



UNSD/UNEP QUESTIONNAIRE 2004 ON ENVIRONMENT STATISTICS

Section: LAND

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INTRODUCTION

The data collection is a joint activity between the United Nations Statistics Division (UNSD), Department of Economic and Social Affairs, and the United Nations Environment Programme (UNEP). It contributes to the development of the UNSD International Environment Statistics Database. The data will be analyzed and consolidated by UNSD for use in international work, in particular for UNEP's Global Environmental Outlook, and will be made available to countries, United Nations specialized agencies and other regional and international organizations, as well as to the general public.

This section deals with the long term trends in the distribution of land resources according to land use categories, as well as the extent of land degradation in terms of soil erosion, salinization and desertification.

The tables have been pre-filled with data received in the UNSD Questionnaire for Environment Statistics 2001, as well as with data from the Food and Agriculture Organization of the United Nations (FAO) and its Global Forest Resource Assessment (FRA). Please note that the sources of the pre-filled data have been assigned a source identification and that these are listed in the Data Source Reference Table.

The definitions are listed in order of appearance in the Definitions worksheet. The sources of definitions are indicated in the 'Description of Tables'. Some definitions have been amended by UNSD for the purposes of this questionnaire.

Changes to 2001 Questionnaire:

The soil erosion table (Table L2) has been simplified. It requests the total area affected by soil erosion separately according to categories of land use and categories of severity.

STEPS TO FOLLOW

For all the tables you are kindly asked to:

- Fill in the contact information at the top of each table.
- Check the pre-filled data and, if required, kindly update in the table. Please note that tables are pre-filled from three different sources and that the pre-filled data are sometimes contradictory. The source for the pre-filled data is coded in the second column after the data. The following data sources were used:
 - FAO statistical data (code 18) for all agricultural land and total categories, (all years) and for 'Forest and other wooded land' (up to 1990)
 - FAO Global Forest Resource Assessment (FRA) (code 48), for Land under forest (1990 and 2000)
 - UNSD Questionnaire 2001

If both FAO and UNSD2001 data were available, the pre-filling was done with FAO data.

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- Fill in the requested variables with data in accordance with the definitions provided (see the Definitions worksheet). If a different definition or methodology has been used, please explain the differences in a footnote (see below) or provide the definition and/or methodology applied in the supplementary information sheet (L5).
- If data are not available for the years stated in each table, please provide the data you might have for other years and add a footnote for the years to which the data apply.
- Use footnotes to give additional information on data. For this purpose, use the first column after the data for an alphabetical code, and write your explanatory text in the footnote text column, preceded by the code of the footnote. Check also pre-filled footnotes and correct them if necessary.
- Please distinguish between 'data is not available', in which case the field should be left blank, and 'data is zero', in which case the field should be filled with a "0".
- Please report data in the requested unit. A conversion matrix is provided.
- Please note that the exclamation mark in the first column of each table indicates high priority data for international work. In the event that complete data are not available from your country, please make efforts to submit data for those variables marked as priority.
- Please note that the use of indentation in the category column of each table indicates which variables are subsets and which variables are totals.
- Do not hesitate to attach any documents or reference which could help UNSD to interpret your data.
- Please deliver all suitable data you have available.
- If you have any questions, do not hesitate to contact Ulrich Wieland at UNSD, e-mail: wieland@un.org, tel. +1 917 367 4201, fax +1 212 963 0623.

DESCRIPTION OF TABLES

Table L1 aims to show the total area of land dedicated to particular uses. The definitions used in the Land section are predominantly sourced from the Standard International Statistical Classification for Land Use adopted by the United Nations Economic Commission for Europe (UNECE). The definitions of 'Forest' and 'Other wooded land' are sourced from the Global Forest Resources Assessment (FRA) published by the FAO.

Table L2 aims at showing the area affected by soil erosion for different types of land use. It also aims to show the area affected by soil erosion categorized by severity. The extent of soil erosion is covered by four categories described in the definition section. Please note that the categories of severity are exclusive. The four categories should therefore add up to the total area affected. The definitions categorizing the extent of soil erosion are sourced from the Global Assessment of Soil Degradation (GLASOD), which was developed by UNEP and FAO.

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If your country has a classification for the severity of soil erosion different to that applied in Table L2, please provide the data according to the national classification and give a detailed explanation of the system in the Supplementary Information Sheet (L5).

Table L3 is intended to gather information on the extent of land area affected by salinization. The 'Total area affected' should be an aggregation of the area affected by salinization upon each of the four land use categories listed in the table. The definition for 'Salinization' was developed by UNSD.

Table L4 requests data on the area affected by desertification. Again, the 'Total area affected' should be an aggregation of the area affected by desertification within each of the three climatic categories listed in the table. The definition for 'Desertification' is sourced from the Secretariat of the United Nations Convention to Combat Desertification (UNCCD).

If your country applies different classifications for salinization in Table L3 or desertification in Table L4, please provide the data according to the national classification and give a detailed explanation of the system in the Supplementary Information Sheet (L5).

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CONVERSION TABLE

Please convert units to Km², if required.

