GROUP ON EARTH OBSERVATIONS

GEOSS Forest Monitoring System

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GEOSS Forest Monitoring System Purpose

Provide basic information to support Countries and International Organizations in decision making on national and international forest related matters.

To be developed in order to serve the cross cutting nature of Forest monitoring, addressing all the involved User Communities

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GEOSS Forest Monitoring System
What information should produce ?

Where is forest ?

Where forest, a number of key characteristics (including changes and trends) such as:

- Classification
- Inventory
- Carbon stocks
- ……..

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GEOSS Forest Monitoring System
Key features

- Systematic observations
- Global Information Products
  - Common Multiuser Products
  - Basic User-related products
- User support tools and methodologies

Note that, in several cases, final users products may require additional observations, data and processing

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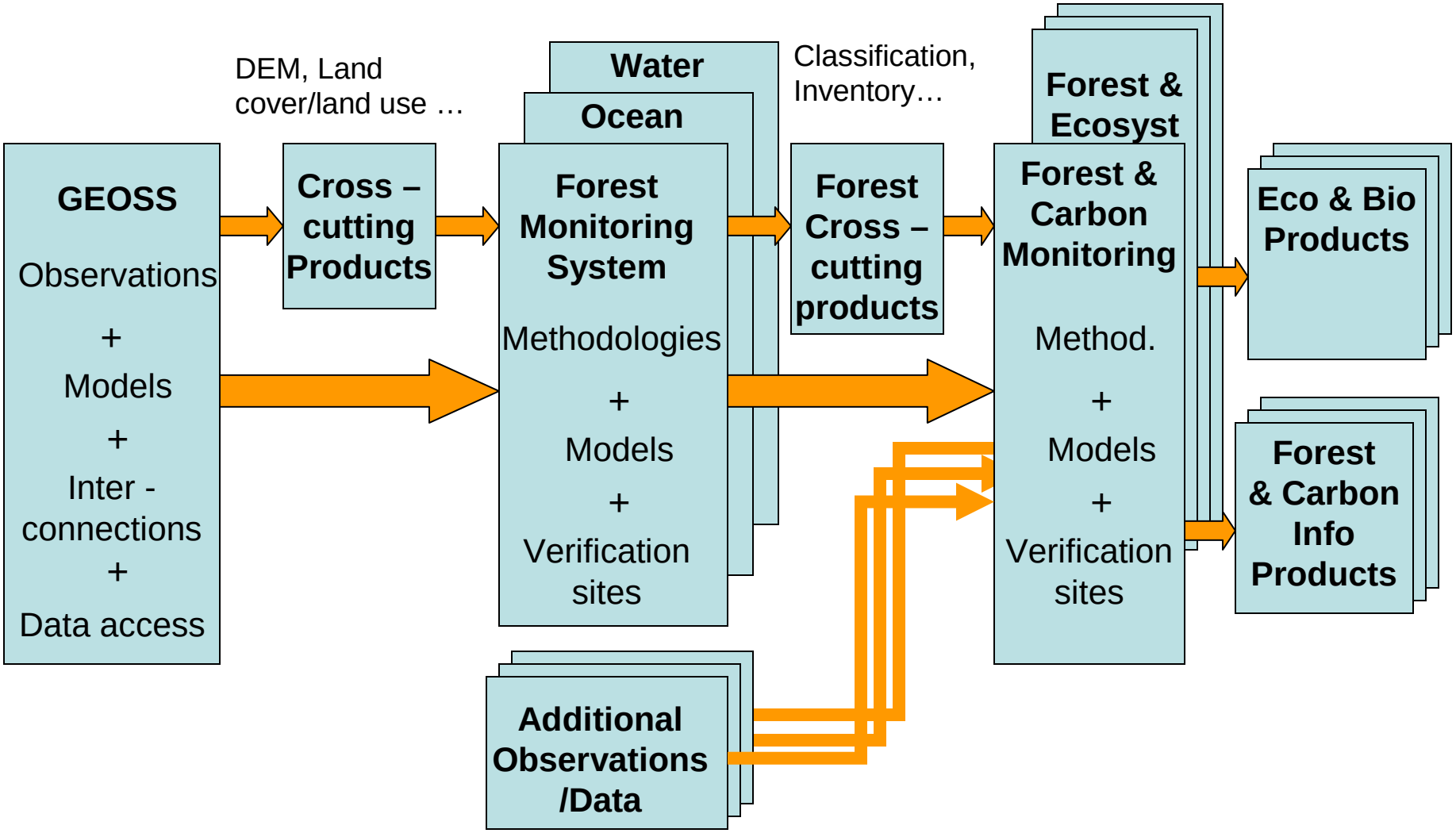
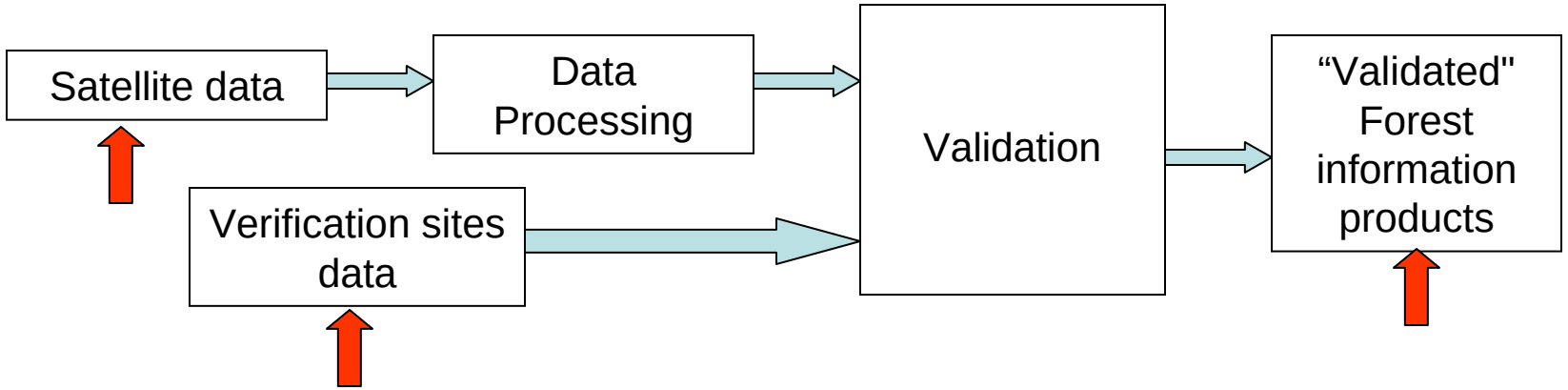
GEOSS and its Forest Monitoring System



