National workshop:

Generating climate change and disasters indicators for policy decision-making in Dominica

19 -21 July 2022

ECLAC's methodology to produce environment, climate change and disaster indicators

Georgina Alcantar, Chief of of Environment and Climate Change Statistics Unit

Statistics Division / Climate change and environment statistics unit
Economic Commission for Latin America and the Caribbean (ECLAC)

UNITED NATIONS

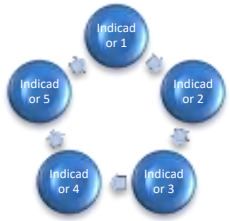
ECLAC

Content

1 Principles for constructing indicator sets

2 Methodological road map for constructing indicators

- Stage I: Preparation
- Stage II: Design and construction of indicators
- Stage III: Institutionalization



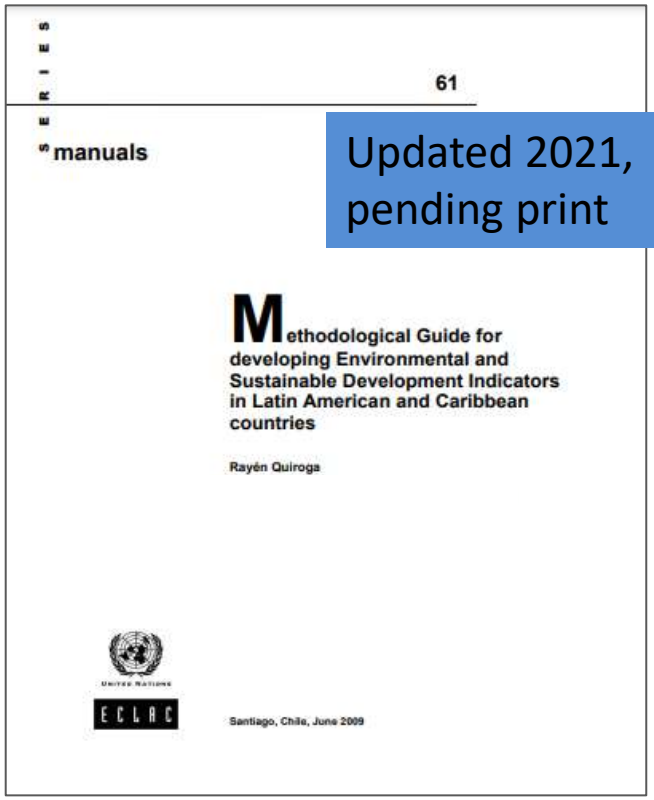
3 Products resulting from the indicator-building process

This methodology can be found in ECLAC Manual 61:

Methodological Guide to develop Environment and Sustainable Development Indicators in Latin American and Caribbean countries

It is based on an **inter-institutional collaborative** work approach to build and agree on the technical specifications of relevant and quality **indicators set** that describe or quantitatively report on the situation and trends of:

- **Environment as a whole**
- **Components of the environment** (water, air quality, forest, ecosystems and biodiversity, renewable energy and energy efficiency, agri-environmental, residuals, environmental health, environmental management, etc.)
- **Multi-Domain processes:**
  - Climate change
  - Disasters



Download:
https://www.cepal.org/en/publications/37890-methodological-guide-developing-environmental-and-sustainable-development

