

# What makes a good indicator?

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## Presentation outline:

- What is an indicator?
- Uses of indicators?
- Successful indicators
- Potential indicators in forest inventories

### Examples:

- FAO manual
- Ecuador's Evaluación Nacional Forestal (National Forest Inventory)
- PGA





## What is an indicator?

*“A measure based on verifiable data that conveys information about more than itself”*



# What is an indicator? E.g. Forest area

*Net change in forest area over time could be an indicator of:*

- availability of forest resources
- progress in forest conservation
- intensity of threats to forest ecosystems
- investment in plantations
- change in soil cover and erosion
- change in forest carbon sequestration
- conservation status of forest-dependent species



## Uses of indicators?

As part of a REDD+ safeguard information system, providing regular information to the UNFCCC on how safeguards are being promoted and supported

To raise awareness of the social and environmental benefits that are besides carbon that are being gained through REDD+ activities.







## What is a successful indicator?

- **Scientifically valid** – theory of relationship between the indicator and its purpose (what change in the indicator means) + reliability of the data
- **Based on available data** – so the indicator can be produced over time (monitoring)
- **Responsive to change in the issue of interest**
- **Easily understandable** – conceptually and in its presentation and interpretation
- **Relevant to user's needs**
- **It is used!** (for measuring progress, early-warning, understanding an issue, awareness-raising, ...)



# Example Metrics (Indicators)

- Area of forest and other land cover (ha)
- Area by management actions (ha)
- Commercial volume of all live trees (m<sup>3</sup>)
- Biomass of standing dead trees (oven-dry tons)
- Aboveground carbon of all live trees (tons)
- Belowground carbon of all live trees (tons)
- Soil organic carbon (tons)
- Net change in total forest carbon (tons)



# Example:

- Objective: Carbon Stock & Flows
- Question: What is the current and net change in carbon by pool?
- Metrics:
  - Aboveground carbon of all live trees (tons)
  - Belowground carbon of all live trees (tons)
  - Carbon in down dead wood (tons)
  - Carbon in standing dead trees (tons)
  - Soil organic carbon (tons)
  - Carbon in litter (tons)





Example information collected as part of a forest inventory	Potential example use as an indicator as part of a Safeguard Information System
Plant species	The presence or absence of rare/ endangered/invasive/pest tree species could be used as an indicator of biodiversity or of forest quality
Household surveys	Could be used as source of indicators of pressure on forest resources/resource use trends/livelihoods
Indicator species or Species diversity	The presence or absence of certain insects/pests/diseases/invasive /threatened species or wildlife abundance could be used as in indicator of biodiversity or forest quality
Non-timber forest products (NTFPs) (Productos Forestales No Maderables (PFNM))	Presence or absence could be used as an indicator of access to forest resources or as the potential for enhancing local livelihoods
Land use and land cover	Could indicate conversion trends from one land use to another and the extent of the conversion process

## Example: Potential indicators in Ecuador's ENF

Ecuador's forest inventory methodology	Potential example use as an indicator as part of a Safeguard Information System
Suelo y regeneración: características del suelo y regeneración natural	Could be used as an indicator of forest quality/degradation
Datos de la Parcela: [...] Uso de la tierra, propietario, y perturbaciones y estado de la vegetación	Potential use as an indicator of conversion of forest to other land uses and pressure on the forest
Medición de arboles vivos, árboles muertos en pie y tocones	Any man-made stumps could be used as an indicator of disturbance/pressures
Productos Forestales No Maderables (PFNM)	Presence or absence could be used as an indicator of access to forest resources or for the potential for enhancing local livelihoods.
Desechos de madera caída y detritos no vivo: hojarasca y detritos no vivo, desechos de madera muerta	Potential indicator of forest health and quality/pest species or diseases

## Example: Participatory Governance Assessment tool – example federal indicators

<i>Criterion</i>	<b>Risks</b>	<b>Possible Safeguards</b>	<b>Possible indicators</b>
<b>1. Fiduciary &amp; fund management systems</b>	<ul style="list-style-type: none"> <li>-Dual system of land tenure: that is, statutory and customary tenure;</li> <li>-Poor land management plans;</li> <li>-Unclear boundaries and land fragmentation;</li> </ul>	<ul style="list-style-type: none"> <li>-Clarify rights of local communities to land and to carbon;</li> <li>-Improve land documentation and management procedures;</li> <li>-Establish clear boundaries between community lands and institutionally managed lands</li> </ul>	<ul style="list-style-type: none"> <li>-Extent to which the rights of local communities to land and to carbon is recognized;</li> <li>-Extent to which local communities benefit from their rights to land and to carbon;</li> </ul>

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**Thank You**

Website: <http://www.un-redd.org>

