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**Report on the Latin American and  
Caribbean Initiative for  
Sustainable Development (ILAC):  
Five Years after it was adopted**



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## Introduction

*The document entitled “**Report on the Latin American and Caribbean Initiative for Sustainable Development (ILAC): Five Years after it was adopted**” is part of the documents of the Sixteenth Meeting of the Forum of Ministers of Environment of Latin America and the Caribbean that will take place in Santo Domingo, Dominican Republic, from Sunday 27<sup>th</sup> January to Friday 1<sup>st</sup> February 2008.*

*This report was prepared under the coordination of the Ministry of the Popular Power for the Environment from the Bolivarian Republic of Venezuela, whose Minister chairs the Forum of Ministers of Environment for Latin America and the Caribbean for the period 2006-2007, and, according to the guidelines developed by the United Nations Environment Program’s Regional Office for Latin America and the Caribbean (UNEP/ROLAC).*

*In response to the United Nations Environment Program’s request, the following countries provided information with regard to the follow up of ILAC with different degrees of coverage: Brazil, Cuba, Chile, Ecuador, El Salvador, Guatemala, Mexico, Panama, the Dominican Republic and the Bolivarian Republic of Venezuela. Their contributions are not fully reflected in this Draft Report, but will be included in the digital annexes of the Final Report.*

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## I. Background

1. During the five-year period that has elapsed since the adoption of the Latin American and Caribbean Initiative for Sustainable Development (ILAC), the Latin American and Caribbean Region has experienced an intense process of change with significant interactions between its development and the environment. Innovative research studies have strongly predicted the magnitude thus reached by the ecological changes and the impacts thereof.
2. Various environmental concerns have attained greater relevance, both due to their local, national, or regional repercussions, as well as due to the intensity in which there are being discussed in the global debate. In response, societies, governments and international organizations have revitalized their initiatives, granting a higher priority to the environmental issue. This renewed sense of urgency is giving rise to the evaluation of the pertinence of action agendas, and this is precisely the framework in which ILAC has been reviewed, after being in force for five years.
3. ILAC was approved on August 31<sup>st</sup>, 2002, during the First Extraordinary Meeting of the Forum of Ministers of Latin America and the Caribbean<sup>(1)</sup>, on occasion of the World Summit on Environment and Sustainable Development of Johannesburg. ILAC, which is part of the Implementation Plan adopted in the aforementioned Summit, was ratified during the Fourteenth<sup>(2)</sup> and the Fifteenth Meetings<sup>(3)</sup> of the Forum of Ministers of the Environment as the main instrument for the promotion of sustainable development within the Region.
4. The ILAC exhibited the will and capability of Latin American and Caribbean governments to update their common agenda in response to the process and to the commitments of the World Summit on Environment and Sustainable Development of Johannesburg, in accordance with the shared priorities of the Region and its meaning vis-à-vis the global issues that were dealt with during the Summit.
5. Jointly, with the United Nations Millennium Summit, from September 2000, and with diverse multilateral commitments, the ILAC developed a comprehensive agenda, which opened up a space for the then emerging subjects, as well as for those issues of more relevance and projection from the point of view of the environment and the sustainable development. The application of the aforementioned agenda has been fostered through the Regional Action Plans (RAPs) adopted by the Forum of Ministers. The RAPs from 2004–2005 and 2006–2007 have specified the regional priorities and lines of action identified by the Ministers of Environment with the support of the institutions that make up the Forum's Inter Agency Technical Committee (ITC).
6. The issues discussed at the Forum of Ministers, and which are included in the RAPs<sup>(4)</sup>, have been aligned with the discussions' program of the Sustainable

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<sup>(1)</sup> UNEP 2002.

<sup>(2)</sup> UNEP 2003.

<sup>(3)</sup> UNEP 2005

<sup>(4)</sup> The priority issues of the 2004-2005 and 2005-2006 RAPs have been the following: Access to genetic resources and fair distribution of benefits; Water resources; Human settlements, vulnerability, and land-use management;

Development Commission, and have reflected the areas in which the work of the ITC agencies is centered, but –above all– they provide a response to the main concerns shared by countries in function of the processes they face internally and in the global arena. Thanks to this, ILAC has maintained its validity, and is now acknowledged as a shared platform, the principles of which are considered in other intergovernmental spaces, such as the Ibero-American Forum of Ministers of Environment <sup>(5)</sup>, or in spaces of subregional coordination.

## II. Scopes of the Revision

**7.** The Initiative's follow-up and application are topics that have been present since the same of process of its formulation. In August 2003, an *“essential set of environmental statistics and indicators that allow to monitor the progress towards the goals established”*<sup>(6)</sup> was agreed upon. In addition, during the ITC meeting held on March 16 and 20 of 2007 in Caracas, Venezuela, a recommendation was issued to undertake an evaluation of ILAC five years after it was adopted, by analyzing its progresses and pending challenges, under the coordination of the the Forum's Chair and with the support of ITC's member agencies.

**8.** Besides presenting an appraisal of ILAC's main results according to the available indicators, the revision is expected to contribute to the identification of the priority action areas of the Forum during the period 2008-2009.

**9.** In accordance to the terms of reference set forth by the Forum's Chair, ILAC revision was performed, mostly, through the following two sources: the collection of the information supplied by the governments on the main national actions for the application of the Initiative, and second, the use of the aforementioned indicators, adopted to perform a follow up on the guiding goals and indicative purposes of ILAC. In addition, several reports and other publications of the ITC member agencies were taken into account, as well as some of their available data bases.

**10.** With respects to the main national actions for the application of the ILAC, the Secretariat of the Forum requested from the governments, the information relevant to the most recent or undergoing strategies or policies, related to the ILAC's priority areas.

**11.** Special efforts were undertaken to update and systematize information concerning the advances in the area of the public management of the sustainable development vis-à-vis improvements in the legislation, standardization, and direct regulation; the institutional and public organization reforms; the new and extended participation mechanisms and inclusion of key agents. Information was also requested concerning the recent actions or innovations in the policies' area, particularly, in relation to its programs and instruments and the innovative steps taken vis-à-vis the funding mechanisms or systems, including possible emblematic cases that depict the application of policies or programs in the priority subjects of ILAC.

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Renewable energy sources; Trade and environment; Economic instruments and fiscal policy; Climatic change, and Environmental indicators.

<sup>(5)</sup> SEGIB 2007.

<sup>(6)</sup> UNEP-World Bank-University of Costa Rica 2004: 3.



Figure 1. ILAC's General Structure						
I. Context						
II. Objectives						
III. Operative Guidelines						
a) On the positions adopted in Rio 1992				b) On the challenges of sustainable development in LAC		
IV Prioridades para la acción	A) Priority issues					
	B) Guiding Goals and Indicative Purposes					
	Area 1 Biologic Diversity	Area 2 Water Management	Area 3 Vulnerability, and sustainable cities	Area 4 Social Issues	Area 5 Economic Aspects and Energy	Area 6 Institutional Aspects
	With 25 guiding goals in:					
	1.1 Wooded Surface	2.1 Water Supply 2.2 Watershed Management	3.1 Land Use 3.2 Degradation 3.3 Air	4.1 Health 4.2 Employment	5.1 Energy 5.2 Cleaner Production	6.1 Education 6.2 Training
	1.2 Protected Areas	2.3 Marine- Coastal Management	3.4 Water 3.5 Solid Wastes	4.3 Poverty and Inequity	5.3 Economic Instruments	6.3 Evaluation
	1.3 Genetic Resources	2.4 Water Quality	3.6 Disasters 3.7 Vulnerability and Risks			6.4 Participation
1.4 Marine Diversity						
4 indicative purposes	7 indicative purposes	10 indicative purposes	7 indicative purposes	4 indicative purposes	6 indicative purposes	
ILAC Indicators						
<b>FORUM OF MINISTERS' REGIONAL ACTION PROGRAMS</b>						
1. Genetic Resources; 2. Water Resources; 3. Human Settlements; 4. Renewable Energies; 5. Trade and Environment; 6. Economic Instruments; 7. Climate Change and 8. Environmental Indicators						

**12.** Since a considerable portion of the indicative purposes and goals of ILAC pertain to the field of action from public entities different to the ones in charged of environment and natural resources, the answers concerning the request of the Technical Secretariat from the Forum of Ministers required an internal consultation from the governments which, in most cases, is still in process. The Technical Secretariat conveys, hereby, its appreciation to the government that provided a timely response, providing elements which will be of great value within the permanent evaluation process of the Initiative.

**13.** With respects to the revision of the indicators adopted for the follow-up of ILAC's guiding goals and indicative, the Working Group on Environmental Indicators (WGEI) updated the information available for the Region. A brief summary of this situation is presented in the pertaining section.

**14.** While ILAC is a political framework for cooperation, the exchange of experiences and information, the coordination, the identification of needs in different scales, and the positive results or weaknesses reported in this revision for the different subjects should not be, unequivocally or directly, attributed to the Initiative itself.

### III. Indicative Goals and Purposes

15. ILAC's goals, purposes and indicators are structured around the following six subjects: a) Biologic diversity, b) Management of water resources, c) Vulnerability, human settlements and sustainable cities, d) Social issues, including health, inequity, and poverty, e) Economic aspects, including competitiveness, trade and the patterns of production and consumption (energy), and f) Institutional aspects.

16. Although in a different order, these six subjects encompass the eight priority areas from the Regional Action Plan (Access to genetic resources and fair distribution of the benefits, Water resources, Human settlements, vulnerability and land use, Renewable energy sources, Trade and environment, Economic instruments and fiscal policy, Climatic Change, and Environmental indicators).

17. From the indicators, which have close information concerning the period of enforcement of the Initiative, we present hereunder the main value considerations vis-à-vis ILAC's indicative goals and purposes, taking into account –in as much as possible- the large subregional and national variability.

#### 1. Biological Diversity

18. Even though the reduction of the wooded areas seems to be slowing down (UNEP 2007), the annual loss of wooded surfaces in the Region during the period 2000 – 2005 was greater than the loss experienced during the period 1990 – 2000. In this first five-year period of the decade, the aforementioned annual loss amounted to 4,743 million hectares, while during the previous decade it reached the 4,494 million hectares every year.<sup>7</sup> As a consequence, the added rate of yearly decrease of the wooded surfaces in Latin America and the Caribbean (LAC) was even greater between 2000 and 2005 (-0.50 %), compared to the previous decade (-0.45). In the Caribbean Region, woods maintained, on the whole, a yearly increase of 0.92%.

Table 1.1. Extension and variation of the wooded surface							
Subregion	Surface (1,000 ha)			Yearly Variation (1,000 ha)		Yearly Variation Rate (%)	
	1990	2000	2005	1990- 2000	2000- 2005	1990- 2000	2000- 2005
	5,350	5,706	5,974	36	54	0.65	0.92
	96,655	89,377	86,649	-728	-546	-0.75	-0.61
	890,818	852,796	831,540	-3,802	-4 251	-0.44	-0.50
	992,823	947,879	924,163	-4,494	-4 743	-0.45	-0.50
	4,077,291	3,988,610	3,952,025	-8,868	-7 317	-0.22	-0.18

**Source:** built from FAO data 2007. The data from Mesoamerica pertains to the addition of Mexico (in table 33 from FAO 2007) to the data from Central America (of table 20 from FAO 2007, which in turn modifies the Latin American and Caribbean totals from the same table 20).

<sup>(7)</sup> FAO 2007.

**19.** The rate of the total surface covered by woods was also reduced, however, considerable subregional differences were observed. In Mesoamerica said rate went from 36.94% to 35.81%, and in South America it went from 48.46% to 47.24%, while the Caribbean region experienced an increase from 31.0 to 31.4 %, thanks to the improvement in three countries. Concerning the sizes the national territories, Mesoamerican countries continued heading the loss of wooded surfaces.

**20.** Even though Latin America and the Caribbean possess a relevant portion of the world's forests, their contribution to the world's deforestation is even more significant. Between the years 2000 and 2005, 65 out of the 100 hectares of forest that were lost in the world belonged to the Region (Ibidem), which puts into perspective the central importance of this target from ILAC.

**21.** The recent loss of wooded surfaces is still being mainly associated with the expansion of the agricultural borders, chiefly in Central America. The reduction of the areas under direct forest exploitation surpassed the two million hectares per year (Ibidem). Forest production, however, has maintained a positive performance due to improvements in productivity and to the progresses made in sustainable development, as well as in other practices such as certification and the development of plantations<sup>(8)</sup>. A recent report suggests that in some countries the decline of forest areas continues to be associated with the increase in livestock herds, in a process that, nonetheless, has differences vis-à-vis the ones of past decades: "The information available suggests that the classic pattern of enlargement of the pasture area for livestock exploitation purposes through land-clearing has been applied; However, unlike prior experiences, there is a simultaneous expansion of highly profitable agricultural activities such as soybean cultivation in Bolivia, Brazil, and Paraguay"<sup>(9)</sup>.

<b>Table 1.2. Protected natural areas % of the territory</b>				
	<b>Caribbean</b>	<b>Mesoamerica</b>	<b>South America</b>	<b>LAC*</b>
1996	5.2	17.1	19.2	17.8
1997	5.4	17.4	19.6	18.1
1998	5.4	17.7	20.5	19
1999	5.9	18	20.5	19
2000	6.3	18.5	20.8	19.2
2001	6.3	18.9	21	19.5
2002	6.4	18.9	21.1	19.5
2003	6.4	19	21.9	20.2
2004	6.4	19.4	22.1	20.4
2005	6.4	19.6	22.2	20.6

**Source:** UCMC. [www.unep-ucmc.org](http://www.unep-ucmc.org) Consulted from ILAC's Data Base.

**22.** The sustainable management of forest resources in the Region has registered achievements in some countries; however, as attested by the proofs, it still demands plenty of policy efforts, not only to put on brakes on the changes in the

<sup>(8)</sup> FAO 2004.

<sup>(9)</sup>ECLAC 2007c, p. 18.

land use, but also to improve the quality of the forests, prevent and fight against the forest fires and to protect the biodiversity. Encouraging the forest's productive functions still is a necessary task for the sustainable development due to its employment and income potential.

**23.** The compliance with the United Nations Pluriannual Work Program on Forests 2007-2015 (United Nations Forum on Forests 2007) will, without a doubt, be able to assist stopping deforestation and to improve the proportion of the surface covered by forests, thus obtaining one of the objectives linked to the Millennium Goals (Objective 7, "Guaranteeing the environment's sustainability", goal 9), which –up to now– is not yet on the path of being complied with <sup>(10)</sup>.

**24.** The surfaces of protected natural areas continued to grow between 2000 and 2005, even if the dimension of the improvements was not large enough so as to compensate for the losses in vegetal covering. During the present five-year period, the protected natural areas, under its various modalities, went from representing the 19.2% of the Region's territory to the 20.6%, with improvements in all the subregions. During said period, this change implied an additional 320.4 thousand kms<sup>2</sup> of protected areas.

**25.** In relation to this favorable change, seven countries that increased their protected areas in more than 1% of their national territory stand out, which represented a noteworthy effort. For other countries with very restricted possibilities of soil availability due to their high population density, additions of less than a 1% of their territory also implied a great effort. In a wide range, a total of 12 countries increased the area under preservation.

**26.** The heterogeneity of the region in relation to the proportion of the surface devoted to preservation is highly noteworthy, which does not necessarily reflect the priority given to this goal. At any rate, the increase of the protected areas in most of the countries is facing a stage of inertia, which can be explained by several factors, ranking from the availability of the soil to property related issues.

**27.** Nevertheless, the fact that improvements to the surface devoted to preservation were accomplished at a time in which the agricultural border was being increased once again, after its stagnation during the eighties, can be acknowledged as significant. From 1993 to 2003, the surface harvested in the Region grew by almost 24 million hectares, an average of a 22% for the whole Latin America and the Caribbean, mainly due to the growth of oil seeds, for which 70 out of each 100 of the new cultivated hectares were devoted, mostly in South America. The exception concerning the increase of the agricultural surface in the area has been the Caribbean <sup>(11)</sup>.

**28.** In their role as protectors of biological diversity, suppliers of multiple environmental services, and generators of sustainable development options for the local population, and not only due to their quantitative growth, more emphasis is increasingly granted to the quality of the management of protected areas. The advances in the management of protected areas were acknowledged in the

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<sup>(10)</sup> United Nations 2007.

<sup>(11)</sup> FAO 2004.

Declaration of Bariloche, as were the national and regional efforts to improve the preservation strategies (Declaration de Bariloche). However, the threats have also been recognized. The latter not only arise from the change in the use of the soil, but also from the overexploitation of mining and energy resources, the contamination, the construction of infrastructure, the forest fires, the disorganized tourist expansion, the meteorological threats, and the illegal trafficking of species among other problems. Furthermore, the insufficient human and financial resources for the operation and surveillance, the lack of management plans or programs, the inadequate institutional arrangements, and the low priorities sometimes granted to the subject, have been pointed out as big problems, both amidst the threat as in the preservation management <sup>(12)</sup>.

**29.** On the other hand, the ecological representativeness of the areas under preservation, the quality of the protection, the continuity and connectivity of the ecosystems in corridors, the monitoring and evaluation, the diversification of options with the private, and non-governmental sectors and the local government, among other aspects, are increasingly the center of attention, care, and sustainable use of biodiversity <sup>(13)</sup>. These factors, especially the fragmentation of ecosystems, a bioregional perspective and strategies at a continental<sup>(14)</sup> scale will become increasingly relevant in the face of the perspective that such economic, demographic, and other type of existing pressures intensify in the years to come.

