



**United Nations Environment Programme
Regional Office for Latin America and the Caribbean**

PROGRAMA DE LAS NACIONES UNIDAS PARA EL MEDIO AMBIENTE
PROGRAMME DES NATIONS UNIES POUR L'ENVIRONNEMENT
PROGRAMA DAS NAÇÕES UNIDAS PARA O MEIO AMBIENTE

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the Environment of Latin America and the Caribbean**

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A. PREPARATORY MEETING OF EXPERTS
20TH TO 22ND NOVEMBER 2003

Environmental Statistics and Indicators Project of the Forum of Ministers of the Environment of Latin America and the Caribbean

I. Background

1. Information is the foundation of sustainable development and is a basic and essential ingredient for successful planning and decision making. Limited availability of environmental and sustainability data has hampered the priority setting and the planning and implementation of actions for sustainable development in Latin America and the Caribbean.

2. Having recognized the severe implication of this problem in the regional context, the Forum has made repeated requests to help bridge the data and indicators gap in the region. The Forum has decided:

- a) to establish a data and information system, based on the subsystems being designed in the region, including pertinent intraregional cooperation underway and the basic supply and capacities of each country in that regard (Tenth Meeting of the Forum, Argentina 1996);
- b) to develop environmental and sustainability indicators, both at the country and regional levels, and build national capacity for data and information management (Tenth Meeting of the Forum, Argentina 1996);
- c) to request the Inter Agency Technical Committee to contribute elements for developing a regional environmental vision that includes the selection of indicators (including geo referenced data), points of departure, quantitative goals and budgetary requirements, as part of a managerial information system to support decision-making (First Special Meeting of the Inter-Sessional Committee of the Forum, New York 1998);
- d) to request UNEP to continue the development of environmental databases and indicators to help countries of the region monitor progress towards sustainable development within the framework of the GEO, in collaboration with partner UN and regional agencies (Thirteenth Meeting of the Forum, Brazil 2001).
- e) To establish a new working group coordinated by Costa Rica on environmental indicators (Thirteenth Meeting of the Forum, Brazil 2001).

II. Project Summary

3. In an extraordinary meeting of the Forum of Ministers of Environment of Latin America and the Caribbean, held on the 31st of August 2001 in Johannesburg on the margins of the World Summit on Sustainable Development, the Latin American and Caribbean Initiative for Sustainable Development (ILAC) was approved. The Initiative sets out the position of the countries of the region with regard to the World Summit on Sustainable Development. The ILAC was developed in Sao Paulo Brazil in May 2002 and was subsequently incorporated into the Johannesburg Plan of Implementation. The ILAC also includes specific Guiding Goals and Indicative Purposes concerning indicators: "Develop and implement an assessment process to follow up the progress made towards attaining sustainable development objectives, including the results of the Johannesburg Plan of Implementation, adopting national and regional sustainability indicators that respond to the region's unique social, economic and political features." The

Environmental Statistics and Indicators Project of the Forum of Ministers uses the Guiding Goals and Indicative Purposes of the ILAC as a framework for its work.

4. The overall aim of the project is to produce a core set of environmental indicators (at the national level) to assess progress in the implementation of the Latin American and Caribbean Initiative for Sustainable Development (ILAC). The project will be implemented by Costa Rica, the focal country for indicators work designated by the Forum, the World Bank, UNEP and other partners. The project is in a direct response to a series of requests by the Forum of Ministers of the Environment of Latin America and the Caribbean (see paragraph 2 above).

5. The project is the follow-up to the initiative implemented by UNEP and the Government of Costa Rica, with support of the World Bank, in 2003. As part of the initiative a Meeting of the Group of Experts on Environmental Statistics and Indicators of the Forum of the Ministers of the Environment of Latin America and the Caribbean was organized in August 2003 where a suggested core set of indicators for ILAC accompanied by a common methodological sheet were identified (see below).