1

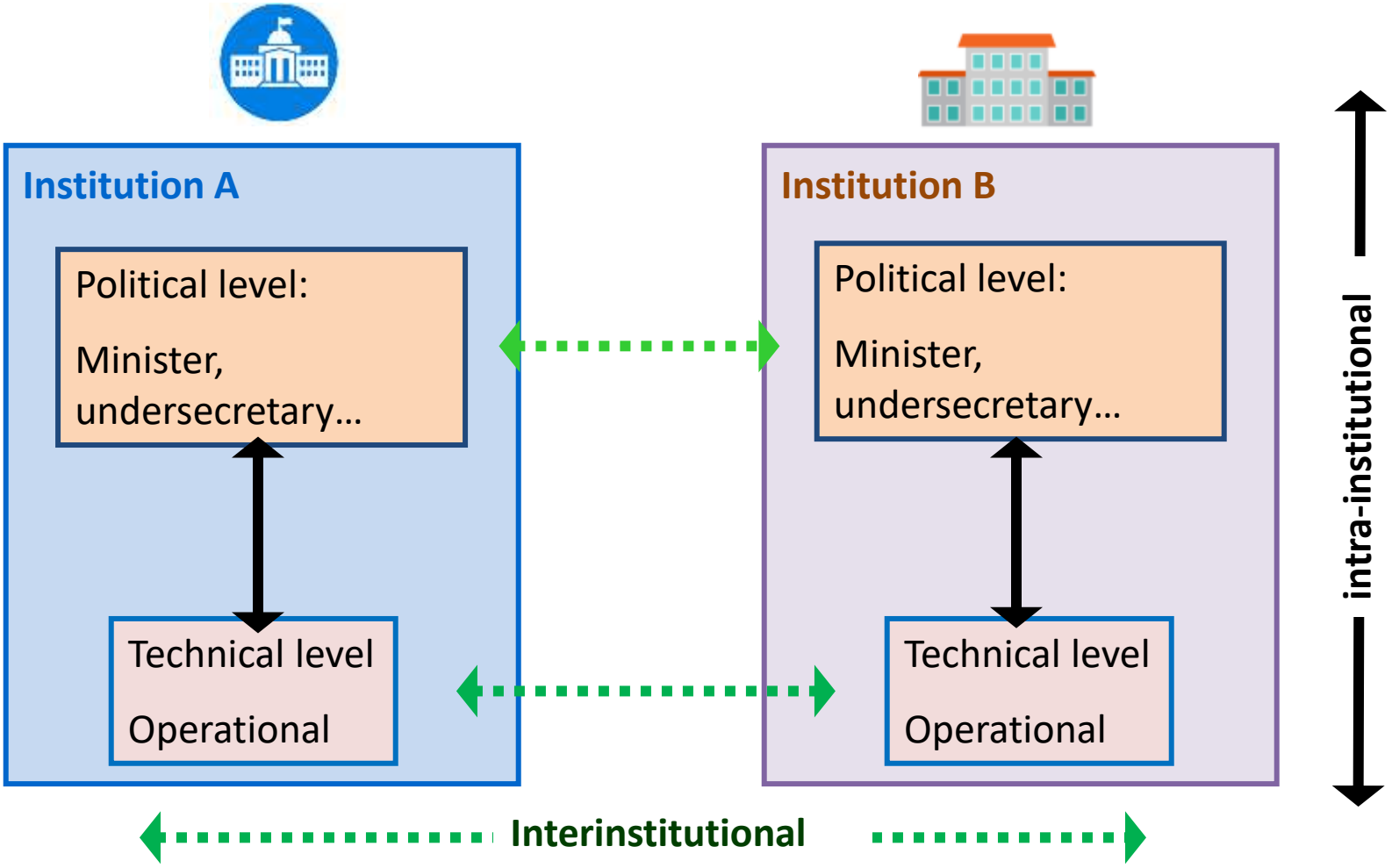
Principles for constructing indicator sets

Principle 1: Teamwork and effective organization

- Engage **producers**, processors, compilers and **users** of environmental and multi-domain indicators
- **Inter-institutional team** with work plan, goals and established leadership
- **Capacity building** for common methodology, concepts and tools to better construct the indicator set

Principle 2: Inter-institutional coordination and cooperation

Clear organization of cooperation among institutions and levels



Principle 3: Demand-driven indicator sets

Decision making and interventions

1. **Identification of the most important and critical decisions**
(Reports or profiles of environment, development sustainability, the situation of climate change and/or occurrence and impact of disasters in the territory)

2. Identification and selection of the most useful potential indicators

(Draft list of potential indicators)

