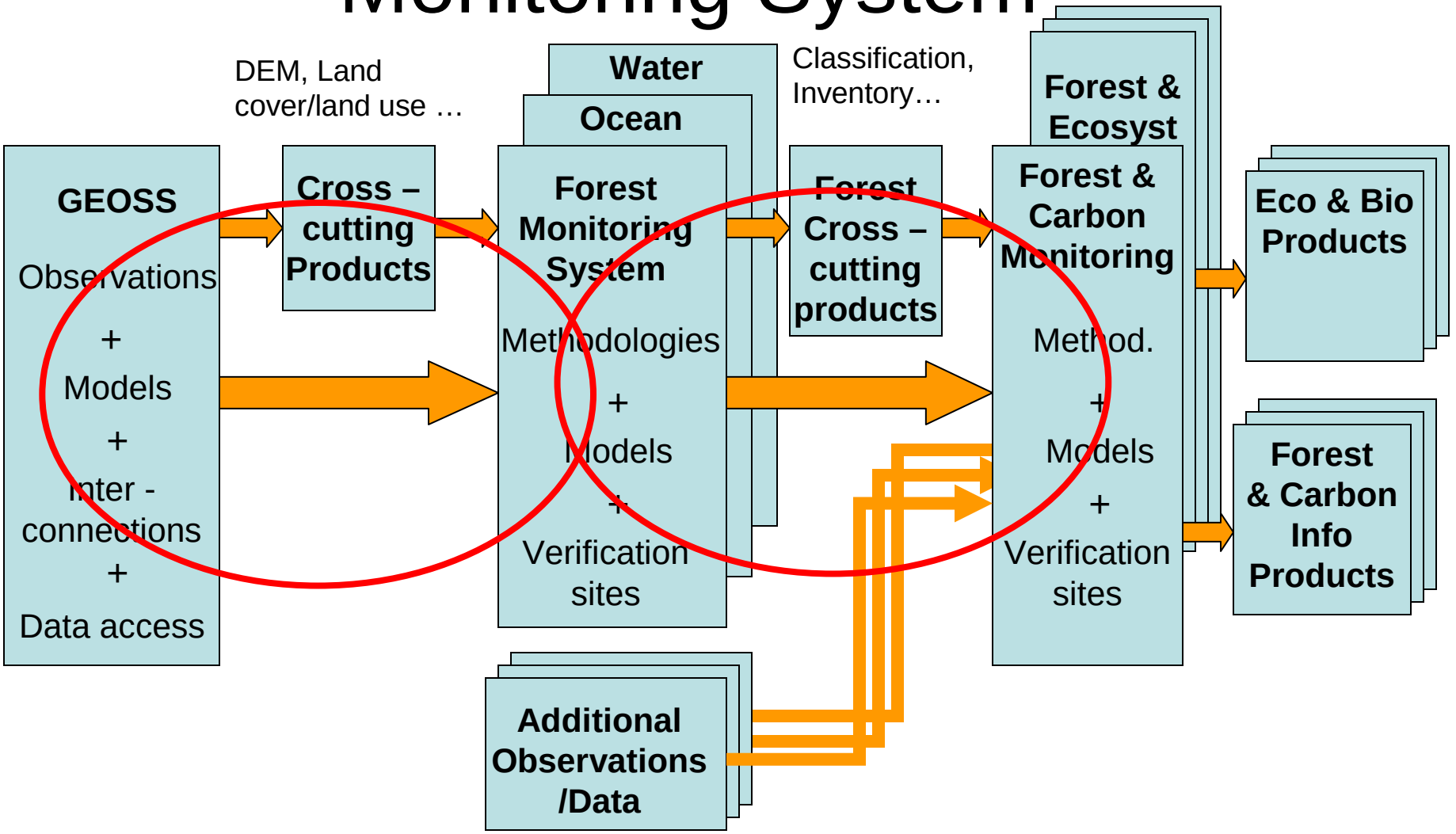
WG3

Forest and Land Cover Dynamics

1. Comment the proposed approach - system

- *Cross-cutting product = Common Multi-user Product?*
- Does a *Common Multi-user Product* mean users under many discipline areas?
- Flowchart *GEOSS and its Forest Monitoring System* should be further defined to improve clarity (e.g. the meaning of alternative flows “small and big arrows”)
- Can we expect that different sensors can provide products that fulfill the same technical standards?
- Validation/test sites in the GEOSS chart mean reference sites for method development and comparison? Common sites may not be applicable for statistical product validation (confidence interval estimation)