6. The main activities of the project are as follows:

- a) Foster the development of a core set of indicators approved by the Forum of Ministers which are readily available in the countries that can be used to measure progress towards the goals of the Latin American and Caribbean Initiative for Sustainable Development.
- b) Develop common methodologies to measure the variables and indicators in the core set in consultation with national experts.
- c) Initiate the development of a project to strengthen capacities and promote the collection and harmonization of statistics and indicators at the national level within the framework of the Forum of Ministers.
- d) Collect the national statistics and indicators and input them into a regional environmental information system that allows the Forum of Ministers to monitor progress towards achievement of the goals of the ILAC and other regional initiatives.

III. Proposal for the Forum of Ministers of Environment of LAC

7. The Forum of Ministers of the Environment of Latin America and the Caribbean is requested to review and decide upon the following:

Activity 1. Foster the development of a core set of indicators approved by the Forum of Ministers which are readily available in the countries that can be used to measure progress towards the goals of the Latin American and Caribbean Initiative for Sustainable Development

8. The Forum is requested to review and approve the matrix of core data and indicators as the basis for the project. The matrix is contained in Annex I. The variables and indicators in the matrix were proposed by experts from countries in the region as well as international organizations that participated in the Meeting on Environmental Statistics and Indicators of the Expert Group of the Forum of Ministers of Environment of Latin America and the Caribbean held in Costa Rica in August 2003. Once approved, the statistics and indicators will be collected at the national level using agreed upon

methodologies. The Ministries of Environment and Environmental Authorities will be the national focal points for this work and they in turn will work with their national statistics services to develop the variables and indicators.

Activity 2: Develop common methodologies to measure the variables and indicators in the core set in consultation with national experts

9. The Forum is requested to review and approve the methodology sheets as a basis for harmonising the methodologies used in the countries of the region in measuring the core set of ILAC variables and indicators. Sample methodology sheets are contained in Annex II. The methodology sheet format was reviewed and amended by experts from countries in the region as well as international organizations that participated in the Meeting on Environmental Statistics and Indicators of the Expert Group of the Forum of Ministers of Environment of Latin America and the Caribbean held in Costa Rica in August 2003.

Activity 3: Initiate the development of a project to strengthen capacities and promote the collection and harmonization of environmental variables and indicators at the national level within the framework of the Forum of Ministers

10. The Forum is requested to discuss the regional needs for increased capacity to collect and harmonize environmental variables and indicators at the national level and to put in motion the development and implementation of a project to strengthen capacities and promote the collection and harmonization of environmental variables and indicators at the national level within the framework of the Forum. The results of the project could include: a consolidated network of ILAC environmental statistics and indicators national focal points; a project proposal developed in consultation with the ILAC environmental statistics and indicators national focal points and key data and indicator partners in LAC; sub regional training workshops on the collection of primary data, data processing and management, the indicators use, and the development of an information monitoring system conducted with the participation of the ILAC environmental statistics and indicators national focal points.

Activity 4: Collect the national statistics and indicators and input them into a regional environmental information system that allows the Forum of Ministers to monitor progress towards achievement of the goals of the ILAC and other regional initiatives

11. The Forum is requested to provide guidance on the usefulness of a dataset and accompanying information tools at the regional level presenting all of the indicators and providing a regional vision of the progress towards the achievement of the goals of the ILAC. A sample ILAC indicators booklet using regional data is available at the Forum.

12. The Forum of Ministers is also requested to identify a focal point to work with UNEP and Costa Rica in the implementation of the above activities.

13. If approved by the Forum of Ministers and once completed, the project will result in: strengthened national capacities for the collection of data and harmonization of environmental variables and indicators within the ILAC framework; better monitoring of progress towards achieving the ILAC goals helping support regional decision-making, better integrated regional data and indicator initiatives, and streamlined environmental reporting in LAC.