GEOSS Forest monitoring system
Simplified Operational flow



User access

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Main System Components

Actual components

- Satellite observations
- Permanent validation/test sites
- GEOSS cross-cutting datasets
- Information products and associated product validation tools and methodologies
- Data management and User access to data and products

Policies and Interoperability standards

- Data policy
- Technical standards

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Satellite observations

- Reconstruction of an Historical archive of consistent satellite images
- Wall to wall coverage (at least on yearly basis) - moderate resolution (Landsat type) through coordinated, systematic observation plans of several Optical and SAR sensors
- Wall to wall coverage (daily to monthly - low resolution (MODIS/MERIS type or better)
- High and Very High resolution data over selected validation sites (monthly coverage)

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Permanent validation/Verification sites

- Establishment of Regional Reference Test Sites, collectively representing the variety of forests being monitored
- Coherent Plan of activities implemeted at each site
- Ground Measurements, Aerial observations and satellite data (higher resolution/higher frequency), in the appropriate mix, planned at each site
- Main output: time series of datasets and products for periodic calibration and validation of RS Information addressing all users coverage)

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GEOSS cross-cutting datasets and products

Datasets of crosscutting nature serving more than one monitoring “purpose”.

Typical examples could be:

- Topographic data (DEM’sm .....)
- Weather, climate and other specific datasets

Note that these datasets and products may be considered intermediate products as well as final user products.

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Information products

They will be directly derived from satellite RS data and will undergo, a yearly calibration and validation, by using verification/test sites data and appropriate tools and methodologies.

Two types of products are foreseen:

- Forest cross cutting products
- User dedicated basic products

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Data management and User access to data and products

Distribution of system functions

Distribution and type of archives

User access points

Etc….

