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A. PREPARATORY MEETING OF EXPERTS

# **Proposal of the Working Group on Environmental Indicators to the Forum of Ministers of the Environment of Latin America and the Caribbean**

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## Background

1. The Working Group on Environmental Indicators (WGEI) of the Latin American and Caribbean Initiative for Sustainable Development (ILAC) was established by Decision 6 of the Thirteenth Meeting of the Forum of Ministers of Environment in Panama (2003). Since then, it has developed a set of indicators to measure national and regional progress towards sustainable development.
2. The WGEI is composed of technical representatives of the Ministries of Environment and the National Statistics Offices (see list of representatives in Annex 2), who have focused their efforts on the methodological development and documentation of the indicators. In 2009, the decision was made to rotate the technical secretariat, chaired by Costa Rica since 2003, to the Ministry of Environment and Natural Resources of Mexico (SEMARNAT), which has chaired the WGEI since 2010, with UNEP as the acting Secretariat.
3. The initiative covers six thematic areas originally established in the ILAC, namely: biological diversity; water resources management; vulnerability, human settlements and sustainable cities; social issues (including health, inequity and poverty); economic aspects (including trade, production and consumption patterns); and institutional issues.
4. This document provides information about the activities undertaken by the WGEI in the last two years, emphasizing the work plan adopted at the Eighteenth Meeting of the Forum of Ministers, lessons learned and next steps.

## Activities of WGEI (2012 - 2013)

5. Below are the WGEI activities implemented following Decision 5 of the Eighteenth Forum of Ministers of the Environment. The 2012-2013 Work Plan calls for several activities; progress towards their completion is reported below.

### Development of indicators

6. In the last period, methodologies were developed for the following five indicators:
  - a) Proportion of species threatened with extinction
  - b) Environmental expenditure as a percentage of total public expenditure
  - c) Percentage of projects authorized to use genetic resources that generate national benefits
  - d) Public expenditure for risk management of disasters caused by extreme natural events and anthropogenic activities
  - e) Proportion of effluents that receive treatment

Also, a potential methodology to measure the progress of national environmental statistical systems was extensively discussed.

#### Fostering the preparation of ILAC National Reports

**7.** To date, ten countries have published ILAC National Reports, with an average of 29 indicators. These countries are Costa Rica (2005), Mexico (2005), Argentina (2006), Brazil (2007), Colombia (2007), Peru (2008), Cuba (2009), Panama (2010), Nicaragua (2011) and Uruguay (2011). Barbados has made significant progress in preparing its national report.

**8.** It is important to note that several countries regularly report on ILAC indicators in their environmental information systems, which can be updated more frequently than printed publications. However, the printed editions are critical in countries where the aforementioned information systems are not available.

#### Promoting the regional use of the ILAC indicators

**9.** Following a digital publishing model, the Secretariat of Environment and Natural Resources of Mexico (SEMARNAT) has developed a Geospatial Viewer for displaying the ILAC indicators at a regional level available to all countries.<sup>1</sup> Countries may enter their data in the platform using web map services (WMS). In all cases, each country retains ownership and responsibility over the information.

#### Strengthening the Working Group on Environmental Indicators

**10.** Between 2012 and 2013, representatives of four new countries joined the WGEl: Bahamas, El Salvador, Honduras and St. Vincent and the Grenadines.

**11.** Financial constraints prevented the realization of a workshop prior to the World Summit on Sustainable Development, as set forth in paragraph 13, Decision 5 of the Eighteenth Workshop Forum of Ministers. However, the Secretariat and ECLAC provided relevant inputs on indicators to regional discussions on the post-2015 agenda.<sup>2</sup>

**12.** UNEP organized the regional meeting 'Strengthening regional networks and national capacities on environmental information', held in November 2013 in Panama City. The meeting had the following objectives:

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<sup>1</sup> <http://gisviewer.semarnat.gob.mx/gisflex/ilac/index.html#>

<sup>2</sup> An explicit reference to the monitoring of sustainable development may be found in the core messages (page 9) of the document 'Sustainable Development in Latin America and the Caribbean', available at [http://www.cepal.org/cgi-bin/getProd.asp?xml=/publicaciones/xml/6/50796/P50796.xml&xsl=/publicaciones/ficha.xsl&base=/publicaciones/top\\_publicaciones.xsl](http://www.cepal.org/cgi-bin/getProd.asp?xml=/publicaciones/xml/6/50796/P50796.xml&xsl=/publicaciones/ficha.xsl&base=/publicaciones/top_publicaciones.xsl)

- Present progress in the generation and management of environmental information (including related geographic information) at the national level, and identify options for regional cooperation and priorities for capacity development within the framework of the ILAC WGEI and the 'Eye on Earth' initiative.
- Identify priority regional indicators on sustainable consumption and production, and priorities for regional cooperation.
- Provide feedback on the UNEP Live prototype platform.