Annexes

Annex I

Matrix of ILAC Indicators

| GUIDING GOALS / INDICATIVE PURPOSES | Indicator | Global or Regional Sources (to be replaced by national sources during the project) | Units | |
|-------------------------------------|--|---|---------------|-----------------------------|
| Biological Diversity | <i>Increase of forest area</i> Ensure the sustainable management of forest resources in the region, significantly reducing present deforestation rates. | Proportion of land area covered by forest ⁽¹⁾ | FAO | % |
| | <i>Territory included in protected areas</i> Increase significantly the territory in the region under protected area regimes and, when defining them, include buffer zones and biological corridors. | Protected areas as percentage of total land area ⁽¹⁾ | WCMC | % |
| | <i>Genetic Resources – Equitable Sharing of Benefits</i> Adopt regulatory frameworks for access to genetic resources, as well as for fair and equitable sharing of the benefits derived from their use, compatible with the Convention on Biological Diversity. | Existence of national laws related to access to genetic resources and benefit sharing | | (Yes/No) |
| | <i>Marine biodiversity</i> Ensure the conservation and proper use of the Caribbean Basin Countries' marine resources with particular emphasis on marine and coastal ecosystems. | Protected marine/coastal areas as percentage of total marine and coastal areas | WCMC | % |
| Water Resources Management | <i>Freshwater supply</i> Improve technology for more efficiency in water use in industry and agriculture and for domestic consumption | Water availability per capita | AQUASTAT, FAO | m ³ / per person |
| | ----- Introduce modern desalination technologies. | Water use Intensity | | M ³ / \$GDP |
| | ----- Integrate the management of coastal aquifers to avoid saline intrusion. | To be determined | | |
| | ----- | To be determined | | |

⁽¹⁾ Goal 7, Millennium Goals.

| GUIDING GOALS / INDICATIVE PURPOSES | Indicator | Global or Regional Sources (to be replaced by national sources during the project) | Units | |
|--|---|---|---------|------------------|
| | <p><i>Watershed management</i> Improve and strengthen institutional arrangements for the integrated management of water basins and aquifers, among other measures, by establishing water basin committees with the participation of all sub national levels of government, civil society, the private sector and all involved stakeholders.</p> | Percentage of managed watershed areas | | % |
| | <p><i>Management of marine and coastal areas and their resources</i> Implement national and regional action plans for the integrated management of coastal resources and coastal ecosystems, with particular attention to the Small Island Developing States.</p> | Fish extraction | FAO | Metric tons |
| | <p>Adopt a holistic and Integrated approach to the management of Caribbean Sea through the development of a comprehensive strategy for its protection and management</p> | To be determined | | |
| | <p>Better quality of inland waters Improve the quality of effluents and reduce the discharge of pollutants into surface water bodies, groundwater and coastal areas.</p> | Percentage of population with access to sanitation ⁽¹⁾ | PAHO | % |
| Vulnerability, human settlements and sustainable cities | <p><i>Land use planning</i> Implement land-use planning policies and plans from a sustainable development approach.</p> | Percentage of municipalities with zoning plans (territorial planning) implemented | | % |
| | <p>Incorporate risk management instruments in land-use planning.</p> | Land use change | FAO | |
| | <p>Areas affected by degradation processes Reduce significantly the areas of the region subject to erosion, salinization and other soil degradation processes.</p> | Percentage of degraded areas | FAO | % |
| | <p><i>Air pollution</i> Reduce the concentration in the air of polluting emissions.</p> | Change in density of motor vehicle fleet (unit per capita) | WB – CD | Units per capita |