To Convert	To	Multiply by
Acre	Km ²	0.004046856
Ha	Km ²	0.01
Square Mile (Statute)	Km ²	2.58998811

DATA SOURCE REFERENCE TABLE

Source Identification	Source
"blank"	UNSD 2001 Questionnaire
18	Food and Agriculture Administration (FAO)
48	Global Forest Resources Assessment 2000 (FRA)

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	DEFINITIONS
Agricultural land	This refers to the major classes of land use on agricultural holdings. For classification the gross area is surveyed for each class. 'Agricultural land' includes land under scattered farm buildings, yards and their annexes, permanently uncultivated land, such as uncultivated patches, banks, footpaths, ditches, headlands and shoulders.
Arable land	This refers to all land generally under rotation whether for temporary crops or meadows, or left fallow. (Please note that land generally under rotation that is left fallow should be included under 'Arable land' and that land left fallow that is not generally under rotation should be included under 'Fallow and other agricultural land'.)
Land under permanent crops	This signifies land used for crops occupying it for a long period of time and which do not have to be planted for several years after each harvest. Land under trees and shrubs producing flowers, such as roses and jasmine, is so classified, as are nurseries (except those for forest trees, which should be classified under 'Forests and other wooded land'). Permanent meadows and pastures are excluded.
Land under permanent meadows and pastures	This means land used permanently (i.e., for five years and more) for herbaceous forage crops. Permanent meadows and pastures on which trees and shrubs are grown should be recorded under this heading only if the growing of forage crops is the most important use of the area. Measures may be taken to keep or increase productivity of the land (i.e. use of fertilizers, mowing or systematic grazing by domestic animals).
Fallow and other agricultural land	This includes all agricultural land, which is not specified elsewhere. Such land may be potentially productive or not. Included are scattered farm buildings, i.e. isolated buildings not belonging to closed villages or similar rural localities. Fallow agricultural land includes land not under rotation that is set at rest for a period of time ranging from one to five years. before it is cultivated again, or land usually under permanent crops, meadows or pastures which is not being used for that purpose for a period of one year. Arable land which is normally used for the cultivation of temporary crops, but which is temporarily used for grazing is included.
Forest	Land under forestry or no land use, spanning more than 0.005 km ² (0.5 hectares); with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds <i>in situ</i> . Please include mangroves and forests on wetlands according to the above height and canopy coverage.
Other wooded land	Land under forestry or no land use, spanning more than 0.005 km ² (0.5 hectares); with trees higher than 5 meters and a canopy cover of 5-10 percent, or trees able to reach these thresholds <i>in situ</i> ; or with a combined cover of shrubs, bushes and trees above 10 percent. Please include mangroves and forests on wetlands according to the above height and canopy coverage.

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	DEFINITIONS
Built-up and related land	Land under houses, roads, mines and quarries and any other facilities, including their auxiliary spaces, deliberately installed for the pursuit of human activities. Included are also certain types of open land (non-built-up land), which are closely related to these activities, such as waste tips, derelict land in built-up areas, junk yards, city parks and gardens, etc. Land occupied by scattered farm buildings, yards and their annexes is excluded. Land under closed villages or similar rural localities is included.
Wet open land	Non-wooded sites either partially, temporarily or permanently water-logged, the water of which may be fresh, brackish or saline, on blanket or raised peatlands. The water may be either stagnant or running, and is usually shallow, especially if it is saline.
Dry open land with special vegetation cover	Non-wooded land which is covered by low vegetation (less than 2 metres).
Open land without, or with insignificant, vegetation cover	Non-built up land the surface of which either is not covered at all by vegetation or scarcely covered by some vegetation, which precludes its inclusion in other categories of the classification.
Total land area	Total land area excluding area under inland or tidal water bodies.
Waters	This relates to the part of the national territory, which is covered by surface waters. The national territory is defined as the surface enclosed by all inland borders and, if applicable, the normal base-line (low-water mark) on the seaward side.
Total area of the country	Total area (of country) including area under inland water bodies, but excluding offshore territorial waters. (= Total land area + waters).
Soil erosion	Wind and water erosion (sheet, rill and gully) of soil can be measured as net loss and applied to one of four categories: light; moderate; strong; and extreme. Alternatively, erosion can be measured visually or derived on the basis of reduced productivity. These alternatives can also be applied to the same four categories.
Erosion - light	Terrain, with net annual soil loss that may or may not have somewhat reduced agricultural productivity, that is suitable for local farming systems. Restoration to full productivity is possible by modifications of the management systems. Original biotic functions are largely intact.
Erosion - moderate	Terrain not described in light erosion that has greatly reduced agricultural productivity, but is still suitable for use in local farming systems. Major improvements are required to restore productivity. Original biotic functions are partially destroyed.
Erosion - strong	Terrain is not reclaimable at farm level. Major investments - engineering works - are required for terrain restoration. Original biotic functions are largely destroyed.
Erosion - extreme	Terrain is unreclaimable and beyond restoration. Original biotic functions are fully destroyed.

