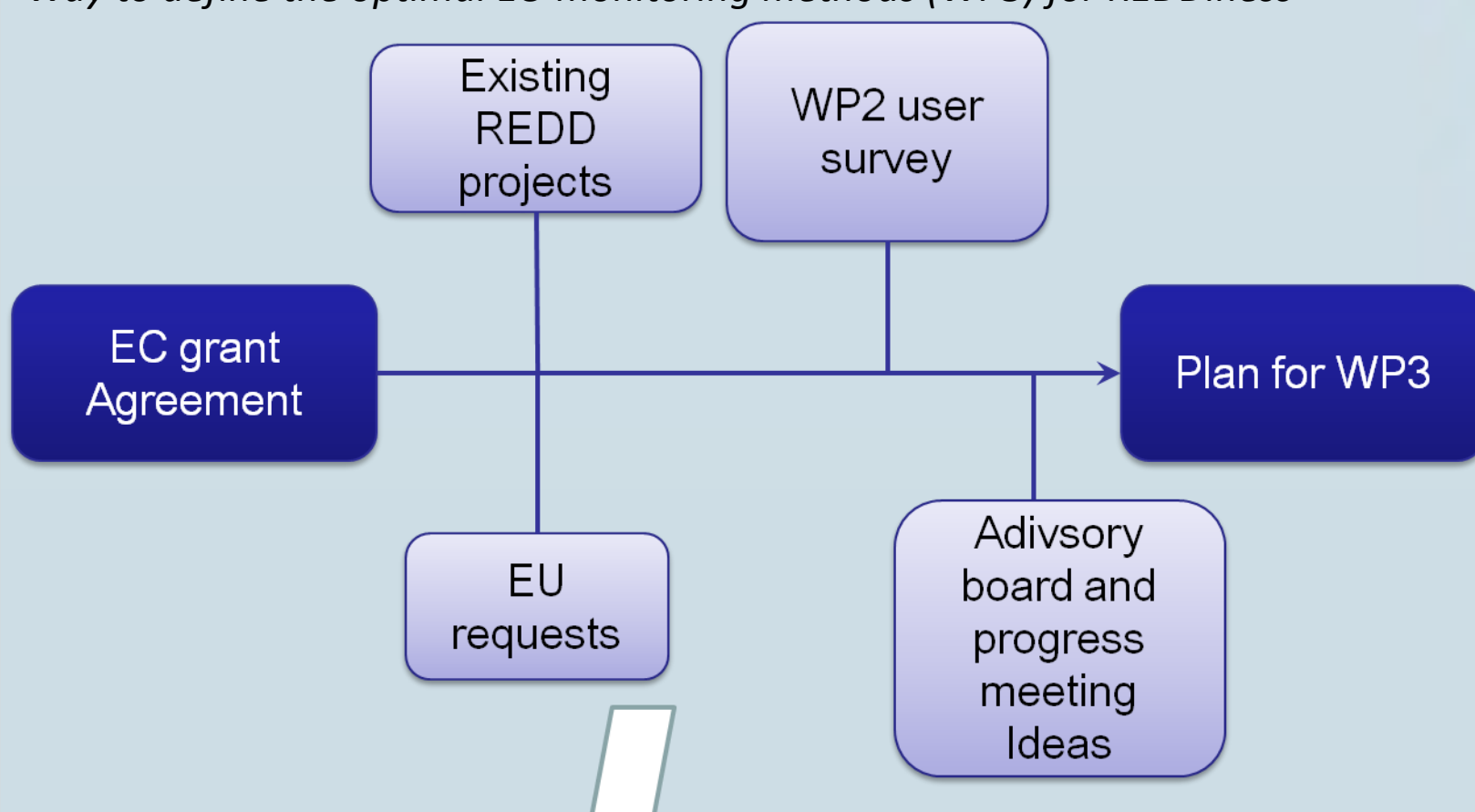
A quantitative survey has been carried out in **Republic of Congo** and **Gabon** to measure awareness and interest in EO-based products. Despite a large interest in REDD and EO training for MRV, only 8 end-users have a minimum technical understanding to learn these techniques.

