Working group on forest health and vitality; protective functions and biodiversity

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A. Conservation of biodiversity

Facilitator: Robert Höft (CBD)

The definition of growing stock (standing volume) as there are confusion "international growing stock".

Report on frequency rather standing volume. Sampling methods and objectives may not capture biodiversity.

Ten most commercial tree species can also evaluate the vulnerability including over harvesting of those species, and also changing the structure of the forest.

Tree species composition

Collaboration with FRA for evaluation of forest biodiversity, in relation to forest depending species.

Actual variables; designated functions, total area with function for conservation of biodiversity, and composition of growing stock.

Thematic study forest area under protected area. This is mainly the management categories that can be contradictory.

Indicators that have been identified by CBD:

Trends in biomes ecosystems and habitats
(ecological zones, forest types (broadleaves, conifer, mixed, palms, bamboo characteristics)

Trends in abundance distribution
(list of tree species, volume composition)

Trends in status of threatened species
(# of threatened forest dwelling species identify from IUCN)

Trends in genetic diversity (in-situ, ex-situ, seed banks)
(thematic study)

Trends in protected areas
(there was an estimation, using area designated by conservation of biodiversity thematic study UICN classes, legally protected areas, on this needed)

Trends in connectivity fragmentation
(Remote sensing information on fragmentation)

Trends in alien sps
(Number and area)

Trends in area under sustainable management
(% of forest area under SFM)

Trends in wood volume
(% of forest area under SFM)

B. Forest health and vitality

Facilitator: Greg Reams (USA)

Currently, the information focuses on disturbances rather than on forest health, vitality and condition.
Possible variables related to health and vitality include defoliation, soil compaction, pollution deposition level, degradation, fragmentation, invasive species, level and composition of natural regeneration and recruitment.
Issues: ome of the "disturbances" are natural, some of the classes do not result in adverse effects. Some are secondary and it may be difficult to determine the primary agent.
The economic impact of disturbances can is very difficult to capture.

Disturbances:

- Keep the current categories.
- Sub-divide "other disturbances" into abiotic (under which weather-related disturbances) and biotic disturbances to facilitate analysis. For these, provide information on national subcategories.
- Include information on invasive species: Area affected and list the most important species.
- Include number of events (for weather and fire) and the extent affected.
- List the top five or ten insects and diseases and the species they affect.

Forest fires:
Suggest to use remote sensing (e.g. MODIS) to provide information on the number and extent of fires occurring in forested ecosystems at the regional and global level.
Include a thematic study on the economic value of various disturbances (case studies).
Include a thematic study on which variables have been used and could be used to provide information on forest health and vitality.

C. Protective functions of forest resources

Facilitator: Jagdish Kumar Rawat (India)

Most, if not all, forests have some protective functions. It may be possible to include information on areas of forests where soil and water conservation is a key objective (riparian forests, forests on steep hills, plantations established on sand dunes, to protect infrastructure, mangroves). Protective function of the forest against desertification.
Possible variables:

- Areas legally designated to protect water supplies, soil or infrastructure. (Include areas where harvesting restrictions are put in place)
- Forest areas where there is a contractual obligation or an informal agreement (not necessarily laid down in the law) to restrict harvesting in order to protect water supplies, soil and infrastructure.
- Area of forest where soil and water conservation is a key objective (riparian forests, forests on steep hills, plantations established on sand dunes, to protect infrastructure, mangroves)
- List of the type of forest areas (and estimated extent) where wood harvesting restrictions are put in place in order to protect water supplies, soil and infrastruc
  These variables are not adding up.

Thematic studies: include those variables that are not included in the actual FRA. Social aspects, mangroves, protection of biodiversity others.

Remote sensing: Forest cover and elevation level to identify the area of forest on steep hills, and in different forest areas (state and change of forest area).