

MRV Systems and Performance

Introduction to MRV systems

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REGIONAL WORKSHOP ON REDD+
MRV IMPLEMENTATION AND DRIVERS OF DEFORESTATION

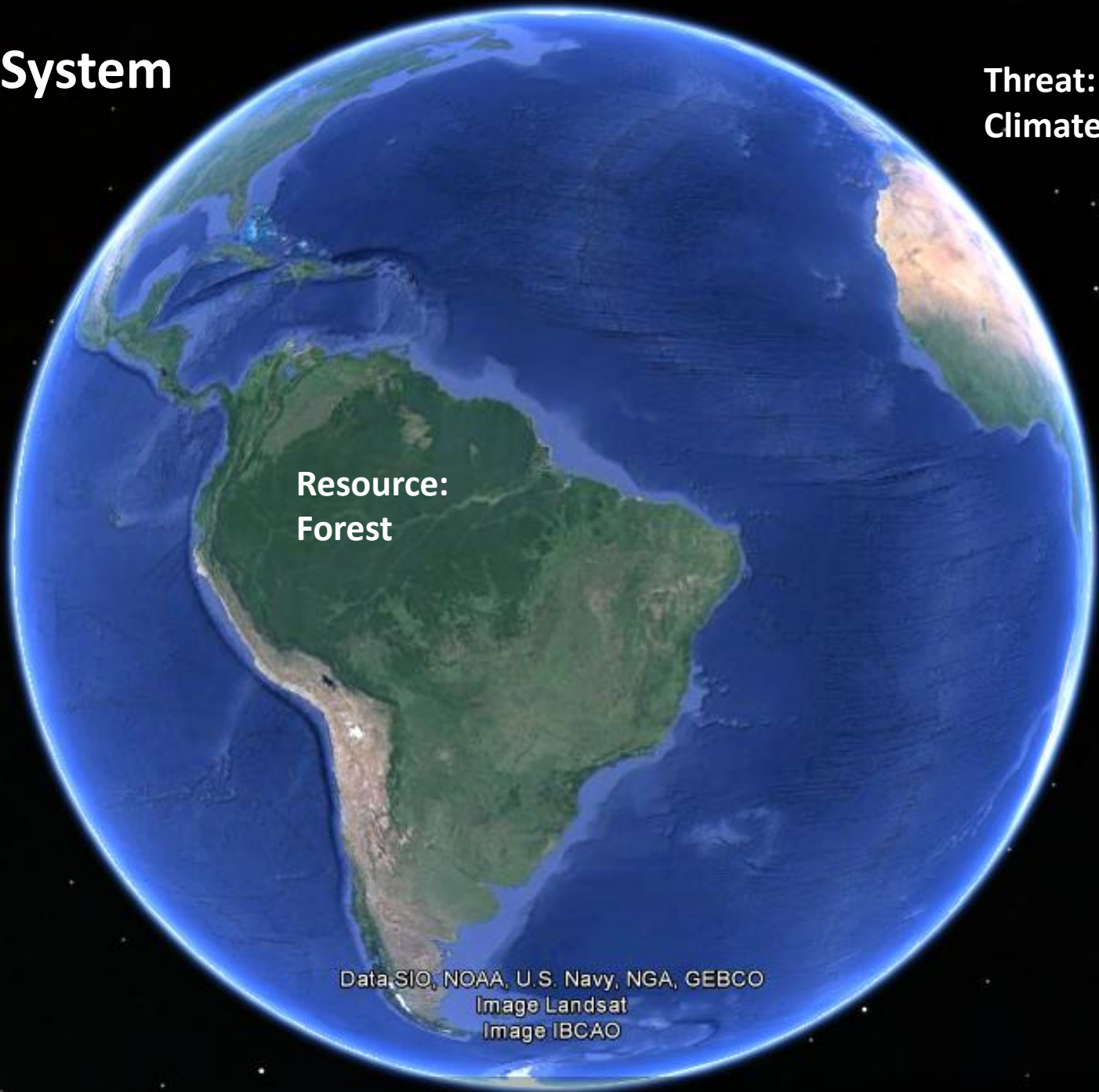
GEORGETOWN, GUYANA
5 DECEMBER 2013

Earth System

Threat:
Climate change

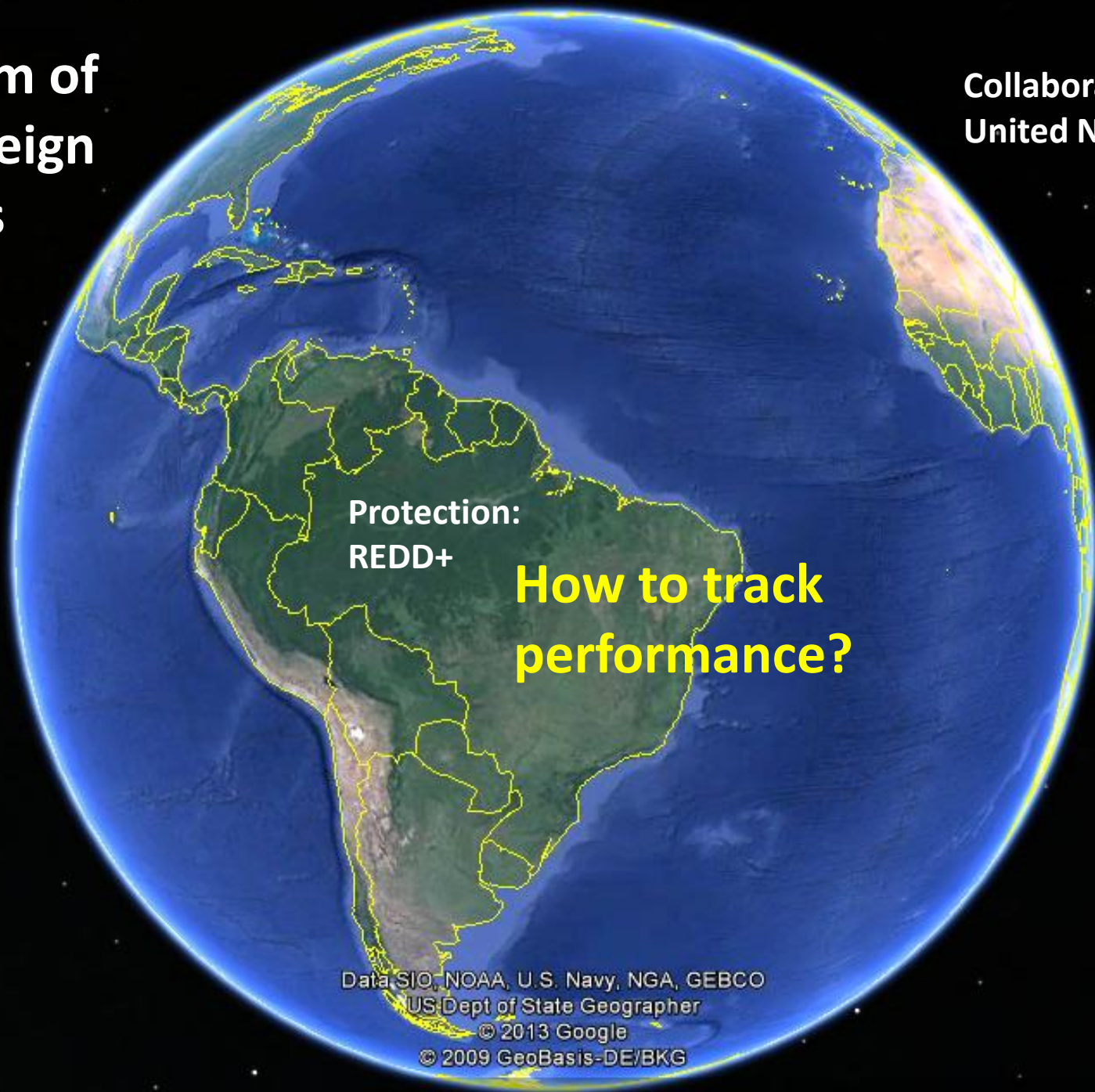
Resource:
Forest

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat
Image IBCAO

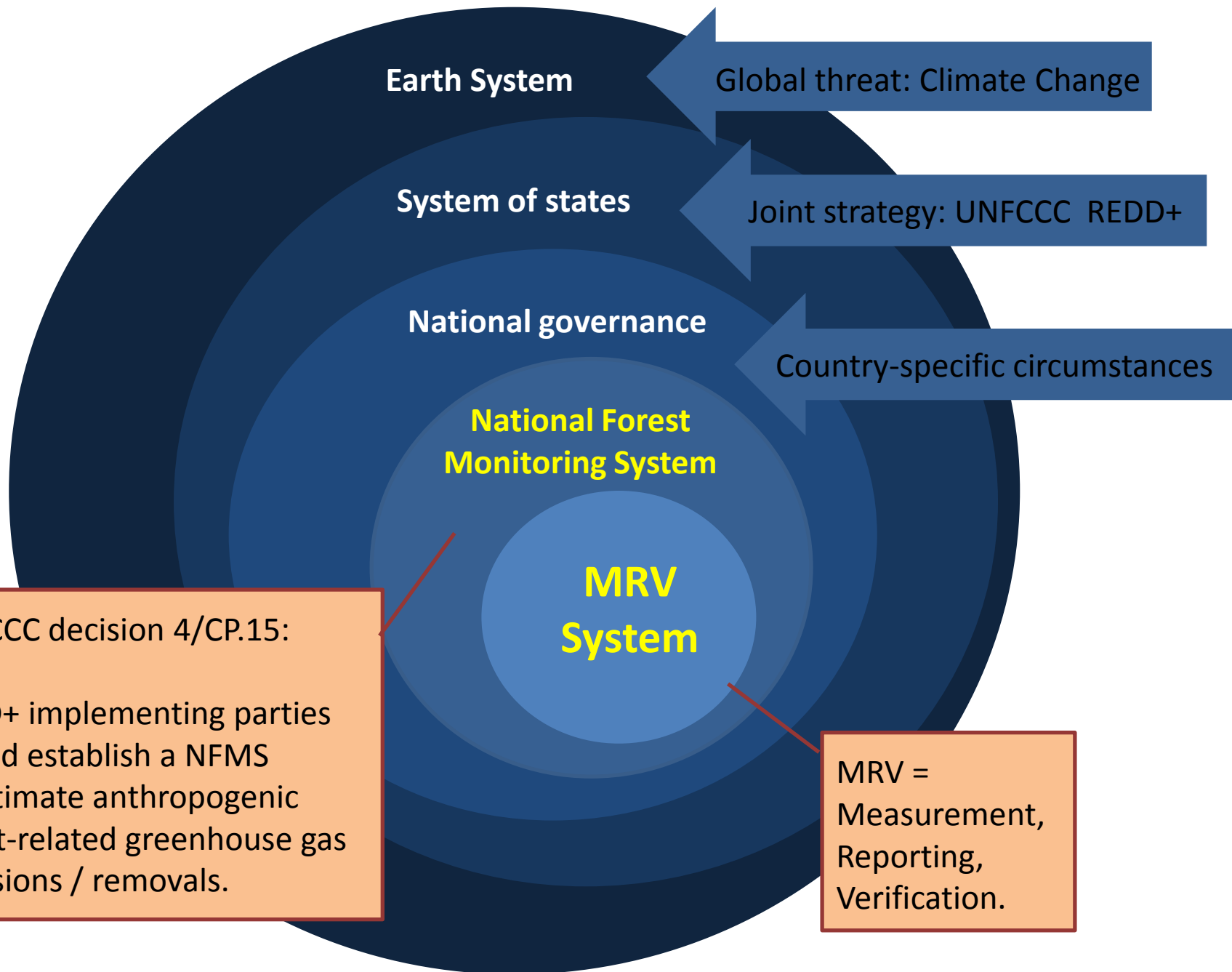


**System of
sovereign
states**

**Collaboration:
United Nations**



Data SIO, NOAA, U.S. Navy, NGA, GEBCO
US Dept of State Geographer
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Earth System

Global threat: Climate Change

System of states

Joint strategy: UNFCCC REDD+

National governance

Country-specific circumstances

National Forest
Monitoring System

MRV
System

UNFCCC decision 4/CP.15:

REDD+ implementing parties should establish a NFMS to estimate anthropogenic forest-related greenhouse gas emissions / removals.

MRV =
Measurement,
Reporting,
Verification.

