DA12 project Kick-off webinar
9 - 11 March 2021

Caribbean SIDS relevant climate change and disasters indicators for evidence-based policies

Data, statistics and indicators: Concepts and production of environment, climate change and disasters statistics

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1 Statistical measurement of the Environment

Starting Questions: What and how to measure?

What do we want to measure?

- **Situation and changes**

  Status and environmental trends, CC and occurrence and impact of disasters

  - Temporary changes in key variables from t_0 → t_1
  - Changes in the spatial distribution

Monitoring and evaluation of environmental dynamics, climate change and disasters

- **What is happening? What has changed?**

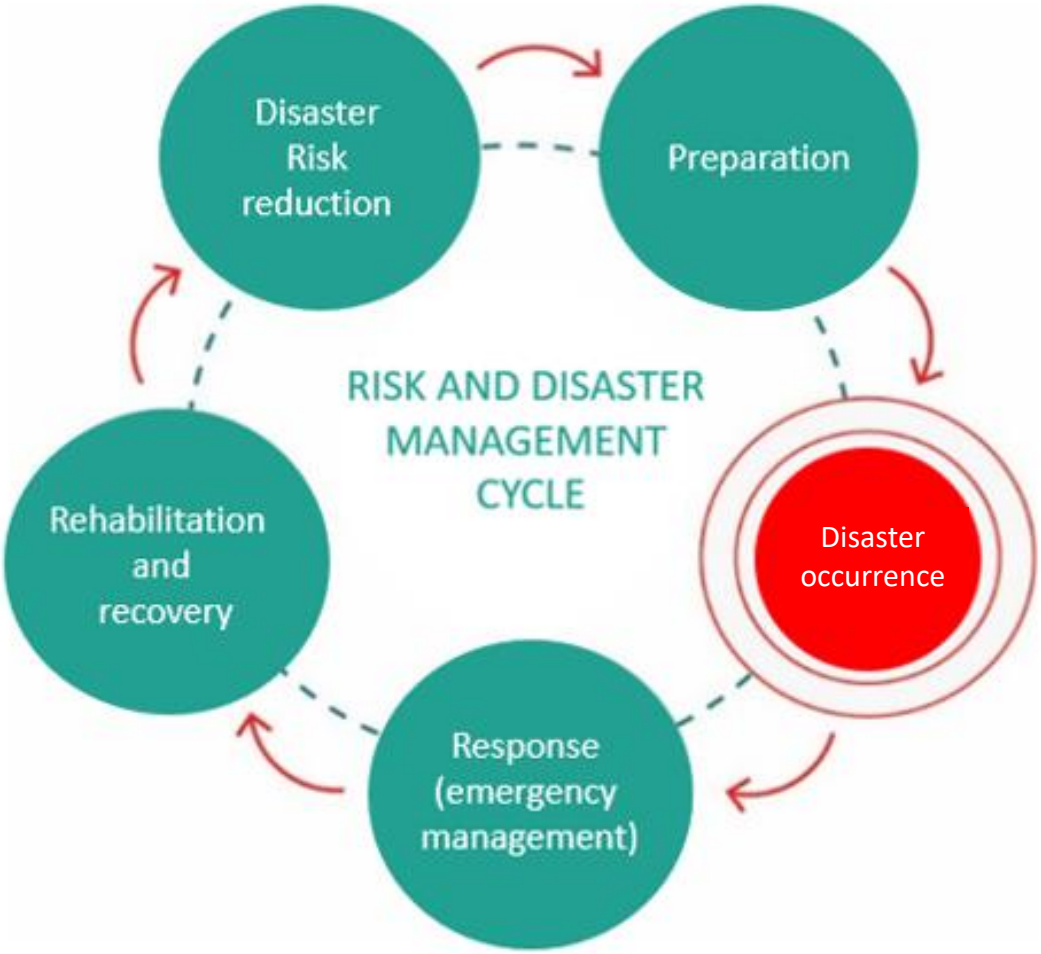
  Occurrence, impacts, mitigation, adaptation

- **Processes - programs, incentives, regulations, enforcement action**

Results
Impacts

} What proportion is attributed to the intervention?

Questions: What and how to measure?