Although not all of the WGEI focal points could attend, it was possible to discuss issues directly related to the 2012-2013 Work Plan (such as sustainable production and consumption indicators) and the strengthening of WGEI. Below are the key messages of the WGEI meeting.

#### Promoting specific activities with similar initiatives and groups throughout the region

**13.** Seven WGEI countries (Bahamas, Colombia, Costa Rica, Dominican Republic, Mexico, Panama, and Suriname) are involved in the 'Development and Strengthening of Official Environmental Statistics through the Creation of a Regional Framework in Latin America and the Caribbean' project, carried out by the National Institute of Statistics and Geography of Mexico (INEGI) and ECLAC, with IADB financing. Some ILAC indicators will serve as input for the products developed by this project, and the experience of WGEI countries will form the basis of the regional assessment on the state of development of environmental statistics.

**14.** Seven WGEI countries (Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Paraguay and Peru) are participating in the project 'Monitoring of green growth in Latin America and the Caribbean', carried out by the United Nations Industrial Development Organization (UNIDO), together with Ministries of Industry, Economy or Environment in these countries, and with funding from the Latin American Development Bank (CAF). The project aims to test and implement the OECD methodology for green growth indicators in LAC. Given the obvious similarities with WGEI's work, the Secretariat, UNIDO and CAF have exchanged experiences on lessons learned in this project and to explore the possibility of having joint meetings between the focal points of the Ministries of Environment, Industry and Statistical Offices.

**15.** The meeting on environmental information organized by UNEP in November 2013 was attended by international organizations such as CAF, CARICOM, CCAD, ECLAC and FAO, who have shown interest in establishing synergies with WGEI in its different areas of work.

#### Promoting the active participation of Small Island Developing States (SIDS) of the Caribbean

**16.** The Secretariat has supported a sub-regional initiative to increase the capacity and strengthen regional and South-South cooperation, to enable SIDS to systematically collect, manage and use environmental data and information to

support their sustainable development goals at the national and regional levels. A draft proposal for a partnership initiative has been discussed by Caribbean SIDS (including Cuba and Dominican Republic), the CARICOM Secretariat and other regional organizations in November 2013.

**17.** In its role as implementing agency of the Global Environment Facility (GEF), UNEP is supporting projects in Haiti, Saint Lucia and Saint Vincent and the Grenadines under the GEF cross-cutting capacity development portfolio, with an emphasis on the strengthening of national environmental information systems.

Promoting the systematization and institutionalization of national and regional monitoring of ILAC indicators

**18.** Based on the accumulation of past experiences, the WGEI proposes a new Work Plan for the period 2014 -2015 to the Forum of Ministers, which aims to give adequate support to the ILAC Initiative and others that advance the Forum of Ministers by managing environmental information for decision making (Annex 1).

**19.** The following table describes the activities undertaken in the period 2012-2013 according to the work plan approved by the Eighteenth Forum of Ministers of the Environment.

**2012-2013 Work Plan**

Activity	Expected outcome	Term	Country, focal point, participating agencies	Results and/or observations
Continue developing the methodology sheets for ILAC indicators in the thematic areas approved by the Forum of Ministers	<p>WGEI will have reached a consensus on the methodology sheets for 100% of the ILAC indicators</p> <p>All emerging indicators are reviewed, and for those that the Group considers relevant, a methodology sheet will be developed</p>	November 2012	WGEI member countries	Five new methodological sheets were developed (see para. 6), and a sixth indicator (level of development of an environmental information/statistics system) is under development. To date, 80% of indicators have established methodology sheets.
Foster the elaboration of new ILAC national reports and the updating of already published reports	Two countries update their ILAC reports and two countries submit their first ILAC report	December 2013	<p>Countries in a position to draft their first report:</p> <p>Belize Bolivia Dominican Republic Uruguay Venezuela</p> <p>Recent report updates: Colombia Costa Rica Cuba Mexico</p>	Peru and Mexico are working on ILAC national reports. Colombia, Ecuador, Mexico and Panama regularly update the indicators in their national environmental information systems.