3. Verification of statistical feasibility of the potential indicators

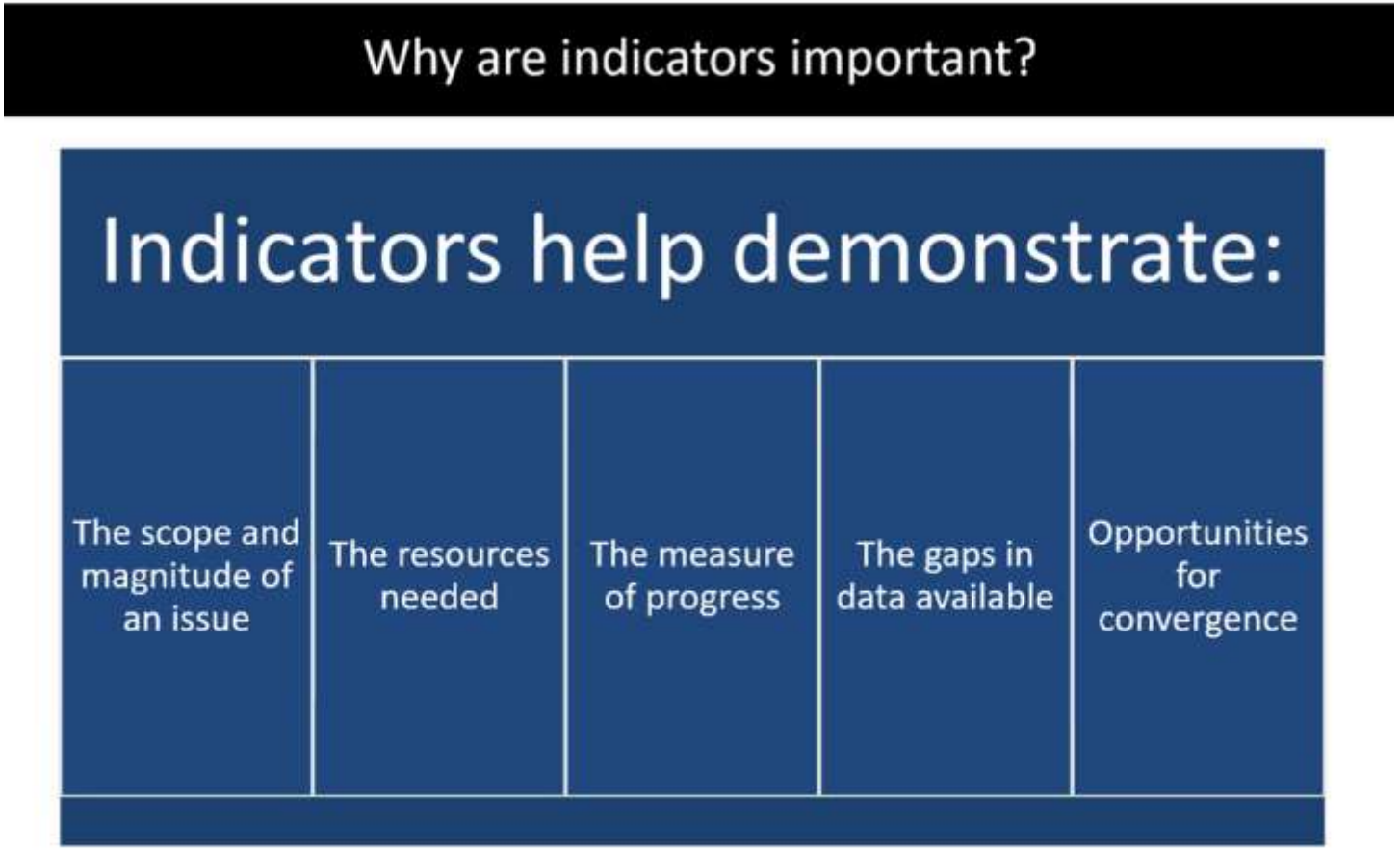
(verification of existence, quality and statistical series and primary data systematization)