M

- **Measurement:** Process of estimating or measuring the amount of carbon emitted or taken up as a direct result of human activities. Includes field measurements, remote sensing, and can include modelling.

R

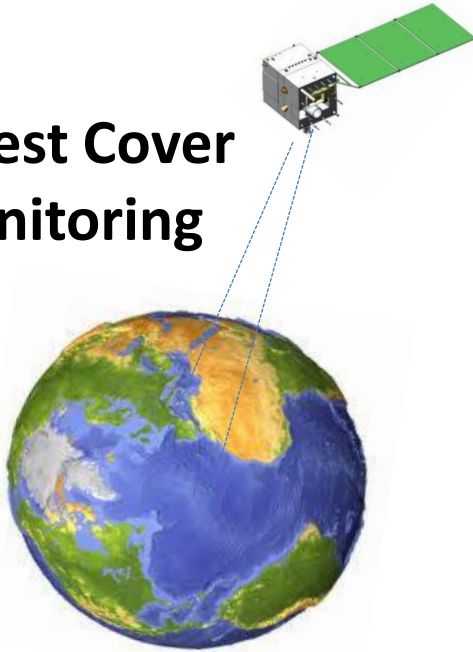
- **Reporting:** Compilation/publication of data resulting from measurement, and of information used for estimations. Specific requirements and guidelines are used to ensure that data are reported uniformly. Could be done through registries.

V

- **Verification:** Process of checking the accuracy/reliability of reported information, including the quality of the procedures or methodologies used to produce the information.

