The Need for Environmental Statistics and Indicators in Ethiopia

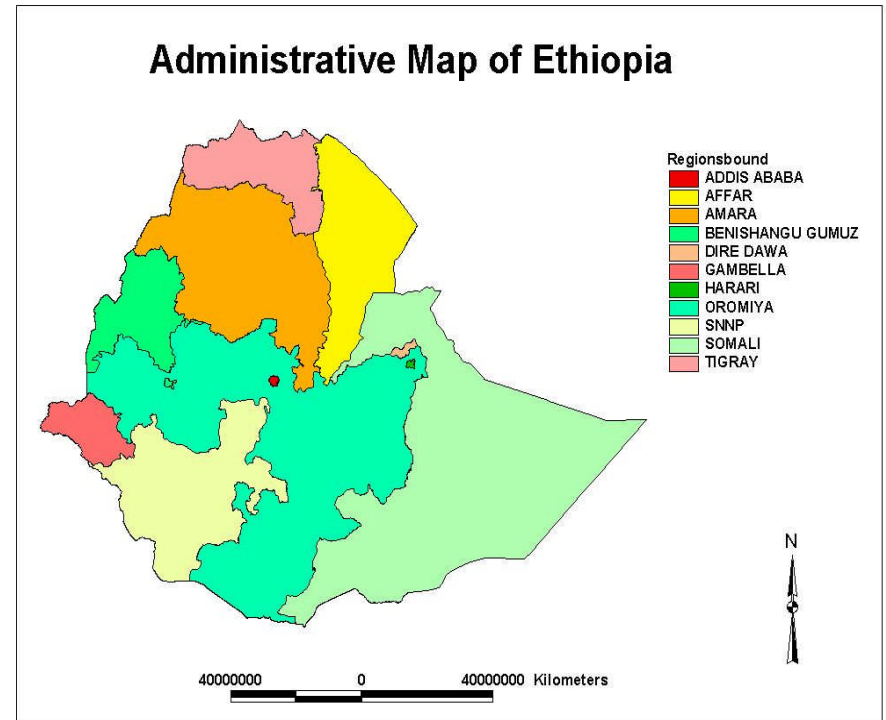*By: Tesfaye Woldeyes*

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Focus of our presentation

- ❑ To discuss the need for environment statistics and indicators   in Ethiopia,

- ❑ To highlight the major data producers in the country

- ❑ To highlight some of the environmental indicators that are available in the country as well as

- ❑ To discuss on the level and type of cooperation between institutions.
- ❑ To discus on the constraints and challenges facing environmental statistics

Introduction

- located between 3^0 and 15^0 north latitude and 33^0 and 48^0 east longitude

- Total area is about 1.13 Million Sq. Kilometers

- Total population is about 77 million as of 2007 and the annual growth rate is about 2.7%

- About 45% of the country is highlands and 55 % is lowlands

- Federal System(9 Reg. states)

Administrative Map of Ethiopia

Regionsbound
- ADDIS ABABA
- AFFAR
- AMARA
- BENISHANGU GUMUZ
- DIRE DAWA
- GAMBELLA
- HARARI
- OROMIYA
- SNNP
- SOMALI
- TIGRAY

40000000   0   40000000 Kilometers

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Introduction Cont'd…

- ❑ The country is endowed with rich natural resources,

- ❑ Natural resources are the bases for economic activity of the vast majority of Ethiopians

- ❑ people have been utilizing the resources without giving attention to the conservation of the resources.

- ❑ This has resulted in to loss of soil fertility, which led to low productivity and low-income generation.

- ❑ Hence, the Country is facing serious economic and environmental challenges at present

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Introduction Cont'd…

❑ Poverty is one of the major challenges for Ethiopia

❑ To overcoming the problem of poverty and understanding that a healthy, productive environmental resource base are prerequisites for improving social well-being and facilitating sustained economic development, the Government put environmentally sound economic development as one of the country's major agenda.

❑ The Government of Ethiopia has committed itself to bring about sustainable development

❑ It is striving to fulfill the requirements put under MDGs and the MEAs

Introduction Cont'd…

❑ Ethiopia has developed and is in the process of implementing a number of national environmental action plans and programs.

❑ Monitoring the level of implementation of these plans and programs is critical

❑ This in turn requires environmental statistics and indicators

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The Need for Environment Statistics

Why?

❑ To sustain socio-economic development, improve social equity by integrating environmental concerns in all development programs, planners, decision makers and the public at large, need to have a good understanding about the environment

❑ The role of Environmental statistics and indicators in sustainable development endeavors is immense.

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The Need for Environment Statistics

❑ It is highly needed :

➢ For understanding the level of our progress towards sustainable development;

➢ In the process of Natural Resources and environmental accounting;

➢ For understanding the status of the environment at a given point in time; and

➢ For Retrospective and/or prospective analysis to track events and changes on the environment etc.

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Major Data Generators

- The Central Statistical Agency (CSA) is mandated to produce statistical information on social and economic aspects of the country

- The CSA shall lead the country's statistical system and to provide training in statistical methodologies.

- CSA was ineffective to collect and disseminate environmental statistics and indicators periodically and systematically so far.

- *Currently, there is one section within the Department of Natural Resources and Agriculture Statistics that is accountable to compile environmental statistics*

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Major Data Generators

❑ The other data source officially mandated for the collection and dissemination of Geo-spatial data is the Ethiopian Mapping Agency.

❑ The Agency mainly conducts aerial photographing, surveying, mapping and remote sensing activities

❑ Other institutions like for instance:

➢ MAoRD, NMSA, MoH, MoWR, MoME, EPA, and DPPA also produce data to meet their internal data needs and/or for external uses.