4. Assessment of primary statistical sources for datamining:

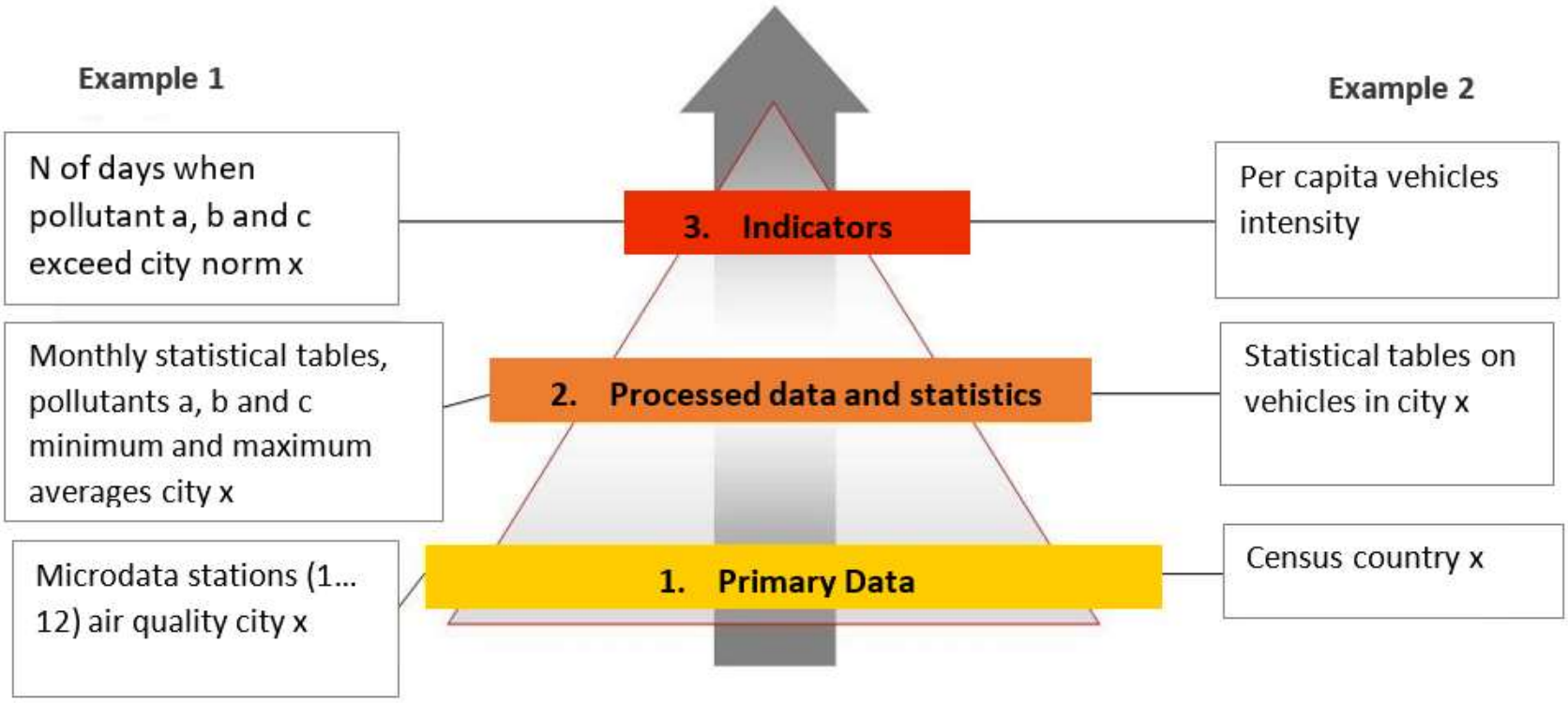
- Surveys and Censuses
- Quality ground monitoring stations and programs (air, water, soil, etc.)
- Remote sensing
- Administrative records
- Estimates
- Scientific research

Building **demand-driven** indicators for decision-makers, **we make better use of limited resources**

Principle 3: Demand-driven indicator sets



Principle 4: Selection of information and coordination of processes



Principle 5: Manageable number of indicators (modular progressive approach)

- Each indicator (design, construction, publication, update) requires:
  - a strong investment of time
  - energy
  - dedication (knowledge, coordination, creativity, consultation, decision, consensus building)
- The first set of indicators should be manageable with available resources
- Each indicator counts and must contribute to the whole set

Don´t forget :
Less is more!!!

Principle 6: Follow the procedures and take care the statistical quality

- Protect the **quality of the primary data**
- **Describe fully** each indicator using the Methodological Sheet
- **Carry out consultations** with agencies and scientific experts to understand the value of each of the indicators and its main implications.
- Sustain critical working attitude and **frequent evaluations** of the indicators.