**30.** The protection of the ecosystems will become even more relevant according to the measure in which the vulnerability intensifies, since the environmental services will become increasingly critical for the society: "The protection of the natural capital continues to improve in the region of Latin America and the Caribbean. Nevertheless, it will continue to be difficult to attain equilibrium between the economic development and the preservation of nature. At the long term, these do not have to be opposed forces, they can rather complement themselves, if we consider that the natural capital establishes the limits of the economic growth and the human development"<sup>(15)</sup>.

**31.** Towards the end of 2006, practically all the Latin American and Caribbean countries (32 out of 33) had ratified the Convention on Biological Diversity <sup>(16)</sup>, one of the main principles of which is the acknowledgement of the sovereign right of the parties to regulate the access to the genetic resources in accordance with the national laws. Based on this principle, ILAC established the national laws related to the access to the genetic resources and the distribution of the benefits as indicators of the progress in this matter.

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<sup>(12)</sup> De la Maza et al 2003.

<sup>(13)</sup> Ibidem.

<sup>(14)</sup> UNEP 2005.

<sup>(15)</sup> UNEP 2007: 26.

<sup>(16)</sup> UNEP 2007.

Table 1.3. Access to Genetic Resources in Latin America and the Caribbean: Regulation and Institutional Arrangements. National Cases.	
Type	Instruments and Policies (examples)
Regional Agreements and Actions	<p><b>Central America:</b> Regional Protocol on the Access to Genetic and Biocemical Resources and to Associated Traditional Knowledge (2002) by the Central American Commission on Environmental and Development.</p> <p><b>Andean Community of Nations:</b> Decision 391 – Common Regimen on Access to Genetic Resources (1996) by the Commission of the Cartagena Agreement.</p>
Framework or sector laws or ordinances	<p><b>Costa Rica:</b> Law on Wildlife Conservation (1992), and Law on Biodiversity, (1998). <b>Cuba:</b> Law on Environment (1997). <b>Mexico:</b> General Law on Ecological Equilibrium and Environmental Protection, (1996); Federal Law on the Access to and the Use of Genetic Resources. <b>Panama:</b> Laq 41, General Environment Law (1998). <b>Peru:</b> Law on the Preservation and Sustainable Use of the Biological Diversity, of 1997. <b>Venezuela:</b> The Constitution of the Bolivarian Republic of Venezuela (2000) establishes the sovereignty over genetic resources, their derived products, and intangible components (art. 11); it protects the collective intellectual property of the knowledge, technologies and innovations of our indigenous peoples, and prohibits the registry of patents on these resources and ancestral knowledge (art. 124). In addition, the Law on Biological Diversity (2000) and the Organic Law on the Indigenous Peoples and Communities (2005) regulate access to genetic resources, and protect and acknowledge the traditional knowledge of the local and indigenous peoples and communities.</p>
Specific legal ordinances	<p><b>Brazil:</b> Provisional Measure 2186-16 of August 23, 2001, and its regulations; Presidential Decree 3945, of September 28, 2001. <b>Chile:</b> Law on Industrial Property, which restricts the granting of biological or genetic heritage and industrial property rights over elements developed from the biological or genetic heritage and the traditional knowledge (article 3, 2005). <b>Cuba:</b> Resolution 111/96, to grant access to resources of biological diversity for research and use (1996). <b>Guatemala:</b> Ministerial Agreement 177-95 from the Ministry of Agriculture, Cattle Breeding, and Feeding that declares the filogenetic resources national patrimony. <b>Mexico:</b> NOM-126-ECOL-2000, which sets forth the specifications for the execution of activities involving the scientific collection of biological material from wild flora and fauna species and other biological resources; Federal Law on Vegetal Varieties (1996); Law on Biosafety of Genetically Modified Organisms (2005); Federal Law on Access to and Use of Genetic Resources (2005, under legislative process). <b>Panama:</b> Executive Decree Num. 257 of 2006, which regulates art. 71 from the General Law on Environment to rule, regulate and control the access to and use of biogenetic resources.</p>
Policies and institutions	<p><b>Chile:</b> National Strategy for the Preservation and Sustainable Use of Biodiversity, which proposes to adopt regulation frameworks for the access to genetic resources, as well as for the fair and equitable sharing of the benefits derived from their use (Strategic Line N° 2, letter e). <b>Cuba:</b> The Center of Inspection and Environmental Control, the national Office of Industrial Property and the Science Directorate participate in the control and surveillance of access to genetic resources. The mechanisms are Access Contracts and Environmental Licenses. It sanctions the violation of rights to share in the benefits of the use of genetic resources. There is a National Commission on Genetic Resources. <b>El Salvador:</b> There are procedures for granting permits for access to genetic and biochemical resources related to the wildlife. <b>Venezuela:</b> The Commission on Access to Genetic Resources was created by means of Resolution N° 54 (1997) to implement policies in terms of access to genetic resources and render operative Decision 391 of the Andean Community of Nations. This Commission analyses the requests for access to genetic resources and is governed by the Rules on coordination of responsibilities in the field of access to genetic resources (Resolution N° 95 of 2001) and an Internal Regulation (Resolution N° 163 of 2004). In addition, in Venezuela, the National Strategy for Biological Diversity (2001) provides guidelines on access to genetic resources.</p>
<p><b>Sources:</b> Information supplied by countries for ILAC's follow up. CCAD 2007. SEMARNAT and INEGI 2006.</p>	

**32.** By the year 2000, at least 20 countries had already created or reformed laws so as to incorporate the basic aspects for the access, recognizing that its regulation is necessary to better control the use of the genetic resources, share its benefits, guide its sustainable use, facilitate the technology transfer, improve the knowledge and Project the rights of the owners or original holders such as the peasants communities and the indigenous peoples <sup>(17)</sup>.

**33.** This process continued during the present decade, acknowledging that since it is a vital starting point, the existence of the national laws should be complemented by an effort of international cooperation, the creation of institutional structures or arrangements and subregional agreements, in addition to come to terms with the problems related to the lack of trained personnel, the bureaucratization, the low level of public awareness, and the difficulties of implementation and enforcement, among others <sup>(18)</sup>. In some cases, the regulation comes to life within the framework laws on sustainable development, in other cases it does so by means of laws or decrees conceived for particular issues, and, in addition, actions with a subregional scope are also undertaken.

**34.** In spite of the progresses made in some of the countries, the purpose of materializing new "exercises to compile the existing national and subregional legislations to be able to draw conclusions on the need to introduce changes to said legislation or to develop new regulatory frameworks from the analysis of the lessons learned"<sup>(19)</sup>, seems to be alive, which would, in addition, allow to complement the information that the ILAC indicator agreed upon for this topic require.

**35.** New international agreements have clarified further the rights of the communities and peoples to the benefits of the genetic resources. The United Nations Declaration on the Rights of the Indigenous Peoples of 2006 established on its article 31 their right to keep, control, Project, and development their cultural inheritance, their knowledge and their traditional expressions, including among the aforementioned the genetic resources, seeds, medicines, knowledge of the characteristics and properties of their fauna and flora. Such a right includes the maintenance, control protection and development of the intellectual ownership of the genetic patrimony, with the adoption of efficacious measures by the status to acknowledge and Project such rights, which encompass new and more accurate implications for the national laws and regulations.

**36.** The Forum Ministers of Environment of Latin America and the Caribbean have had the support of a Working Group on the Access to Genetic Resources. In their meeting of September 21 and 22 of 2007, the Group manifested its concern in the face of the financial difficulties of the countries of the Region to adequately participate in the negotiations of the international regime of access to genetic resources and the benefit sharing, restrictions that may affect the

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<sup>(17)</sup> FAO 2000.

<sup>(18)</sup> UNEP 2003b.

<sup>(19)</sup> Ibidem.

representativeness, transparency, and legitimacy of the agreements in future negotiations <sup>(20)</sup>.

**37.** The surface of the protected marine and coastal areas has also improved in the Region, although, the pace of said improvement has been slower. In the year 2000, Latin America and the Caribbean as a whole had a 1.72% of its marine and coastal areas under protection systems, and by the year 2006 the proportion had raised to a 2.10%. Per subregions, The Caribbean is the area with a larger protected percentage, namely with a 6.09%.

<b>Table 1.4. Protected coastal and marine areas. Percentage of the total coastal and marine area</b>			
	<b>2000</b>	<b>2004</b>	<b>2006</b>
<b>Latin America and the Caribbean</b>	1.72	2.05	2.10
<b>The Caribbean</b>	5.87	6.09	6.09
<b>Mesoamerica</b>	3.86	3.95	4.33
<b>South America</b>	1.21	1.58	1.58
<b>Source:</b> <a href="http://www.unep-wcmc.org">www.unep-wcmc.org</a> Consulted on the Data Base of ILAC.			

**38.** The difficulties faced by the terrestrial preservation systems, previously described in short, affect the marine and coastal areas as well and, in various cases, even with greater intensity. Additionally, the climatic change is already affecting said systems, e.g., the reefs, which are, in addition, submitted to intense pressures due to the accelerated increase of the tourist activities and the impacts generated inland by the change in the use of the soil, the use of the agrochemicals, the discharge of wastes without the adequate treatment, among other factors.

**39.** In the case of the Caribbean, for example, around two thirds of the reefs are in risk, mainly because of the coastal development, the discharges, the overfishing, the tourism and the reduction of mangroves, and in spite of the valuable environmental services provided by these systems, barely 20% of said reefs are under protection and only a 4% thereof is deemed to have effective management systems <sup>(21)</sup>.

**40.** In the specific case of the Mesoamerican reef, the antropic alteration of the soil landscape have almost doubled the discharges at river mouth, the sediments have multiplied almost by twenty, and the phosphorous discharges have grown by a factor of seven. Trends point towards a larger growth thereof and to other impacts, which draws attention to the need to coordinate the management of the terrestrial ecosystems so as to guarantee the protection of the marine and coastal areas <sup>(22)</sup>.

**41.** In addition, the erosion of the coasts, the flooding of the low lands, the damages to the infrastructure, among others implications associated to the climatic change, are worsening the vulnerability, especially in the Caribbean, thus

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<sup>(20)</sup> UNEP 2007b.

<sup>(21)</sup> UNEP 2005.

<sup>(22)</sup> Burke L. and Z. Sugg 2006.



generating serious human and economic consequences<sup>(23)</sup>. The protection of coastal systems will, therefore, be ore relevant to maintain and improve the safety and, in general, the development of the countries with access to the sea, particularly of the small islands countries. The low percentage of the coastal and marine areas protected up to the present, will render it difficult to comply in the next years with the adopted commitments<sup>(24)</sup>.

## 2. Management of Water Resources

42. During the period of enforcement of ILAC, the low availability of water per inhabitant has been maintained, both due to the increase of the population itself as well as because of the per capita consumption. Between the years 2004 and 2006, the per annum amount of hydric resources per person was reduced in 1.33% in Central America, and in South America the reduction was of 1.75% per annum. In the Region there is a steady increase in the water use.

Table 2.1. Current per capita renewable water resources. Cubic meters per inhabitant			
Region	2004	2006	Annual Change %
Central America	6,924.4	6,739.6	-1.33
South America	47,044.0	45,399.7	-1.75
Source: WRI: Instituto Mundial de Recursos (WRI) : EarthTrends, Portal de Información Ambiental. Consulted on <a href="http://www.eclac.cl">www.eclac.cl</a>			

43. Comparing the availability of water per capita between 1960 and 2005, it is possible to observe how it has diminished in an even dramatic way: information from 30 countries show that 4 of those countries have decreased their per capita availability less than a fourth; the reduction in 6 of those countries has been between half the prior amount and a fourth thereof; 19 out of those 20 countries have lowered their per capita availability between a half and three fourth of the prior amount. In most of the countries there is a per capita availability of water of less than a half the amount available in 1960.

44. Although most of the countries use less that the 4% of their available water, which indicates that there still are important unused amounts of it, the indicative purpose of improving the efficiency in the use of water has become even more important, mostly in relation to the techniques of irrigation, desalinization, integrated hydric and hydrological management of surface and underground aquifers and of the watershed in their different scales.

45. Seen by sectors, in the Region, three fourth of the countries employ over half of the water they use in agriculture, and even 40% of the countries do so in an 80%. The remainder of the countries distributes their employment of water mainly between the domestic use and the agricultural use. In general terms, from the supply point of view, it is very important to focus the attention on the efficiency of the water use in agriculture<sup>(25)</sup>.

<sup>(23)</sup>UNEP-SEMARNAT 2006.

<sup>(24)</sup> Declaration of Bariloche.

<sup>(25)</sup> Fourth World Water Forum 2006.

46. The paradigm of the integrated management of hydric resources has been consolidated in the national legislations over the decade, with a tendency towards the institutional improvement in the management of watersheds. Even though there is a lack of accurate information about the percentage of watershed areas under management, in most of the countries watershed committees are still being created, as registered in the Fourth World Water Forum held in 2006.

47. The committees have assumed decentralized tasks, but difficulties for the sustenance of said organizations have been detected. The legislative reforms have followed an orientation towards consolidating the figure of a single water authority for the management of the resources, different to the authority of administration and service rendering: The watershed organizations “are quickly developing as means for the decentralization and instrumentation of the integrated management of hydric resources, in accordance with the global trends. Problems have arisen as to the sustainability of many of these organizations, specifically those linked to programs sponsored by international organizations. Even though the recognition of this problem has given raise to mechanism that allow for the improvement of their sustainability, it is still too soon to draw conclusions, and that remains as one of the major challenges for the watershed organizations at the national and local levels”<sup>(26)</sup>.

**Box 2.1 Watershed Management. Policies and Institutional Arrangements. National Cases**

**Brazil:** the National Water Resources Management System (SINGREH), which includes the National Water Resources Council (CNRH), the National Water Agency (ANA), the Water Resources Council of the States and the Federal Districts, and Hydrographic Basin Committees (7 at the federal level and 12 at the state level). **Chile:** National Strategy for Integrated Management of Hydrographic Basins (2007); not all states have regulations. **Ecuador:** Binational Plan for the Use and Sustainable Development of the Mira-Mataje and Carchí-Guaítara River Basins by the National Technical Committee. **El Salvador:** Watershed Organizations with the participation of public and private stakeholders at the local level; there are already four (ACUGOLFO, ASUSCUBAJI, ASOCLI and ACURHCASPEB). **Guatemala:** Special unit for the Implementation of the Integrated Development of Hydrographic Basins by the Technical Cooperation Convention for the National Micro-watershed Program, and the Ministerial Agreement for the Creation of the National Watershed Program, (2006). The Policy of Preservation, Protection and Improvement of the Environment and the Natural Resources (2007) includes Integrated Water Resources Management. **Mexico:** National Water Commission (CNA) and the Watershed Committees (25 in 2003), and the Technical Committees of Underground Waters, which are instances of government-user coordination. **Panama:** Executive Decree No. 163 (August of 2006), sets forth an organizational structure and functions of the National Environment Authority (ANAMA), and creates the Directorates of Integrated Management of Hydrographic Basins. **Peru:** National Program on the Management of Hydrographic Basins and the Preservation of Soils (PRONAMACHCS) in the Andean Region or Mountain Range. **Venezuela:** division in 16 hydrographical regions. The basin of the Orinoco river occupies 73% of the territory.

Sources:

Information provided by countries for the database of ILAC.

SINIMA and DAI/MMA. 2006. *Brazil 2006. Indicadores de Acompanhamento. Iniciativa Latino Americana e Caribenha para o Desenvolvimento Sustentável (ILAC)*. Sistema Nacional de Informações sobre o Meio Ambiente, Departamento de Articulação Institucional del Ministerio del Medio Ambiente y la Oficina de Brazil del Programa de las Naciones Unidas para el Desarrollo, Brazil.

SEMARNAT and INEGI 2006. *Iniciativa Latinoamericana y Caribeña para el Desarrollo Sostenible (ILAC). Indicadores de seguimiento: Mexico 2005*. Secretaría de Medio Ambiente y Recursos Naturales, Instituto Nacional de Estadística, Geografía e Informática y el Programa de las Naciones Unidas para el Desarrollo, Mexico.

<sup>(26)</sup> Ibidem

**48.** The marine and coastal management has become even more relevant in the face of the threats derived from the global change, and in particular those derived from the climatic change, mostly in the Caribbean and the island status, but also for the continental countries with coasts in which the population growth is noteworthy. Damages to the coastal systems are no longer a hypothesis but a reality, which can be noticed mostly in the reef systems and the mangrove areas, the deterioration of which is affecting the tourist activities, the infrastructure and fishing.

**49.** Fishing activities aggregated in the Region during the current decade have kept at lower levels than the maximal ones reached in 1994, with a differentiated trajectory among the countries and with the normal fluctuations explained by the climatic variability. This behavior is an expression of the non-sustainability in the management of various fisheries in different marine ecoregions, which represent a relevant proportion of the world's fishing activities.

**50.** Overexploitation of the marine fishing resources has been qualified as alarming, hence an increase of any fishing activity is no longer desirable. The improvements in the supply are being directed towards aquiculture, which, nonetheless, also bears diverse risks, mostly associated to the coastal management, the deforestation of mangroves, the contamination due to discharges and health. The growth of the aquiculture is very dynamic.