Activity	Expected outcome	Term	Country, focal point, participating agencies	Results and/or observations
			Peru	
Disseminate the region-wide use of ILAC indicators to monitor progress in sustainable development and decision-making	A thematic regional publication (or factsheets) using the ILAC indicators	November 2013	WGEI UNEP	The contents and scope of a publication is under discussion. The work is subject to the availability of information and financing
Strengthen the Working Group on Environmental Indicators	At least two countries have been incorporated into WGEI	March 2012	LAC governments	The Bahamas Environment, Science and Technology Commission, the General Direction of Statistics and Census of El Salvador, the Ministry of Natural Resources and Environment of Honduras and the Ministry of Health, Wellness and Environment of Saint Vincent and the Grenadines have joined WGEI since this work plan was approved.
	The inclusion of indicators of Sustainable Consumption and Production is assessed	June 2013	WGEI UNEP	This issue was addressed at the regional meeting "Strengthening regional networks and national capacities on environmental information" organized by UNEP in November 2013. It was agreed that a <i>petit comité</i> will revise the existing indicators and present a first proposal on possible indicators fit to the needs of the countries.
	WGEI gatherings through virtual tools and forums	At least once a month	WGEI UNEP	Three virtual meetings were held in 2013. UNEP's license of the Elluminate software for virtual meetings expired in April 2013, and the meetings were suspended momentarily. The renewal of this software is under procurement at the moment.
Promote specific activities with similar initiatives and groups throughout the region	The promotion of national capacities to construct environmental indicators and statistics, in collaboration with the Working Group on	Ongoing since November 2011	SCA ECLAC	Six WGEI countries are participating in the regional environmental statistics project

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Activity	Expected outcome	Term	Country, focal point, participating agencies	Results and/or observations
	Environmental Statistics of the Statistical Conference of the Americas (SCA)		<p>UNEP</p> <p>INEGI (Mexico)</p> <p>Dominican Republic</p>	<p>coordinated by ECLAC and INEGI.</p> <p>ECLAC and the UN Statistics Division has been involved in the development of methodology sheets in the Working Group.</p> <p>ECLAC and UNEP had agreed, in principle, to hold joint meetings and outputs in the framework of the Forum of Ministers and the Statistical Conference of the Americas, but funding and administrative constraints could not make it happen in 2013.</p>
	The establishment of coordination mechanisms with the Working Group on Environmental Statistics of the SCA and with environmental commissions in the sub-regions (CAN, CCAD, CARICOM, MERCOSUR), among others	Activities planned throughout the year	<p>SCA</p> <p>ECLAC</p> <p>UNEP</p> <p>CAN, CCAD</p> <p>CARICOM, MERCOSUR and others</p>	<p>These sub-regional organizations were invited to the meeting on 13-14 November, 2013.</p> <p>UNEP participated in a meeting of the CCAD climate change observatory, where indicators for assessing the impact of disasters were discussed and the process of development and adoption of ILAC indicators presented.</p>
Promote training in the use of geospatial tools to construct the ILAC indicators	Two virtual forums and conferences	October 2013	UNEP	The GeoSUR Programme (of Latin American Development Bank) participated in the November 2013 meeting, via Webinar.
	Beta software for geographic information portal	April 2012	SEMARNAT	Available for countries through SEMARNAT (Mexico)
Promote incorporation of the Small Island Developing States of the Caribbean into WGEI, and their active participation in its development	Three countries of the English-speaking Caribbean incorporated into WGEI	2012	<p>WGEI</p> <p>UNEP</p>	Two English-speaking Caribbean countries (Bahamas, St. Vincent and the Grenadines) have joined the Working Group.
Promote systematizing and institutionalizing national and regional monitoring of ILAC indicators, thus improving coordination	At least three countries receive technical assistance in designing and implementing a national environmental	Needs assessment through May 2012 and subsequent high-level	<p>WGEI</p> <p>UNEP</p> <p>Governments</p>	UNEP is supporting Honduras and Panama in developing their National State of the Environment reports and has conducted a

Activity	Expected outcome	Term	Country, focal point, participating agencies	Results and/or observations
between environmental authorities, national statistics offices and the technical entities in charge of geospatial information	information system  Assistance with topics such as: collecting environmental data, interpreting statistical and environmental information, implementing environmental accounting	awareness-raising Establishment of horizontal-cooperation schemes (December 2012)		short training event on the GEO methodology in Chile, in 2013.  UNEP also supports Haiti, St. Vincent and the Grenadines and Saint Lucia in the development of their National Environmental Information Systems, through the GEF capacity development portfolio.

## Recommendations for strengthening the ILAC Initiative

The following recommendations are derived from virtual WGEI discussions and meeting "Strengthening regional networks and national capacities on environmental information", 13-15 November 2013.

**17.** Latin America and the Caribbean is one of the most active regions, committed to the development of environmental information (including not only the generation, but also the access to information). In this context, the work of the ILAC Working Group has been very important. This has led to breakthroughs in the development of environmental information in recent years. Notable achievements include the development of technical and analytical capabilities at the national level. In addition, and despite existing limitations, there is a commitment and willingness to cooperate at the regional level to better support decision making in the future. Based on consensus and a broad understanding of the importance of environmental information, the following recommendations are presented for consideration to the Forum of Ministers.