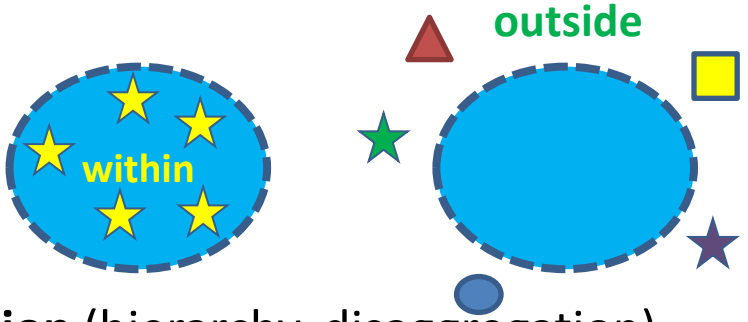


To measure and produce Official Statistics / Indicators

We need

1. Define detailed **demand** for indicators by policies and targets (for example, Disaster Risk Reduction-DRR)

2. Definition of variables and Statistical unit = boundaries (what stays within and outside)



3. Articulate with a statistical classification (hierarchy, disaggregation)

4. Identify / Select / Develop data sources

5. Make the data collection and calculation **methodology explicit**

Use international statistical standards and recommendations for spatial and temporal comparability (Statistical Commission UN)

6. Comprehensive description: metadata and methodology sheets

7. Inter and intra-institutional cooperation

To measure and produce Official Statistics / Indicators

The production of spatial-temporal comparable statistical series and indicators requires:

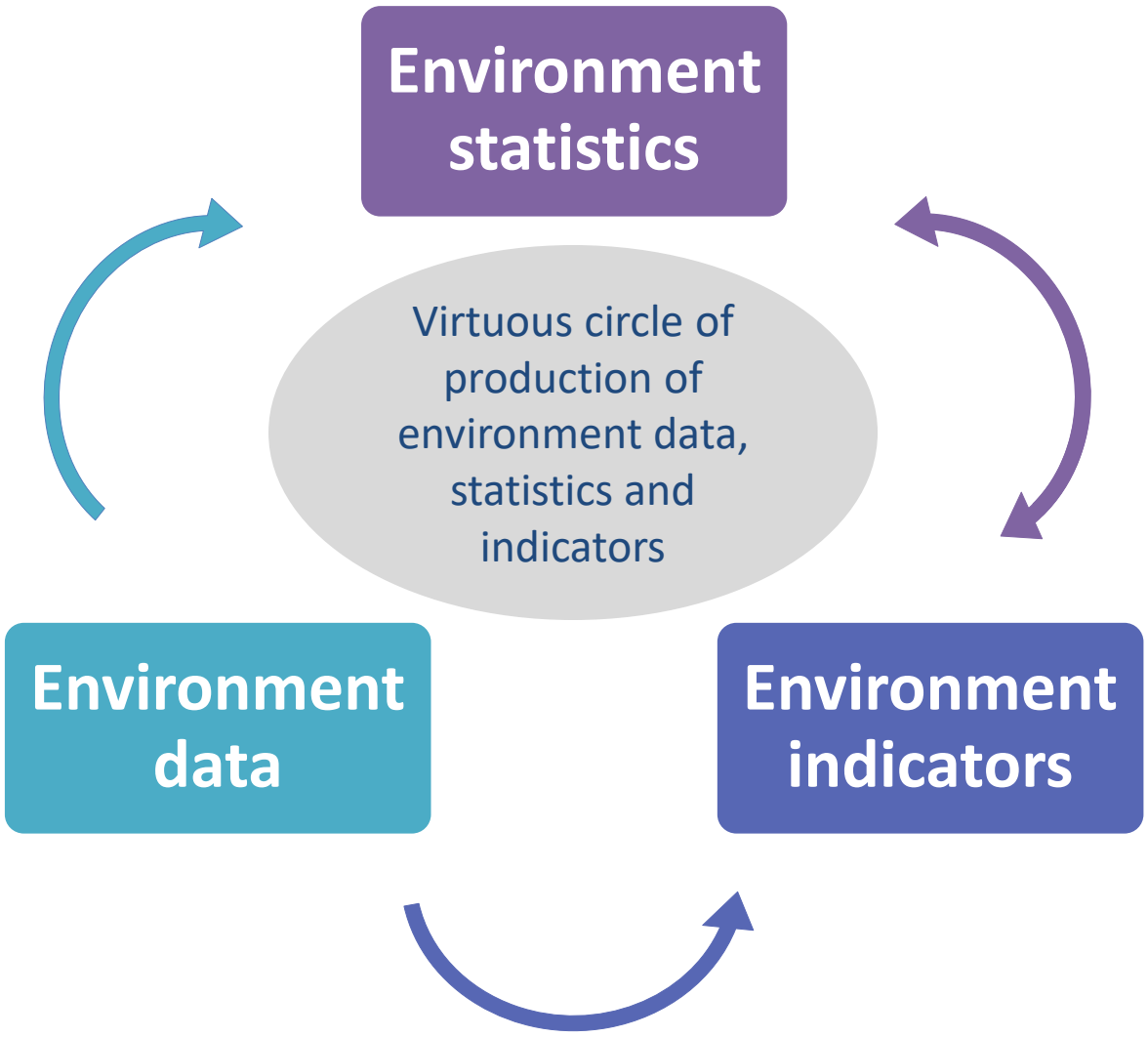
1. **Technical capacities:** inter-institutional training, technical assistance to support countries
2. **Produce and update** on regular basis
3. **Disseminate** (e.g., sets of indicators)
4. **Institutional Development - political will and resources**
   a) Inter-institutional cooperation
   b) Intra-institutional cooperation
   c) Strong organization of specialized units in environmental / disaster / resilience statistics

