Providing production ready datasets that can be country owned

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with contributions by many ...

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Report to UN-GGIM at its recent 7th Session

- *22. … new data sources and new technologies for data collection will need to be explored … The integration of geospatial information and statistical data will be crucial for the production of a number of indicators*

- *26. … availability and application of geospatial information for the production of a specific indicator may require specialist capacities and expertise that many Member States may not have nor wish to replicate nationally … a modality to identify and partner institutions such as research institutions within its Academic Network as potential 'centers of excellence' to function as a dedicated data source for Member States to access*

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Why global geospatial datasets for national reporting?

- Fill existing national data and capacity gaps for estimation and reporting:
  - Detailed assessment on what is required versus what is available (in country, by indicator)
  - Identify priorities and develop a (national) roadmap for continuous improvement
  - Evolve capacities and create ownership
- Increase the efficiency for monitoring:
  - Reduce costs for annual updating
  - Focus on tracking key changes and trends (small change in big number issue)
  - Ensure consistency and sustainability of reporting 2015-2030

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Why global geospatial datasets for national reporting?

- Stimulate transparency and engagement:
  - Provide information to clarify what to do where and why (for implementation)
  - Use the power of open data to engage multiple stakeholders (local and global) and underpin transformational changes

- Compare and communicate "performance":
  - Global data as independent source or baseline (including data before 2015)
  - Comparisons to build confidence
  - Demonstrate and visualize successes

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Example: SDG indicator 9.1.1.

- Proportion of rural population who live within 2 km of an all-season road

- Data required: network of all season roads and distribution of rural population:
  - Various global road network data sources including Open Street Map (open source and regularly updated)
  - Global geospatial population datasets usually spatialize national censuses

- Country without any data might pick-up global data

- Need for data to provide changes (gain/loss of roads and population, spatially)

- Comparison and integration of multiple data sources

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Land Cover Data for Sustainable Dev. Goals

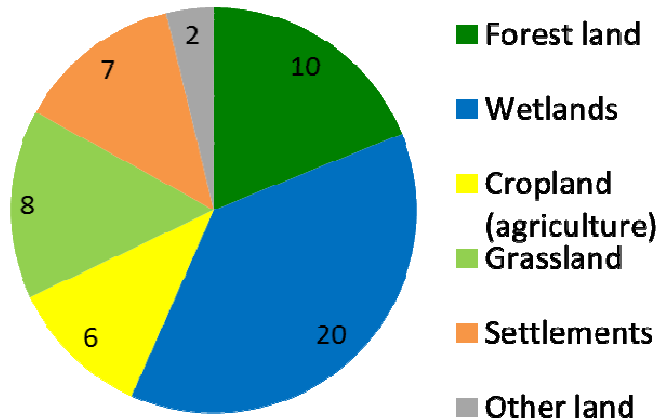| SDGs	Land Use data	Land Cover data	Land Cover Change data	Biomass data (AGB)	Fire data (Active fires, burnt areas)
Zero hunger	essential/complementary	Complementary			
Clean water	essential/complementary	essential/complementary	Essential		
Industry	Complementary				
Cities	Complementary	Complementary			
Consumption & production	Complementary	Complementary	Complementary		
Climate action					
Life below water	essential/complementary	essential/complementary	Essential		
Life on land	Essential	Essential	Essential	Essential	Essential

Importance of data for indicators in place to monitor targets/goals:

Essential	essential / complementary	Complementary	Not relevant

GOFC-GOLD SDG assessment: http://www.gofcgold.wur.nl/documents/newsletter/Sustainable_Development_Goals-infobrief.pdf
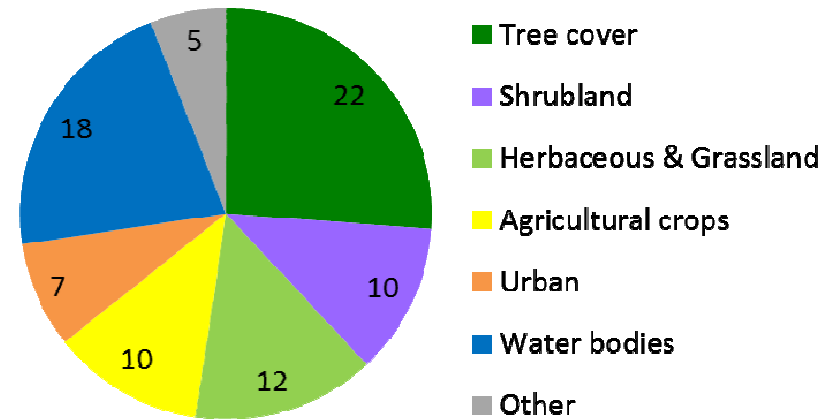
Data requirements for land sub-categories

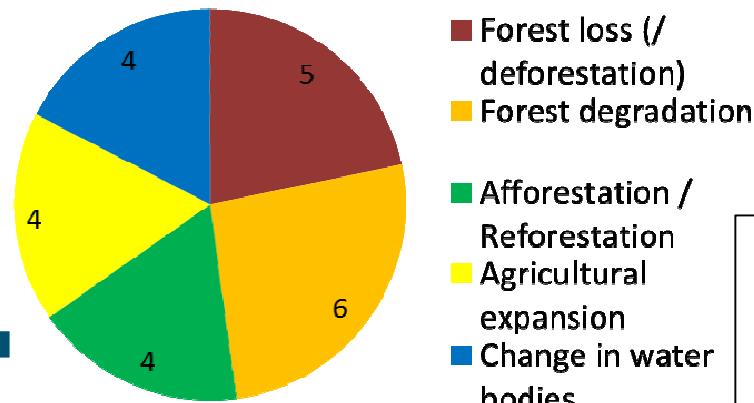LU / LC monitoring provides important data to monitor 8 goals, 29 targets, and 33 indicators