GEOSS and its Forest Monitoring System



1. Comment the proposed approach – observation systems

- Bi-annual coverage may be needed to capture the seasonal variation in certain regions (tropics)
- High and Very High resolution data over selected validation sites (monthly coverage) – is it feasible? Yes, in terms of satellite capacity
- Does GEOSS establish its own test site network or will existing be utilized? NO it builds on on-going activities of Members and Participating Organizations

1. Comment the proposed approach – data policy

- Good but which data the open data policy is referring to (also VHR data, for instance)?

1. Comment the proposed approach – Operational flow

- Can GEOSS provide data sharing functions also between the users (i.e. could the red arrows in the flowchart go in two directions)?

Certainly yes, also because many users are also providers. This concept should be taken into account when moving to the detailed definition.

2. Characterize and identify, from each user community point of view, the main components of the GEOSS Monitoring System, starting from the definition of the final products

Final products

Common Multiuser Products (= crosscutting forest products?)

- Forest/non-forest cover
  - Definition (commonly agreed forest definition; possibly varying regionally)
  - crown cover as a continuous variable (*)
- Main forest cover type
  - Definition (commonly agreed nomenclature; possibly varying regionally)
  - Review of existing classifications (Globcover, US products, GLC 2000…)
  - Height (SAR, Aster DEM, around 2015 NASA DESdyni mission with lidar and L-band InSAR http://desdyni.jpl.jasa.gov)

(*)So that can be made compatible with different current definitions of forest

2. Characterize and identify, from each user community point of view, the main components of the GEOSS Monitoring System, starting from the definition of the final products

Final products

Basic User-related products

- **Pre-processed and calibrated satellite data**
- Biomass (WG2)
- (Bio)diversity (WG1)
  - Fragmentation, patch size etc.
- Main forest cover type if a common nomenclature is not possible to achieve or feasible to attempt as a Common Product
- Disturbance
- Height
- Age/development stage

2. Characterize and identify, from each user community point of view, the main components of the GEOSS Monitoring System, starting from the definition of the final products

User communities

International

- Conventions (UNFCCC, RAMSAR)
- FAO, UNDP, World Bank, Asian Development Bank
- European Commission, ASEAN, SAARC…
- Academia, research institutes
- Private sector (forest industry, insurance…)
- NGO

National

- National governments, forest departments, environment agencies
- Academia, research institutes
- Private sector (forest industry, insurance…)
- NGO

2. Main System Components – Intl vs. ntnl

Actual components

Satellite observations

- Intl: mostly medium to low resolution, lower time frequency
- Ntnl: mostly high to medium, higher time frequency