| GUIDING GOALS / INDICATIVE PURPOSES | Indicator | Global or Regional Sources (to be replaced by national sources during the project) | Units | |
|---|--|---|-------|----------------------------|
| | <i>Water pollution</i> Increase coverage of drinking water services and wastewater treatment. | Percentage of population with access to safe water ⁽¹⁾ | PAHO | % |
| | | Percentage of population with access to sanitation ⁽¹⁾ | PAHO | % |
| | <i>Solid waste</i> Reduce significantly solid waste generation (domestic and industrial) and, among other measures, promote recycling and reuse. | Percentage of population with access to waste collection | | % |
| | Implement integrated management of solid wastes (domestic and industrial), including appropriate treatment and final disposal. | Waste collected and properly disposed | | ton/y/per capita |
| | <i>Vulnerability to anthropogenic disasters / natural phenomena:</i> Implement and strengthen regional risk management cooperation mechanisms to lessen the impact of anthropogenic disasters and those caused by natural phenomena, including setting up a regional early -warning system and forming immediate response groups. | Existence of national emergency commissions or immediate response groups | | |
| | <i>Vulnerability and risk management</i> Refine and apply vulnerability indicators Incorporate indicators into national development plans | To be determined To be determined | | |
| Social issues including health, inequity and poverty | <i>Health and environment</i> Implement policies and plans to reduce environmental risks that cause damage to health, in particular those transmitted by water, vectors, air pollution and exposure to chemical substances. | Morbidity rate attributable to acute respiratory diseases | PAHO | |
| | | Disability -Adjusted Life Year (DALY) lost from waterborne diseases | WHO | |
| | Implement comprehensive measures to control and reverse the spread of the HIV/AIDS pandemic including development of coordinated approaches to research education and treatment and access to retroviral pharmaceuticals | Morbidity of HIV/AIDS | PAHO | Number of cases registered |
| | Increase the proportion of green and healthy areas per inhabitant. | Hectares of green urban areas per urban population | | Hectares per capita |

| GUIDING GOALS / INDICATIVE PURPOSES | Indicator | Global or Regional Sources (to be replaced by national sources during the project) | Units | |
|--|---|---|-------|---------------------|
| | <i>Environment and job creation</i> Promote the formulation and implementation of sustainable development projects and programmes that will help to create jobs and avoid migration and displacement. | To be determined | | |
| | <i>Poverty and inequity</i> Reduce drastically poverty rates in the region's countries. | Proportion of population below US\$1 (PPP) per day ⁽²⁾ | WB | % |
| | <i>Create sustainable livelihoods by developing micro-enterprises.</i> | Rate of growth of No. of small businesses | | % |
| | Formulate and implement strategies for women, youth, indigenous peoples, people of African descent, migrants, disabled and other minority groups of the region in accordance with human rights and fundamental freedoms. | Social spending as percentage of Gross Domestic Product | | % |
| Economic issues, including competitiveness, trade and production and consumption patterns | <i>Energy</i> Increase renewable energy use in the region to at least 10% of its total energy consumption by the year 2010. | Percentage of energy consumed from renewable sources as total energy consumed | OLADE | % |
| | <i>Cleaner production</i> Install cleaner production centres in all the countries of the region | To be determined | | |
| | Incorporate the concept of cleaner production in a significant number of the main industries, with emphasis on small and medium-sized enterprises. | Number of companies ISO 14001 certified | ISO | Number of companies |
| | <i>Economic instruments</i> Establish a system of economic incentives for productive and industrial processing projects that will save natural resources and energy and eventually reduce the amount of effluents discharged into water, land and the air. | To be determined | | |