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Salinization	The net increase in salt concentration in the top soil leading to declining productivity or biodiversity. Salinization can be a result of the clearing of native vegetation, the overuse of irrigation, or the evaporation of saline groundwater. If the country has developed a national classification for land affected by salinization, please provide the data according to the classification and give a detailed explanation of the system in the Supplementary Information Sheet (L5).
Total area affected (by salinization)	Sum over all four categories, i.e. 'Agricultural land', 'Forest and other wooded land', 'Dry open land with special vegetation cover' and 'Open land without, or with insignificant vegetation cover'.
Desertification	The process of land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors including climatic variations (e.g. drought) as well as direct and indirect human activities (e.g. overgrazing, intensive agricultural cultivation). Countries are asked to provide data according to the national definition of desertification. Please give the definition as well as the description of the methodology applied and possible national severity classification in the Supplementary Information Sheet (L5).
Total area affected (by desertification)	Sum over all three categories, i.e. dry sub-humid areas, semi-arid areas and arid areas.
Dry sub-humid areas	Dry sub-humid areas have a precipitation to potential evapotranspiration ratio of equal to or greater than 0.50 and less than 0.65, with highly seasonal rainfall regimes and less than 25 per cent interannual rainfall variability. Such areas are very susceptible to degradation, probably enhanced by the seasonality of rainfall, drought periods and the increasing intensity of human use.
Semi-arid areas:	Semi-arid areas have a precipitation to potential evapotranspiration ratio of equal to or greater than 0.20 and less than 0.50, with distinctly highly seasonal rainfall regimes and mean annual values up to 800 millimetres/year in summer rainfall areas and 500 millimetres/year in winter regimes. Interannual variability ranges between 25 per cent and 50 per cent, so despite the apparent suitability for grazing in semi-arid grasslands, this and sedentary agricultural activities are susceptible to seasonal and interannual moisture deficiency.
Arid areas	Arid areas have a precipitation to potential evapotranspiration ratio equal to or greater than 0.05 and less than 0.20, and mean annual precipitation values up to approximately 200 millimetres/year. Interannual variability is between 50 per cent and 100 per cent.

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Country: _____
Contact institution: _____

Contact person: _____
E-mail: _____

Tel: _____
Fax: _____

Table L1: Land Use

Priority	Category	Unit	1950*		1960*		1970*		1980*		1990*		2000*		2002*	
!	Agricultural land (1) = (2)+(3)+(4)+(5)	km ²														
	Arable land (2)	km ²														
	Land under permanent crops (3)	km ²														
	Land under permanent meadows and pastures (4)	km ²														
	Fallow and other agricultural land (5)	km ²														
!	Forest and other wooded land (6) = (7)+(8)	km ²														
	Land under forest (7)	km ²														
	Other wooded land (8)	km ²														
!	Built-up and related land (9)	km ²														
!	Wet open land (10)	km ²														
!	Dry open land with special vegetation cover (11)	km ²														
!	Open land without, or with insignificant, vegetation cover (12)	km ²														
!	Total land area (13) = (1)+(6)+(9)+(10)+(11)+ (12)	km ²														
!	Waters (14)	km ²														
!	Total area of the country (15) = (13)+(14)	km ²														

Notes:

*If data are not available for the years stated in each table, please provide the data you might have for other years and add a footnote for the years to which the data apply.

Footnotes

Code	Footnote text

Section: LAND

Country: _____
 Contact institution: _____

E-mail: _____
 Contact person: _____

Tel: _____
 Fax: _____

Table L2: Area Affected by Soil Erosion

Priority	Category	Unit	1980*			1990*			2000*			2002*		
	Light erosion (1)	km ²												
	Moderate erosion (2)	km ²												
	Strong erosion (3)	km ²												
	Extreme erosion (4)	km ²												
!	Total area affected by soil erosion (5) = (1)+(2)+(3)+(4)	km ²												
	<i>of which:</i> Agricultural land	km ²												
	Forest and other wooded land	km ²												
	Dry open land with special vegetation cover	km ²												
	Open land without, or with insignificant, vegetation cover	km ²												

Notes:

*If data are not available for the years stated in each table, please provide the data you might have for other years and add a footnote for the years to which the data apply.

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Table L3: Area Affected by Salinization

Priority	Category	Unit	1980*		1990*		2000*		2002*	
!	Total area affected (1) = (2)+(3)+(4)+(5)	km ²								
	Agricultural land (2)	km ²								
	Forest and other wooded land (3)	km ²								
	Dry open land with special vegetation cover (4)	km ²								
	Open land without, or with insignificant, vegetation cover (5)	km ²								

Notes:

*If data are not available for the years stated in each table, please provide the data you might have for other years and add a footnote for the years to which the data apply.

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Table L4: Area Affected by Desertification

Priority	Category	Unit	1980*		1990*		2000*		2002*	
!	Total area affected (1) = (2) + (3) + (4)	km ²								
	Dry sub-humid areas (2)	km ²								
	Semi-arid areas (3)	km ²								
	Arid areas (4)	km ²								

Notes:

*If data are not available for the years stated in each table, please provide the data you might have for other years and add a footnote for the years to which the data apply.

