Preliminary approach to the methodology of Ecuador`s water account, and

Ministry of Environment, Ecuador

July - 2014
The objectives of SCAN

To calculate the availability of the environmental assets

To evidence the interactions between the environment and the economy

To develop indicators that represent those interactions

To link the economic statistics and environmental statistics

Information as an Input to help improve the public policy

To support a transition from a traditional economy to SD and “Buen Vivir”

* Se basa en la metodología SEEA propuesta por Naciones Unidas, dentro del esquema de Desarrollo Sostenible y Economía Verde
**Los activos ambientales constituyen el entorno biofísico que proporciona beneficios a la humanidad
The Water Resources in Ecuador

Potential water distribution and its availability

**Pacific watershed**
- 48% National territory
- 88% population
- 21% potential water

**Amazon Watershed**
- 52% National territory
- 12% population
- 79% potential water

For the distribution of the population, water demand is inversely proportional to its availability.

The Andean population greatly benefits from the Andean wetland ecosystems as a water reservoir (páramo).

Fuente: SENAGUA 2011, PNBV 2013-2017
Objectives of the methodology of Ecuador`s water account

- To identify the available information to develop the different accounts
- To recognize the limitations of the data
- To establish strategies and commitments with other institutions to develop the water account
- To identify the pressures exerted by the economy in the water resources. Show the availability of water assets in Ecuador 2014-2017

SCAN started in 2013
The Water Resources and its input in Ecuador’s economy

Distribution of consumptive uses of water in Ecuador, 2011

- Agricultural use: 80%
- Domestic use: 13%
- Industrial use: 7%

If the non consumptive use is considered, the hydroelectric energy represents the 53% of the total use.

Fuente: Base de Datos de Concesiones. SENAGUA (2011)
Elaboración: Equipo Técnico y consultor Proyecto Sistema de Contabilidad Ambiental Nacional (SCAN) del Ministerio del Ambiente (MAE).

www.ambiente.gob.ec
The Water Resources and its input in Ecuador’s economy

Water’s contribution to the electrical matrix

- Hidráulica
- Energía Térmica
- Importaciones
- Solar
- Eólica
- Productos de la caña

Fuente: Ministerio de Electricidad y Energía Renovable
Elaboración: Equipo Técnico y consultor Proyecto Sistema de Contabilidad Ambiental Nacional (SCAN) del Ministerio del Ambiente (MAE).

www.ambiente.gob.ec
The Water Resources and its input in Ecuador’s economy

Water’s contribution to the primary energetic matrix

<table>
<thead>
<tr>
<th>Year</th>
<th>Petróleo</th>
<th>Gas Natural</th>
<th>Hidroenergía</th>
<th>Leña</th>
<th>Productos de Caña</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td></td>
<td></td>
<td>3.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td>3.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td>3.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td>3.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td>3.5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fuente: Ministerio Coordinador de los Sectores Estratégicos
Elaboración: Equipo Técnico y consultor Proyecto Sistema de Contabilidad Ambiental Nacional (SCAN) del Ministerio del Ambiente (MAE).
According to ECLAC (2011), currently 60% of the information that is necessary to develop the water account doesn’t exist.
Limitations of the information

The information is not reliable

Outdated and incomplete information

The country needs an efficient investment in equipment and facilities to get the information
Purpose of the Green GDP

- An indicator under the guidelines of Weak sustainability
- GDP ignores depletion and degradation of environmental assets
- It introduces the environmental costs, caused by the economic activities, to the GDP
- SD requires additional indicators that evidence human wellbeing
Indicators of the SCAN

Some indicators

- Stock’s lifetime
- Productivity
- Intensity
- PINAE

PINAE = Producto Interno Neto Ambiental del Ecuador. Environmental Net Domestic Product of Ecuador
Green GDP and aggregates adjusted with environmental costs in Ecuador

Green GDP = GDP – CFK – EAD

The costs of petroleum, natural gas, and wood forest resources depletion (SEEA, 1993)

Depreciation of the produced assets (SNA, 1968)
Thanks!!

Eco. Franco Carvajal
Responsable de cuenta de petróleo y gas natural y cuenta del agua
Mail: franco.carvajal@ambiente.gob.ec

Eco. María del Mar Martínez
Responsable de cuenta emisiones al aire y cuenta del agua
Mail: delmar.martinez@ambiente.gob.ec