⁽²⁾ Goal 1, Millennium Goals

| GUIDING GOALS / INDICATIVE PURPOSES | Indicator | Global or Regional Sources (to be replaced by national sources during the project) | Units | |
|-------------------------------------|---|---|---------------|-------------|
| Institutional arrangements | <i>Environmental education</i> Improve and strengthen the incorporation of the environmental dimension into formal and non-formal education, the economy and society. | Total of environmental science teaching hours in primary education | | Total hours |
| | <i>Training and capacity building of human resources</i> Eradicate illiteracy and ensure universal enrolment in primary and secondary education | Net enrolment ratio in primary education ⁽³⁾ | UNESCO | % |
| | Build capacities to address vulnerabilities in the region | To be determined | | |
| | Establish, for the public and private sectors and for the community in general, programmes for capacity building in sustainable development management | To be determined | | |
| | <i>Evaluation and indicators</i> Develop and implement an assessment process to follow up the progress made towards attaining sustainable development objectives, including the results of the Johannesburg Plan, adopting national and regional sustainability indicators that respond to the region's unique social, economic and political features | State of the environment reports | UNEP UNEP | Yes / No |
| | <i>Participation of society</i> Create and strengthen participation mechanisms to deal with sustainable development issues, with representatives from government, non-government and major groups in all countries of the region. | Existence of national sustainable development councils | Earth Council | Yes / No |

⁽³⁾ Goal 3, Millennium Goals.

Annex II Sample Methodology Sheets

METHODOLOGICAL SHEETS Indicators ILAC

(The areas without shading correspond to which they must be filled to national level)

| Identification of the Variable/Indicator | |
|--|------------------------|
| Name: | Change in forest cover |
| Unit of measurement: | ha per year |
| Regularity: | Annual |
| Scale of Application: | Regional / National. |
| Last year with data available | 2003 |

| General Description | |
|------------------------|---|
| Definition: | Land with tree crown cover (or equivalent stocking level) of more than 10 percent and area of more than 0.5 hectares (ha). The trees should be able to reach a minimum height of 5 meters (m) at maturity in situ. May consist either of closed forest formations where trees of various stories and undergrowth cover a high proportion of the ground; or open forest formations with a continuous vegetation cover in which tree crown cover exceeds 10 percent. Young natural stands and all plantations established for forestry purposes which have yet to reach a crown density of 10 percent or tree height of 5 m are not included under forest, neither are areas normally forming part of the forest area which are temporarily unstocked as a result of human intervention or natural causes but which are expected to revert to forest. Includes: forest nurseries and seed orchards that constitute an integral part of the forest; forest roads, cleared tracts, firebreaks and other small open areas; forest in national parks, nature reserves and other protected areas such as those of specific scientific, historical, cultural or spiritual interest; windbreaks and shelterbelts of trees with an area of more than 0.5 ha and width of more than 20 m; plantations primarily used for forestry purposes, including rubberwood plantations and cork oak stands. Excludes: Land predominantly used for agricultural practices. (FAO – Forestry) |
| Method of Calculation: | <p>The change in the forest cover consists in the difference of the total forest area of an individual year x and another individual year $x + i$, over the amount of years between x and $x + i$</p> <p>Let A the total forest area in year x and B the total forest area in year $x + i$, therefore the average change in the forest cover per year is:</p> $\frac{A - B}{(x + i) - x}$ |
| Source of the data | |

| | |
|------------------------|---|
| Physics (Material): | Food and Agriculture Organization of the United Nations. Forestry |
| URL: | http://www.fao.org/forestry/index.jsp |
| Person in charge: | |
| Periodicity of Update: | Biannually |
| Interpretation: | |
| Format: | Temporal |
| Limitations: | |

Relevance for SiREA / ILAC

Purpose / Intention:

Subject: Biological Diversity

Subtheme: Increase of forest area

International agreements and conventions:

Goals/Standards:

General Comments for the Indicator

METHODOLOGICAL SHEETS 2
Indicators ILAC

(The areas without shading correspond to which they must be filled to national level)

| Identification of the Variable/Indicator | |
|--|---|
| Name: | Population with access to sanitation |
| Unit of measurement: | Percentage with respect to the total population |
| Regularity: | Annual. |
| Scale of Application: | Regional / National |
| Last year with data available | 1998 |