Principle7: User-friendly indicator format

- Indicators should be displayed in an **attractive and easily understood by the users**.
- **Give sufficient time and trained staff** to the design phase of the platform of the indicators

- Carefully select the **appropriate language** used and the presentation for the indicator
- **Proper selection** of the publication media
- **Plan and spend time on the launching** of the indicators, complete with media coverage and institutional backing

Principle 8: Flexible attitude/Perseverance

- **There are always** methodological, institutional, financial, capacity and primary information **challenges** to face during the work:
  - Deal with changes
  - Review
  - Improve
  - Remove

- Identify and develop new potential indicators at any time during their work.
- Avoid inflexibilities of any sort

2

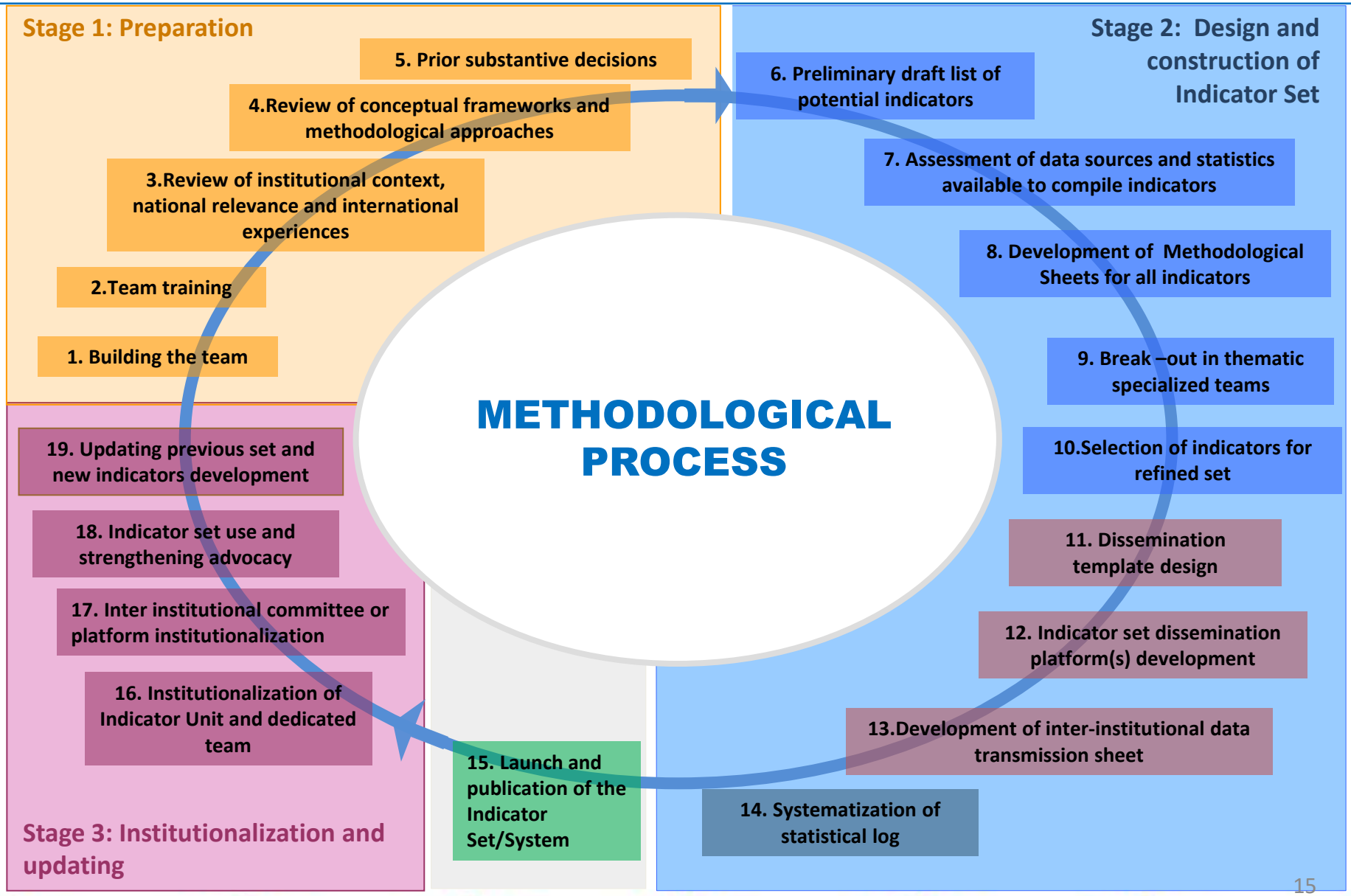
Building indicators: Methodological road map