Permanent validation/test sites

- Intl: few variables
- Ntnl: specific ecosystems, more variables measured

GEOSS cross-cutting datasets

- Similar needs intl and ntnl

Information products and associated product validation tools and methodologies

- Products different, tools and methodologies similar

Data management and User access to data and products

- Similar needs intl and ntnl

2. Main System Components – Intl vs. ntnl

Policies and Interoperability standards

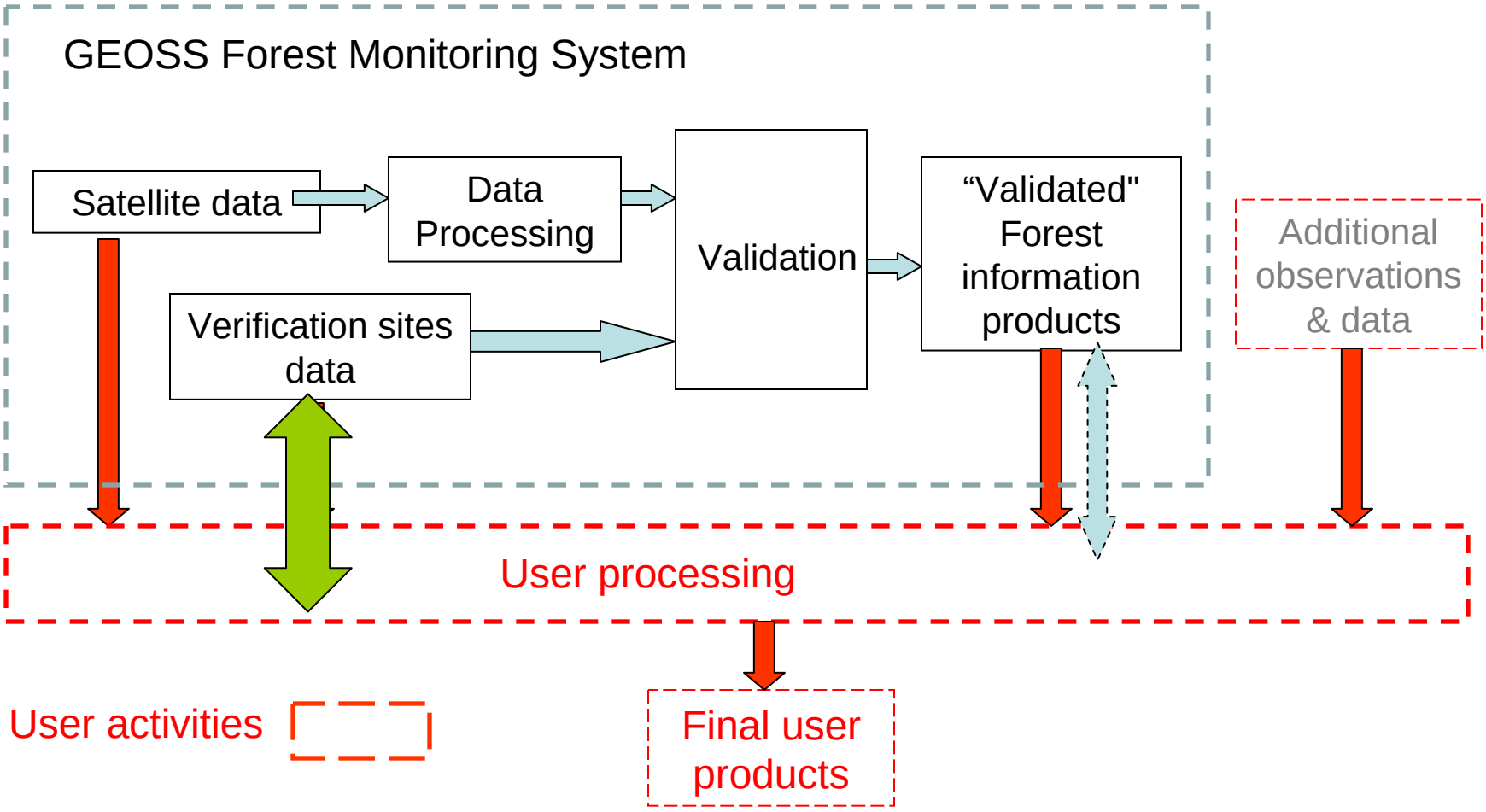
Data policy

- Similar needs intl and ntnl – open data policy free data or with nominal costs to users

Technical standards

- Similar needs intl and ntnl

3. Include these “customized” components in the proposed operational flow of the system



4. How candidate example users will use the system?

Example user: Intl

- FAO remote sensing survey could integrated to the GEOSS
- European Commission will use the information to support policy definition and implementation

Example user: National forest inventory

- Access to pre-processed optical and SAR data
- Cross cutting products like DEM, vegetation index products
- User-specific products can serve as the basic forest map and resource information for many countries.
- If products are annually available, number of users will increase
- Exceptional events such as natural disasters increase demand as well
- Some countries with longer tradition of forest inventories may be more interested in the satellite data products

General comment

- Although it was out of the scope of the WG3 it was felt that the actual implementation concept should be considered at an early stage of the definition of the monitoring system