| General Description of the Indicator | |
|--------------------------------------|--|
| Definition: | <p>Proportion of population with access to a sanitary facility for human excreta disposal in the dwelling or immediate vicinity. (Blue Book).</p> <p>This indicator requires definitions for the following elements:</p> <p>i) Sanitary facility: A sanitary facility is a unit for disposal of human excreta which isolates faeces from contact with people, animals, crops and water sources. Suitable facilities range from simple but protected pit latrines to flush toilets with sewerage. All facilities, to be effective, must be correctly constructed and properly maintained.</p> <p>ii) Population covered: This includes the urban and rural population served by connections to public sewers; (pit privies, pour-flush latrines, septic tank, etc.)</p> |
| Method of Calculation: | This indicator may be calculated as follows: The numerator is the number of people with improved excreta -disposal facilities available multiplied by 100. The denominator is the total population (Blue Book) |
| Source of the data | |
| Physics (Material): | Pan American Health Organization |
| URL: | www.paho.org |
| Person in charge: | |
| Periodicity of Update: | Annually |
| Interpretation: | |
| Format: | Temporal |
| Limitations: | The availability of facilities does not always translate into their utilization. (Blue Book) |

Relevance for SiREA / ILAC

| | |
|---|--|
| Purpose / Intention: | To monitor progress in the accessibility of the population to sanitation facilities. This represents a basic indicator useful for assessing sustainable development, especially human health. Accessibility to adequate excreta disposal facilities is fundamental to decrease the faecal risk and the frequency of associated diseases. (Blue Book) |
| Subject: | Water Resources Management, Vulnerability, human settlements and sustainable cities |
| Subtheme: | Freshwater supply, Better quality of inland waters, Water pollution |
| International agreements and conventions: | Agenda 21 UNCED (1992) indicates the need for universal coverage and the Second World Water Forum and Ministerial Conference, The Hague, March 2000 established the target of universal coverage by the year 2025. (Blue Book) |
| Goals/Standards: | International targets for this indicator have been established under the auspices of the World Health Organization (WHO). The Vision 21 of the Water Supply and Sanitation Collaborative Council provides targets of 100% coverage by the year 2025. (Blue Book) |

General Comments for the Indicator

METHODOLOGICAL SHEETS
ILAC Indicators

(The areas without shading correspond to which they must be filled to national level)

| Identification of the Variable/Indicator | |
|--|---|
| Name: | Population with access to safe water |
| Unit of measurement: | Percentage with respect to the total population |
| Regularity: | Annual |
| Scale of Application: | Regional / National |
| Last year with data available | 1998 |

| General Description of the Indicator | |
|--------------------------------------|--|
| Definition: | <p>Proportion of population with access to an improved water source in a dwelling or located within a convenient distance from the user's dwelling to obtain the minimum amount of water defined. (Blue Book)</p> <p>This indicator requires definitions for the following elements:</p> <p>i) Population covered: This includes urban and rural population served by house connections, or without house connections but with reasonable access.</p> <p>ii) Reasonable access to water: In urban areas, a distance of not more than 200 metres from a house to a public stand post or any other adequate point source may be considered reasonable access. In rural areas, reasonable access implies that people do not have to spend a disproportionate part of the day fetching water for the household's needs.</p> <p>iii) Minimum amount of water: The amount of water needed to satisfy metabolic, hygienic, and domestic requirements. This is usually defined as twenty litres of safe water per person per day.</p> <p>iv) Safe water: The water does not contain biological or chemical agents at concentration levels directly detrimental to health. It is likely that treated surface waters, and water such as that from protected boreholes, springs, and sanitary wells are safe. Untreated surface waters, such as streams and lakes, should be considered safe only if the water quality is regularly monitored and considered acceptable by public health officials.</p> |
| Method of Calculation: | <p>This indicator may be calculated as follows: The numerator is the number of persons with access to an adequate amount of safe drinking water in a dwelling or located within a convenient distance from the user's dwelling multiplied by 100. The denominator is the total population. (Blue Book)</p> |
| Source of the data | |
| Physics (Material): | Pan American Health Organization |
| URL: | www.paho.org |
| Person in charge: | |