This technical understanding is defined by three criteria: (i) the level of knowledge in EO techniques, (ii) completeness of the responses and (iii) coherency in the answer to two overlapping questions. With these criteria we define 8 end-users among 24 as the best partners to define the REDD optimal EO techniques in Congo and Gabon. Personnel skills and technical resources to work with GIS and EO techniques have been assessed. EO software and competences are missing.

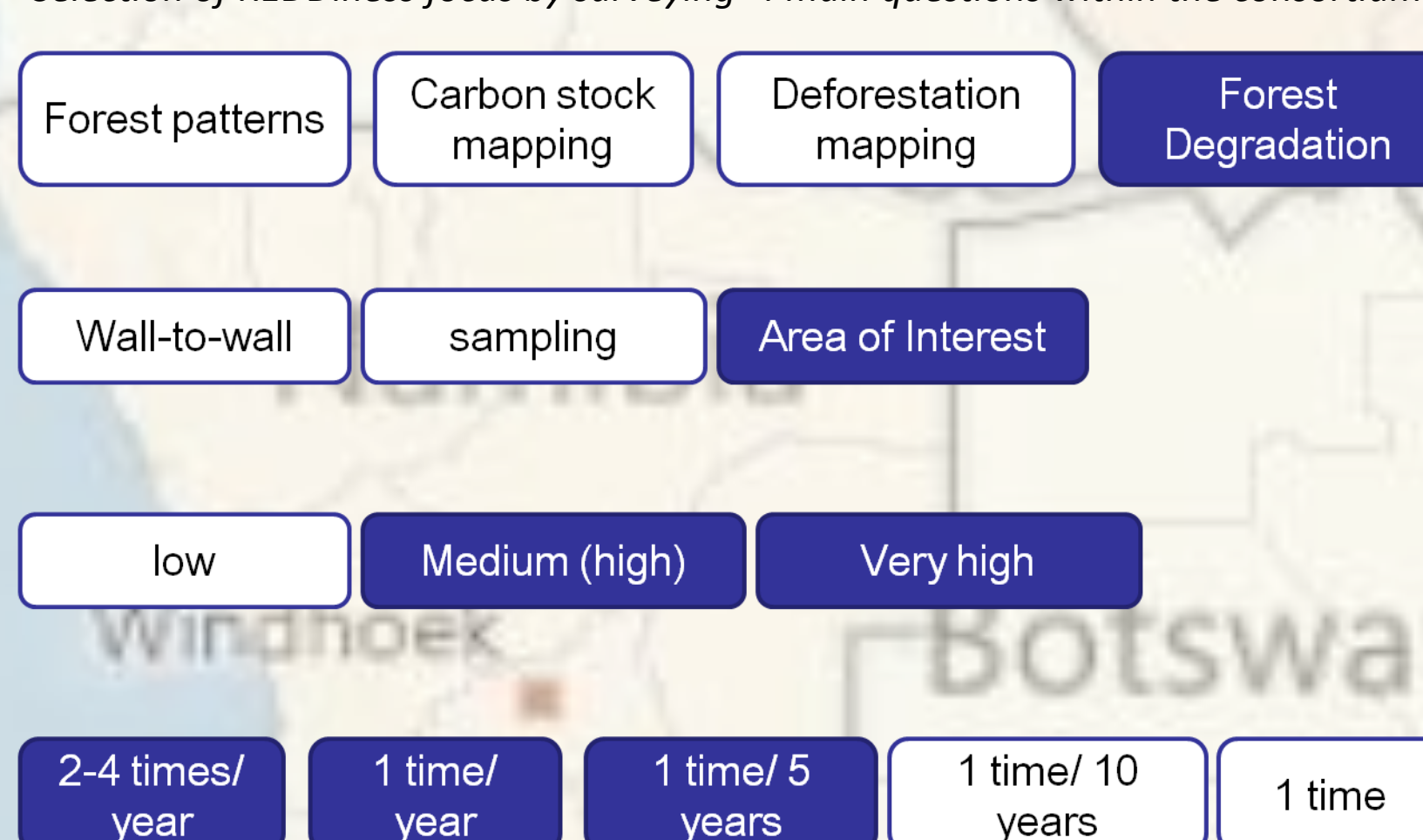
## EO monitoring solutions

REDDiness did an in-depth analysis of the state-of-the-art to be able to support Congo and Gabon in the development of their MRV systems. From a large inventory of topics needed in MRV and EO expertise in REDDiness consortium, one specific scenario of EO monitoring has been chosen for the project : “forest degradation in cloudy region”.