With: Adequate resources / high hierarchical level ES unit (such as economic and social statistics area) in the organization chart

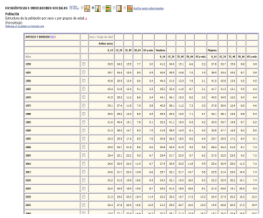
Quantitative environmental information includes data, statistics and indicators

- To turn data into statistics and indicators, it is required to apply **statistical processing** operations
- Operations based on statistical **methodologies, rules and standards** together with **specific procedures** in the domain of environmental statistics
- Certain types of environmental **data sources** involve specific collection and compilation processes
- Description of statistics and indicators in the form of **metadata** allows comparison over time and records possible differences with definitions, recommendations and international standards
- The use of relevant statistical **classifications** in the domain of environmental statistics guarantees temporal and spatial comparability

Environment Statistics System



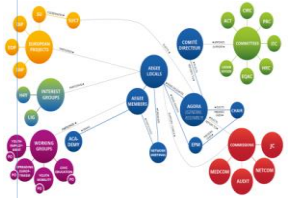
Production, dissemination and use of environmental statistics and indicators

Production	Characteristics	Dissemination	Characteristics/Uses
Environment statistics	They describe the situation and trend of the environment and the main processes that affect it	• Tables and charts • Statistical compendiums • Databases 	• Heavy • Multipurpose • Experts and Analysts • Build environment declarations • Report on multilateral environmental policies and agreements • To compile environmental accounts • SDG indicators required
Environment indicators	They describe and show the situations and the main environmental dynamics in synthesis form	File that presents indicators explained and contextualized 	• Report for specific purposes (policies, programs) • Limited number • Citizenship • Decision makers • Authorities • Respond to SDG

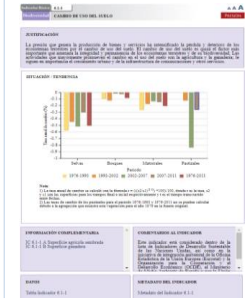
Stages of statistical processing

Data

Validation



Structuration

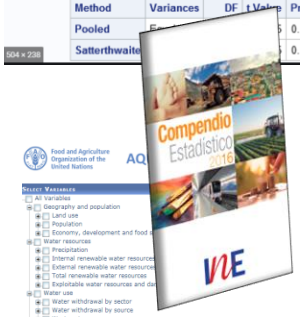


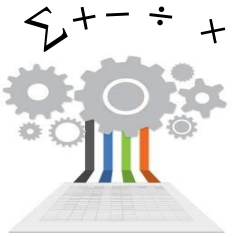
Description (metadata)

Statistics series (compendia, yearbooks and databases)

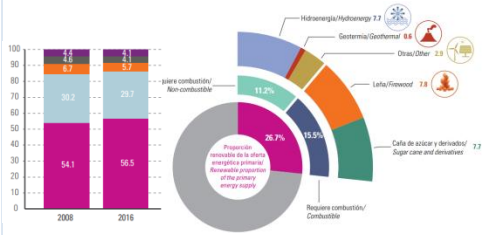
Sex	Method	Mean	95% CL Mean		Std Dev	95% CL
F		60.5889	56.7315	64.4463	5.0183	3.3897
M		63.9100	60.3776	67.4424	4.9379	3.3965
Diff (1-2)	Pooled	-3.3211	-8.1447	1.5025	4.9759	3.7339
Diff (1-2)	Satterthwaite	-3.3211	-8.1551	1.5129		

Method	Variances	DF	t Value	Pr > |t|
Pooled				0.1645
Satterthwaite				0.1652





Selection and processing of statistics, aggregation and combination with economic and social statistics



Environment indicators

Users and uses of the indicators

- A2030 environment indicators
- Public policies and programs
- State of the environment
- Environment performance reports
- Environment accounts

Fuente: elaboración propia.

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Thank you for your attention!

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https://www.cepal.org/en/topics/environmental-statistics
https://www.cepal.org/en/headquarters-and-offices/eclac-caribbean