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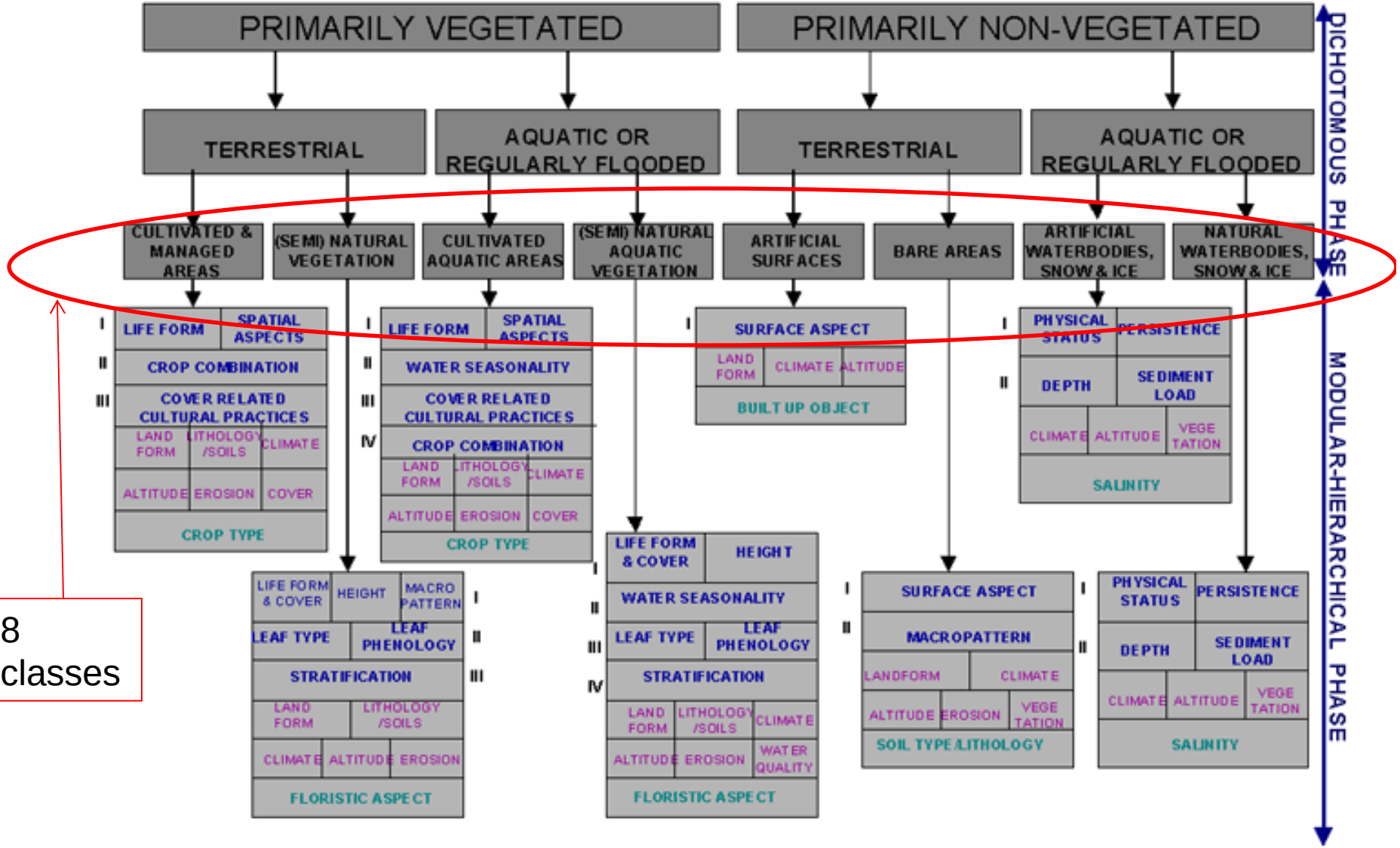
LCCS classifiers



8 classes

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Policies and Interoperability standards

- Data policy
  - Open access to observations, datasets and products
  - Free of charge or minimum cost (this may vary with respect to different user requests)
- Technical standards
  - Forest definition
  - Interoperability of different RS data in generating same information
  - Geometrical comparability and consistence of products