Measurement of GHG emissions and removals

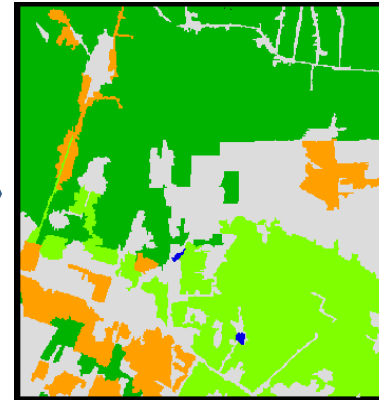
Forest Cover Monitoring



Satellite image interpretation



Forest cover change maps



UN-REDD
PROGRAMME

Activity Data on
land-use change

Carbon Stock Assessment

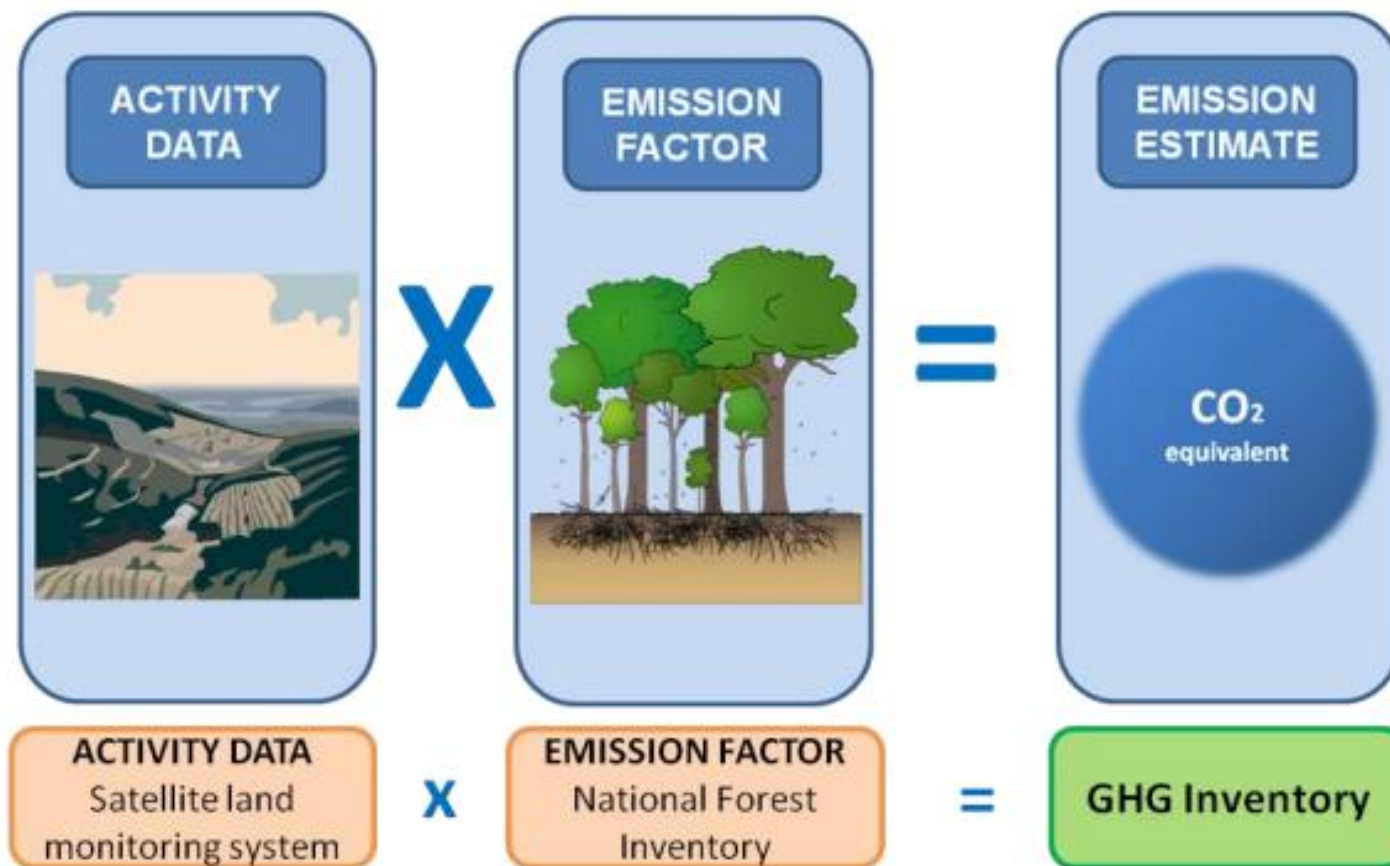


Forest inventory of carbon pools:

- Above ground biomass
- Below ground biomass
- Soil organic matter
- Dead wood
- Litter

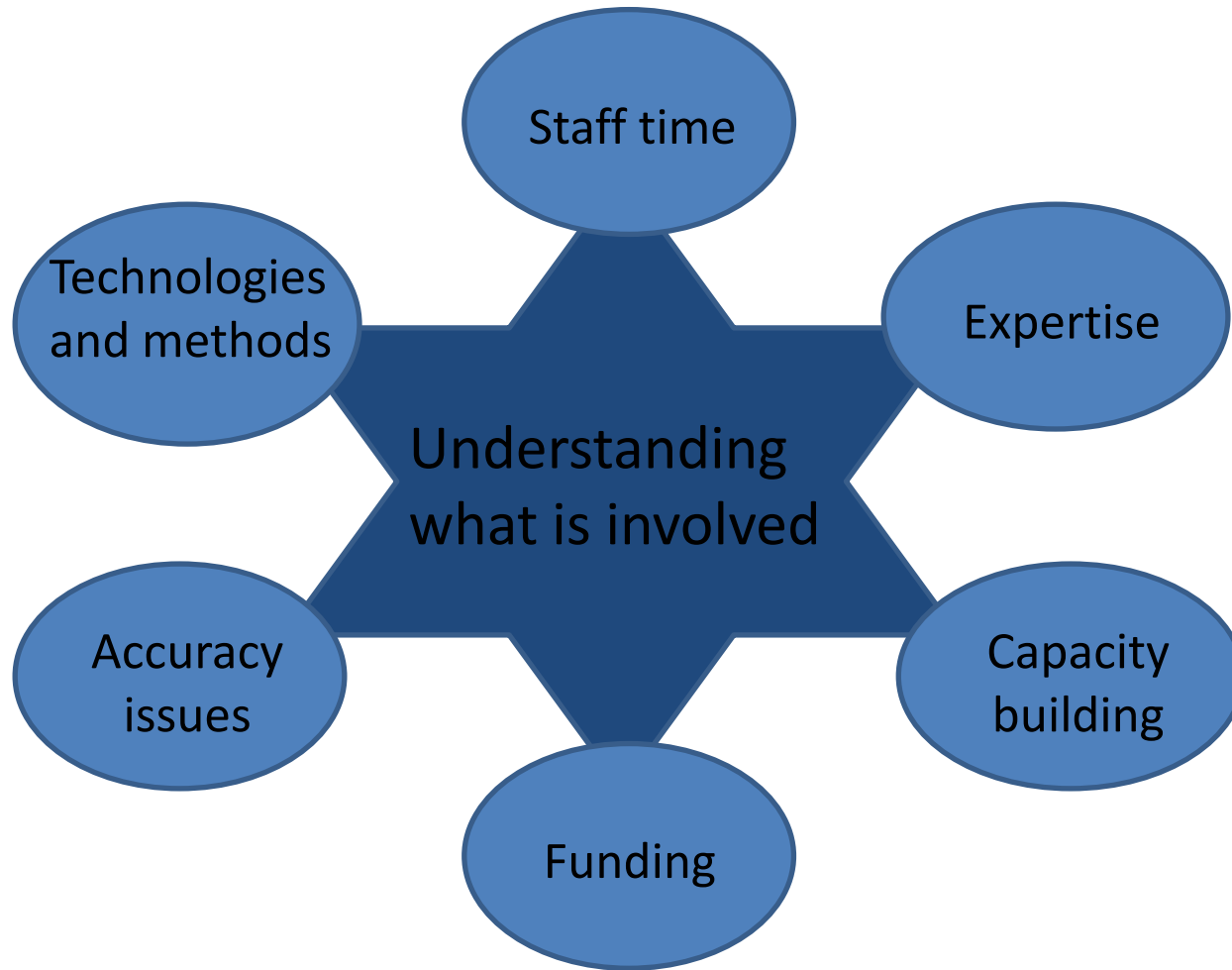
Emission Factors
IPCC values or field data