**18.** This new period is characterized by the need to take into account the relationship between the environment and development economics in more detail, as well as the need for communication and understanding between professionals and institutions in both sectors for policymaking. It will be important to consider different levels of development in the region and different national visions the selection of appropriate indicators.

**19.** In terms of data and statistics, the environment-economy relationship should be based on common classifications and metadata. Some analysis tools, such as the System of Environmental and Economic Accounting, asset accounting and decoupling indicators, have recently been proposed for this purpose. In general — and based on the experience of existing ILAC indicators it is recommended to limit the number of indicators in order to facilitate interpretation.

**20.** The WGEI should develop its work on indicators so that it is linked to and supports the economic, environmental and social goals developed in connection with the Sustainable Development Goals (SDGs) and post-2015 agenda, as well as a possible revision of ILAC goals by the Forum of Ministers of Environment.

**21.** Regarding the work on indicators, it is suggested that the WGEI focus its work on the interrelationship, interpretation and dissemination of existing indicators as well as the review and development of indicators related to the issue of sustainable production and consumption, with the aim of integrating them to the existing indicator set.

**22.** On the other hand, it is necessary to improve the linkage of environmental information to development policy through several mechanisms: multilateral environmental agreements and conventions; reporting processes at national and global levels; donor funding (e.g. GEF) and operational plans of various ministries. For example, the lack of information on topics like the ecological footprint can present possible trade limitations in the future for countries that rely heavily on exports.

**23.** Reference is made to the preparatory process for the 2014 UN Conference on Small Island Developing States (SIDS), in particular to paragraphs 143-149 of the Interregional Preparatory Meeting held in Barbados in August 2013. Paragraph 144 states:

'We call for the strengthening of data systems and partnership initiatives where they exist and for the establishment of linkages and partnership with existing initiatives. Ownership of data and information collected and deposited will remain the property of SIDS governments within those regions.'

**24.** In this context, it is necessary to develop and strengthen National Environmental Information Systems (NEIS) and identify areas that require technical, institutional and financial support, as well as to promote the upgrading of national reports. Beyond the NEIS legal framework, it is important to disseminate the usefulness of the systems for decision-making and involve partners outside of the environmental sector. Inter-agency cooperation is key to the operation and sustainability of information systems, both at the national and international levels. Cooperation is also key at the technical level and for the harmonization of methodologies, standards, definitions and data exchange protocols. . It is also important to highlight the approval of the new Framework for the Development of Environment Statistics (FDES), designed to support countries in the organization and development of their environmental statistics, which are still the weakest pillar of sustainable development in terms of information availability.

**25.** The sustainability of information systems (including databases, human resources and other aspects-) is a very important consideration, especially where platforms are developed with external funding or from specific projects. The Group recommends Governments to further institutionalize their NEIS, assigning a specific budget and developing legal frameworks that support them. Where possible, it is advisable to have permanent staff for the development and maintenance of the

NEIS, so that the generation of information is based on robust and well documented methodologies, and the products are reliable.

**26.** The Caribbean island countries recognize the importance of a strong stimulus for the development of institutional capacities for environmental monitoring. Inter-agency coordination and cooperation networking can help to distribute and/or reduce costs and optimize technological resources. It is important to consider partnerships with universities and other research centres to develop training systems, beyond the *ad hoc* technical training. A joint sub-regional level initiative should be considered.

**27.** Having dynamic and online access to information and environmental assessments from different countries, as well as access to previously available information from a wide variety of sources and initiatives, is very relevant for decision-making in the context of the Forum of Ministers of the Environment. In this regard, platforms like UNEP Live become more important, as do the training tools currently developed by UNEP to promote access to and use of environmental information at global, regional and national levels to maintain a continued review of the state of the environment.

**28.** In addition, training activities related to UNEP Live can strengthen the NEIS, establishing baselines for different projects and studies at the national level.

**29.** There is broad consensus among WGEI members on the need for synergies and networking with partners to work on common issues. An effective strategy is to strengthen horizontal cooperation among countries in the region. WGEI experiences during this period have shown that there are policies, programmes and good practices in the region that may be successfully replicated.

**30.** It is essential to intensify efforts and for better communication, coordination and collaboration between different specialized international agencies of the UN and international organizations concerned with the development of environmental information, in order to coordinate technical cooperation and financing of specific projects on the issue.

**31.** The governments of Latin America and the Caribbean as well as international organizations are called on to implement the 2014-2015 WGEI Work Plan (Annex 1), based on the availability of funds, in order to strengthen cooperation between countries and increase the availability, comparability and outreach of environmental information in the region.

