



EASTERN AFRICA STATISTICAL TRAINING CENTRE
CHUO CHA TAKWIMU MASHARIKI MWA AFRIKA



Training environment statisticians at EASTC in support of the FDES 2013

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Workshop on Environment Statistics for the East African
Community Region Arusha, Tanzania

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Outline of the Presentation

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Introduction

Framework for the Development of Environment Statistics (FDES) recognizes environment statistics as relatively new statistical domain and demand for such statistics is increasing (FDES, 2013). It is well elaborated in FDES that the domain covers a wide range of information and is multi- and interdisciplinary in nature that originates from a variety of institutions that collect data and, similarly, numerous methods are used to compile them.



Introduction

One of the objectives of the FDES as a multipurpose framework is to provide, to the extent possible, the environment statistics necessary for the development of environmental-economic accounts.

In recognizing this objective, ***Eastern Africa Statistical Training Centre*** as the regional institution in the field of official statistics has already started trainings within the thematic 6 components and sub-components of the framework. The training is on two levels, at the bachelor's degree and at the master's degree.



Introduction

Training at the bachelor's level is geared towards producing highly motivated, responsible and creatively innovative professional graduates to deal with the production and use of reliable official statistics(environment statistics) in the 18 member states (*Botswana, Ethiopia, Kenya, Lesotho, Malawi, Seychelles, Somalia, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe, South Africa, Mauritius, Namibia, Eritrea, Sudan and South Sudan*).



Introduction

Training at master's level is designed to produce competent, responsible and innovative strategic statistical professionals and managers who will work at senior levels as official statisticians (in the field of environment statistics), decision makers, and administrators of National Statistical Systems (NSS), sub-systems, schemes and programmes designed to respond to the statistical demands of African Nations in the Eastern and Southern Africa region.



Training at EASTC in support of the FDES 2013

In support of the FDES 2013, EASTC after attending the previous workshop on environment statistics held on 6th -10th July, 2015 at Arusha, has improved its curriculum by introducing various modules related to environment statistics.



Training at EASTC in support of the FDES 2013

These modules complement components and sub components of the framework and they include *remote sensing and GIS, Ecosystems Valuation and Accounting, Energy statistics, Agricultural statistics, Environmental Impact Assessment and Management, Population statistics, Health statistics, Housing statistics, environmental policies for sustainable environment taxes, subsidies and property rights in environmental conservation*. The connection of these modules with FDES is as follows:



FDES Component 1: Environmental Conditions and Quality

EASTC training on thematic component 1

- **Remote Sensing and GIS to monitor environment changes on land use land cover (LULC)**

Observe: land cover, boundaries, threats, damage, weather, topography

Monitor: change in forest cover, range condition, land use

Classify: into land cover and land use categories, habitats

Measure: areas, distances, height/elevation

Detect: fires, resource use violations

- **Ecosystems Valuation and Accounting**

Designing of valuation protocols of ecosystem goods and services



FDES Component 2: Environmental Resources and their use

EASTC training on FDES thematic component 2

- **Energy statistics(sources, classification, indicators, utilization etc)**
- **Agricultural statistics (forest, livestock, crops, fisheries and their by-products etc)**



FDES Component 3: Residual

EASTC training on thematic component 3

- Compute and interpret indicators of environmental statistics (e.g Percentage of population connected to public waste water collecting system etc)



FDES Component 4: Extreme Events and Disasters

EASTC training on thematic component 4

- Environmental Impact Assessment and Management
- Use of environmental management tools and techniques such as
 - Cost Benefit Analysis (CBA),
 - Sensitivity Analysis (SA) and
 - Environmental Auditing (EA).
- Application of remote sensing and GIS to detect fires, resource use violations



FDES Component 5: Human settlement and Environment Health

EASTC training on thematic component 5

- Population statistics
- Health statistics
- Housing statistics
- Relate environmental issues and human development



FDES Component 6: Environmental protection, management and engagement

EASTC training on thematic component 6

- Analyze environmental policies for sustainable environment
- Explain taxes, subsidies and property rights in environmental conservation.



Challenges of Trainers

Environment Statistics, as an emerging statistical field of Official Statistics, is not taught by any teacher at every university. Normally students are trained at STCs such as EASTC by teachers with working experience from NSOs, Government Departments and International organizations such as ISI (i.e. From hands –on experience).



Challenges of Trainers

However, most STCs including EASTC face shortage of teaching staff and inadequate teaching materials in the field of environment statistics.

This situation limits the capacity of most countries to produce reliable environment statistics for effective policy and decision makers.



Challenges of Software

Cost of software that are not available from the open source(OSS). Most available as OSS are cracked also can easily be infected by malware that damage data files or boot sector of the hard disks



Conclusion

EASTC appreciates UNSD (Environment Statistics Section) Reena and others, UNECA, UNEP, COMESA, EAC secretariat, the URT, other countries' and NSO's representatives and ISAE for facilitating the revision process of the FDES.

The framework will assist EASTC in the process of improving the environment statistics curriculum so as meet the current environment demands



Dear participants, before I conclude the presentation; I would like to share with you other programmes offered at EASTC

- Ph.D. In **Official Statistics** in collaboration with Acharya Nagarjuna University (ANU)-INDIA.
- Masters of **Official Statistics (MOS)**
- Masters in **Agricultural Statistics (mas)** in collaboration with Sokoine University of Agriculture (SUA)-TANZANIA.
- Bachelors of Official Statistics
- Diploma in Statistics
- Certificate in Data Collection



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Thank you for Your Attentive Listening

For more information about other
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<http://www.eastc.ac.tz/>