Measurement, Reporting, Verification



IPCC basic equation for estimating GHG emissions from land use related activities: **Emissions = AD x EF**

Planning and developing an MRV system



MRV objective: tracking REDD+ performance

HOW?

MRV needs to correspond with and satisfy decisions and recommendations by the UNFCCC Conference of the Parties.

What are the international requirements and obligations that we need to follow in terms of MRV?

MRV needs to be developed by each country in their own way in order to respond to national circumstances.

What works best in our specific context? How to ensure long-term capacity to support our MRV system?

International requirements

In general, countries should:

- Secure the cooperation of all stakeholders through the establishment of national arrangements
- Have a forest inventory and a land-use change analysis
- Be able to apply the IPCC Guidelines (from 2000, 2003 and GPG-LULUCF from 2006) in order to ensure the transparency, completeness, comparability, consistency and accuracy of their emissions and removals estimates
- Have in place appropriate quality assurance/quality control (QA/QC) procedures
- Be able to prepare domestically verified national reports
- Follow new decisions on MRV from UNFCCC COP in Warsaw

National choices

Some decision-factors to consider:

- Options for remote sensing technology to acquire and learn to use - trade-offs between cost and accuracy
- Methodology and level of detail in national forest inventory
- National versus sub-national accounting and how to link different levels
- Potential partnerships with donors, multilateral institutions, conservation organizations with different offers
- Suitable institutional arrangements for participation of all stakeholders
- National forest definition
- Measurement/monitoring frequency
- Wall-to-wall mapping versus focusing on hotspots for near real time monitoring
- Mapping classes, level of detail
- How to consider social and environmental safeguards

Keep in mind for the discussion:

How can this regional working group support MRV development and implementation in the Guiana Shield?

Some key resources for more information:

- Global Observation of Forest and Land Cover Dynamics (GOFC-GOLD): *MRV Sourcebook*
- UN-REDD 2013: *National Forest Monitoring Systems - M&MRV in the context of REDD+ activities*
- Forest Carbon, Markets and Communities (FCMC) 2013: *REDD+ MRV Manual*
- IPCC 2006: *Guidelines for National GHG Inventories*
- IPCC 2003: *Good Practice Guidance for Land-use, Land-use change and Forestry (LULUCF)*
- IPCC 2000: *Good Practice Guidance and uncertainty management for national GHG inventories*
- UNFCCC decisions on REDD+, National Forest Monitoring Systems, MRV
- REDD+ Community (reddcommunity.org)



Obrigada – Merci
Thank you for your attention

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