**32.** The Latin American Development Bank (CAF), the United Nations Industrial Development Organization (UNIDO) and CARICOM are undertaking initiatives in the field of environmental information, which are complemented by the WGEI's work and ILAC goals in general. The Forum of Ministers is called on to extend an invitation to these organizations and others like CCAD and CAN, to participate as WGEI observers and thus promote regional synergies.

**33.** The WGEI can serve as a space for collaboration, discussion and exchange, building on the capacity of countries and international organizations for the creation of tools for sharing documents, ideas and national experiences around new topics

that are of interest to countries such as green economy and resource efficiency, among others.

**Annex 1**

**Working Group on Environmental Indicators of ILAC: Workplan 2014-2015**

Activity	Expected product	Country, focal point, participant agencies	Next steps or observations
1. Continue the development of methodological sheets of the ILAC indicators in the thematic areas approved by the Forum of Ministers	Five methodological sheets agreed by the WGEI	WGEI UNEP	
	WGEI to present a proposal to the Forum of Ministers on the inclusion of indicators on sustainable consumption and production	WGEI	
2. Promote the systematic development and institutionalization of ILAC indicators monitoring at the national level, improving coordination between the environmental authority, the national statistics office, technical entities in charge of geospatial information and other ministries and agencies involved in the management of relevant information in each country.	Promote the elaboration and update of ILAC indicators reports	WGEI	In addition to ILAC reports, the indicators could be included in the national reports on the state of the environment or environmental information systems.
	Promote capacity development in the use of geospatial tools for the compilation of ILAC indicators	SEMARNAT GeoSUR (CAF) UNEP	
	<p>Technical assistance for the elaboration and launch of a National System of Environmental Information</p> <p>Assistance in topics such as: collection of environmental data (techniques, formats, exchange protocols), interpretation of statistical and environmental information, implementation of environmental accounting</p>	WGEI UNEP GEOSUR ECLAC	<p>South-South and triangular cooperation</p> <p>Projects already on-going or expected to start soon</p>
3. Disseminate the use of ILAC indicators at the regional level to monitor progress towards sustainable development	A regional thematic analysis using ILAC indicators, that could lead to a publication (according to funding availability)	WGEI  UNEP	<p>The compilation of data should be supported by a consultant.</p> <p>The possibility to link this analysis to other similar work from international partners (UNSD, ECLAC, FAO) could be also explored.</p>
4. Strengthen the Working Group on Environmental Indicators promoting concrete activities with other similar groups and initiatives at the regional level.	Establish close coordination between the WGEI and other initiatives and projects, promoting national capacity development in the elaboration of environmental statistics and indicators.	Conference of Statistics of the Americas  WGEI ECLAC	Topics: sustainable consumption and production, green growth, environmental accounting, "blue growth" (referred to oceans and seas)

		UNEP UNIDO	
	Invite the sub-regional commissions (CAN, CCAD, CARICOM, MERCOSUR), to participate as observers of the WGEI	WGEI UNEP	Topics: environmental assessment, international trade
	Meetings of the WGEI through virtual tools and fora for the discussion of topics related to ILAC indicators or others of common interest	WGEI UNEP	Via Elluminate, Skype or videoconference
7. Promote the incorporation and active participation of the Small Island Developing States of the Caribbean in the WGEI	Establish a sub-regional partnership for the adoption of ILAC indicators in the specific context of the SIDS	WGEI UNEP CARICOM	Proposal for a sub-regional Project to be submitted to the GEF

## Annex 2

## List of the WGEI members (25 countries)

Country	Name	Last name	Position	Institution
Antigua and Barbuda	Diann	Black-Layne	Chief Environment Officer	Ministry of Agriculture, Land, Housing and the Environment
	Jason	Williams	Data Manager	Environment Division
Argentina	Fernando	Reinoso	Director de Impacto Ambiental y Social	Secretaría de Ambiente y Desarrollo Sustentable de la Nación
	Silvia	Chiavassa	Técnicos de la Dirección de Impacto Ambiental y Social	
	Fabián	Scagnetti		
	Martín	Rabbia		
Bahamas	Ingeria	Miller	Officer	The Bahamas Environment Science & Technology Commission (BEST), Ministry of Environment
	Portia	Tulloch	Statistician	Department of Statistics
Barbados	Travis	Sinckler	Senior Environmental Officer	Ministry of Environment, Water Resources and Drainage
Belize	Edgar	Ek	Lands Information Centre (LIC)	Ministry of Natural Resources and the Environment
Bolivia (Plurinational State of)	Milton	Vargas	Especialista en Registros, Estadísticas e Indicadores Económicos	Instituto Nacional de Estadística (INE)
Brazil	Denise Maria	Penna Kronemberger	Gerente de proyectos (Coordinadora técnica de la publicación Indicadores de Desarrollo Sostenible)	Instituto Brasileiro de Geografía e Estatística
	Rui	Gonçalves	Gerente de Projeto, Departamento de Gestão Estratégica	Secretaria Executiva, Ministerio do Meio Ambiente
Colombia	Nany Heidy	Alonso Triana	Jefe de la Oficina de Planeación	Ministerio de Ambiente y Desarrollo Sostenible
	Javier Ernesto	Camargo Cubillos	Oficina de Asuntos Internacionales	
	Mónica	Madrid Arroyo	Gerente de Estadísticas Agropecuarias y Ambientales	Departamento Administrativo Nacional de Estadística (DANE)
Costa Rica	Alvaro	Aguilar	Centro Nacional de Información Geoambiental	Ministerio del Ambiente, Energía y Telecomunicaciones (MINAET)
	Fabio	Herrera Ocampo	Estadísticas Ambientales	Instituto Nacional de Estadísticas y Censos (INEC)
Cuba	Orlando	Rey Santos	Director - Dirección de Medio Ambiente	Ministerio de Ciencia, Tecnología y Medio Ambiente
	Ileana	Saborit	Dirección de Medio Ambiente	