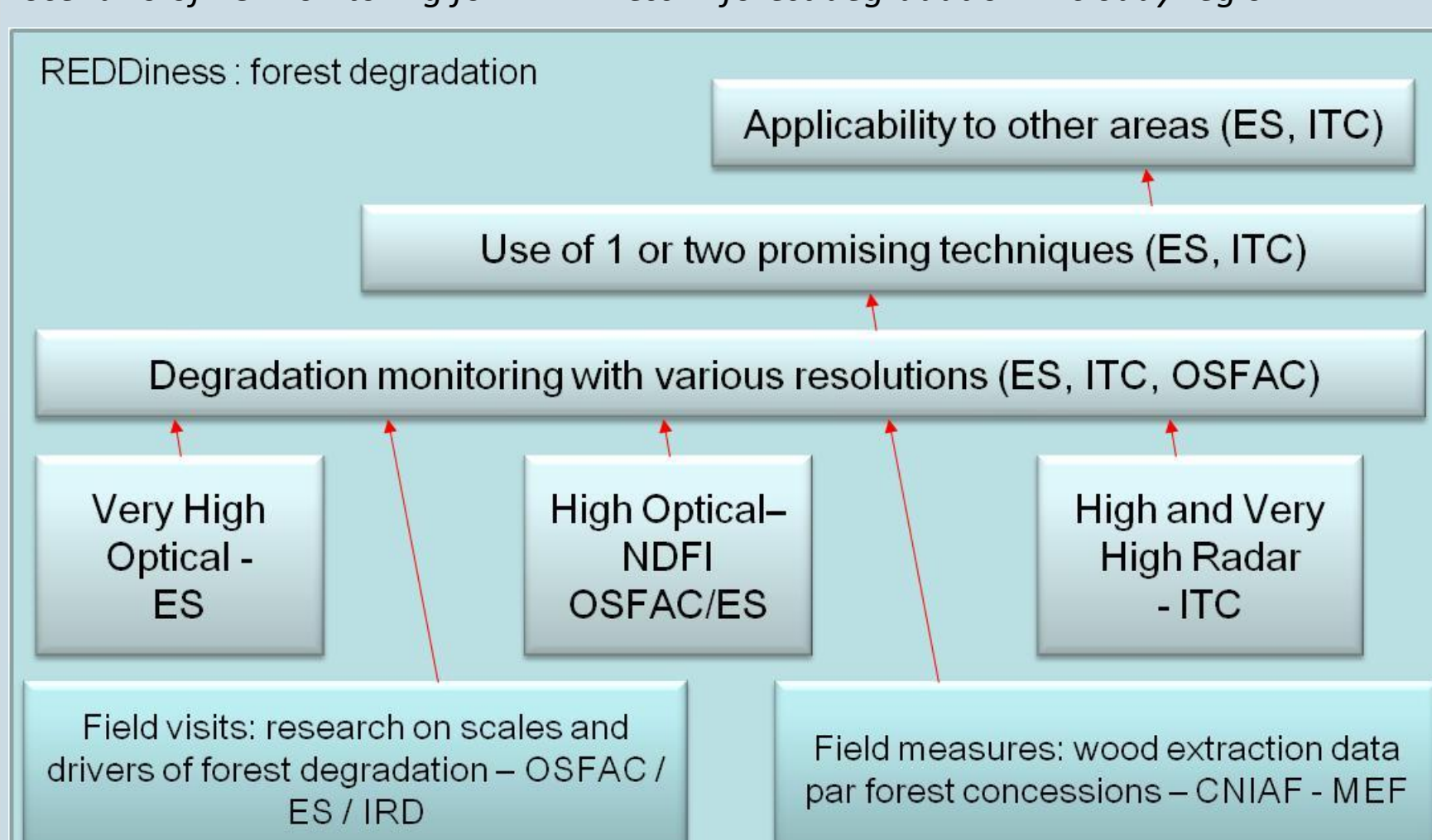
Way to define the optimal EO monitoring methods (WP3) for REDDiness