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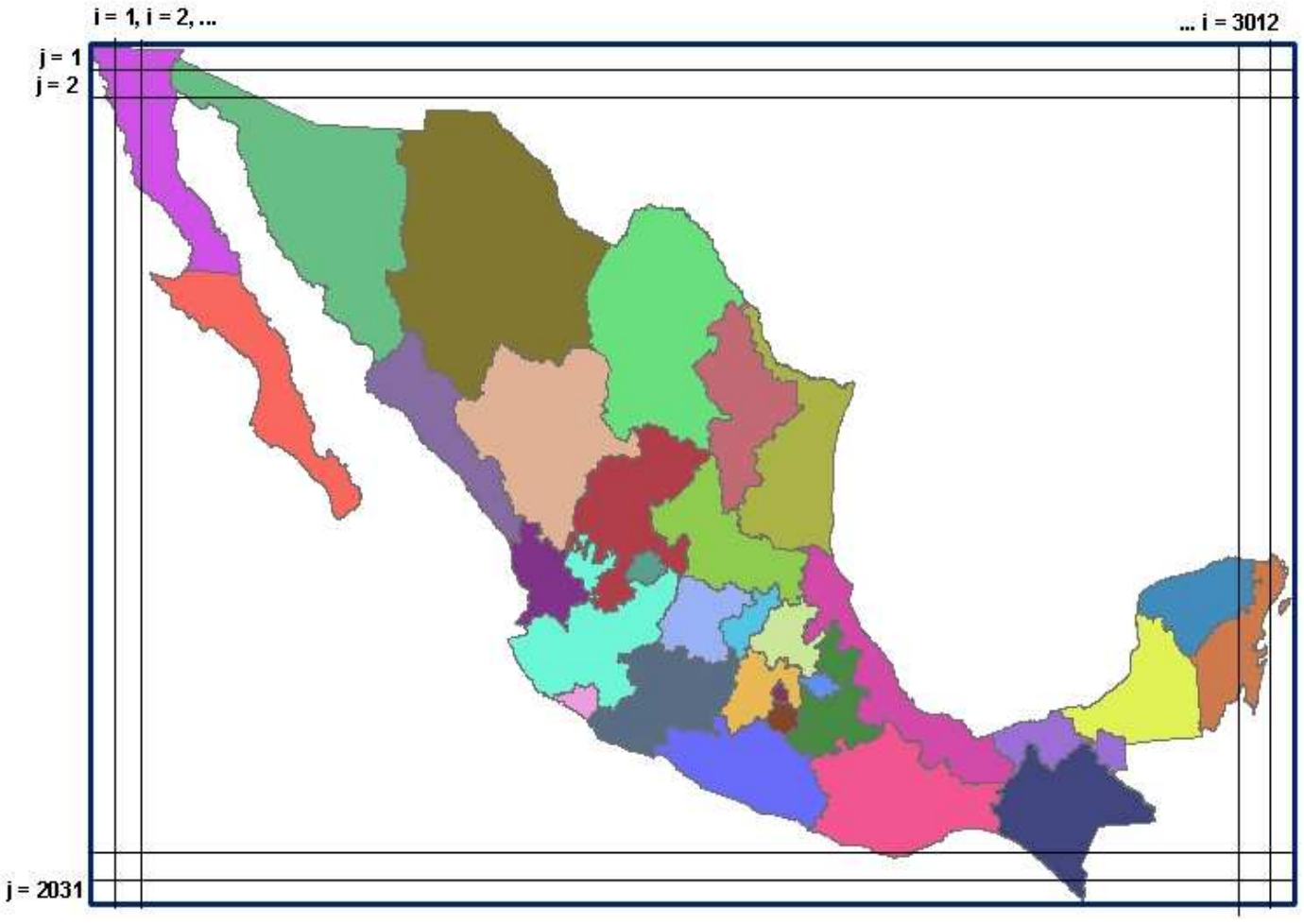
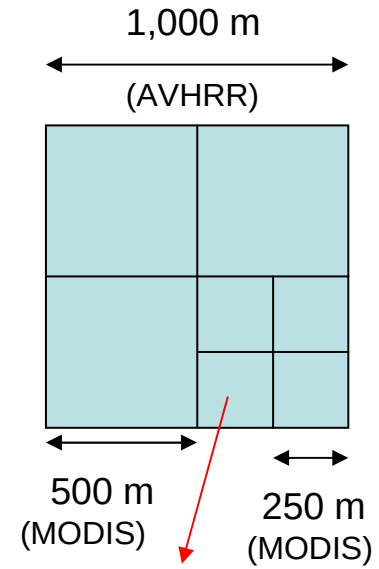
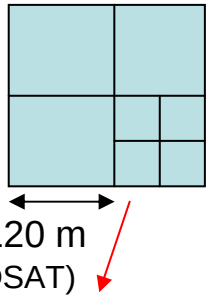
NATIONAL INTEGRATED MULTI-SCALE SYSTEM

(REMOTE SENSING AND *IN SITU* SAMPLING NETWORK)