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<b>Dominican Republic</b>	Patricio	Devers	Encargado de Estadísticas e Indicadores Ambientales	Ministerio de Medio Ambiente y Recursos Naturales
	Adrián	Alcántara	Encargado de Estadísticas Ambientales	Oficina Nacional de Estadística
<b>Ecuador</b>	Ramiro	Vásquez	Coordinador General de Planificación Ambiental	Ministerio del Ambiente
	Holger	Zambrano	Indicadores Ambientales – SUIA	
	Maria José	Murgueitio		Instituto Nacional de Estadísticas y Censos (INEC)
	Paulina	Díaz	Dirección de Producción de Estadísticas Socio demográficas	
<b>El Salvador</b>	Ana Graciela del Rosario	Batres Díaz	Técnico en seguimiento Institucional	Ministerio de Medio Ambiente Recursos Naturales
	Cristofer Maruc	Muñoz Aguilar	Jefe, Departamento de Datos Espaciales	Dirección General de Estadística y Censos (DIGESTYC)
<b>Guatemala</b>	Gustavo Adolfo	Suárez	Director General de Políticas y Estrategias Ambientales	Ministerio de Medio Ambiente y Recursos Naturales
<b>Honduras</b>	Carlos Alberto	Thompson	Director de la Unidad de Planeamiento y Evaluación de la Gestión	Secretaría de Recursos Naturales y Ambiente
<b>Mexico</b>	Arturo	Flores Martínez	Director General de Estadística e Información Ambiental	Secretaría del Medio Ambiente y Recursos Naturales (SEMARNAT)
	César	Rodríguez Ortega	Director de Análisis e Indicadores Ambientales	
	Francisco Javier	Jiménez Nava	Director General Adjunto de Recursos Naturales y Medio Ambiente; Dirección General de Geografía y Medio Ambiente	Instituto Nacional de Estadística y Geografía(INEGI)
	Carlos Roberto	López Pérez	Director de Estadísticas de Medio Ambiente	
<b>Nicaragua</b>	Martha Lucía	Sánchez	Responsable del SINIA	Ministerio del Ambiente y los Recursos Naturales (MARENA)
<b>Panama</b>	Neyra	Herrera	Estadística Ambiental	Autoridad Nacional del Ambiente (ANAM)
	José	Branca	Encargado de la Unidad de Estadísticas Ambientales	Instituto Nacional de Estadística y Censo (DEC)
<b>Paraguay</b>	Rodrigo	Mussi Buzarquis	Director de Planificación Estratégica	Secretaría del Ambiente
	Nimia	Torres	Directora de Estadísticas Económicas	Dirección General de Estadística , Encuestas y Censos (DGEEC)
<b>Peru</b>	Sonia	González Molina	Directora General de Investigación e Información Ambiental	Ministerio del Ambiente (MINAM)
	Verónica	Mendoza	Especialista	

	Doris	Mendoza Loyola	Profesional de la Dirección Técnica de Demografía e Indicadores Sociales	Instituto Nacional de Estadística (INEI)
<b>Saint Lucia</b>	Caroline	Eugene	Sustainable Development and Environment Officer III	Ministry of Physical Development and the Environment
	Majella	Louis	Statistician III	Ministry of Physical Development and the Environment
<b>Saint Vincent and the Grenadines</b>	Todd	Lewis	Environmental Analyst	Ministry of Health, Wellness and the Environment
<b>Suriname</b>	Andreas Ronald	Talea	Manager of the Economic Statistics Division	General Bureau of Statistics
<b>Uruguay</b>	Marcelo	Iturburu		Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente
<b>Venezuela (Bolivarian Republic of)</b>	José Félix	Uzcátegui	Director General de Análisis Estratégico	Ministerio del Poder Popular para el Ambiente