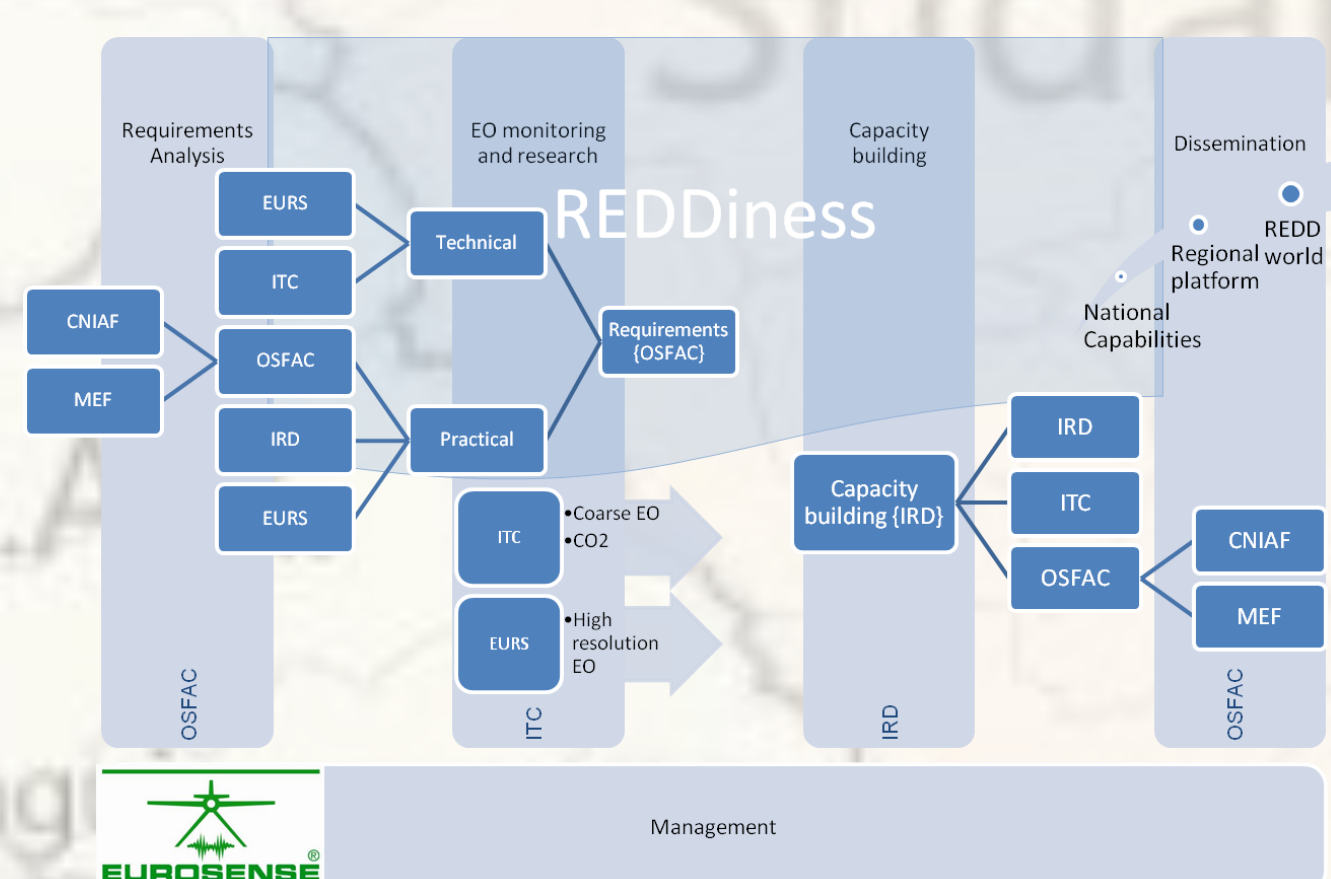
Selection of REDDiness focus by surveying 4 main questions within the consortium