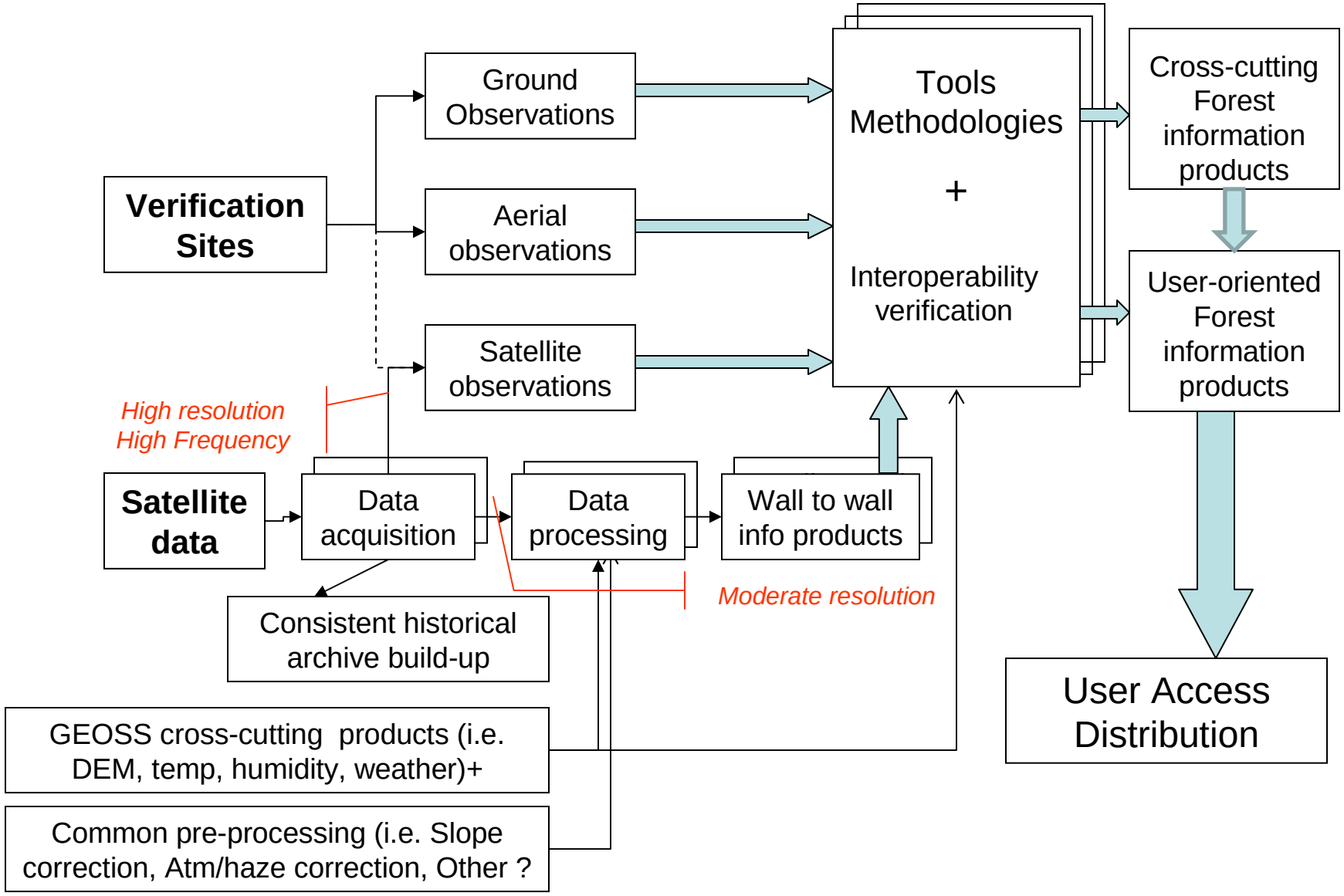






and so on till
2.5 m (SPOT)

GEOSS Forest Monitoring operational flow (notional)



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What is requested to each Breakout Groups

- Comment the proposed approach
- Characterize and identify, from each user community point of view, the main components of the OSS Monitoring System, starting from the definition of the final products
- Include these “customized” components in the proposed operational flow of the system
- Consider two types of Users (one Country and one International Organization) and develop the scenarios on how they will make use of the system (what data and products will they use), completing the simplified diagram with additional input data and final user products

The two last actions should result in a operational flow « tailored » to each User Group.

GEOSS Forest monitoring system
Simplified Operational flow
User involvement