Annex 3

Matrix of ILAC indicators

THEMATIC AREA	OBJETIVE	SPECIFIC OBJECTIVE	INDICATOR	Methodological sheet
1. BIOLOGICAL DIVERSITY	1.1 Increase the forest area	1.1.1 Guarantee the sustainable management of forest resources in the region, significantly reducing actual rates of deforestation.	1.1.1.1 Proportion of country surface covered by forests	AGREED
	1.2 Increase the territory under protected areas	1.2.1 Significantly increase regional territory under protected areas, considering also transition zones and biological corridors.	1.2.1.1 Proportion of terrestrial and marine protected areas	AGREED
			1.2.1.2 Proportion of known species at extinction risk	AGREED
	1.3 Guarantee the equitable distribution of benefits derived from the use of genetic resources.	1.3.1 Adopt regulation frameworks for access to genetic resources as well as the equitable and fair distribution of benefits derived from its use, compatible with the Convention on Biological Diversity	1.3.1.1 Number of authorized projects for the use of genetic resources that generate benefits at the national level.	AGREED
	1.4 Preserve marine diversity	1.4.1 Secure the conservation and sustainable use of marine resources, particularly in coastal and marine ecosystems.	1.4.1.1 Proportion of terrestrial and marine protected areas	AGREED
2. WATER RESOURCES MANAGEMENT	2.1 Increase water supply	2.1.1 Increase the efficiency of water use in industry, agriculture and domestic consumption	2.1.1.1 Proportion of water resources utilized	AGREED
			2.1.1.2 Water consumption for domestic use	AGREED
			2.1.1.3 Water consumption in the industrial sector	AGREED
			2.1.1.4 Water consumption for irrigation in the agricultural sector	AGREED
	2.1.2 Introduce modern technologies for water desalination	2.1.2.1 Desalinated water	EMERGING	
		2.1.3 Integrate coastal aquifer management to avoid marine intrusion	2.1.3.1 Existence of regulatory frameworks for the management of aquifers	EMERGING
	2.2 Properly manage watersheds and aquifers	2.2.1 Enhance and strengthen the institutions in charge of integrated water resources management through the establishment of basin committees, where all levels of the Government, civil society, private sector and other stakeholders are involved	2.2.1.1 Proportion of watersheds that have management committees	AGREED

	2.3 Properly manage coastal-marine ecosystems and their resources	2.3.1 Implement action plans for the integrated management of coastal and marine resources and ecosystems, with particular attention to small island developing States.	2.3.1.1 Fish extraction	AGREED
		2.3.2 Adopt a comprehensive and integrated approach for the management of the Caribbean Sea through the development of a strategy for its protection and management	2.3.2.1 Projects or funds allocated to the management of the Caribbean Sea or its coasts	EMERGING
	2.4 Improve the quality of terrestrial waters	2.4.1 Improve the quality of effluents and reduce the discharge of pollutants to surface and underground water bodies and to coastal areas	2.4.1.1 Percentage of total generated effluents that receive treatment	AGREED
			2.4.1.2 Proportion of the population with access to improved sanitation	AGREED
3. VULNERABILITY, HUMAN SETTLEMENTS AND SUSTAINABLE CITIES	3.1 Promote territorial planning	3.1.1 Implement territorial plans and policies, with a sustainable development approach	3.1.1.1 Proportion of country area under territorial planning	AGREED
		3.1.2 Incorporate tools for risk management in territorial planning	3.1.2.1 Annual land use change	AGREED
	3.2 Reduce areas affected by degradation processes	3.2.1 Reduce the regional area affected by erosion, salinization and other degradation processes	3.2.1.1 Areas affected by degradation processes	AGREED
	3.3 Reduce air pollution	3.3.1 Reduce the concentration of polluting emissions in the air	3.3.1.2 Total, per capita and GDP-related emissions of carbon dioxide	AGREED
	3.4 Reduce water pollution	3.4.1 Widen the coverage of water supply and waste water treatment	3.4.1.1 Proportion of the population with access to improved water supply	AGREED
			3.4.1.2 Proportion of the population with access to improved sanitation	AGREED
	3.5 Integrated management of solid waste	3.5.1 Reduce the generation of solid waste (from domestic and industrial sources) and promote recycling and reuse	3.5.1.1 Proportion of the population with access to waste collection	AGREED
			3.5.2 Implement integrated management of solid waste, including treatment and adequate final disposal.	3.5.2.1 Urban solid waste disposed adequately
	3.6 Reduce vulnerability natural and anthropogenic disasters	3.6.1 Implement and strengthen regional cooperation mechanisms for risk management and the mitigation of natural and anthropogenic disasters, including the formulation of a regional early warning system and the creation of immediate response groups	3.6.1.1 Public expenditure in risk management of extreme natural and anthropogenic events	AGREED
			3.6.2 Evaluate the vulnerability of the population	3.6.2.1 Proportion of the population that live in areas under risk