Stage I: Preparation

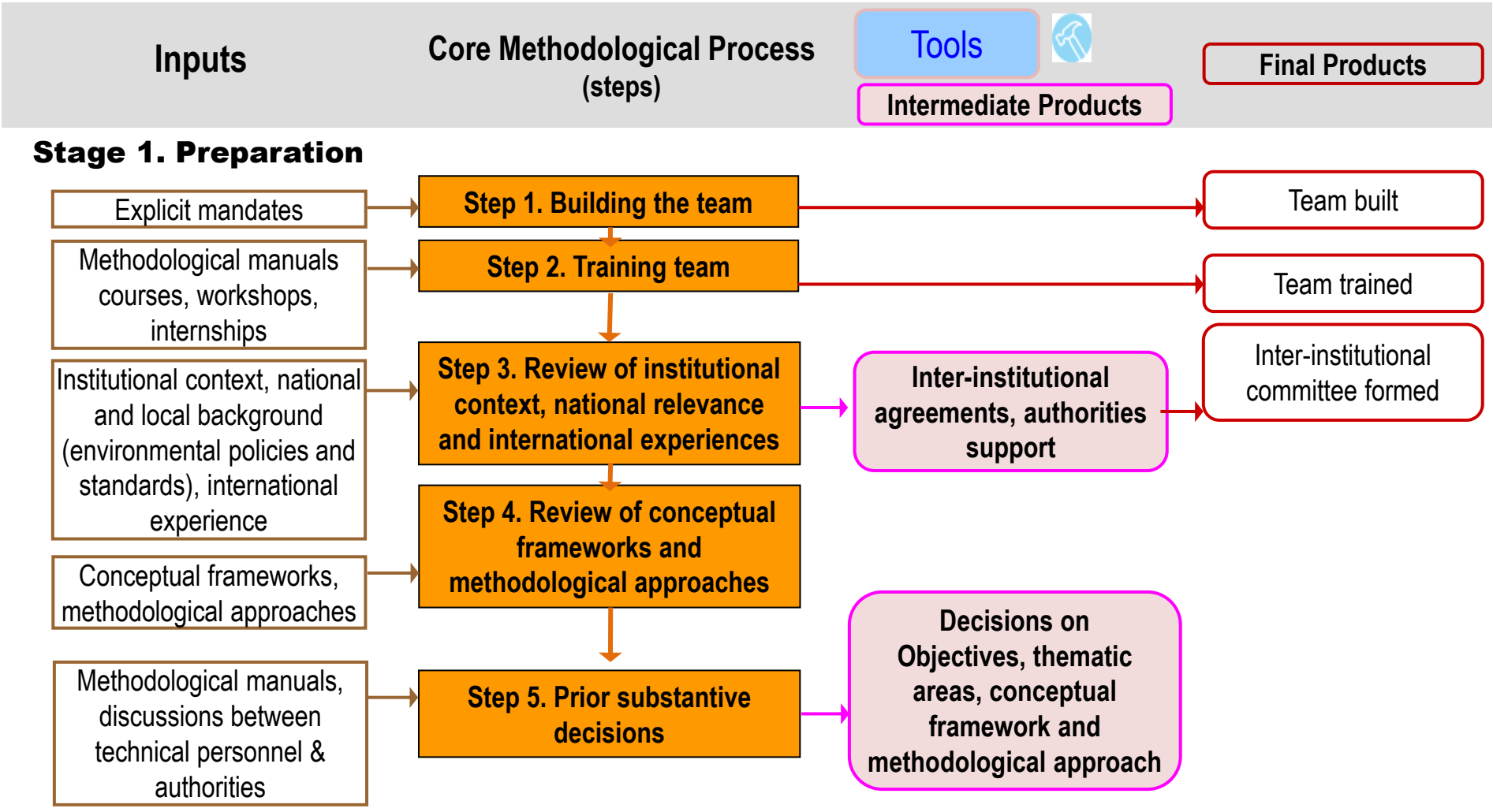
Stage II: Design and construction of indicator set