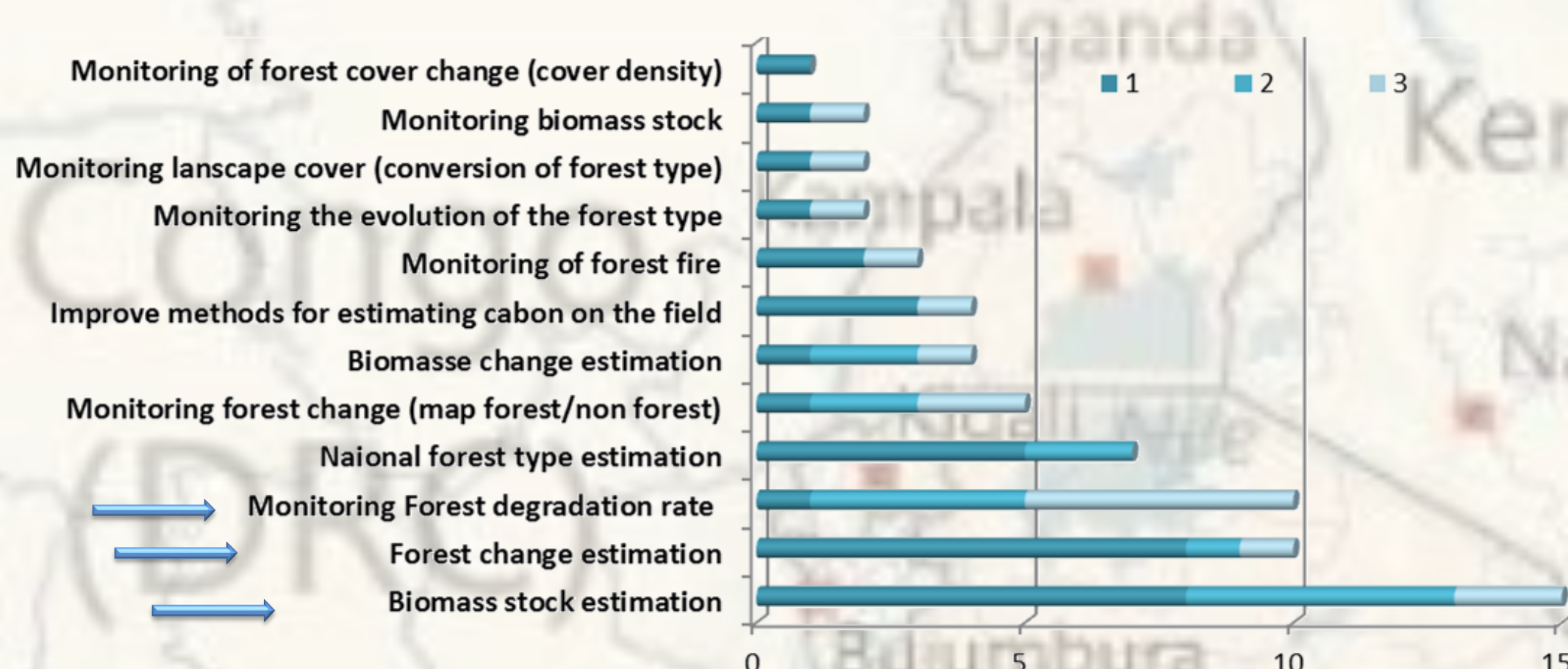
Scenario of EO monitoring for REDDiness : “forest degradation in cloudy region”



