



Overview of Methodology Sheets for Land, Agriculture, Forests and woodlands, and Biodiversity

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Land, Agriculture, Forests and woodlands, and Biodiversity (1)

- LAND

- Proportion of pop. with secure land tenure
 - FAO methodology; current focus on agricultural land; focus on rural and not national; no data
 - Current work on agricultural and rural statistics being carried out by FAO with a Friends of the Chair group led by Brazil
- Percentage distribution of land area by ownership rights
 - Changed title
 - FAO methodology; no data; what are the national practices?



Land, Agriculture, Forests and woodlands, and Biodiversity (2)

- LAND (cont.)
 - Land affected by desertification
 - FAO methodology which is currently under development; limited resources to collect/analyze satellite imagery
 - Land degradation
 - FAO methodology; theoretically possible but may be difficult in reality



Land, Agriculture, Forests and woodlands, and Biodiversity (3)

- LAND (cont.)
 - Proportion of land area affected by contamination
 - UK methodology – is it applicable?; are data available?; list of contaminated sites based on soil samples; based on industrial areas one can identify potentially contaminated sites; large scale mining activities (gold, copper) or oil refining – need to know list of industrial activities where hazardous waste is a problem
 - Land use change
 - FAO methodology; agricultural and forest land; problem is the data on the direction (from/to) of land use change



Land, Agriculture, Forests and woodlands, and Biodiversity (4)

- AGRICULTURE

- Agricultural Production Index

- FAO methodology; relevance of the indicator in an environmental indicator list; clear economic indicator about prices but nothing about food production; if it increases quickly it can be a pressure on the environment but it can also be related to price changes



Land, Agriculture, Forests and woodlands, and Biodiversity (5)

- AGRICULTURE (cont.)
 - Proportion of agricultural land area under irrigation
 - FAO methodology; what was actually irrigated and not about potential area; need also area equipped for irrigation and how much would need irrigation, so the 3 indicators together make more sense; tells you more about the pressure on water resources which is included in freshwater use according to ISIC in freshwater chapter



Land, Agriculture, Forests and woodlands, and Biodiversity (6)

- AGRICULTURE (cont.)
 - Use of agricultural pesticides
 - FAO methodology; FAO aware that one should look at each pesticide individually and not as aggregate as each one has different environmental effects; need to have a list of pesticides uses; it is apparent consumption not actual consumption which would require an annual survey of farmers



Land, Agriculture, Forests and woodlands, and Biodiversity (7)

- AGRICULTURE (cont.)
 - Number of reported cases of pesticide contamination
 - FAO methodology; clarify if it is occupational hazard or contamination of products e.g. food/soil; if it is occupational hazard then it does not belong here as you should then include any dangerous substance that people use; if there is a reporting system it could be okay



Land, Agriculture, Forests and woodlands, and Biodiversity (8)

- AGRICULTURE (cont.)
 - Use of fertilizers
 - FAO methodology; includes 3 fertilizers which are manufactured and does not include manure
 - Livestock pressure over carrying capacity
 - FAO methodology; the brief definition does not mention carrying capacity itself and it is currently about livestock density; is there an established carrying capacity in the countries?



Land, Agriculture, Forests and woodlands, and Biodiversity (9)

- FORESTS AND WOODLANDS
 - Proportion of land area covered by forest
 - FAO methodology; although a definition exists countries may have varying national definitions; FAO will be carrying out 2010 FRA
 - Proportion of forests damaged
 - FAO methodology; disturbances other than those listed?
 - Area of forest under sustainable forest management
 - FAO methodology; qualitative indicator; if there are sustainable forest management plans then it should be possible; definition of sustainable forest management is problem; FAO does not have data



Land, Agriculture, Forests and woodlands, and Biodiversity (10)

- FORESTS AND WOODLANDS (cont.)
 - Rate of afforestation/deforestation
 - FAO methodology; they are two indicators;
 - Proportion of exports of forestry products
 - FAO methodology; should be okay
 - Proportion of protected forest area to the total forest area
 - IUCN methodology; title of indicator should be changed to forest protected area; data may be available for the countries



Land, Agriculture, Forests and woodlands, and Biodiversity (11)

- BIODIVERSITY
 - Proportion of terrestrial area protected by ecological region
 - UNEP-WCMC methodology; indicator is okay
 - Number of wetland species, threatened and extinct
 - RAMSAR methodology; difficult to categorize what are wetland species



Land, Agriculture, Forests and woodlands, and Biodiversity (12)

- BIODIVERSITY (cont.)
 - Change in the area of wetlands
 - RAMSAR methodology; are area data available for all wetlands?; how do you measure change – the change can be seasonal or short-term due to climatic changes; the focus could be on land use changes, e.g. when wetlands are drained and used for agricultural cultivation
 - Number of Ramsar sites
 - RAMSAR methodology; need to check if all wetlands are Ramsar sites; include the area of the Ramsar sites



Land, Agriculture, Forests and woodlands, and Biodiversity (13)

- BIODIVERSITY (cont.)
 - Proportion of rehabilitated area of wetlands
 - RAMSAR methodology; are area data available for all wetlands?; data on rehabilitated areas may be available
 - Threatened plant species as a percentage of total known plant species
 - IUCN methodology; indicator is okay



Land, Agriculture, Forests and woodlands, and Biodiversity (14)

- BIODIVERSITY (cont.)
 - Threatened animal species as a percentage of total known animal species
 - IUCN methodology; indicator is okay
 - Proportion of species threatened with extinction
 - UNEP-WCMC methodology; definition is the opposite of the title of the indicator; although MDG indicator there are no data



Land, Agriculture, Forests and woodlands, and Biodiversity (15)

- **BIODIVERSITY (cont.)**
 - Abundance of selected key species
 - UNEP-WCMC methodology; indicator is okay if there are censuses of species; need a regional list of key species
 - Abundance of invasive alien species
 - Global Invasive Species Programme methodology; indicator is okay