**51.** The access of the population to water treatment services, adopted as near indicator for the indicative purpose of "improving the quality of the effluents and decreasing the discharge of contaminants into surface and underground water bodies as well as into the coastal zone" maintained a positive trend, but with noteworthy differences among subregions and countries, standing out favorably the Mesoamerican subregion. Between 2000 and 2004, the Region, as a whole, improved in two percentile points the proportion of the population with access to sanitation services, with a greater advance in Mesoamerica of almost 4 percentile points. In the rural areas, the mean coverage had not yet reached the 50% by the year 2004<sup>(27)</sup>.

**52.** Partial data exhibit national advances in the proportion of treated and reused waters in some countries, but in most of the countries of the Region, less than 20% of the urban waste waters are treated. The deficient treatment of both urban and industrial waste waters is causing contamination impacts in the river and water bodies, both terrestrial as well as marine. Barely a fourth of the countries of the Region treat more than 50% of its waste waters, which also affects the health of the population<sup>(28)</sup>.

**53.** In the face of the low coverage of the sanitation services in the rural areas, more insistence has been placed in a greater promotion of the in situ dry treatment services, reuse and recycling, local pretreatment services, and wet treatment services that discourage the use of water for the discharge of excretes, since many of the use option are neither sustainable nor environmental or economical for most of the rural zones of Latin America and the Caribbean.

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<sup>(27)</sup> Fourth World Water Forum 2006 b.

<sup>(28)</sup> Ibidem.

### ***3. Vulnerability, Human Settlements and Sustainable Cities***

**54.** The urban population of Latin America and the Caribbean already represents the 78% of the total population, the largest urbanization index per continent, and the trend keeps pinpointing towards a greater concentration in the cities, which inhabitants will grow during the 2005-2010 five-year period at a rate of 1.7% per annum <sup>(29)</sup>.

**55.** In a few more years, 85 out of each 100 inhabitants of the Region will live in cities, a fact that places the importance borne by the urban environmental improvement in the sustainable development of Latin America and the Caribbean in its just dimension. Cities are the main human scope of development, with everything and its problems of management of the territorial space, supply and treatment of water, management of wastes, atmospheric contamination, and an increasing social and environmental vulnerability vis-à-vis the ever increasing natural threats.

**56.** Urban expansion continues to imply pressures to generate changes in the use of the soil, which – on occasions – it influences the displacement of productive agricultural areas and the biological diversity, but it influences the placement of settlements in zones of landslide, flooding, subsidence risks as well as in zones bearing other risks, which vouches for the need to improve the design and application of policies and plans of land-use and urban management. Through the decade over GEO reports of cities, which have reinforced this indicative purpose, have been issued.

**57.** In more general terms, the soil degradation has been evolving negatively through time due, in many of the cases, to the human action, especially the deforestation, the overexploitation of the soil and the inadequate agricultural and cattle-breeding management. Only some of the countries have programs or policies associated to the recovery of the degraded soils.

**58.** The main engines and forces of the urban atmospheric contamination keep increasing. The motorization and the use of automotive fuels keep growing and, as main sources in the inventories of emissions, they still are the main pressures of urban contamination. However, in some of the main cities improvements can be observed in the pollution indices or in certain components of said indexes, may that be due to the improvements in fuels of fossil origin or because of the more spread use of substitutes, like some biofuels, the renewal of the vehicle fleet, the new options of public transportation, the measures for the control of emissions, and other practices adopted as part of the programs for the prevention and control of the urban atmospheric contamination. The changes derived from these trends on the morbidity and mortality rates, attributable to the urban atmospheric contamination, are still uncertain. With few exceptions, the CO<sub>2</sub> per capita emissions keep growing, together with the pertaining contribution of the Region to the global emissions.

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<sup>(29)</sup> UNFPA 2007.

Box 3.1 Land Use Management. National Cases	
<b>i) To implement plans and policies for the land use management from a sustainable development approach</b>	
Indicator Percentage of municipalities with land use management plans under execution	<p><b>Brazil:</b> the completed zonings pertain to 22% of the national territory, and the undergoing zonings pertain to a 26%; up to the year 2006, approx. 1,200 out of the 1,682 urban centers with the Guiding Blueprint had been delivered. <b>Chile:</b> up to the year 2006, incorporation of 305 priority sites for conservation in Regional Plans for Urban Development, environmental assessment of 429 land planning instruments, zoning of Coastal Border in three Regions, Strategic Environmental Assessment of eight Regional Plans for Urban Development. <b>Guatemala:</b> 50% of the departments have started their Territorial Strategic Planning. <b>Mexico:</b> Until 2004, 25 (78.1%) of 32 states had a land use management program. <b>Peru:</b> as of 2005, 90 (5.24%) out of 1,716 municipalities had a land use conditioning Plan. <b>Venezuela:</b> there are Land Use Management Plans in all of the states, but four.</p>
Policies and institutional arrangements	<p><b>Brazil:</b> The Guiding Blueprint is the planning tool for urban growth and Ecological-Economic Zoning; it is an organizational tool for land use management; they are mandatory for works and public and private activities; Decree No. 99.540 (September 1990) establishes the Coordinating Committee for Ecological-Economic Zoning of the national territory, (CCZEE); Decree No. 4927 (July 2002) establishing the Permanent Working Group for Implementation of Ecological-Economic Zoning; Law Num. 10.257 (July 2001) establishes the Statute of the Cities. <b>El Salvador:</b> National Plan of Land Use and Development. <b>Guatemala:</b> National System of Strategic Planning. The Preservation, Protection and Betterment of the Environment and the Natural Resources (2007) includes a Promotion axis for the use, management and sustainable development of the land. <b>Mexico:</b> Land use management by means of state programs that encompass economic, social, and environmental criteria under the joint responsibility of federal dependencies (Secretariat of Social Development; Secretariat of Environment and Natural Resources; National Population Council; National Institute of Statistics, Geography, and Information Technology). <b>Nicaragua:</b> Nicaraguan Institute of Land Use Studies (INETER), responsible for designing methodologies and instruments for land use management. In the framework of the General Policy for Land Use Management and Development (Executive Decree N° 90-2001), the National Land Use Management Program is implemented (PRONOT), and the Draft General Land Use Management Law is proposed (2006). <b>Panama:</b> National Environmental Authority responsible for land use management at the national level (Article 22, Law 41 of 1998, General Law of Environment). Plans of Environmental Land Use Management (OTA) are developed at the national, provincial, community, district and local levels. <b>Dominican Republic:</b> the State Secretariat of environment and Natural Resources and the State Secretariat of Planning and Development jointly developed the National Plan of Land Use Management.</p>
<b>ii) To incorporate instruments for the risk management in the land use management plans</b>	
Indicator Change in land use	<p><b>Brazil:</b> in 1985-1995, the rate of land use in agricultural and livestock management increased more than use for pastures (2.5%), and forest coverage (1.1%). <b>Mexico:</b> intense land use change; in 1993-2002, 1.3 million hectares (annual rate of 0.45%) of forest were lost, 370,000 hectares of forests (0.12% per annum), 950,000 of the xerophile scrubland (0.21% annually), and 113,000 hectares of natural grasslands (0.12% annual); in 2002, out of the original vegetation, only 56% of the tropical forests, 73% of the temperate forests, 77% of the xerophile scrubland, and 55% of the natural grasslands remained. <b>Panama:</b> in 1951-2001, the land area used for the agriculture and cattle breeding increased 138.9%. <b>Dominican Republic:</b> in 1996-2003, almost 15% of the agricultural lands decreased and the forest areas increased by more than 10%.</p>
<p><b>Sources:</b> Information supplied by countries for the data base of ILAC. SINIMA and DAI/MMA. 2006. SEMARNAT and INEGI 2006. Franklin, Henrik, et al 2007.</p>	

59. On its part, the access of the population to drinking water services has experienced, in the recent years, a notable improvement, mostly in rural areas. In the Region as a whole, the coverage reached a 91% in 2004, an improvement of almost two percentile points vis-à-vis the year 2000, already very neat to the aggregated Millennium Objective, but with the prevailing national and subregional differences.

<b>Table 3.1. Percentage of the population with access to drinking water and sanitation</b>				
	Percentage of the population with access to drinking water		Percentage of the population with access to sanitation	
	2000	2004	2000	2004
<b>Latin America and the Caribbean</b>	89.20	91.00	75.09	77.16
<b>The Caribbean</b>	82.80	84.40	72.25	74.15
<b>Mesoamerica</b>	91.40	94.90	73.45	77.32
<b>South America</b>	89.10	90.20	76.04	77.42

**Source:** WHO/UNICEF <http://rbm.who.int/wmr2005/> Taken from the data base of ILAC

60. While the generation of solid wastes in the Region keeps increasing, the coverage of the collection services still has a very limited reach, mostly among the low income populations that normally also lack from the adequate facilities and the final treatment systems. The generation of municipal wastes is growing faster than the population and it is deemed that by the end of the present decade over 25 million tons per year, compared to the year 2000, will be produced. The limited information available shows that the availability of solid wastes in landfills is growing in some countries; however, the undergoing pressures imply, just the same, the promotion of intermunicipal programs, the closing of inadequate storage places, the modification of regulatory frameworks and incentive systems, and the more accelerated transit to projects that lead to the reduction of greenhouse effect emissions associated to the municipal wastes.

<b>Box 3.2 Solid Wastes. National Cases.</b>
<b>i) To significantly reduce the generation of solid wastes (from the household and industrial sectors), and to promote – among others – recycling and reuse</b>
<b>Indicators</b> <i>% of the population with access to waste collection.</i> <b>Solid Waste Generation</b>
<b>Brazil:</b> 2005, 85% of the permanent inhabitants of urban households had access to waste collection services; nonetheless, said access is unequal for it exceeds the 90% in the Southeastern Region but does not reach the 70% in the Northeastern Region. In 2005, only 23% of the permanent inhabitants of rural households had access to waste collection services. <b>Chile:</b> 60% of the household wastes are disposed of in landfills with sanitary and environmental guarantees. <b>Cuba:</b> in 2006, 100.0% of the urban population and 75.5% of the total population had access to waste collection services. <b>El Salvador:</b> more than half of the country's municipalities have no access to solid waste collection services. <b>Guatemala:</b> in 1994, the urban waste collection coverage was of barely 24.99%. Each year more than one million tons of uncollected garbage are burnt, buried or deposited in clandestine dump sites. <b>Mexico:</b> in 2004, 86.3% of the population had access to collection services; 95% or more in the states with greatest urban development, and around 80% in the states of greater rural and excluded population. In 2004, around 94.800 tons per day of urban solid wastes were generated. <b>Panama:</b> in 2004, 1.3 million inhabitants of the city of Panama had access to waste collection services.

Box 3.2 Solid Wastes. National Cases.
<p><b>Indicator:</b> <i>Policies and institutional arrangements</i></p> <p><b>Brazil:</b> pursuant to the Constitution (1988), the municipalities are responsible for the management of urban cleaning and solid wastes generated in their territory. <b>Chile:</b> National Policy on Solid Wastes (2005), their Action Plan and the National Information System for the Management of the Solid Wastes. There normative advances concerning hazardous wastes; incineration and co-incineration; disposal and management of mud coming from waste water treatment plants; sanitary landfills; hospital residues. <b>Ecuador:</b> the integral management of solid wastes was declared a national priority and a Committee of Interinstitutional Coordination and Cooperation was created. <b>Guatemala:</b> the Preservation, Protection and Betterment of the Environment and Natural Resources (2007) include the strategic action of environmental Cleaning and restoration of the land. <b>Mexico:</b> the General Law for the Prevention of and Integral Management of Residues (2003) aims at preventing the generation, the use of the value from urban solid wastes, which are special and hazardous under a scheme of shared – but differentiated – responsibility of all the sectors involved in the generation and management. <b>Dominican Republic:</b> Guide on the Management of Solid Wastes in the Master Plan of City Hall from the city of Santo Domingo (2007). <b>Venezuela:</b> the Law on Residues and Solid Wastes (2004) foresees the elimination of the open air dumps in five years and their replacement with sanitary landfills.</p>
ii) To implement the integrated management of solid wastes, including their adequate treatment and final disposal
<p><b>Indicator:</b> <i>Wastes collected and disposed of appropriately</i></p> <p><b>Brazil:</b> according to the “National Research of Basic Sanitation” (PNSB), in 2000, a daily average of 157,000 tons of solid wastes were collected; this is an estimate, for only 8.4% of the municipalities effectively weighed on scales the collected wastes on scales; ten capitals had an inadequate way of disposal of all of their solid wastes. If the whole country is taken into account, barely 46.3% of the collected wastes were disposed of in an adequate fashion. <b>Chile:</b> The generation of waste has increased proportionally to the GDP, until reaching a yearly average of approximately 380 kg/person. The environmental impact has decreased since the closing of irregular dump sites and their replacement with sanitary landfills. Santiago has three authorized sanitary landfills, a center for the processing of hazardous wastes (since 1996), and a site for the disposal of medical wastes and non-treatable hazardous wastes (since 2004). There are plans to increase its recycling rate from 9 to 20% between 2004 and 2010. <b>Costa Rica:</b> The per capita production of the solid wastes has remained stable; in 2002, the annual estimated average was 318 kg/person, which represents 1.28 million metric tons per year. Costa Rica: There are no accurate waste reduction, reuse or recycling measures. It is assumed that 70% is collected and transported to final disposal sites, and the remaining 30% is burnt or dumped with no control in empty lots or water bodies. <b>Cuba:</b> in 2006, 3,855.5 metric tons of residues were collected from de 8.4 million urban inhabitants with collection services; 15% were adequately disposed of; 8% are managed, and 19% are used in the recycling process and manure. <b>El Salvador:</b> more than 30 companies collected recyclable wastes: glass, plastic, and tin. There are 11 sanitary landfills approved by the Ministry of Environment and Natural Resources, which covered the whole national territory. <b>Guatemala:</b> 4,242 tons per day are produced, according to the XI Population Census. <b>Mexico:</b> in 2004, the yearly per capita generation reached 328.5 kg/person (18% more than in 1997). There are marked differences among the different states, in a range that goes from 240 up to 395 kg/person/year. The recycled volume grew from 720 thousands to 895 thousand from 1995 to 2004 (42.8% paper, cardboard and by-products; 33.3% glass, and 23.6% metals. In 2000, 68.1% of the households had access to a collection service; 3.7% deposited the wastes in public containers; 23% burnt or buried the waste; 2.3% placed it in ravines or gullies; 1.6% dumped it on the streets or empty lots, and 0.3% deposited it directly into bodies of water. In 2004, 60.8% of the waste collected was disposed of in sanitary landfills, and 13.2% in controlled earth landfills. <b>Peru:</b> in 2001, the estimated generation of solid wastes was 0.18 MT/year/inhabitant. <b>Panama:</b> the average volume per year per capita of 37 tons/inhabitant of solid wastes has been constant during 1998-2004. In 2004, 433,658.61 tons were deposited in the Sanitary Landfill from Cerro Patacon in the city of Panama. <b>Peru:</b> in 2001, it was found that that 26.74% of the wastes were collected and disposed of adequately. <b>Dominican Republic:</b> The volume of solid wastes of the City of Santo Domingo went from 553.5 to thousands of tons in 1998-2004. <b>Venezuela:</b> the final uncontrolled disposal of solid wastes has generated an acute environmental, sanitary and social crisis. There are approximately 270 open air dump sites and a single sanitary landfill in operation. In 2007, barely 17.41% out of the total of 270 open air dumps have been cleaned.</p>
<p><b>Sources:</b> Information supplied by countries for the data base of ILAC. World Bank. 2007b. MIDEPLAN 2007. OECD and ECLAC 2005. SINIMA and DAI/MMA. 2006. Universidad Rafael Landívar 2006. Wilk, David, Carlos Pineda Mannheim, Dianna Moyer 2006.</p>

61. Up to date there is no solid information on vulnerability so as to feed the proposed indicators in such a way that they support a regional or even a subregional aggregation, and an account of the current trends can be issued. Nevertheless, indirectly there is a record of an increase in the population exposed to disasters of a meteorological nature, mostly the population residing in coastal zones. The growth of the population that lives in risk zones was of almost 20 million persons between 2000 and 2005. The long term trends concerning victims and economic and patrimonial damages keeps increasing, but with marked subregional differences. The impacts of disasters over the development are being increasingly better quantified and valued, which permits having a better knowledge of its human and material repercussions, as well as its repercussions over the ecosystems and capacity for and the pace of growth of the economies.

<b>Table 3.2. Population within the 100 kms from the coast. In thousands.</b>		
	<b>2000</b>	<b>2005</b>
<b>Latin America and the Caribbean</b>	264,198	283,235
<b>The Caribbean</b>	37,988	39,906
<b>Mesoamerica</b>	58,601	64,078
<b>South America</b>	167,609	179,251
<b>Source:</b> UNEP/DEWA/GRID Europe. <a href="http://www.grid.unep.ch">http://www.grid.unep.ch</a> Consulted on the Data Base of ILAC.		

62. The response capability of the countries of the Region has been stimulated by multiple national and cooperation projects or by projects under funding schemes, with notable legislative, organizational and capacity building changes in the recent years. Nevertheless, an adaptative response to the scope implied by the challenges of the increasing vulnerability – mostly in the islands status of the Caribbean and in many coastal regions that also have higher levels of exposure to natural threats - is still in process. More preventative attention approaches for the management of the risk related disasters are being consolidated around this direction.