| | |
|------------------------|--|
| Periodicity of Update: | Annually |
| Interpretation: | |
| Format: | Temporal |
| Limitations: | The existence of a water outlet within reasonable distance is often used as a proxy for availability of safe water. The existence of a water outlet, however, is no guarantee in itself that water will always be available or safe, or that people always use such sources. (Blue Book) |

| | |
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| Relevance for SiREA / ILAC | |
| Purpose / Intention: | To monitor progress in the accessibility of the population to improved water sources. Accessibility to improved water sources is of fundamental significance to lowering the faecal risk and frequency of associated diseases. Its association with other socioeconomic characteristics, including education and income, which also makes it a good universal indicator of human development. When broken down by geographic (such as rural/urban zones), or social or economic criteria, it provides useful information on equity issues. (Blue Book) |
| Subject: | Water Resources Management, Vulnerability, human settlements and sustainable cities |
| Subtheme: | Freshwater supply, Water pollution |
| International agreements and conventions: | Agenda 21 of UNCED (1992) indicates the need for universal coverage and the Second World Water Forum and Ministerial Conference, The Hague, March 2000 established the target of universal coverage by the year 2025. (Blue Book) |
| Goals / Standards: | International targets for this indicator have been established under the auspices of the World Health Organization (WHO). The Vision 21 of the Water Supply and Sanitation Collaborative Council provides targets of 100% coverage by the year 2025. (Blue Book) |

| |
|------------------------------------|
| General Comments for the Indicator |
|------------------------------------|

METHODOLOGICAL SHEETS
Indicators ILAC

(The areas without shading correspond to which they must be filled to national level)

| Identification of the Indicator | |
|---------------------------------|-------------------------------|
| Name: | Protected areas |
| Unit of measurement: | Percentage of total land area |
| Regularity: | Annual |
| Scale of Application: | Regional / National |
| Last year with data available | 2003 |

| General Description | |
|---------------------|---|
| Definition: | <p>An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means. (IUCN)</p> <p>IUCN has defined a series of protected area management categories based on management objective. Definitions of these categories, and examples of each, are provided in Guidelines for Protected Area Management Categories (IUCN, 1994). The six categories are included as 'protected areas' to calculate this indicator are the followings:</p> <p>CATEGORY Ia: Strict Nature Reserve: protected area managed mainly for science</p> <p>Definition: Area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.</p> <p>CATEGORY Ib: Wilderness Area: protected area managed mainly for wilderness protection</p> <p>Definition: Large area of unmodified or slightly modified land, and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition.</p> <p>CATEGORY II: National Park: protected area managed mainly for ecosystem protection and recreation</p> <p>Definition: Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.</p> <p>CATEGORY III: Natural Monument: protected area managed mainly for conservation of specific natural features</p> |

| | |
|---|---|
| <p>Method of Calculation:</p> | <p>Definition: Area containing one, or more, specific natural or natural/cultural feature which is of outstanding or unique value because of its inherent rarity, representative or aesthetic qualities or cultural significance.</p> <p>CATEGORY IV: Habitat/Species Management Area: protected area managed mainly for conservation through management intervention</p> <p>Definition: Area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.</p> <p>CATEGORY V: Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation</p> <p>Definition: Area of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.</p> <p>CATEGORY VI: Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems</p> <p>Definition: Area containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.</p> <p>The usefulness of this indicator depends on clearly distinguishing totally protected areas and partially protected areas, since they have different, although complimentary, functions. Each requires a separate expression of the indicator as follows: Calculate the combined area of totally protected areas of 1000 ha. or more. Calculate the combined area of partially protected area regardless of size. Calculate the percentage of the total national territory occupied by each group. (Blue Book)</p> |
| <p>Source of the data</p> <p>Physics (Material):</p> <p>URL:</p> <p>Person in charge:</p> <p>Periodicity of Update:</p> | <p>UNEP-WCMC (UNEP World Conservation Monitoring Centre) 2002: GEO3 Protected Areas Snapshot</p> <p>quin.unep-wcmc.org/wdbpa/GEO3.cfm?</p> <p>Annually</p> |
| <p>Interpretation:</p> <p>Format:</p> | <p>Temporal</p> |
| <p>Limitations:</p> | <p>The indicator represents de jure not de facto protection. It does not indicate the quality of management or whether the areas are in fact protected from incompatible uses. It also gives a rather coarse picture of ecosystem protection. Additional detail would be needed to show the extent of disturbance of the ecosystem within each protected area, and coverage of rare or key ecological communities and habitats. (Blue Book)</p> |