➢ Different project offices, Multilateral and Bilateral Agencies, International and National NGOs also generate environmental statistics in the country

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Available Environmental and Related Indicators

•**Ethiopia has not yet clearly developed its own environmental indicators.**

Indicator	Unit	Period of collection
Total population	Number	Census every 10 year
Average annual growth rate	%	
Total land area	ha	Unknown
Total forest area	ha	"
Total forest cover	%	"
Total arable land	ha	Annually
Area of arable Land	%	Annually
Average holding size/household in rural area	ha	Annually
Average annual deforestation rate	%	Unknown
Area under Temporary crops	ha	Annually
Area under Permanent crops	ha	"
Pesticide applied area	ha	"
Fertilizer applied area	ha	"
Irrigated area (peasant holdings)	ha	"

Available Environmental and Related Indicators

Indicator	Unit	Period of collection
Total internal renewable water resources Internal renewable water per capita Total water withdrawals Withdrawals per capita Proportion of households with access to safe water	m3 (annual) m3 / person/ yea m3 (annual km3 m3 / person/ yea %	Census every 10 year
Percent of protected area Percent of protected area actively managed	% %	Unknown Unknown
Terrestrial mammals Bird species Reptiles species Species of amphibians Species of fish Higher plant species	Number Number Number Number Number Number	Unknown Unknown Unknown Unknown Unknown Unknown

Available Environmental and Related Indicators

Indicator	Unit	Period of collection
Carbon-dioxide (CO_2) emission-1994	Gg	Unknown
Methane (CH_4) emission -1994	Gg	Unknown
Nitrous oxide (N_2O) emission -1994	Gg	Unknown
Proportion of households using solid fuel ●Firewood ●Charcoal ●Leaves/Dung cakes, etc.	 % % %	 Every Five year Every Five year Every Five year
Population with access to improved sanitation	%	Every Five year
Quantity of Mineral Production ●Gold in ●Tantalum	 Kg Ton	Annually

Cooperation between Institution

❑ The Government of Ethiopia has recognized the need to establish an "Environmental Information System".

❑ This is pointed out in section 4.7 of the Environmental Policy of Ethiopia and it has also been articulated in section 16.3 of the re-establishment proclamation of the Federal EPA

❑ The proclamation has mandated the Federal EPA to coordinate the establishment of Environmental Information Systems (EIS)

Cooperation between Institution

❑ Accordingly, EPA has put its effort to lay the foundation for the realization of an EIS through initiating the establishment of Ethiopian Environment Information Network (Ethio-EIN).

❑ The Ethio-EIN is primarily designed to:
   ➢ provide a framework for cooperation and coordination
   ➢ Strengthen the data foundation for an Integrated Environmental Assessment and Reporting (IEA&R) ;

❑ The networking initiative has triggered a very good collaboration between different environment data producers and users

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□ At federal level, 12 core institutions joined the network initiative.

□ Tigray, Amhara and Oromiya Regional Environmental Protection Agencies took the lead in coordinating the initiative

Cooperation between Institution

❑ *Federal Level Partners*:
  ➢ Federal Environmental Protection Authority (coordinator);
  ➢ Ministry of Agriculture and Rural Development;
  ➢ Ministry of Water Resources;
  ➢ Ministry of Health;
  ➢ Disaster Prevention and Preparedness Commission;
  ➢ Population and Housing Census Commission Office;
  ➢ Central Statistical Authority;
  ➢ Ethiopian Mapping Authority;
  ➢ Geological Survey of Ethiopia;
  ➢ Institute for Biological Diversity Conservation;
  ➢ National Meteorological Service Agency; and
  ➢ Christian Relief and Development Association.

Cooperation between Institution

❑ *Regional State Level Partners*:

  ➢ Oromiya Regional State;

  ➢ Sothern Nations, Nationalities and Peoples Regional State; and

  ➢ Tigray Regional State.

❑ *Ethio-EIN partners would:*

  ➢ provide access to their respective environment data/information resources holdings;

  ➢ collaborate to standardize, harmonize and develop core environmental statistics and indicators

Conclusions

❑ The need to have environmental statistics and indicators is very high and urgent. Moreover the need to statistical data and indicator is highly

❑ This need is linked to the constitutional rights of Ethiopian citizens to be informed and participate in decision-making regarding to the well being of the environment and equitable utilizations of the goods and services to be generated from their environment.

❑ However, the data available pertaining to environmental matters in Ethiopia is very much limited.

Conclusions

❑ Despite the availability of very few environmental statistics and indicators, most of them are inconsistent and some of the indicators are even obsolete.

❑ Capacity for Data collection, dissemination, and analysis regarding environmental issues is not yet well developed.

❑ Major factors include institutional, financial and technical resources limitations.

❑ Recently environment statistics work is considered as a subsidiary function.

Conclusions

- But the reality shows that environmental statistics is quite a huge task that has to be properly accomplished.

- Is it possible to achieve the desired success in availing national environment statistics and indicators to the needy with the current situation?

- We feel that the answer would be "NO"!!!

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Conclusions

❑ There is a need improve the present environmental statistics system in the country

❑ The CSA and EPA have to be well   strengthened

❑ The first and most crucial thing is to have a proper institutional set-up within the CSA.

Conclusions

❑ Effective coordination of the work and sharing of environment statistics is highly needed at national and sub-national levels

❑ Pushing forward to join hands to effectively implement the Ethio-EIN initiative is highly required.

❑ Capacity building in the form of training, technical and financial assistance is very essential

Thank You