<b>Table 3.3. Number of victims due to natural disasters</b>						
<b>Subregion</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Latin America and the Caribbean</b>	542,610	8,580,691	2,240,903	2,744,825	4,065,619	7,017,164
<b>The Caribbean</b>	675	5,905,268	428,109	228,353	984,087	2,657,872
<b>Mesoamerica</b>	150,155	1,712,952	776,255	296,688	173,618	3,361,470
<b>South America</b>	391,780	962471	1,036,539	2,219,784	2,907,914	997,822
<b>Source:</b> EM-DAT <a href="http://www.em-dat.net/disasters">http://www.em-dat.net/disasters</a> Consulted on the Data Base of ILAC.						



#### **4. Social Issues, including Health, Inequity and Poverty**

**63.** The growing pressure over the ecosystems regresses increasingly as impacts over the human wellbeing and, in particular, over the human health. Sometimes the effects are direct, other differed or displaced, and the interactions appear to grow increasingly complex with the manifestation of the global changes. As maintained by the Millennium Evaluation of Ecosystems, the possibility of non-linear changes on the quality of the ecosystems presents itself also as a threat for the human health.

**64.** The sensitivity to the ecologic change is especially strong in the case of some important diseases in the Region, such as malaria, schistosomiasis, acute respiratory diseases or diseases of a hydric origin, among others with a high impact measured by the years of life adjusted by the ones of disability, and for those with an acceptable level of trust, mechanisms and promoters linked to the ecologic deterioration and not only to the sanitation conditions have been identified.

**65.** Recent information exhibits a high incidence of the acute respiratory diseases and to the acute diarrheic diseases. Out of the total number of deaths in children of less than 5 years of age, 8.6% is attributed to acute respiratory diseases in the Region; however, in Central America they reach a 20.7%, and the 10.7% in the Andean area. In relation to the acute diarrheic diseases, differences are also large: they are attributed a 5.1% of the deaths of children of less than 5 years of age for the whole region; however, in Central America this figure reaches an 11.4% and in the Latin Caribbean a 6.5%. The population under risk of malaria and dengue is still very large, ranking from a 10.3% in the Andean area to a 17.1% in the Latin Caribbean, and to a 13.1% in Central America <sup>(30)</sup>.

**66.** Concerning HIV, it is emphasized that although the prevalence thereof in adults maintains itself at a stable level, the morbidity and mortality continued to increase in 2006, with 140 thousand new infections for that same year in the whole Region.

**67.** In some strategic purposes that link economy, social development and environment, sufficient aggregated information is still missing in, for instance, what concerns to projects with generation of employment, local hold, and creation of micro enterprises linked to sustainable development projects. The same are expected to have improved, since – thanks to the almost generalized good economic performance that the region has experienced mostly since 2003 – the unemployment rates have dropped. Formal employment has been growing at a yearly rate of 3.7% since that same year, even though the unemployment rate was still high during the first term of 2007, with 8.3% of the economically active population. At the beginning of the decade, the rate of unemployment surpassed the 11%.

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<sup>(30)</sup> PAHO 2006.

Box 4.1 Health and Environment. National Cases.	
i) To implement policies and plans to reduce environmental risks that cause damages to the health, especially those of hydric transmission, by vectors, by air pollution, and by exposure to chemical substances	
<p>Indicators</p> <p>Morbidity rate attributable to acute respiratory diseases</p> <p>Years of life lost due to disability (AVPD) due to diseases of a hydric origin</p>	<p><b>Brazil:</b> the acute respiratory infection (ARI) is a frequent cause of hospitalization in the health services. It is related to social inequality and to the increase of contaminating emissions discharged into the atmosphere. The acute respiratory infection is more serious for people over 60 years and for those under 5 years. In 2000-2005, data on ARI show a reduction in the rate of hospitalization among children of less than 5 years; the average morbidity rate dropped from 40.65 to 27.42 cases per 1.000 children, the downward trend is widespread but with strong regional disparities (67.80 maximum and 24.07 minimum in that period). The decline shows direct correlation with the successful implementation of measures to control the contamination (e.g., Sao Paulo). In the North and Northeast regions, there are high rates of morbidity due to diseases of hydric origin, because of the inequality in the distribution of drinking water and the precarious sanitary conditions. The lack of regular supply of drinking water in marginalized regions obliges the communities to seek water in polluted streams and polluted rivers. The lack of regular supply of drinking water in marginalized regions obliges the communities to seek water streams and rivers polluted. In 2000-2005, the rate of morbidity due to the acute diarrheic disease (ADD) in children under 5 years of age was reduced from 23.43 to 19.93 for every thousand children; the North and Northeast regions still present, however, the highest rates of hospitalization due to the acute diarrheic disease. <b>Chile:</b> pneumonia presents an increase and it is the main cause of mortality in children; the acute respiratory insufficiency is the main cause (60%) of hospitalization and morbidity in children; the bronchial obstruction syndrome affects 25% of all children of less than 12 months of age in Santiago. The environmental policies related to hydric resources have had positive effects on health. Drinking water is supplied to 99.8% of the urban population and to 60% of the rural population. During 1990-2004, the waste water treatment increased from 8% to 71% in urban areas. An epidemiological surveillance system and a program of inspection and hygiene in food products has allowed for the eradication of cholera and the 90% reduction of the morbidity rate due to typhoid. <b>Cuba:</b> during 2001-2006, the ARI exhibit an increase from 43,395 to 45,437/100 thousand inhab. (a minimum of 40,852 in 2004); the EDA show a decline from 7,733 to 6,510/100 thousand inhab (minimum of 5.999 in 2004) <b>Mexico:</b> The respiratory diseases are among the 10 diseases that cause the greatest loss of years of healthy life. In 1995-2004, the average morbidity rate per year due to Acute Respiratory Infections (ARI) was of 27 thousand 864 cases/100 thousand inhabitants, with a declining trend (29 thousand 685 cases/100 thousand inhabitants, maximum, and 24 thousand 581 cases/100 thousand inhabitants, minimum, during that same period).</p>
<p>Policies and Institutional Arrangements</p>	<p><b>Brazil:</b> The air quality indexes in the Brazilian metropolis surpass those recommended by the World Health Organization, but show a declining trend; the improvements in the environmental license programs exert their influence, as well as the existence of the PROCONVE government program, which establishes more stringent emission limits for vehicles. The Ministry of Health introduced the National Program in Environmental Health (1998), and there is a surveillance related to the Quality of Water for Human Consumption (VIGIAGUA). <b>Chile:</b> The Rural Drinking Water Program of the Ministry of Public Works seeks to extend the service to 98% of the concentrated rural population. <b>Guatemala:</b> in 2005, the National Program on Reproductive Health and the National Vaccination Program, as well as the Managerial Information System in the Health Area, were implemented. Local governments are the ones in charge of the environmental sanitation, pursuant to the Municipal Code established in 2002. The Policy of Conservation, Protection and Improvement of the Environment and Natural Resources (2007) includes the strategic line of development of Environmental Mechanisms and Instruments for the production and management of the environmental quality. <b>Mexico:</b> The Program of Child Health Care (1997) includes nutrition, immunization, prevention and control of diarrheic and respiratory diseases. The aforementioned program was able to reduce mortality associated with ARI in children under 5 years of age, from 143 to 42 deaths per 100 thousand children in 1990-2003. The ARI are still the second leading cause of infant mortality (8.6%).</p>

Box 4.1 Health and Environment. National Cases.	
ii) To implement comprehensive measures to control and reverse dissemination of the HIV virus, including the development of coordinated approaches to research, education, training and access to retroviral drugs	
Indicator HIV Morbidity	<p><b>Brazil:</b> Estimates indicate that approximately 600,000 persons are living with AIDS; according to WHO parameters, that amounts to a concentrated epidemic, with an HIV infection rate of 0.61% of the population from 15 to 49 years of age, of which 0.42% are women and 0.80% are men. The incidence rate was 17.2 cases/100,000 inhabitants in 2004. More than 80% of the cases were concentrated in the Southeast and South regions. Only the Southeast showed a consistent though slow decreasing tendency. The other regions showed a steady increase in incidence rates. <b>Caribbean Islands:</b> HIV/AIDS incidence is a serious problem in the Caribbean. One Caribbean country has the highest rate of cases in the Central American region, with a new case each day. The Caribbean region is the second most strongly attacked region, following sub-Saharan Africa. The adult population with HIV reaches 2.3% or more. Statistics confirm that transmission to young sectors occurs, especially to women. The problem is associated with massive movements of people through sex-related tourism that involves specific groups of the local populations and tourists. <b>Mexico:</b> accumulated incidence and prevalence rates of AIDS have increased since 1983, above all among men of productive age. In November 2005, there were 98,933 cases (83.3% men; 16.7% women). The HIV/AIDS morbidity rate increased from 4.4 to 8.1 cases/100,000 inhabitants in 1990-2004; in 2003-2004 it increased from 0.72 to 1.67 cases/100,000 inhabitants among women and from 3.24 to 6.27 cases/100,000 inhabitants among men. At the end of 2004, HIV/AIDS prevalence was 0.3% among the adult population (77<sup>th</sup> place in the world and 23<sup>rd</sup> place in Latin America and the Caribbean). Altogether, AIDS transmission was sexual in 92.2% of the cases, by blood in 5.3% of the cases and perinatal in 2.2% of the cases. In 2005, government health institutions attended more than 30,000 patients. The epidemic was concentrated in urban areas, and particularly in densely populated areas. Mortality has remained stable since 1997 at around 4.3 deaths/100,000 inhabitants per year. In 2001, AIDS was in sixth place among the causes of death; in 2003, AIDS was in 16<sup>th</sup> place among the causes of death; in 2003, 4,541 deaths were caused by this disease. <b>Panama:</b> the Health Ministry reported 674 cases in 2005. <b>Peru:</b> in 2001, reports indicated 1,902 persons infected with HIV; 739 persons with AIDS; and a prevalence rate of 28 cases/100,000 inhabitants. <b>Venezuela:</b> in 2003, the number of persons with HIV/AIDS was estimated at 107,280 (an interval of 79,960-150,420 persons). Various sources assume a prevalence of less than 0.33%. Highly effective triple therapy has been given to 12, 546 persons.</p>
Policies and institutional arrangements	<p><b>Cuba:</b> since 1986, a Prevention and Control program has been formed by education, prevention, epidemiological monitoring and care. HIV/AIDS care is provided through a promotion and education program for the population in general and vulnerable groups with intersectoral and community participation; epidemiological monitoring of infected and ill and of deaths; free care and treatment at all levels of the National Health System, including social care; antiretroviral treatment for those who need it; multidisciplinary research at all research centers and institutes to meet needs in the areas of vaccinations, development of medicines and means of diagnosis. <b>Guatemala:</b> the National STI/HIV/AIDS Program was implemented (1999) and the Program of Action against AIDS in Central America, together with the countries of the area. <b>Mexico:</b> since 2003 coverage with antiretroviral treatment has been universal; the budget reached 600 million pesos in 2004. An HIV Prevention and Control Program has been implemented. <b>Venezuela:</b> since 1998 the policy of free and universal access to antiretroviral treatment has been implemented. In 2004, a sentinel study among pregnant women throughout the country was planned with joint financing by the Health and Social Development Ministry and the United Nations Population Fund. A project to train community and university HIV preventers was initiated through an agreement between the Universidad Bolivariana, the Universidad Marítima in the State of Vargas and the National Youth Institute.</p>
<p><b>Sources:</b> Information supplied by countries for the data base of ILAC. SINIMA and DAI/MMA 2006. <i>Brazil 2006</i>. OECD and ECLAC 2005. SEMARNAT and INEGI 2006. MINSa 2002. CARICOM 2004.</p>	

**68.** The population living in poverty has been experiencing a decrease, both according to the indicator of the population with an income below the US\$ 1 and 2 PPA and to the indicator of the population living below the lines of indigence and total poverty, estimated by the Economic Commission for Latin America and the Caribbean. The appraisal of the progresses will depend on the indicator adopted and on the years of reference taken into account. Thanks to the improved economic performance, to the growth of the employment rate, and even to the distributive improvement of some countries, poverty – under the same conditions – was reduced from a 44% of the population in 2002 to a 36.5% in 2006. In 2005, the aforementioned percentage finally went back to being below the level of 1980, at time in which poverty reached 40.5% of the population, which leads us to say that in the recent years the Region has registered the best social behavior of the last two and a half decades.

**69.** According to the forecasts, in 2007 poverty maintained its downward trend and included 35.1% of the population. The number of people living under poverty conditions was reduced from 221 million in 2002 to 190 million in 2007<sup>(31)</sup>. In 1980 there were 136 million persons living in poverty. However, in 4 of the 18 countries on which the estimate was based, an increase in the levels of poverty was shown between the following years 2000/2002 and 2003/2005. As a whole, the Region is advancing towards the fulfillment of the first Millennium Goal: to reduce by half the level of poverty that existed in 1990 by the year 2015. "The region as a whole has great possibilities of attaining the first Millennium Goal. Assuming that income distribution does not undergo major changes in the coming years, Latin America requires a GDP growth rate of 1.1% annually, which is less than the population growth rate. In addition to this low growth rate there is also the contributing fact that four countries have exceeded the goal, since they "subsidized" others that are further behind, particularly when among those Brazil and Mexico are included, which encompass more than half of the regional population<sup>(32)</sup>". There are countries, however, that have not yet been able to meet 50% of the same goal. The poverty reduction is also very uneven. According to the same source, of the 16 countries taken into account in these statistics, major poverty reductions have only been attained in five countries since 1990, and in the rest of the countries little or no progress has been noted.

**70.** In turn, according to the most common synthetic indicator (the Gini index), income distribution is also undergoing improvement in the present decade. The behavior of the social expenditure, as an approximate indicator of the strategies in favor of vulnerable and special groups, has been showing a drop as a proportion of GDP in the recent years, and the budgetary resources devoted to the social sectors such as education, health, security and assistance, and housing have also shown improvements in recent years.

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<sup>(31)</sup> ECLAC 2007 d.

<sup>(32)</sup> Ibid. P. 13.

### **5. Economic aspects, including Competitiveness, Trade and the Production and Consumption Patterns (Energy)**

**71.** The energy intensity kept at a relatively stable level between the years 2000 and 2003 (use of energy per US\$ 1000 of the GDP PPA). In Mesoamerica, however, a considerable increase was registered. At the long term, in the last 20 years, no considerable improvements are observed, in contrast with other region that in a similar period have considerably reduced their energy intensity.

**72.** Within the framework of the large increase in the oil prices and the efforts to reduce the greenhouse effect gases, the last years exhibited a stronger emphasis in the strategies of energy diversification, mostly in relation to renewable energy sources. Between 2000 and 2004, the contribution of the renewable sources to the energy supply in the region stayed between the 14.2 and the 14.8%, experiencing an increase of slightly over the 15 & in 2004. In this regard, the indicative purpose of ILAC (“To implement the use in the Region of, at least 10% of renewable energy sources out of the total energy percentage of the Region by the year 2010”) has already been met in average, even though in most of the countries the dependence on fossil fuels is still evident. The percentage of the population that uses solid fuels is at the 13.87% within the regional average, with 20.4 for Mesoamerica and 18.4% for the Caribbean.

<b>Table 5.1. Use of Energy per \$1000 of the GDP (PPA) Petroleum equivalent Kilograms</b>				
<b>Subregion</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Latin America and the Caribbean</b>	164.65	164.08	164.79	164.59
<b>The Caribbean</b>				
<b>Mesoamerica</b>	166.24	169.41	172.53	174.58
<b>South America</b>	156.48	154.36	153.56	152.92
<b>Source:</b> UNSD <a href="http://unstats.un.org/unsd/default.htm">http://unstats.un.org/unsd/default.htm</a> Consulted on the Data Base of ILAC.				

**73.** Although, on the whole, no clear signs of an energy transition are yet to be seen in the Region, in some countries, and especially in Brazil, it is already a fact that a change – due to the growing use of new renewable sources – is being consolidated. In other cases, the conventional renewable sources still bear a great weight over the energy supply. If the current impulse towards diversification is maintained, then the marked dependence on fossil fuels could start dropping, which could accelerate the transition towards the climatic change mitigation strategies. This aspect, without a doubt, will become even more relevant in the next years in the face of the greater weight of the climatic change policies, which could also be reflected on the new Regional Action Plan from the Forum of Ministers.

**74.** The regional CFCs reduction goals to 55% in 2005 were completely met. Out of the four countries that produced said substances, two (Brazil and Mexico) have already closed their producing plants. As a whole, the consumption of substances with a potential to deplete the ozone layer decreased from 22.389 tons in the year

2000 to 6.769 tons by 2005. The new steps agreed upon 20 years after the approval of the Montreal Protocol can be reached fully met.

<b>Table 5.2. Consumption of substances that deplete the ozone layer</b>						
Subregion	2000	2001	2002	2003	2004	2005
Latin America and the Caribbean	22,389.152	18963.158	12,709.608	12,759.640	13,551.417	6,769.380
The Caribbean	1,366.700	1385.561	1,187.348	988.755	982.819	544.416
Mesoamerica	3,934.554	3115.486	2,828.394	2,802.646	3,824.102	2,137.814
South America	17,087.898	14462.111	8,693.866	8,968.239	8,744.496	4,087.15

Source: <http://www.unep.ch/ozone/> Taken from the Data Base of ILAC

**75.** The cleaner production goal is mostly associated to the CFCs consumption indicators and to the ISO14000 certification of the companies.