Land Use data

- Forest land — 10
- Wetlands — 20
- Cropland (agriculture) — 6
- Grassland — 8
- Settlements — 7
- Other land — 2

Land Cover data

- Tree cover — 22
- Shrubland — 10
- Herbaceous & Grassland — 12
- Agricultural crops — 10
- Urban — 7
- Water bodies — 18
- Other — 5

Land Cover Change data

- Forest loss (/ deforestation) — 5
- Forest degradation — 6
- Afforestation / Reforestation — 4
- Agricultural expansion — 4
- Change in water bodies — 4
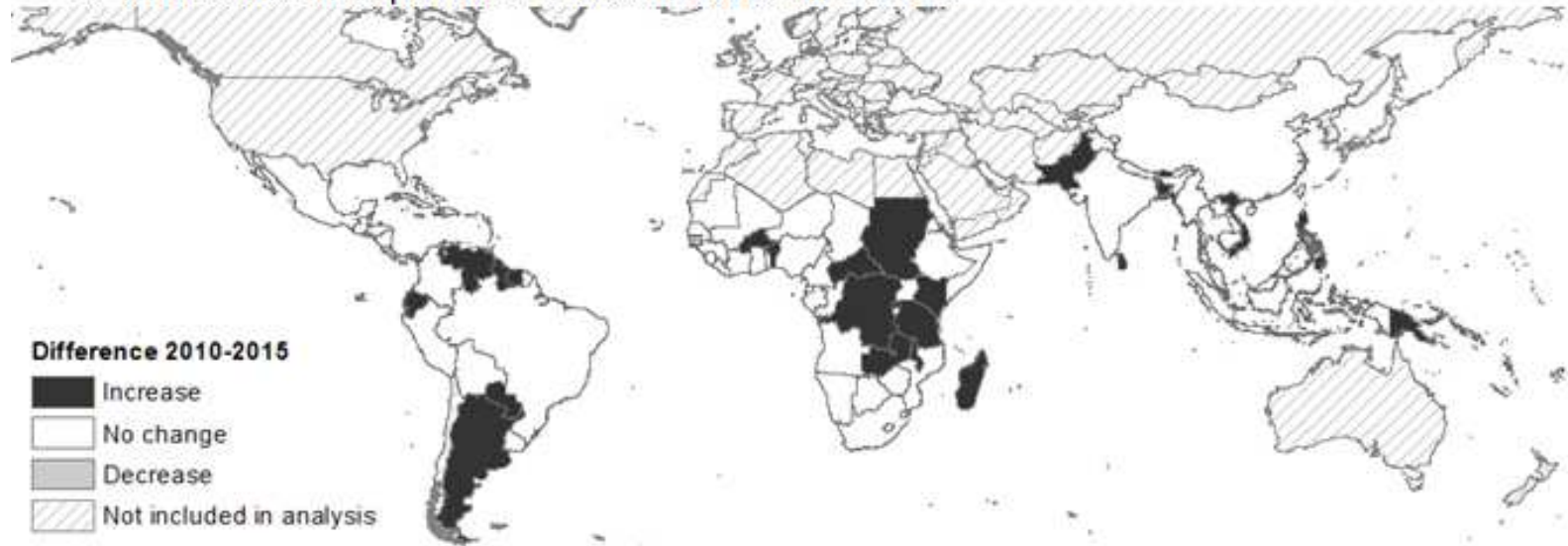
GOFC-GOLD SDG assessment:
http://www.gofcgold.wur.nl/documents/newsletter/Sustainable_Development_Goals-infobrief.pdf

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The numbers in the pie charts refer to the number of indicators for which the spatial data requirements apply.

a. Difference in capacities between 2005 and 2010

Difference 2005-2010
- Increase
- No change
- Decrease
- Not included in analysis

b. Difference in capacities between 2010 and 2015

Difference 2010-2015
- Increase
- No change
- Decrease
- Not included in analysis

Increase in forest area change monitoring capacities for FAO FRA 2015
(Source: Romijn et al. 2015, Forest Ecology & Management)

Successful mechanisms to integrate global datasets

- Sustained dialog for efforts address specific country needs
- Free and open satellite data
- Expert synthesis workshops, Good Practice Guidance docs, and training materials:
  - http://www.gofcgold.wur.nl/redd/training-materials/
- Various ways to uptake data:
  - Simple uptake of global datasets (rare)
  - As stratification for change assessments
  - Use of "analysis ready data" but own interpretation
  - Independent data source to improve national estimation
- Easy use of dense satellite time series and "big data analytics"

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Successful mechanisms to integrate global datasets

Closing remarks

- Why global geospatial datasets for national reporting?
  - Fill data/capacity gaps
  - Increase efficiency (focus on change/trends)
  - Stimulate transparency and engagement
  - Compare and communicate performance
- Ensured free and open satellite time series until 2030 at least (NASA/USGS, ESA/EC-Copernicus)
- Active and sustained dialog between countries and their needs, SDGs indicator developers and technical community
  - Address specific needs from varying circumstances
  - Refine requirements for global monitoring initiatives
  - Demonstrations and idea of "centers of excellence"

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