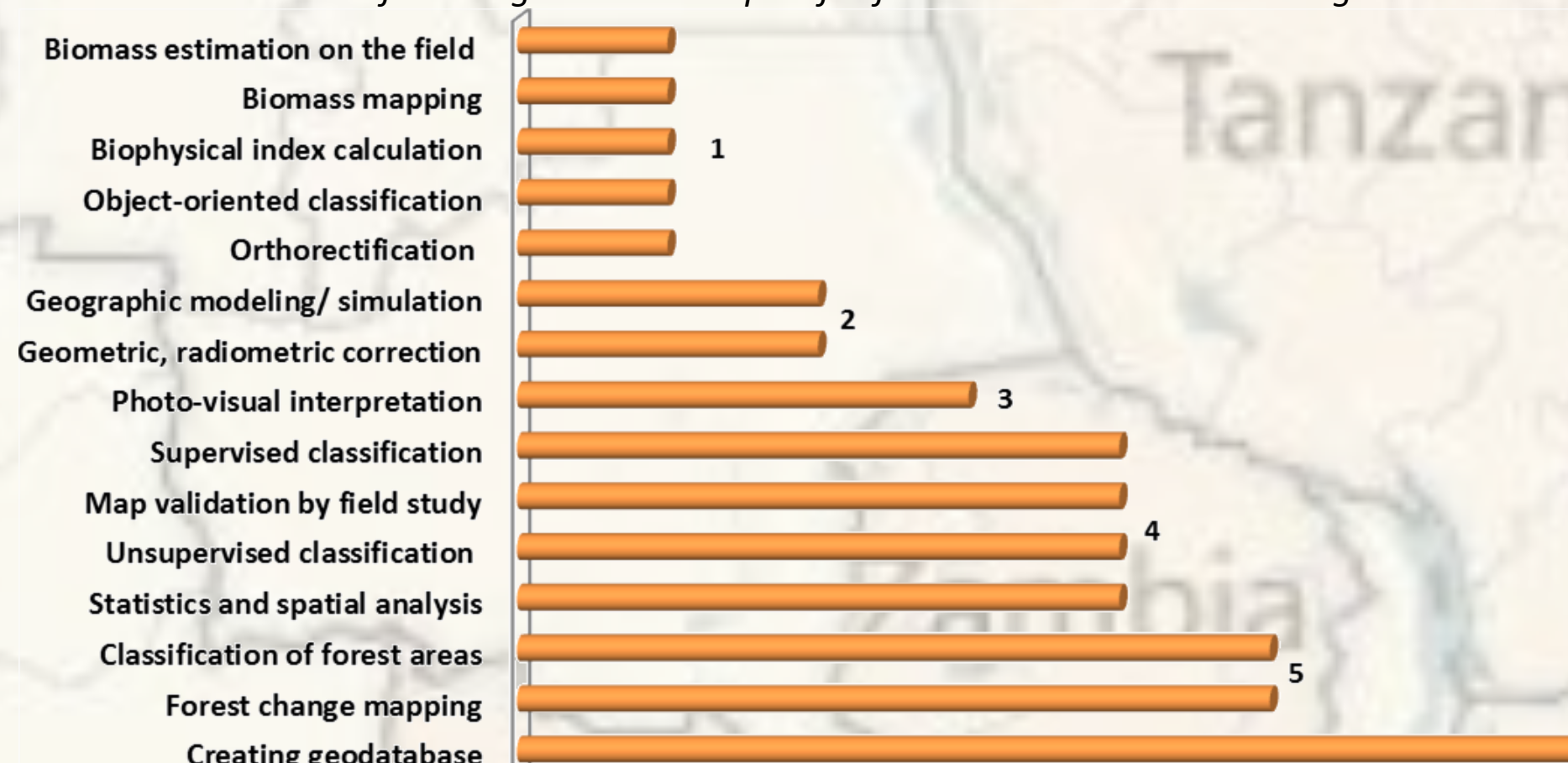
Workflow of REDDiness : from Congolese and Gabonese user requirements to REDD world



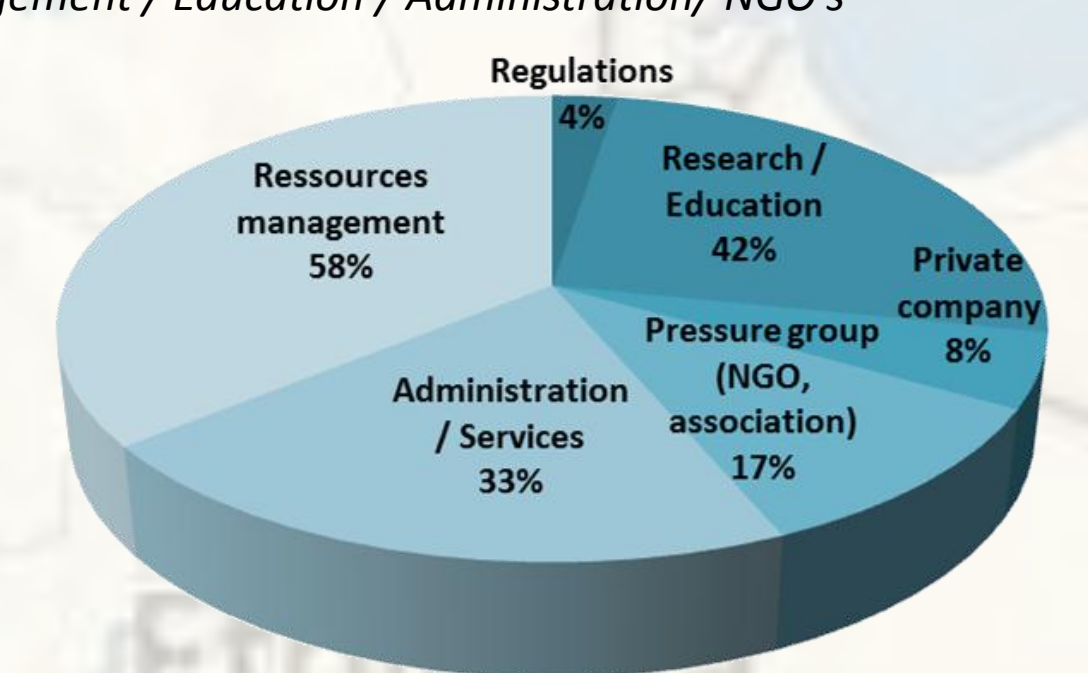
“What are the 3 most importants EO techniques in your national REDD strategy?”