**76.** Cases such as the one of the Regional Enterprise Network for Cleaner Production in Central America, the Competitiveness and Environment Project of Mercosur, the initiatives of the Environmental Cooperation Commission of North America with Mexico, the work with enterprises and groups for the establishment of the Sustainable Tourism Zone undertaken by the Association of Caribbean States, illustrate the initiatives that are being carried out.

<b>Table 5.3. Number of companies with ISO 14001 certification. Number of certifications</b>						
Subregion	2000	2001	2002	2003	2004	2005
Latin America and the Caribbean	715	931	1783	2092	3437	3816
The Caribbean	11	11	11	11	11	11
Mesoamerica	183	275	413	455	558	494
South America	521	645	1359	1626	2868	3311

Source: The ISO Survey 2003, 2004 and 2005 Copyright c 2006 ISO [www.iso.org/iso/en/iso9000-14000/pdf/survey2005.pdf](http://www.iso.org/iso/en/iso9000-14000/pdf/survey2005.pdf) Taken from the Data Base of ILAC

**77.** The indicative purpose of “Establishing a system of economic incentives for productive and industrial transformation projects that preserve the energy and natural resources, and bring about the final reduction of the discharge of effluents into the water, soil and air” is monitored through the economic instruments in line with the environmental policy that continues to be very unequal and still are below the potential they have as a means to complement the most deeply rooted mechanisms of regulation and control. Already at the time of ILAC’s approval and, in fact, since the nineties, most of the countries of the Region applied different economic instruments with environmental purposes.

**78.** In different studies carried out at the beginning of the current decade, several obstacles, primarily of an institutional nature, that were hindering a more intensive and more generalized application of said instruments were already being identified, which would express a diversification of the strategies of environmental management in favor of mode decentralized mechanisms and with greater balance between in face of the policies excessively centered on control. Most of those

obstacles still persist, mainly those related to the coordination among financial and environmental authorities, the weakness of the legal structure, the lack of sufficient information to provide the basis for the adoption of the instruments, the existence of anti-environmental biases from sectorial policies, among others that are still demanding a priority attention.

**79.** In spite of the elements presented above, significant advances have been registered in recent years in the use of some complementary economic alternatives for the environmental management, among which the application of a wide range of environmental services remuneration or compensation options, the adoption of measures associated to the control of emissions of green house effect gases, or the application or several economic measures for preservation stand out.

### ***6. Institutional Aspects***

**80.** The indicative purpose of ILAC of "improving and strengthening the incorporation of the environmental dimension in formal and non-formal education, in education and society" happily led to the initiative of the United Nations of the Decade of Education for Sustainable Development 2005-2014. Departing from it, new programs that are more actively promoting the education for sustainable development were designed in several countries of the Region, and there has been a multiplication of the actions from groups of citizens, researchers, educators and other groups that since decades have been fostering this topic in Latin America and the Caribbean.

**81.** The education for sustainable development, the environmental training and the environmental education have been building a social movement in the Region and not just an institutional answer. Initiatives such as the Latin American and Caribbean Education Program, supported in the XV Meeting of the Forum of Ministers, are allowing to better promote the integration of the environmental dimension and of the sustainability of development in the formal and non-formal education at their different levels, by means of improved forms of articulation of the public organization with the social and citizens' organizations.

**82.** ILAC adopted, as indicator in this subject, the "total number of hours in which environmental science is taught in the primary education", something for which there is no available information up to the present. Nonetheless, a great dynamism has been document in educational options of very diverse nature, for instance, through the Network of Environmental Training for Latin America and the Caribbean sponsored by UNEP, which for over 25 years has been a space of interaction among educational institutions, international and public organizations, educators and, in general, stakeholders interested in this ample field of knowledge, collective action and public policies.

Box 6.1 Environmental Education	
<b>i) To improve and strengthen the incorporation of the environmental dimension in formal and nonformal education, aimed at the different social groups in the economy and in society</b>	
<p>Indicators</p> <p>Total hours of teaching environmental science in primary education (ND)</p> <p>Total courses that deal with environmental themes in primary education</p>	<p><b>Brazil:</b> formal education deals with environmental matters in a cross-cutting manner in the curricular system, in accordance with the National Curricular Parameters (1997). Environment is considered a theme of fundamental value for democracy and of growing importance in basic education. According to the National Institute of Education Studies and Research of the Education Ministry, in 2001, of a total of 35.3 million students enrolled, nearly 10 million did not have access to environmental education. In 2004, this figure was less than 1.8 million and approximately 152,000 schools worked with environmental education. The basic teaching institutions that have some environmental education activity increased their coverage from 71% to 94% of the students enrolled from 2001 to 2004. The Environment Ministry and the Education Ministry, through the Management Organization of National Environmental Education Policy, are working together to see that environmental education is integrated into other sectoral policies; they have supported 44 environmental education networks organized in different thematic and geographical areas and the installation of 391 "Green Rooms," which are educational structures that are open to the public and support convergence in the activities of local environmentalist groups by making environmental information access and production available.</p>
<p>Policies and institutional arrangements</p>	<p><b>Brazil:</b> National Environmental Education Policy (Law Num. 9795 of 1999). There are Intersectoral Environmental Education Commissions in 24 states of the Federation; they serve as multisectoral, collegiate bodies responsible for preparing, observing and managing state environmental education policies and programs. <b>El Salvador:</b> Environmental themes have been introduced in courses and programs at all levels of the National Education System. <b>Guatemala:</b> National Environmental Education Policy (2005); curriculum change in primary education to include the themes of Sustainable Development and Environmental Education (2006). The Policy for the Conservation, Protection and Improvement of the Environment and Natural Resources (2007) includes the Environmental Education and Training Program. <b>Mexico:</b> the government's environmental sector participates in the Interinstitutional Consultative Councils to incorporate the environmental dimension into the primary education study plans and programs. In nonformal education, a sustainability approach is being promoted in community intervention projects coordinated by governmental institutions of the social sector. <b>Panama:</b> Law 10 (June 1992) adopts environmental education as a national strategy. Environmental Education Teaching Guides of the Environment Ministry and the National Environment Authority (ANAM) are being used to train teachers. The GLOBE Program works with students in producing environmental indicators based on observation and the use of simple scientific methods to monitor local environmental quality. Currently 72 schools in the country are participating in the program and 75 teachers have been trained in the protocols for atmosphere, land cover, hydrology and soils. The Environmental Volunteers Program has enrolled and trained 1,508 volunteers who participate in environmental management.</p>
<p><b>Sources:</b>                      Information supplied by countries for the data base of ILAC. SINIMA y DAI/MMA. 2006. World Bank. 2007. INEGI 2006.</p>	

**83.** Upon decades of efforts, however, environmental education in the Region continues to face difficulties in relation to its integration into educational systems, study programs, teachers' instruction, the design of materials for the learning and teaching processes, a simplifying and individualistic treatment, among others, in spite of which it is acknowledged that there are projects that can change this



situation in a short period of time <sup>(33)</sup>. UNESCO and UNEP are working in coordination to further the Decade of the Education for Sustainable Development 2005-2014, by means of a collaboration agreement adopted in 2006.

**84.** In the goal of “Education and training of human resources” and the indicative purpose of eradicating illiteracy and universalizing the tuition at the basic and secondary education levels, ILAC identified the net tuition rate in the primary education as indicator. The same has been exhibiting a constant improvement during the decade, from 92.6% in 2000 to 94% in 2005, but with a slightly lower change in the case of women since the year 2001. Almost all of the countries have rates of over the 90%, but not all of them have been registering improvements in the last years.

**85.** In secondary education, net tuition went from 61.2% in 2000 to 68.1% in 2005, and an improvement was experienced in relation to both genders, especially in what concerns to women. As in the case of the primary education, not all countries showed an improvement.

**86.** The illiteracy rate dropped from 11.1% to 9.5% during those same years, exhibiting an even larger rate among women. The illiteracy rates among countries go from 0.3% up to over 40%, which places in its right dimension the profound differentiation registered in this indicator.

**87.** In relation to the building of capacities to face the vulnerability, and the establishment of programs for capacity building in the management of sustainable development, there is still insufficient information to follow up on these purposes.

<b>Table 6.1. Net tuition rates in the primary and secondary school (%) and illiteracy (%) in Latin America and the Caribbean</b>						
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Net tuition rates in the primary school (%)						
Total	92.6	93.2	93.2	92.8	93.6	94
Men	93.6	93.2	94	94.3	93.7	94.2
Women	91.7	93.2	92.4	91.2	93.5	93.9
Net tuition rates in the secondary school (%)						
Total	61.2	63.1	65.2	66.1	67.4	68.1
Men	59.6	61.1	63.2	64.3	65.3	66.0
Women	62.8	65.2	67.2	68.0	69.5	70.3
Rate of illiteracy in the age population of 15 and above (%)						
Total	11.1	-	-	-	-	9.5
Men	10.1	-	-	-	-	8.8
Women	12.1	-	-	-	-	10.3
<b>Source:</b> UNESCO-UIS UNESCO's Institute for Statistics. Consulted on BADEINSO, <a href="http://websie.eclac.cl/sisgen/ConsultaIntegrada.asp">http://websie.eclac.cl/sisgen/ConsultaIntegrada.asp</a>						

<sup>(33)</sup> González-Gaudio 2007.

**88.** It was decided, in relationship to the evaluation and the indicators, "to develop and implement an evaluation process to follow up on the progress in the achievement of the sustainable development objectives, including the results of the Johannesburg Action Plan, adopting sustainability indicators' systems, at a national and regional level, which respond to the social, economic, and political particularities of the Region", taking all the national reports on the state of environment and the systems of environmental statistics as indicators.

**89.** The Working Group on Environmental Indicators had registered, by 2007, ten countries with systems of environmental statistics. The aforementioned Group, which is the one that has worked more regularly out of all the working groups created by the Forum of Ministers, has been working – among others activities – in the revision of the indicators of ILAC and it has created diverse instruments for the understanding and analysis of the indicators, aiming at coming – as near as possible - to information that relates the progresses and setbacks of each goal.

**90.** In this sense, the Group reviews and develops the methodological sheets so as to move forward towards better or complementary indicators. They also worked in linking ILAC indicators with the Millennium Goals, not only in relation to Goal 7, but also in relation to the other Goals associated with the Initiative and, in general, in the harmonization of the methodologies to calculate the environmental indicators and the ones pertaining to sustainable development in the Region, in such a way that effective comparisons among countries can be made and the results of the policies and international agreements can be monitored.

**91.** The interest of the countries to have reports that report their environmental situation is noteworthy, for practically all countries have published one or several reports during this decade, both concerning general as well as priority issues. Three of the countries also published national ILAC reports, and three other countries expected to publish their reports by the end of 2007. In addition, 19 countries have prepared national GEO reports and in 14 countries GEO reports of cities or subregions were created, a process that is continuously spreading in the face of interest shown by the local governments. By September 2007 39 of these reports of cities or regions were already known.

**92.** If to those we add the thematic, subregional and youth GEO reports, we can then observe that the Region has experienced a great impulse as to the systematization of the information and its availability to the public in the last years. Concerns have been expressed to know the impact of this ample variety among the society, the media and the decision making bodies. The overall vision for the Region pertains to the GEO-LAC 2000 and 2003 reports, and currently the GEO-LAC 2008 report is being prepared.

<b>Table 6.2. National environment reports, ILAC reports and GEO reports up to 2007*</b>						
Countries	National Reports	GEO Reports				
		ILAC Reports	National	Cities and Subregions	Regions	Youth and others
Latin America and the Caribbean		2	19	37	2 LAC	1 LAC
The Caribbean	14		5	5	2	4
Mesoamerica	8	3	8	4	1	6
South America	12	1	6	28	3	12

**Source:** Developed from information of the Working Group on Environmental Indicators of the Forum of Ministers of Environment from Latin America and the Caribbean ( Panama , Panama , July 4-5 of 2007) and from Internet searches (column 2).

**93.** The last of the institutional aspects and ILAC's, is the one pertaining to the participation of the society. The purpose was identified as "Creating and strengthening participation mechanisms in sustainable development issues, with governmental participation, non-governmental participation and the participation of the main groups in all the countries of the Region", measured through the existence of national councils of sustainable development. By the start of the decade, most of the countries had already included in the general environmental legislations or in the thematic or sectorial laws, provisions related to the citizens' participation, and had created different types of councils of citizens' participation with different degrees of reach, scale, and composition.

**94.** Along the 2000's decade more relevance seems to have been given to the different qualitative aspects of the social participation or citizens' participation in public policies. The new forms of interaction and exchange of information in the network gave rise to new participative dynamics that grant more priority to the procedures of transparency, access to information and the more effective influence in the decision making and in their surveillance. The participation councils are still the protagonists of the citizens' intervention in the public policies, and nowadays, beyond the formal spaces, the real incidence in the policies and in the access to the environmental justice seems to be privileged.

#### **IV. General Considerations and specific considerations for the Regional Action Plan**

**95.** Seen in as a whole, the period elapsed starting from 2002 in Latin America and the Caribbean has registered a remarkable economic recovery. Estimates foresee that during the year 2008 the positive economic behavior will be maintained, but at a lower rate of growth with respect to 2007. If so, we would be talking about the completion of six consecutive years of growth, and the per capita product will have risen 23% in the period, which had not been seen in several decades<sup>(34)</sup>.

<sup>(34)</sup> ECLAC 2007 e.

**96.** This behavior has favored, for the most of the Region, improvements in the employment, income and social spending, in the reduction of poverty and in other social indicators, favoring the progress in some of the purposes and goals of ILAC and the Millennium Goals. In some countries we are also seeing light distributional improvements. Due to the existing heterogeneity, progress is uneven among countries, but as a whole a change in line with the implementation of the Millennium Development Goals is portrayed. The relatively positive performance is still not enough for the amount of the population living in poverty to be below the level of 1980, and it barely has dropped below the line of 1990.

**97.** In the light of the ILAC, adopted in 2002, the results of the Region present contrasts. On the one hand, this stage of economic growth has seen the resurgence of pressures on the environment, which involve the aggravation of some trends of environmental degradation. On the other hand, partial advances and institutional achievements, which can be enhanced in favor of sustainable development, have been noted.

**98.** Some of the environmental trends that have sustained or have worsened are the following: in the period the reduction in the area covered by forests was maintained, even at a higher rate than during the prior decade, with its consequent impact on biodiversity. The causes appear to be mainly associated with the increase in the agricultural area, mainly from cash crops for export, the expansion of cattle breeding areas and other changes in the use of the soil, linked not only to the form being adopted by the economic dynamism and the Latin American and Caribbean insertion in the globalization process<sup>(35)</sup>, but also to the urban growth and the infrastructure. We also continue to observe deterioration in water availability per inhabitant, the continuation of the soil degradation, the underlying pressures from the urban contamination, mainly due to the motorization. Economic, demographic, and land-related pressures on the coastal and marine ecosystems are still increasing. The population settled in localities along the coastline continues to grow at higher rates than the average, and overfishing continues. As a whole, the forces of change and the pressures remained unfavorable to environmental sustainability and, in some cases, were even more adverse than in previous decades.

**99.** Such trends are even more disturbing in the regional context of climate change and the growing socio-environmental vulnerability. As the recent GEO 4 of UNEP sustains, the main negative trends continue to worsen in the conventional scenarios<sup>(36)</sup>. The last reports from the Intergovernmental Panel on Climate Change and others, which have refined their prospective analysis<sup>(37)</sup> techniques even more, have updated the evidence on the consequences of climate change, which are already under way for Latin America and the Caribbean, and which are strengthened by structural factors of our own patterns of human settlements and, in general, by the occupation of the land. Renewed threats have been added to the old trends, and they have been pointing towards the need to strengthen the environmental policies and, in general, the policies for sustainable development.

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<sup>(35)</sup> ECLAC 2007 c.

<sup>(36)</sup> UNEP 2007.

<sup>(37)</sup> WB 2007

**100.** In this framework, the Region could be entering a new phase of environmental and sustainable development policies. On the one hand, the Region is facing formidable challenges to confront environmental deterioration and new threats and, on the other hand, it is now facing institutional capacities more developed than in the recent past. Recent years have also registered achievements that point in a good direction: the conservation systems have improved their coverage and management capacity, the effort to control the CFCs has shown an undoubted success, the systems of environmental management and certification have continued their consolidation, the diversification of policies is progressing with improvements in the instruments, including economic instruments, evaluation systems and environmental indicators are in the process of maturing, and the same is happening with efforts of education for sustainability, the citizens' participation, and other areas in which the institutional effort and the citizens' effort are in the process of crystallization.

**101.** Without a doubt, this process of change can and must be accelerated drawing the positive advantages of the recent period of economic growth, the institutional achievements registered, the largest availability to internalize the environmental dimension in the development by the governments and other sectors, and the favorable opinion that appears to be emerging in favor of policies, practical measures and more ambitious commitments in favor of the sustainable development. In this framework, there are sufficient elements to consider that the work agenda established by the Forum of Ministers in its Fourteenth Meeting (Panama, 2003) to undertake the implementation of the ILAC remains in force.