Relevance for SiREA / ILAC

| | |
|---|---|
| Purpose / Intention: | <p>The indicator represents the extent to which areas important for conserving biodiversity, cultural heritage, scientific research (including baseline monitoring), recreation, natural resource maintenance, and other values, are protected from incompatible uses. It shows how much of each major ecosystem is dedicated to maintaining its diversity and integrity.</p> <p>Sustainable development depends on a sound environment, which in turn depends on ecosystem diversity. Protected areas are essential for maintaining ecosystem diversity, in conjunction with management of human impacts on the environment. (Blue Book)</p> |
| Subject: | Biological Diversity |
| Subtheme: | Territory included in protected areas |
| International agreements and conventions: | This indicator shows implementation of Article 8(a) of the Convention on Biological Diversity. (Blue Book) |
| Goals/Standards: | Recommendation 16 of the Fourth World Congress on National Parks and Protected Areas (Caracas, 1992) establishes a target of 10% protected area of each biome (major ecosystem type) by the year 2000 (McNeely 1993). (Blue Book) |

General Comments for the Indicator

METHODOLOGICAL SHEETS
Indicators ILAC

(The areas without shading correspond to which they must be filled to national level)

| Identification of the Variable / Indicator | |
|--|--|
| Name: | Land use change |
| Unit of measurement: | Proportion of change of each category of land use to another land use per unit of time (Blue Book) |
| Regularity: | Annual |
| Scale of Application: | International / National |
| Last year with data available | |

| General Description | |
|------------------------|---|
| Definition: | <p>Change with time of the distribution of land uses within a country.</p> <p>This indicator requires definitions for the following elements:</p> <p>Land use: Land use is characterized by the arrangements, activities and inputs people undertake in a certain land cover type to produce, change or maintain it. Land use defined in this way establishes a direct link between land cover and the actions of people in their environment. Not to be confused with land cover. A crop is not a land use. Recreation area is a land use term that may be applicable for different land cover types: for instance sandy surfaces like a beach, a built up area like a funfair, a forest, etc. (http://www.fao.org/sd/EIdirect/EIre0057.htm, September, 2003; FAO)</p> |
| Method of Calculation: | Land use change data can be derived from periodic mapping and monitoring, partly on the basis of land cover information; from remote sensing, supported by ground truthing; and the use of land use aspects from agricultural census. It is essential to use a uniform classification of land use and cover. |
| Source of the data | |
| Physics (Material): | Food and Agriculture Organization (FAO) |
| URL: | www.fao.org |
| Person in charge: | |
| Periodicity of Update: | |
| Interpretation: | |
| Format: | Temporal |
| Limitations: | |

| | |
|---|--|
| Relevance for SiREA / ILAC | |
| Purpose / Intention: | The purpose of this indicator is to highlight changes in the productive or protective use of the land resource to facilitate sustainable land use planning and policy development. |
| Subject: | Vulnerability human settlements and sustainable cities. |
| Subtheme: | Land use planning. |
| International agreements and conventions: | |
| Goals / Standards: | Generally, international targets for this indicator do not exist. However, certain minimal contiguous limits or proportions of total land area have been established for certain needed or desirable land uses, for example protected areas. |

General Comments for the Indicator

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