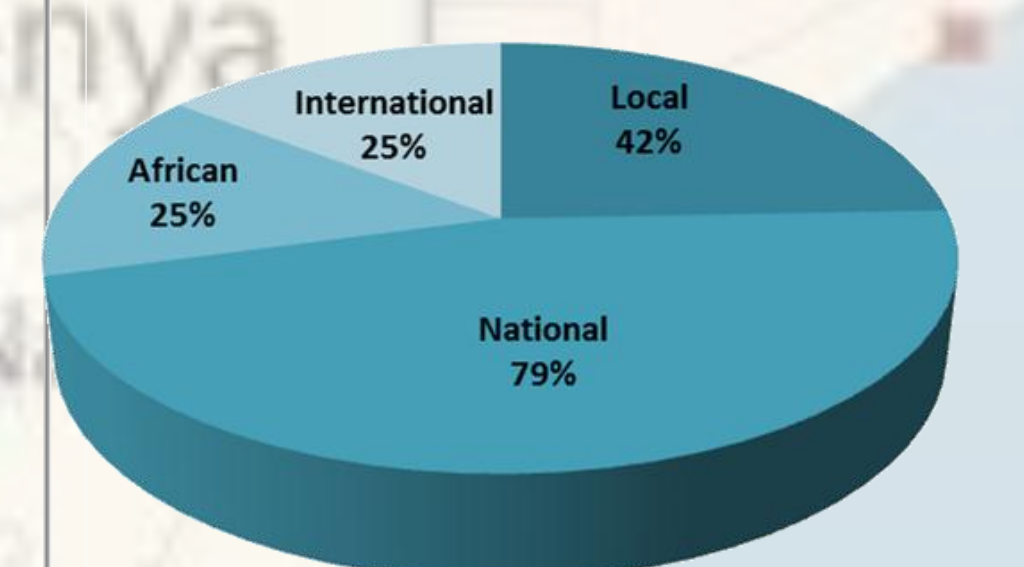
Interests and needs of training in EO techniques for forest and carbon monitoring



Four main profiles of survey participants: Natural resources management / Education / Administration/ NGO's



Management levels of Congolese and Gabonese institutions: mainly national and regional, only 25% have a continental or international vision



Criteria to define the technical understanding and select the 8 best REDDiness end-users

	REDD knowledge		Completeness (/23 questions)	Consistency		Total (%)	REDD project
	Pol. (/5)	Scient. (/5)		Set (/2)	Link (/1)		
Congo							
CNIAF	3	3	23	2	1	87%	Yes
OCDF	5	4	22	1.5	0.5	79%	Yes
CERDEC	3	4	23	1	1	85%	No
CIB	2	3	23	2	1	87%	No
Gabon							
IRSH	4	5	23	2	0.5	92%	No
MEF-Bois	2	3	22	2	1	85%	Yes
MEF-Aqua	3	3	23	2	1	87%	No
IRET	3	3	23	2	1	87%	No

## Capacity building

In the second phase of REDDiness, capacity building practices in GIS, remote sensing and field analysis are planned. The EO monitoring and capacity building plans will be combined to optimise the transfer of knowledge in collaboration with other regional initiatives. On the long term, the two local partners of REDDiness (MEF and CNIAF) would be the key contacts for REDD national training.