**102.** It is necessary that future actions, to continue with the implementation of ILAC, concentrate in a limited number of priorities. This statement has been reiterated by countries of the Region and by Representatives of the Agencies that make up the Interagency Technical Committee, when they discussed what program should be adopted by the Forum of Ministers to advance in the achievement of the objectives and goals set forth by ILAC.

**103.** The activities carried out during the period 2003-2007 in the RAP's concentration areas could be reinforced so as to give greater emphasis, among others, to the following topics: the implications of the production and the growing use of biofuels, the strengthening of the action strategies in the face of the climatic change, and the strengthening of the action programs in the face of the growing threats of global change; as well as the integrated management of ecosystems.

**104.** These are certainly topics that have been present in the debate and that have been part of the work programs in force, but which deserve greater attention in the face of the recent trends observed in most of the countries of the Region, and in the face of the new stage of the international negotiations that will begin starting from the year 2008.

**105.** In synthesis, we can anticipate the convenience of the countries of the Region to continue to focus their individual and collective effects in the application of ILAC in the thematic areas in which they have been working since 2003. However, it would be necessary to update the approaches and perspectives to include the socioeconomic and environmental trends observed in recent years.

**106.** The participants to the Sixteenth Meeting of the Forum of Ministers could take into consideration the recommendation issued by the Preparatory Meeting of High-Level Experts as to the convenience of performing periodic evaluations concerning the implementation of ILAC, considering the evaluation process carried out for the Sixteenth Meeting. To this respect, a methodology proposal will be presented, from which a specific recommendation to the Forum of Ministers can be developed.

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## Annex I. Tabulation of the guiding goals, indicative purposes and ILAC indicators

### 1. Biological Diversity

<b>ILAC. S. IV. Priorities for Action. Guiding Goals and Indicative Purposes. 1 Biological Diversity</b>		
<b>Guiding Goal</b>	<b>Indicative Purpose</b>	<b>Indicators</b>
1.1 Increase of the wooden surface	i) To guarantee the sustainable management of the Region's forest resources, significantly reducing the current rates of deforestation.	Proportion of surface covered by woods.
1.2 Territory under protected areas	i) To significantly increase the surface of the regional territory under protection areas, taking into account in its definition transition zones and biological corridors.	Proportion of protected areas with respect to the total territory.
1.3 Genetic Resources – Equitable distribution of the benefits.	i) To adopt frameworks of regulation for the access to the genetic resources as well as for the fair and equitable participation in the benefits derived of its use, compatible with the Convention on Biological Diversity.	Existence of national laws related to the access to genetic resources and the distribution of benefits.
1.4 Marine Diversity	i) To guarantee the preservation and adequate use of the marine resources of the Countries of the Caribbean Basin, especially in the marine and coastal ecosystems.	Protected marine and coastal areas vis-à-vis the total marine and coastal area.

## **2. Management of Water Resources**

<b>ILAC. S. IV. Priorities for Action. Guiding Goals and Indicative Purposes. 2 Management of Water Resources</b>		
<b>Guiding Goal</b>	<b>Indicative Purpose</b>	<b>Indicators</b>
2.1 Water Supply	i. To improve the technology in order to increase the efficiency in the industrial water use and in the water use for domestic consumption.	Availability of water per inhabitant.
	ii. To introduce modern technologies for the desalinization of sea water.	Water consumption per inhabitant.
	iii. To integrate the management of coastal aquifers in order to avoid saline intrusion.	
2.2 Watershed management	i. To improve and strengthen the institutionality for the integrated management of watersheds and aquifers, among others, by means of the establishment of committees of hydrographic watersheds, with the participation of all the subnational levels of the government, the civil society, the private sector and all stakeholders involved.	Percentage of areas of watersheds under management.
2.3 Management of marine and coastal areas and their resources.	i) To implement action plans for the integrated management of the coastal resources and ecosystems, with particular attention to the Small Islands Developing Status.	Fishing extraction
	ii) To adopt a comprehensive and integrated approach for the management of the Caribbean Sea by means of the development of a comprehensive strategy for its protection and management.	
2.4 Better quality of terrestrial waters.	i) To improve the quality of the effluents and to diminish the discharge of contaminants into surface and underground water bodies as well as into the coastal zone.	Percentage of the population with access to sanitation.



### 3. Vulnerability, Human Settlements and Sustainable Cities

<b>ILAC. S. IV. Priorities for Action. Guiding Goals and Indicative Purposes. 3 Vulnerability, Human Settlements and Sustainable Cities</b>		
Guiding Goal	Indicative Purpose	Indicators
3.1 Land Use Management	i) To implement plans and policies of land use management, departing from a sustainable development approach.	Percentage of municipalities with undergoing land use management plans.
	ii) To incorporate instruments for the management of risks in the land use management plans.	Change in the use of the soil.
3.2 Areas affected by degradation processes.	i) To significantly reduce the surface of the regional territory subject to erosion, salinization, and other processes of soil deterioration.	Percentage of degraded areas.
3.3 Air Pollution.	i) To reduce the concentration of contaminating emissions into the air.	Change in the density of the park of motor vehicles.
		Co2 emissions
3.4 Water Contamination.	i) To increase the coverage of drinking water services and waste water treatment services.	% of the population with access to drinking water.
		% of the population with access to sanitation services.
3.5 Solid Wastes.	i) To significantly reduce the generation of solid wastes (household and industrial wastes), and to promote, among other things, recycling and reuse.	% of the population with access to waste collection services.
		Generation of solid wastes.
	ii) To implement the integrated management of solid wastes, including the treatment and adequate final disposal thereof.	Adequately collected wastes and adequate disposal thereof.
3.6 Vulnerability in the face of anthropogenic disasters and disasters caused by natural phenomena.	i) To implement and strengthen regional cooperation mechanisms for the management of risks and the mitigation of anthropogenic disasters and the disasters caused by natural phenomena, including the formulation of a regional early warning system and the creation of immediate response groups.	Existence of national emergency commissions or immediate response groups.
3.7 Vulnerability and risk management.	i) To refine and apply vulnerability indicators.	
	ii) To incorporate indicators in the national development plans.	

#### 4. Social Issues, including Health, Inequity and Poverty

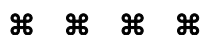
<b>ILAC. S. IV. Priorities for Action. Guiding Goals and Indicative Purposes. 4 Social Issues, including Health, Inequity and Poverty</b>		
Guiding Goal	Indicative Purpose	Indicators
4.1 Health and environment	i) To implement policies and plans in order to result the environmental risks that cause health damages, especially those of hydric transmission, by vectors, atmospheric contamination or exposure to chemical substances.	Morbidity rate attributable to acute respiratory diseases. AVPD due to diseases hydric origin.
	ii) To implement integral measures to control and regress the spread of the AIDS virus, including the development of coordinated efforts for research, education, treatment and access to retroviral drugs.	HIV Morbidity
	iii) To increase the proportion of green and healthy areas <i>per capita</i>	Proportion of urban green areas according to the urban population.
4.2 Environment and the generation of employment	i) To promote the formulation and implementation of sustainable development projects and programs, which contribute to generate employment and to prevent migrations and uprooting	
4.3 Poverty and inequity.	i) To drastically reduce the poverty levels in the countries of the Region.	Percentage of the population with and income of less than US\$ 1 PPA
		Proportion of households entitled to title deeds.
	ii) To create sustainable forms of live through the development of micro-enterprises.	Growth index of the number of small enterprises.
	iii) To formulate and execute strategies for the women, the youth, the indigenous populations, the communities of African descent, migrants, people with disabilities, and other minority groups of the Region, in accordance with the human rights and the fundamental liberties.	Social expenditure as% of the GDP.

**5. Economic Aspect, including Competitiveness, Trade and the Production and Consumption (Energy) Patterns**

<b>ILAC. S. IV. Priorities for Action. Guiding Goals and Indicative Purposes. 5 Economic Aspect, including Competitiveness, Trade and the Production and Consumption (Energy) Patterns</b>		
Guiding Goal	Indicative Purpose	Indicators
5.1 Energy	i) To implement the use in the Region of, at least, a 10% of renewable energy out of the total energy percentage of the Region for the year 2010	Use of energy for US\$1000 of the GDP PPA
		Percentage of the population that uses solid fuels
		Percentage of energy consumed from renewable energy sources in relation to the total energy consumed.
5.2 Cleaner production	i) To install Cleaner Production Centers in all the countries of the Region.	Consumption of CFCs, which deplete the ozone layer.
	ii) To incorporate the cleaner production concept in a significant fraction of the main industries with an emphasis in the small and medium industry.	Number of companies with ISO14000 certification.
5.3 Economic Instruments	i) To establish an economic incentive system for productive and industrial transformation projects that preserve the natural resources and energy and produce the final reduction of effluents discharged into the water, soils and air.	Economic instruments applied.

## **6. Institutional Aspects**

<b>ILAC. S. IV. Priorities for Action. Guiding Goals and Indicative Purposes. 6. Institutional Aspects</b>		
<b>Guiding Goal</b>	<b>Indicative Purpose</b>	<b>Indicators</b>
6.1 Environmental education	i) To improve and strengthen the incorporation of the environmental dimension in the formal and non-formal education, in the economy and in the society.	Total of hours in which environmental science is taught in primary school (ND)
6.2 Formation and training of human resources	i) To eradicate illiteracy and universalize the primary and secondary school tuition.	Net tuition rate in primary school.
	ii) To build capacities to face vulnerability in the Region	
	iii) To establish programs to build capacities in the management of the sustainable development for the public sector, the private sector and the community level.	
6.3 Evaluation and indicators	i) To develop and implement an evaluation process to follow up on the progress made in the attainment of the sustainable development goals, including the results of the Action Plan of Johannesburg, , adopting systems of sustainability indicators, at the national and regional levels, that correspond to the social, economic and political particularities of the Region.	Reports on the state of the environment and the Environmental Statistical System.
6.4 Participation of the society	i) To create and strengthen participation in subjects of sustainable development, with governmental representation, non-governmental representation, and representation of the main groups in all the countries of the Region.	Existence of national councils on sustainable development.



## Annex II Statistical Tables

<b>Table A 1.1.</b>	Proportion of the surface covered by woods (%)
<b>Table A 1.2.</b>	Percentage of Protected Areas in relation to the total territory (%)
<b>Table A 1.3.</b>	Percentage of protected marine and coastal areas vis-à-vis the total marine and coastal area
<b>Table A 2.1.</b>	Percentage of the population with access to drinking water
<b>Table A 2.2.</b>	Percentage of the population with access to sanitation
<b>Table A 3.1.</b>	Density of the motor vehicle park. Vehicles per each thousand inhabitants. Some countries
<b>Table A 3.2.</b>	Latin America and the Caribbean. Population within the 100 kms of the coast. In thousands
<b>Table A 3.3.</b>	Number of victims of natural disasters
<b>Table A 4.1.</b>	Percentage of persons living with HIV/AIDS per country (%)
<b>Table A 4.2.</b>	Social expenditure as percentage of the total public expenditure
<b>Table A 5.1.</b>	Use of Energy per US\$1000 of the GDP (PPA) Kilograms of equivalent petroleum
<b>Table A 5.2.</b>	Carbon dioxide emissions. Metric Tons
<b>Table A 5.3.</b>	Percentage of energies consumed from renewable sources compared to the total energy consumption. %
<b>Table A 5.4.</b>	Consumption of substances that deplete the ozone layer. ODP Tons
<b>Table A 5.5.</b>	Number of companies with ISO 14001certificación. Number of certifications
<b>Table A 6.1.</b>	Net inscription rate in primary school. %
<b>Table A 6.2.</b>	National environmental reports, ILAC reports and GEO reports up to the year 2007

<b>Table A 1.1. Proportion of the surface covered by woods (%)</b>		
<b>Country</b>	<b>2000</b>	<b>2005</b>
<b>Latin America and the Caribbean</b>	<b>46.80</b>	<b>46</b>
<b>Caribe</b>		
Anguila		
Antigua and Barbuda	20.5	20.5
Netherland Antilles	1.3	1.3
Aruba	0.0	0.0
Bahamas	51.4	51.4
Barbados	4.7	4.7
Cuba	22.2	24.7
Dominica	62.7	61.3
Grenada	11.8	11.8
Guadalupe		
Haiti	4.0	3.8
Jamaica	31.5	31.3
Martinica		
Montserrat		
Puerto Rico	45.9	46.0
Dominican Republic	28.4	28.4
Saint Kitts and Nevis	13.9	13.9
Saint Vincent and the Grenadines	25.6	28.2
Saint Lucia	27.9	27.9
Trinidad and Tobago	44.4	44.1
Turks and Caicos Islands		
Virgin Islands, American	28.6	28.6
Virgin Islands, British		
<b>Mesoamerica</b>	<b>36.94</b>	<b>35.81</b>
Belize	72.47	72.47
Costa Rica	46.53	46.83
El Salvador	15.64	14.38
Guatemala	38.81	36.32
Honduras	48.53	41.54
Mexico* (1993 y 2002, respect.)	35.52	34.65
Nicaragua	45.63	42.74
Panama	57.87	57.69
<b>South America</b>	<b>48.46</b>	<b>47.24</b>
Argentina	12.3	12.1
Bolivia	55.4	54.2
Brazil	58.3	56.5
Chile	21.1	21.5
Colombia	58.7	58.5
Ecuador	42.8	39.2
Guayanas		
Paraguay	48.7	46.5
Peru	54.1	53.7
Suriname	94.7	94.7
Uruguay	8.1	8.6
Venezuela*	55.7	54.1
French Guyana		
<b>Source:</b> FAO. <a href="http://www.fao.org">www.fao.org</a> Consulted on the Data Base of ILAC. Information verified by countries.		

<b>Table A 1.2. Percentage of Protected Areas in relation to the total territory</b>						
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Latin America and the Caribbean</b>						
<b>Caribe</b>						
Anguila						
Antigua and Barbuda	0.90	0.90	0.90	0.90	0.90	0.90
Netherland Antilles						
Aruba						
Bahamas	0.50	0.50	0.90	0.90	0.90	0.90
Barbados	0.10	0.10	0.10	0.10	0.10	0.10
Cuba	14.80	14.80	15.10	15.10	15.10	15.10
Dominica						
Grenada						
Guadalupe						
Haiti	0.10	0.10	0.10	0.10	0.10	0.10
Jamaica	13.50	13.50	13.50	13.50	13.50	13.50
Martinica						
Montserrat						
Puerto Rico						
Dominican Republic						
Saint Kitts and Nevis						
Saint Vincent and the Grenadines	1.30	1.30	1.30	1.30	1.30	1.30
Saint Lucia	2.20	2.20	2.20	2.20	2.40	2.40
Trinidad and Tobago	1.80	1.80	1.80	1.80	1.80	1.80
Turks and Caicos Islands						
Virgin Islands, American						
Virgin Islands, British						
<b>Mesoamerica</b>						
Belize	27.80	28.60	28.70	29.50	29.50	30.40
Costa Rica	21.00	23.10	23.30	23.30	23.30	23.30
El Salvador	0.90	0.90	0.90	0.90	0.90	0.90
Guatemala	30.80	30.80	30.80	30.80	30.80	30.80
Honduras	20.00	20.00	20.00	20.00	20.00	20.00
Mexico*	8.62	8.81	8.85	9.04	9.04	9.76
Nicaragua	18.20	18.20	18.20	18.20	18.20	18.20
Panama	21.30	21.30	21.30	21.30	24.60	24.60
<b>South America</b>						
Argentina	6.20	6.20	6.20	6.20	6.20	6.20
Bolivia	19.80	19.80	19.80	19.80	19.80	19.80
Brazil	17.10	18.10	18.10	18.10	18.10	18.70
Chile	13.80	13.80	13.80	20.80	20.80	20.80
Colombia	31.60	31.60	31.60	31.60	31.60	31.60
Ecuador	53.50	53.50	53.50	53.50	53.50	53.50
Guayanas						
Paraguay						
Peru	7.70	9.40	9.80	10.30	12.50	13.30
Suriname						
Uruguay	0.40	0.40	0.40	0.40	0.40	0.40
Venezuela	62.90	62.90	62.90	62.90	62.90	62.90
French Guyana						
<b>Source:</b> <a href="http://www.unep-wcmc.org/">http://www.unep-wcmc.org/</a> consulted on the Data Base of ILAC. Information verified by countries.						