			3.6.2.2 Occurrence of disasters by event type	AGREED
4. SOCIAL ISSUES, INCLUDING HEALTH, INEQUITY AND POVERTY	4.1 Reduce the prevalence of HIV / AIDS and morbidity due to illness related to the environment	4.1.1 Implement integrated measures to control and reverse the spread of HIV/AIDS, including the development of coordinated approaches for research, education, treatment and access to retroviral pharmaceuticals	4.1.1.1 Prevalence of HIV/AIDS in population between 15 and 49 years	AGREED
		4.1.2 Implement policies and plans to reduce environmental risks that cause health problems, especially waterborne diseases, vectors, airborne diseases and those borne through exposure to chemical substances	4.1.2.1. Morbidity rate attributed to acute respiratory diseases	AGREED
			4.1.2.2 Morbidity rate attributed to waterborne diseases	AGREED
		4.1.3 Increase the proportion of green and healthy areas per capita	4.1.3.1 Area of green urban areas per capita	UNDER DEVELOPMENT
	4.2 Promote the creation of green jobs	4.2.1 Promote the formulation and implementation of projects and programmes that contribute to the generation of green jobs	4.2.1.1 Proportion of green jobs	EMERGING
	4.3 Reduce poverty and inequality	4.3.1 Reduce poverty levels in the region	4.3.1.1. Proportion of urban dwellers living in slums	AGREED
			4.3.1.2 Population living on less than 1 USD per day	AGREED
			4.3.1.3 Growth rate of the number of new small companies	EMERGING
			4.3.1.4 Social public expenditure as a proportion of national GDP	AGREED
		4.3.2 Formulate and execute strategies for women, youth, indigenous groups, Afro-descendent communities, migrants, disabled and other minority groups, according to human rights and fundamental liberties	To be determined	
5. ECONÓMIC ISSUES, INCLUDING TRADE AND PATTERNS OF PRODUCTION AND CONSUMPTION	5.1 Increase the use of renewable energy	5.1.1 Include at least 10% of renewable energy in the energy matrix of the region by 2010	5.1.1.1 Proportion of the population that uses solid fuels	EMERGING
			5.1.1.2 Proportion of renewable energy	AGREED
			5.1.1.3 Use of energy for each US\$ 1,000 dollars of GDP (Purchase Power Parity - PPP)	AGREED
	5.2 Increase clean production	5.2.1 Install Cleaner Production Centres in all countries of the region	5.2.1.1 Consumption of chlorofluorocarbons that deplete the	AGREED

			Ozone Layer	
		5.2.2 Incorporate the concept of clean production in a significant fraction of the principal industries, focusing on small and medium industries.	5.2.2.2 Companies with ISO 14001 certification	AGREED
	5.3 Increase environmental expenditure and promote the use of economic instruments	5.3.1 Formulate and execute strategies for a productive transformation that preserves natural and energy resources	5.3.1.1 Existence of economic instruments applied at the national level	AGREED
		5.3.2 Increase the economic resources allocated by the Government to the conservation, protection and restoration of the environment and natural resources	5.3.2.1. Environmental expenditure as a percentage of total public expenditure	AGREED
6. INSTITUTIONAL ISSUES	6.1 Strengthen environmental education	6.1.1 Enhance and strengthen the environmental dimension in formal and non-formal education	6.1.1.1 Existence of official integrated environmental education programmes in schools	EMERGING
	6.2 Promote and strengthen education and capacity building of human resources	6.2.1 Eradicate analphabetism and provide universal basic and secondary education	6.2.1.1 Net enrollment rate in primary education	AGREED
		6.2.2 Develop capacities to address vulnerability in the region	6.2.2.1 Public expenditure in risk management of extreme natural and anthropogenic events	AGREED
		6.2.3 Establish programmes for capacity building in the management of sustainable development for the public sector, the private sector and at the community level	6.2.3.1 Teaching hours of environmental science in primary education	EMERGING
	6.3 Establish national systems of environmental information	6.3.1 Develop and implement systems of information and indicators of sustainability at the national and regional level that correspond to the social, economic and political characteristics of the region	6.3.1.1 Reports on the state of the environment	AGREED
			6.3.1.2 System of environmental statistics	AGREED
	6.4 Promote citizen participation.	6.4.1 Create and strengthen participation mechanisms related to sustainable development, with representation of the government, non-government sectors and major groups of the region	6.4.1.1 Existence of national committees on sustainable development	AGREED