<b>Table A 1.3. Percentage of protected marine and coastal areas vis-à-vis the total marine and coastal area</b>							
	2000	2001	2002	2003	2004	2005	2006
<b>Latin America and the Caribbean</b>	<b>1.72</b>	<b>1.72</b>	<b>1.73</b>	<b>2.04</b>	<b>2.05</b>	<b>2.10</b>	<b>2.10</b>
<b>Caribe</b>	<b>5.87</b>	<b>5.87</b>	<b>6.08</b>	<b>6.09</b>	<b>6.09</b>	<b>6.09</b>	<b>6.09</b>
Anguilla							
Antigua and Barbuda							
Netherland Antilles							
Aruba							
Bahamas							
Barbados							
Cuba							
Dominica							
Grenada							
Guadalupe							
Haiti							
Jamaica							
Martinica							
Montserrat							
Puerto Rico							
Dominican Republic							
Saint Kitts and Nevis							
Saint Vincent and the Grenadines							
Saint Lucia							
Trinidad and Tobago							
Turks and Caicos Islands							
Virgin Islands, American							
Virgin Islands, British							
<b>Mesoamerica</b>	<b>3.86</b>	<b>3.87</b>	<b>3.89</b>	<b>3.89</b>	<b>3.95</b>	<b>4.33</b>	<b>4.33</b>
Belize							
Costa Rica							
El Salvador							
Guatemala							
Honduras							
Mexico*	2.18		2.19			2.5	
Nicaragua							
Panama							
<b>South America</b>	<b>1.21</b>	<b>1.21</b>	<b>1.21</b>	<b>1.58</b>	<b>1.58</b>	<b>1.58</b>	<b>1.58</b>
Argentina							
Bolivia							
Brazil							
Chile							
Colombia							
Ecuador							
Guayanas							
Paraguay							
Peru							
Suriname							
Uruguay							
Venezuela							
French Guyana							
<b>Source:</b> <a href="http://www.unep-wcmc.org/">http://www.unep-wcmc.org/</a> . Information verified by countries							



<b>Table A 2.1. Percentage of the population with access to drinking water</b>		
<b>Country</b>	<b>2000</b>	<b>2004</b>
<b>Latin America and the Caribbean</b>	<b>89.40</b>	<b>91.10</b>
<b>Caribe</b>	<b>82.80</b>	<b>84.40</b>
Anguila	60.00	60.00
Antigua and Barbuda	92.00	91.00
Netherland Antilles		
Aruba	100.00	100.00
Bahamas	97.00	97.00
Barbados	100.00	100.00
Cuba*	94.2	95.60
Dominica	97.00	97.00
Grenada	95.00	95.00
Guadalupe	98.00	98.00
Haiti	54.00	54.00
Jamaica	93.00	93.00
Martinica		
Montserrat	100.00	100.00
Puerto Rico		
Dominican Republic	92.00	95.00
Saint Kitts and Nevis	100.00	100.00
Saint Vincent and the Grenadines		
Saint Lucia	98.00	98.00
Trinidad and Tobago	92.00	91.00
Turks and Caicos Islands	100.00	100.00
Virgin Islands, American		
Virgin Islands, British	100.00	100.00
<b>Mesoamerica</b>	<b>91.4</b>	<b>94.9</b>
Belize	90.00	91.00
Costa Rica	97.00	97.00
El Salvador	80.00	84.00
Guatemala	91.00	95.00
Honduras	87.00	87.00
Mexico* (2000 y 2005 respect.)	87.80	89.20
Nicaragua	76.00	79.00
Panama	90.00	90.00
<b>South America</b>	<b>89.1</b>	<b>90.2</b>
Argentina	96.00	96.00
Bolivia	82.00	85.00
Brazil	89.00	90.00
Chile	94.00	95.00
Colombia	92.00	93.00
Ecuador	88.00	94.00
Guayanas	83.00	83.00
Paraguay	80.00	86.00
Peru	81.00	83.00
Suriname	92.00	92.00
Uruguay	100.00	100.00
Venezuela*	83.70	89.74
French Guyana	84.00	84.00
<b>Source:</b> WHO/UNICEF <a href="http://rbm.who.int/wmr2005/">http://rbm.who.int/wmr2005/</a> Taken from the Data base of ILAC * Information verified by countries		

<b>Table A 2.2. Percentage of the population with access to sanitation</b>		
<b>Country</b>	<b>2000</b>	<b>2004</b>
<b>Latin America and the Caribbean</b>	<b>75.09</b>	<b>77.16</b>
<b>Caribe</b>	<b>72.25</b>	<b>74.15</b>
Anguila	99.00	99.00
Antigua and Barbuda	95.00	95.00
Netherland Antilles		
Araba		
Bahamas	100.00	100.00
Barbados	100.00	100.00
Cuba*	93.70	95.00
Dominica	82.00	84.00
Grenada	96.00	96.00
Guadalupe	64.00	64.00
Haiti	28.00	30.00
Jamaica	79.00	80.00
Martinica		
Montserrat	100.00	100.00
Puerto Rico		
Dominican Republic	71.00	78.00
Saint Kitts and Nevis	95.00	95.00
Saint Vincent and the Grenadines		
Saint Lucia	89.00	89.00
Trinidad and Tobago	100.00	100.00
Turks and Caicos Islands	95.00	96.00
Virgin Islands, American		
Virgin Islands, British		
<b>Mesoamerica</b>	<b>73.45</b>	<b>77.32</b>
Belize	47.00	47.00
Costa Rica	92.00	92.00
El Salvador	61.00	62.00
Guatemala	78.00	86.00
Honduras	65.00	69.00
Mexico* (2000 y 2005 respect.)	76.20	85.60
Nicaragua	46.00	47.00
Panama	72.00	73.00
<b>South America</b>	<b>76.04</b>	<b>77.42</b>
Argentina	89.00	91.00
Bolivia	43.00	46.00
Brazil	74.00	75.00
Chile	90.00	91.00
Colombia	85.00	86.00
Ecuador	82.00	89.00
Guayanas	69.00	70.00
Paraguay	74.00	80.00
Peru	61.00	63.00
Suriname	93.00	94.00
Uruguay	100.00	100.00
Venezuela*	67.74	73.13
French Guyana	78.00	78.00
<b>Source: WHO/UNICEF <a href="http://rbm.who.int/wmr2005/">http://rbm.who.int/wmr2005/</a> Consulted on the Data Base of ILAC. Information verified by countries.</b>		

<b>Table A 3.1. Density of the motor vehicle park. Vehicles per each thousand inhabitants. Some countries</b>				
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Latin America and the Caribbean</b>	<b>88.15</b>	<b>87.95</b>		
<b>Caribe</b>				
Bahamas	265.39	261.61		
Grenada	147.65	157.26		
Guadalupe	274.63	272.10		
Haiti				
Jamaica	49.91	49.61		
Puerto Rico	533.78	537.81	530.03	531.90
Dominican Republic	55.17	66.88		
Saint Kitts and Nevis				
Saint Vincent and the Grenadines	77.62	85.80		
<b>Mesoamerica</b>	<b>94.92</b>	<b>113.78</b>	<b>128.35</b>	
Belize	107.32	117.01	130.24	
Costa Rica	87.05	88.18	89.82	
El Salvador	23.57			
Mexico*	161.1	177.2	190.8	199.8
Nicaragua	14.72	16.21		
Panama	75.59	72.84		
<b>South America</b>	<b>75.04</b>	<b>66.94</b>		
Bolivia	31.62	31.57	31.29	33.16
Brazil	85.24	86.24		
Chile	85.71	86.69	87.03	87.96
Colombia	19.28	18.96		
Ecuador	27.30	26.11	28.26	30.65
Guayanas	82.02	81.80		
Paraguay	76.05			41.51
Peru	27.63	28.49	31.16	33.39
Suriname	140.55	125.72	145.23	160.04
Uruguay	200.50	186.85	187.85	
Venezuela	54.30	55.14		
French Guyana	200.84	195.12		
<b>Source:</b> UNSD <a href="http://unstats.un.org/unsd/cdb/cdb_advanced_data_extract.asp">http://unstats.un.org/unsd/cdb/cdb_advanced_data_extract.asp</a> Consulted on the Data Base of ILAC. Information verified by countries.				

<b>Table A 3.2. Latin America and the Caribbean. Population within the 100 kms of the coast. In thousands</b>		
	<b>2000</b>	<b>2005</b>
<b>Latin America and the Caribbean</b>	<b>264198</b>	<b>283235</b>
<b>Caribe</b>	<b>37988</b>	<b>39906</b>
Anguila	11	13
Antigua and Barbuda	65	66
Netherland Antilles	228	237
Aruba	101	109
Bahamas	301	320
Barbados	267	272
Cuba	11194	11364
Dominica	71	70
Grenada	104	106
Guadalupe	413	430
Haiti	8124	8777
Jamaica	2576	2693
Martinica	383	394
Montserrat	4	4
Puerto Rico	3914	4090
Dominican Republic	8391	9048
Saint Kitts and Nevis	38	37
Saint Vincent and the Grenadines	103	106
Saint Lucia	148	156
Trinidad and Tobago	1291	1321
Turks and Caicos Islands	16	19
Virgin Islands, American	121	128
Virgin Islands, British	23	26
<b>Mesoamerica</b>	<b>58601</b>	<b>64078</b>
Belize	226	248
Costa Rica	4031	4461
El Salvador	6284	6883
Guatemala	7604	8540
Honduras	4847	5427
Mexico*	27909.3	29486.3
Nicaragua	3576	4103
Panama	2848	3060
<b>South America</b>	<b>167609</b>	<b>179251</b>
Argentina	16304	17040
Bolivia		
Brazil	85201	91070
Chile	11446	12218
Colombia	11709	12640
Ecuador	7252	7880
Guayanas	590	596
Paraguay		
Peru	14533	15565
Suriname	395	407
Uruguay	2607	2705
Venezuela	17421	18954
French Guyana	149	174
<b>Source:</b> UNEP/DEWA/GRID Europe. <a href="http://www.grid.unep.ch">http://www.grid.unep.ch</a> Information verified by countries.		

<b>Table A 3.3. Number of victims of natural disasters</b>							
<b>Country</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
<b>Latin America and the Caribbean</b>	<b>542610</b>	<b>8580691</b>	<b>2240903</b>	<b>2744825</b>	<b>4065619</b>	<b>7017164</b>	<b>1327321</b>
<b>Caribe</b>	<b>675</b>	<b>5905268</b>	<b>428109</b>	<b>228353</b>	<b>984087</b>	<b>2657872</b>	<b>46748</b>
Anguila							
Antigua and Barbuda							
Netherland Antilles							
Aruba							
Bahamas		0			9000	1500	
Barbados			2000		0		
Cuba	675	5900012	358970	600	205750	2600000	1768
Dominica		175			100		
Grenada					60000	1650	
Guadalupe							
Haiti	0	5081	38589	150275	336829	41876	39700
Jamaica		0	26500		350126	10396	5280
Martinica							
Montserrat							
Puerto Rico							
Dominican Republic		0	1750	77478	22169	2450	
Saint Kitts and Nevis							
Saint Vincent and the Grenadines							
Saint Lucia							
Trinidad and Tobago							
Turks and Caicos Islands							
Virgin Islands, American							
Virgin Islands, British							
<b>Mesoamerica</b>	<b>150155</b>	<b>1712952</b>	<b>776255</b>	<b>296688</b>	<b>173618</b>	<b>3361470</b>	<b>286340</b>
Belize	62570	20000				0	
Costa Rica	200	1437	95040	2635	3311	4072	
El Salvador	711	1591550	2999	50000		77224	9000
Guatemala	3536	8448	102296	220		477854	0
Honduras	0	61051	7075	3105	137500	103869	1500
Mexico	73301	5600	516830	238653	4090	2683571	270700
Nicaragua	9837	24866	26842		5969	7880	
Panama	0	0	25173	2075	22748	7000	5140
<b>South America</b>	<b>391780</b>	<b>962471</b>	<b>1036539</b>	<b>2219784</b>	<b>2907914</b>	<b>997822</b>	<b>994233</b>
Argentina	30340	254950	17727	143900	6307	52	4500
Bolivia	32287	357255	17231	48230	55000	3000	126600
Brazil	17000	1946	319730	18571	153114	31004	116000
Chile	171266	14245	255642	0	9000	28557	95862
Colombia	40430	6232	124538	74778	539520	604940	238465
Ecuador	100457	32300	201356	32905			357933
Guayanas	0					274774	35000
Paraguay	0		2765		0	52990	1873
Peru	0	295543	97550	1901400	2144973	2505	18000
Suriname							
Uruguay							
Venezuela							
French Guyana							

**Source:** EM-DAT <http://www.em-dat.net/disasters> Consulted on the Data Base of ILAC

<b>Table A 4.1. Percentage of persons living with HIV/AIDS per country</b>				
	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2005</b>
<b>Latin America and the Caribbean</b>				
<b>Caribe</b>				
Anguila				
Antigua and Barbuda				
Netherland Antilles				
Aruba				
Bahamas	3.0		2.9	3.3
Barbados	1.5		1.6	1.5
Cuba	0.1		0.1	0.1
Dominica				
Grenada				
Guadalupe				
Haiti	5.5		3.8	3.8
Jamaica	0.8		1.5	1.5
Martinica				
Montserrat				
Puerto Rico				
Dominican Republic	1.8		1.2	1.1
Saint Kitts and Nevis				
Saint Vincent and the Grenadines				
Saint Lucia				
Trinidad and Tobago	3.0		2.6	2.6
Turks and Caicos Islands				
Virgin Islands, American				
Virgin Islands, British				
<b>Mesoamerica</b>				
Belize	2.1		2.1	2.5
Costa Rica	0.6		0.3	0.3
El Salvador	0.6		0.9	0.9
Guatemala	1.1		0.9	0.9
Honduras	1.6		1.5	1.5
Mexico*		1.0		
Nicaragua	0.2		0.2	0.2
Panama	0.7		0.9	0.9
<b>South America</b>				
Argentina	0.7		0.6	0.6
Bolivia	0.1		0.1	0.1
Brazil	0.6		0.5	0.5
Chile	0.3		0.3	0.3
Colombia	0.5		0.5	0.6
Ecuador	0.3		0.3	0.3
Guayanas				
Paraguay	0.4		0.4	0.4
Peru	0.4		0.5	0.6
Suriname	1.3		1.7	1.9
Uruguay	0.3		0.4	0.5
Venezuela	0.6		0.6	0.7
French Guyana				
<b>Source:</b> PAHO <a href="http://www.paho.org">www.paho.org</a> Consulted on the Data Base of ILAC. Information verified by countries.				

<b>Table A 4.2. Social expenditure as percentage of the total public expenditure</b>					
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
<b>Latin America and the Caribbean</b>	<b>63.48</b>	<b>60.88</b>	<b>59.39</b>	<b>58.05</b>	<b>57.97</b>
<b>Caribe</b>	<b>57.00</b>				
Anguila					
Antigua and Barbuda	76.30	75.01	75.66		
Netherland Antilles					
Aruba					
Bahamas					
Barbados	72.79	73.47	73.41	74.05	
Cuba	46.89				
Dominica	58.45	60.11	60.38	59.63	
Grenada	68.01	68.81	66.43	66.09	68.42
Guadalupe					
Haiti	55.02	54.81	55.15	55.11	55.29
Jamaica	62.01	61.90	62.85	62.85	61.96
Martinica					
Montserrat					
Puerto Rico	57.84	56.46			
Dominican Republic	54.84	55.67	56.34	58.13	63.00
Saint Kitts and Nevis	68.39	66.75	67.06	68.69	
Saint Vincent and the Grenadines	65.22	64.86	65.85	66.51	66.78
Saint Lucia	72.99	73.77	75.10	76.59	
Trinidad and Tobago	51.11	53.51	55.00	50.02	51.99
Turks and Caicos Islands					
Virgin Islands, American					
Virgin Islands, British					
<b>Mesoamerica</b>	<b>66.95</b>	<b>67.76</b>	<b>68.71</b>	<b>69.41</b>	<b>68.77</b>
Belize	61.67	64.10	65.23		
Costa Rica	58.46	61.45	62.35	62.53	62.56
El Salvador	57.92	57.75	58.43	58.54	59.58
Guatemala	57.39	57.85	58.19	58.11	58.43
Honduras	52.25	54.64	55.90	55.47	
Mexico	67.81	68.59	69.57	70.32	69.49
Nicaragua	54.62	54.85	55.36	55.83	55.28
Panama	73.62	75.24	76.41	78.53	74.40
<b>South America</b>	<b>62.23</b>	<b>57.71</b>	<b>54.60</b>	<b>52.14</b>	<b>52.29</b>
Argentina	66.88	68.07	56.78	54.29	53.97
Bolivia	55.20	55.61	55.72	55.13	53.76
Brazil	64.75	53.94	53.30	49.96	49.64
Chile	56.82	56.70	56.16	54.86	51.61
Colombia	59.08	60.19	59.88	58.65	57.78
Ecuador	54.64	61.60	62.63	63.61	62.06
Guayanas	39.88	40.78	40.59	41.37	41.73
Paraguay	53.53	51.14	51.26	48.53	48.53
Peru	59.79	60.28	60.03	59.81	60.03
Suriname	63.07	66.13	68.71	68.82	
Uruguay	68.11	69.24	66.10	61.75	60.04
Venezuela	46.12	49.37	46.13	43.90	
French Guyana					

**Source:** World bank. World Development Indicators. [www.worldbank.org](http://www.worldbank.org). Consulted on the Data Base of ILAC.

<b>Table A 5.1. Use of Energy per US\$1000 of the GDP (PPA) Petroleum equivalent kilograms</b>				
<b>Country</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Latin America and the Caribbean</b>	<b>164.65</b>	<b>164.08</b>	<b>164.79</b>	<b>164.59</b>
<b>Caribe</b>				
Anguila				
Antigua and Barbuda				
Netherland Antilles				
Aruba				
Bahamas				
Barbados				
Cuba				
Dominica				
Grenada				
Guadalupe				
Haiti	143.00	148.00	166.00	159.00
Jamaica	415.00	412.00	391.00	401.00
Martinica				
Montserrat				
Puerto Rico				
Dominican Republic	147.00	142.00	142.00	136.00
Saint Kitts and Nevis				
Saint Vincent and the Grenadines				
Saint Lucia				
Trinidad and Tobago	856.00	863.00	854.00	766.00
Turks and Caicos Islands				
Virgin Islands, American				
Virgin Islands, British				
<b>Mesoamerica</b>	<b>166.24</b>	<b>169.41</b>	<b>172.53</b>	<b>174.58</b>
Belize				
Costa Rica	98.00	101.00	106.00	101.00
El Salvador	141.00	145.00	143.00	145.00
Guatemala	161.00	162.00	158.00	153.00
Honduras	187.00	196.00	201.00	202.00
Mexico*	189.29	183.65	177.18	178.18
Nicaragua	169.00	166.00	166.00	180.00
Panama	142.00	157.00	143.00	132.00
<b>South America</b>	<b>156.48</b>	<b>154.36</b>	<b>153.56</b>	<b>152.92</b>
Argentina	138.00	137.00	140.00	139.00
Bolivia	248.00	217.00	207.00	206.00
Brazil	146.00	144.00	144.00	146.00
Chile	184.00	174.00	176.00	166.00
Colombia	108.00	106.00	100.00	99.00
Ecuador	201.00	206.00	198.00	201.00
Guayanas				
Paraguay	155.00	154.00	156.00	156.00
Peru	102.00	99.00	93.00	89.00
Suriname				
Uruguay	105.00	95.00	100.00	95.00
Venezuela	410.00	405.00	421.00	443.00
French Guyana				
<b>Source: UNSD <a href="http://unstats.un.org/unsd/default.htm">http://unstats.un.org/unsd/default.htm</a> Consulted on the Data Base of ILAC Information verified by countries.</b>				



<b>Table A 5.2. Carbon dioxide emissions. Metric Tons</b>				
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Latin America and the Caribbean</b>				
<b>Caribe</b>				
Anguila				
Antigua and Barbuda	353	353	372	399
Netherland Antilles	3291	3334	3395	4059
Aruba	2093	2099	2136	2157
Bahamas	1800	1800	2086	1873
Barbados	1187	1216	1225	1192
Cuba*			25327	
Dominica	101	111	120	138
Grenada	206	221	218	221
Guadalupe	1632	1653	1685	1713
Haiti	1343	1571	1764	1741
Jamaica	10327	10637	10315	10737
Martinica	2091	2118	2246	1341
Montserrat	49	49	55	61
Puerto Rico	9976	14409	14808	2105
Dominican Republic	20133	20251	21518	21347
Saint Kitts and Nevis	101	101	114	126
Saint Vincent and the Grenadines	154	175	184	194
Saint Lucia	323	313	304	326
Trinidad and Tobago	25344	25854	27800	28699
Turks and Caicos Islands				
Virgin Islands, American	12144	13307	12347	13548
Virgin Islands, British	58	58	68	77
<b>Mesoamerica</b>				
Belize	691	713	747	780
Costa Rica	5539	5629	5674	6340
El Salvador	5748	5953	6034	6553
Guatemala	10205	10563	11009	10711
Honduras	5034	5718	6044	6507
Mexico*	404412		393532	
Nicaragua	3774	3981	3934	3917
Panama	5762	7008	5841	6035
<b>South America</b>				
Argentina	137562	125972	119933	127728
Bolivia	9867	9207	9093	7908
Brazil	308024	316478	312897	298902
Chile	59539	55228	57251	58591
Colombia	58249	56198	53399	55631
Ecuador	21366	24004	24619	23245
Guayanas	1601	1647	1610	1632
Paraguay	3692	3827	4002	4143
Peru	27356	26419	25966	26198
Suriname	2129	2266	2254	2242
Uruguay	4895	4528	4351	4380
Venezuela	162917	158123	135761	144227
French Guyana	981	985	1005	1005
<b>Source:</b> World Bank. <a href="http://devdata.worldbank.org/query/default.htm">http://devdata.worldbank.org/query/default.htm</a> . Consulted on the Data Base of ILAC. Information verified by countries.				

<b>Table A 5.3. Percentage of energies consumed from renewable sources compared to the total energy consumption. %</b>					
<b>Country</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
<b>Latin America and the Caribbean</b>	<b>14.24</b>	<b>14.39</b>	<b>14.64</b>	<b>15.05</b>	<b>14.81</b>
<b>Caribe</b>					
Anguila					
Antigua and Barbuda					
Netherland Antilles					
Aruba					
Bahamas					
Barbados					
Cuba	26.83	27.79	23.75	21.24	19.37
Dominica					
Grenada					
Guadalupe					
Haiti	74.40	72.67	72.89	73.80	73.97
Jamaica	12.17	11.91	11.62	11.28	11.74
Martinica					
Montserrat					
Puerto Rico					
Dominican Republic	17.37	18.41	17.61	18.10	19.27
Saint Kitts and Nevis					
Saint Vincent and the Grenadines					
Saint Lucia					
Trinidad and Tobago	0.34	0.25	0.26	0.21	0.20
Turks and Caicos Islands					
Virgin Islands, American					
Virgin Islands, British					
<b>Mesoamerica</b>					
Belize					
Costa Rica	7.50	7.22	7.49	8.16	8.24
El Salvador	34.00	32.89	33.08	31.75	32.52
Guatemala	54.56	53.32	52.80	53.34	52.90
Honduras	44.09	41.13	41.07	40.92	40.04
Mexico					
Nicaragua	51.64	48.17	52.06	49.42	51.09
Panama	17.90	16.14	17.21	17.11	16.82
<b>South America</b>					
Argentina	4.77	5.15	5.29	5.34	3.34
Bolivia	14.63	16.45	16.75	16.20	14.68
Brazil	23.08	23.30	24.34	26.02	26.55
Chile	16.40	16.73	16.36	15.46	15.39
Colombia	18.60	18.51	18.15	17.52	14.92
Ecuador	8.34	8.32	7.77	6.41	5.74
Guayanas					
Paraguay	57.92	57.56	54.98	54.4	53.79
Peru	17.83	18.66	18.83	19.15	17.66
Suriname					
Uruguay	13.74	15.56	16.67	16.96	15.37
Venezuela	0.95	0.93	0.94	1.02	0.96
French Guyana					
<b>Source:</b> World Bank <a href="http://www.worldbank.org">www.worldbank.org</a> .					

<b>Table A 5.4. Consumption of substances that deplete the ozone layer. ODP Tons</b>						
<b>Country</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Latin America and the Caribbean</b>	<b>22389.152</b>	<b>18963.158</b>	<b>12709.608</b>	<b>12759.64</b>	<b>13551.417</b>	<b>6769.38</b>
<b>Caribe</b>	<b>1366.7</b>	<b>1385.561</b>	<b>1187.348</b>	<b>988.755</b>	<b>982.819</b>	<b>544.416</b>
Anguila						
Antigua and Barbuda	4.954	3.116	3.72	1.491	1.886	1.08
Netherland Antilles						
Aruba						
Bahamas	65.9	63	55	24.646	18.782	12.999
Barbados	8.08	12.486	9.49	8.564	14.05	6.726
Cuba	533.65	504	488.82	481.036	445.094	208.562
Dominica	2.086	1.56	2.966	1.438	1.038	1.388
Grenada	2.868	1.31	2.07	2.094	1.9	0.55
Guadalupe						
Haiti	168.95	168.95	181.24	115.91	132.5	81.4
Jamaica	59.752	48.63	31.73	16.2	16	5.04
Martinica						
Montserrat						
Puerto Rico						
Dominican Republic	401.946	485.777	329.76	266.488	310.358	204.318
Saint Kitts and Nevis	7.016	6.622	5.334	2.78	3.328	1.491
Saint Vincent and the Grenadines	6.04	6.86	6.016	3.07	2.09	1.028
Saint Lucia	4.18	4.07	7.616	2.518	0.79	1.52
Trinidad and Tobago	101.278	79.18	63.586	62.52	35.003	18.314
Turks and Caicos Islands						
Virgin Islands, American						
Virgin Islands, British						
<b>Mesoamerica</b>	<b>3934.554</b>	<b>3115.486</b>	<b>2828.394</b>	<b>2802.646</b>	<b>3824.102</b>	<b>2137.814</b>
Belize	15.51	27.966	21.65	15.05	12.23	9.596
Costa Rica	105.94	144.556	137.36	142.504	111.502	96.146
El Salvador	99.07	116.908	101.64	97.48	75.612	119.156
Guatemala	187.9	265	239.566	147.07	65.4	57.5
Honduras	172.31	121.608	131.246	219.086	167.766	122.6
Mexico	3059.53	2223.94	1946.734	1983.15	3208.438	1604.018
Nicaragua	44.36	35.15	54.89	29.85	48.42	35.97
Panama	249.934	180.358	195.308	168.456	134.734	92.828
<b>South America</b>	<b>17087.898</b>	<b>14462.111</b>	<b>8693.866</b>	<b>8968.239</b>	<b>8744.496</b>	<b>4087.15</b>
Argentina	2396.73	3293.147	2139.22	2255.2	2211.58	1675.503
Bolivia	78.824	76.71	65.478	32.122	42.366	26.73
Brazil	9275.052	6230.85	3000.632	3224.276	1870.5	967.175
Chile	575.96	470.234	370.188	424.464	230.78	221.482
Colombia	1149.348	1164.836	907.044	1058.112	898.5	556.886
Ecuador	230.47	206.96	229.564	256.262	147.424	132.452
Guayanas	24.368	19.848	14.34	10.444	11.914	23.468
Paraguay	153.488	115.96	96.87	91.8	141.03	250.748
Peru	346.986	189.039	196.526	178.392	145.66	127.666
Suriname	43.98	46	46	12.296	9.22	7.48
Uruguay	106.802	102.332	75.174	111.38	90.88	97.56
Venezuela	2705.89	2546.195	1552.83	1313.491	2944.642	
French Guyana						

Source: <http://www.unep.ch/ozone/>

<b>Table A 5.5. Number of companies with ISO 14001 certificación. Number of certifications</b>						
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Latin America and the Caribbean</b>	<b>715</b>	<b>931</b>	<b>1783</b>	<b>2092</b>	<b>3437</b>	<b>3816</b>
<b>Caribe</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>
Anguila						
Antigua and Barbuda						
Netherland Antilles					1	2
Aruba						
Bahamas						
Barbados	3	3	3			1
Cuba					1	3
Dominica						
Grenada						
Guadalupe						
Haiti						
Jamaica		4	1	1	4	5
Martinica						
Montserrat						
Puerto Rico	4	4	3	4	6	5
Dominican Republic	1	1		1	1	4
Saint Kitts and Nevis						
Saint Vincent and the Grenadines						
Saint Lucia	2	2	1	1	1	1
Trinidad and Tobago	1	1	7	9	7	7
Turks and Caicos Islands						
Virgin Islands, American						
Virgin Islands, British						
<b>Mesoamerica</b>	<b>183</b>	<b>275</b>	<b>413</b>	<b>455</b>	<b>558</b>	<b>494</b>
Belize		2	2	2		1
Costa Rica	20	14	38	38	52	50
El Salvador					3	4
Guatemala	2	2	1	1	3	7
Honduras	2	2	2	6	5	4
Mexico	159	254	369	406	492	422
Nicaragua					1	2
Panama		1	1	2	2	4
<b>South America</b>	<b>521</b>	<b>645</b>	<b>1359</b>	<b>1626</b>	<b>2868</b>	<b>3311</b>
Argentina	114	175	249	286	408	454
Bolivia	1	3	4	7	14	30
Brazil	330	350	900	1008	1800	2061
Chile	11	17	55	99	312	277
Colombia	21	41	69	135	217	275
Ecuador	1	2	1	1	11	14
Guayanas		3	3	4	3	1
Paraguay	1	1	4	3	3	4
Peru	13	15	25	31	41	78
Suriname						
Uruguay	22	29	32	32	42	52
Venezuela	7	9	17	20	17	65
French Guyana						
<b>Source: The ISO Survey 2003, 2004 and 2005 Copyright c 2006 ISO</b> <a href="http://www.iso.org/iso/en/iso9000-14000/pdf/survey2005.pdf">www.iso.org/iso/en/iso9000-14000/pdf/survey2005.pdf</a>						

<b>Table A 6.1. Net inscription rate in primary school %</b>					
<b>Country</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
<b>Latin America and the Caribbean</b>					
<b>Caribe</b>					
Anguila		98	96.53	91.3	88.3
Antigua and Barbuda					
Netherland Antilles					
Aruba	99.3	94.7	96.8	96.9	96.6
Bahamas	87.4	84.1	85.4	85.9	83.7
Barbados	97.7	97.2	97.6	97.6	97.2
Cuba* (prom. Niños y niñas)		98.1	98.2	99.1	
Dominica	94.6	79.7	96	93.4	87.7
Grenada	85.8	84.2		86.3	83.9
Guadalupe					
Haiti					
Jamaica	90.4	90.1	89.6	88.5	90.6
Martinica					
Montserrat					94.3
Puerto Rico					
Dominican Republic	86.1	93.7	93.7	92.9	86
Saint Kitts and Nevis			94.9	96	94
Saint Vincent and the Grenadines	90.5	92.7	93.6	91.6	93.9
Saint Lucia	94.5	95.7	95.6	95.8	97.6
Trinidad and Tobago	93.2	92.6	89.5	90.9	92.2
Turks and Caicos Islands					
Virgin Islands, American					
Virgin Islands, British	94.9	92.5	91	93.7	94.7
<b>Mesoamerica</b>					
Belize	96.1	95.7	97.5	96.8	95.2
Costa Rica					
El Salvador		88.1	89.4	90.9	92.3
Guatemala	85.8	86.5	88.7	88.7	93
Honduras	97.6	97.5	97.6	97.6	97.8
Mexico*	98.5			99.4	101 <sup>(2005)</sup>
Nicaragua	97.8	98.2	98.3	98.3	98.2
Panama					
<b>South America</b>					
Argentina				98.8	
Bolivia					
Brazil	91.7	93.7	92.1	92.9	
Chile					
Colombia	88.5	86.7	87.4		83.2
Ecuador	98	97.7	97.6	97.2	97.7
Guayanas					
Paraguay					
Peru	97.6	97.9	97.9	97.3	97.1
Suriname		92.6	91.8	92.4	
Uruguay					
Venezuela*	89.5	92		93.6	93.9
French Guyana					
<b>Source: UNESCO.</b> Consulted on the Data Base of ILAC. <a href="http://www.uis.unesco.org/ev.php?URL_ID=2867&amp;URL_DO=DO_TOPIC&amp;URL_SECTION=201">http://www.uis.unesco.org/ev.php?URL_ID=2867&amp;URL_DO=DO_TOPIC&amp;URL_SECTION=201</a> Information verified by countries.					

Table A 6.2. National environmental reports, ILAC reports and GEO reports up to the year 2007* > *						
Countries	National Reports <sup>1</sup>	GEO Reports				
		ILAC Reports	National <sup>2</sup>	Cities and Subregions	Regions	Youth and others
<b>Latin America and the Caribbean</b>		2004			2	1
<b>Caribe</b>	14		5	5	2	4
Anguila						
Antigua and Barbuda						
Netherland Antilles						
Aruba						
Bahamas						
Barbados						1
Cuba				4		1
Dominica						
Grenada						
Guadalupe						
Haiti						
Jamaica						
Martinica						
Montserrat						
Puerto Rico						
Dominican Republic				1		1
Saint Kitts and Nevis						
Saint Vincent and the Grenadines						
Saint Lucia						1
Trinidad and Tobago						
Turks and Caicos Islands						
Virgin Islands, American						
Virgin Islands, British						
<b>Mesoamerica</b>	<b>8</b>	<b>3</b>	<b>8</b>	<b>4</b>	<b>1</b>	<b>6</b>
Belize					GEO y biodiv. <sup>3</sup>	
Costa Rica		ILAC			GEO y biodiv. <sup>3</sup>	1
El Salvador				1	GEO y biodiv. <sup>3</sup>	1
Guatemala				1	GEO y biodiv. <sup>3</sup>	1
Honduras					GEO y biodiv. <sup>3</sup>	
Mexico		ILAC		1		1
Nicaragua					GEO y biodiv. <sup>3</sup>	1
Panama				1	GEO y biodiv. <sup>3</sup>	1
<b>South America</b>	<b>12</b>	<b>1</b>	<b>6</b>	<b>28</b>	<b>3</b>	<b>12</b>
Argentina		ILAC		4	Mercosur	1
Bolivia				2	Andino	
Brazil				10	Mercosur	5
Chile				3		1
Colombia				2	Andino	1
Ecuador				2	Andino	1

Table A 6.2. National environmental reports, ILAC reports and GEO reports up to the year 2007* > *						
Countries	National Reports <sup>1</sup>	GEO Reports				
		ILAC Reports	National <sup>2</sup>	Cities and Subregions	Regions	Youth and others
Guayanas						1
Paraguay					Mercosur	
Peru				3	Andino	1
Suriname						
Uruguay				2	Mercosur	1
Venezuela					Andino	
French Guyana						

\* The table includes the report foreseen to be concluded up to December of 2007. 1) Reports that relate the environmental and/or sustainability situation, regardless of the fact of them being a legal requirement. 2) May be one or more. 3) Central America.

**Source:** Developed from information presented by Dr. Edgar Gutierrez in the meeting of the Working Group on Environmental Indicators of the Forum of Ministers of Environment from Latin America and the Caribbean (Panama, Panama, July 4-5 of 2007) and from Internet searches (column 2).

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