Stage III: Institutionalization and updating

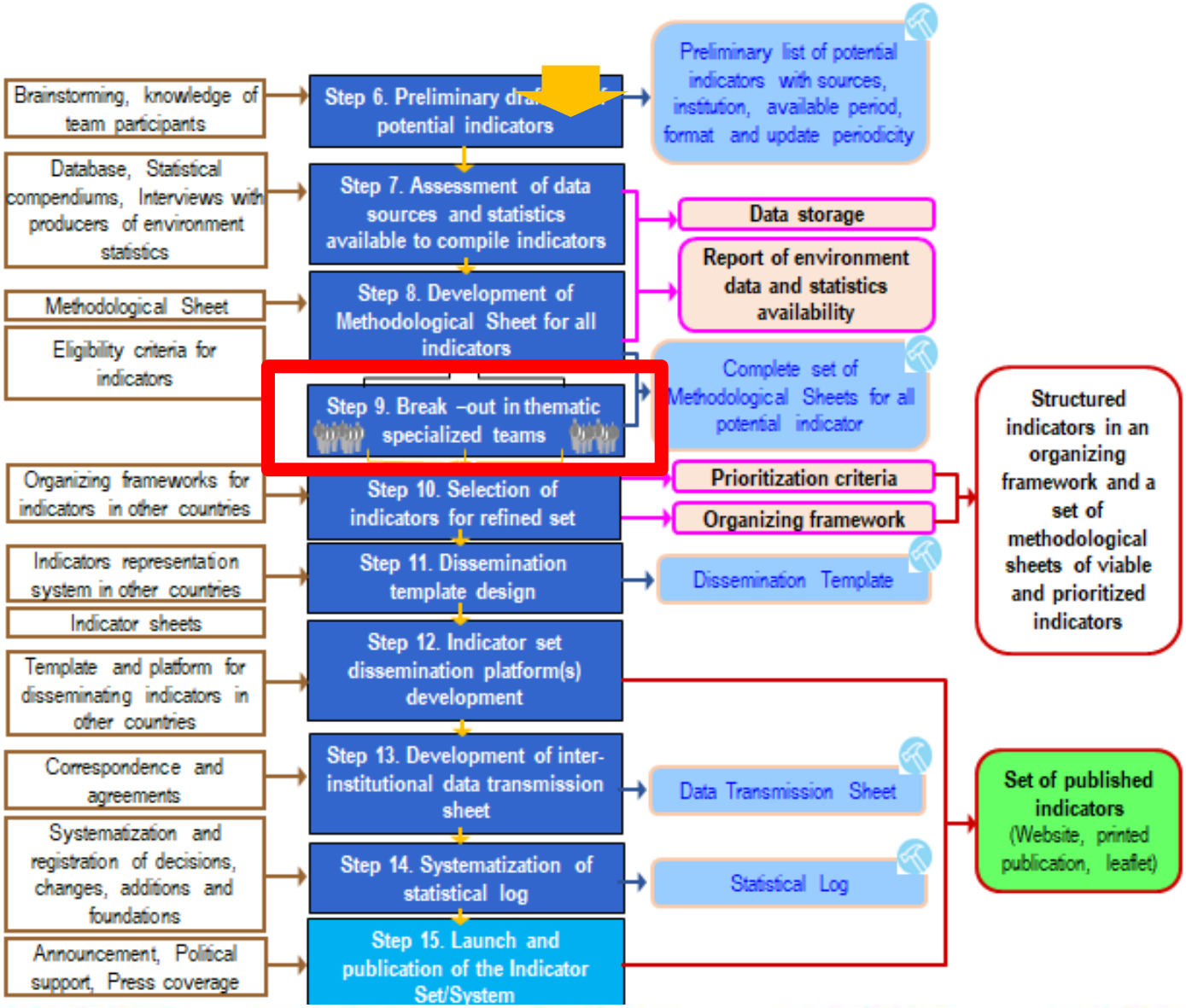
2. Methodological road map



Stage I: Preparation



Stage II: Design and development of indicators



Stage II: Design and development of indicators

Development of Methodological Sheet for all indicators

- **Key tool** in constructing the indicators set
- **Internal use**
- Contains **all the technical specification**s and its underlying variables
- **Clarifies technical content** and specificities
- Allows for a **common comprehensio**n and building process
- Informs about the design/construction **progress** of each indicator
- **Facilitates** the technical analysis of each indicator
- Content will be used in the dissemination template
- **Enables comparability** of the indicator over time and across space

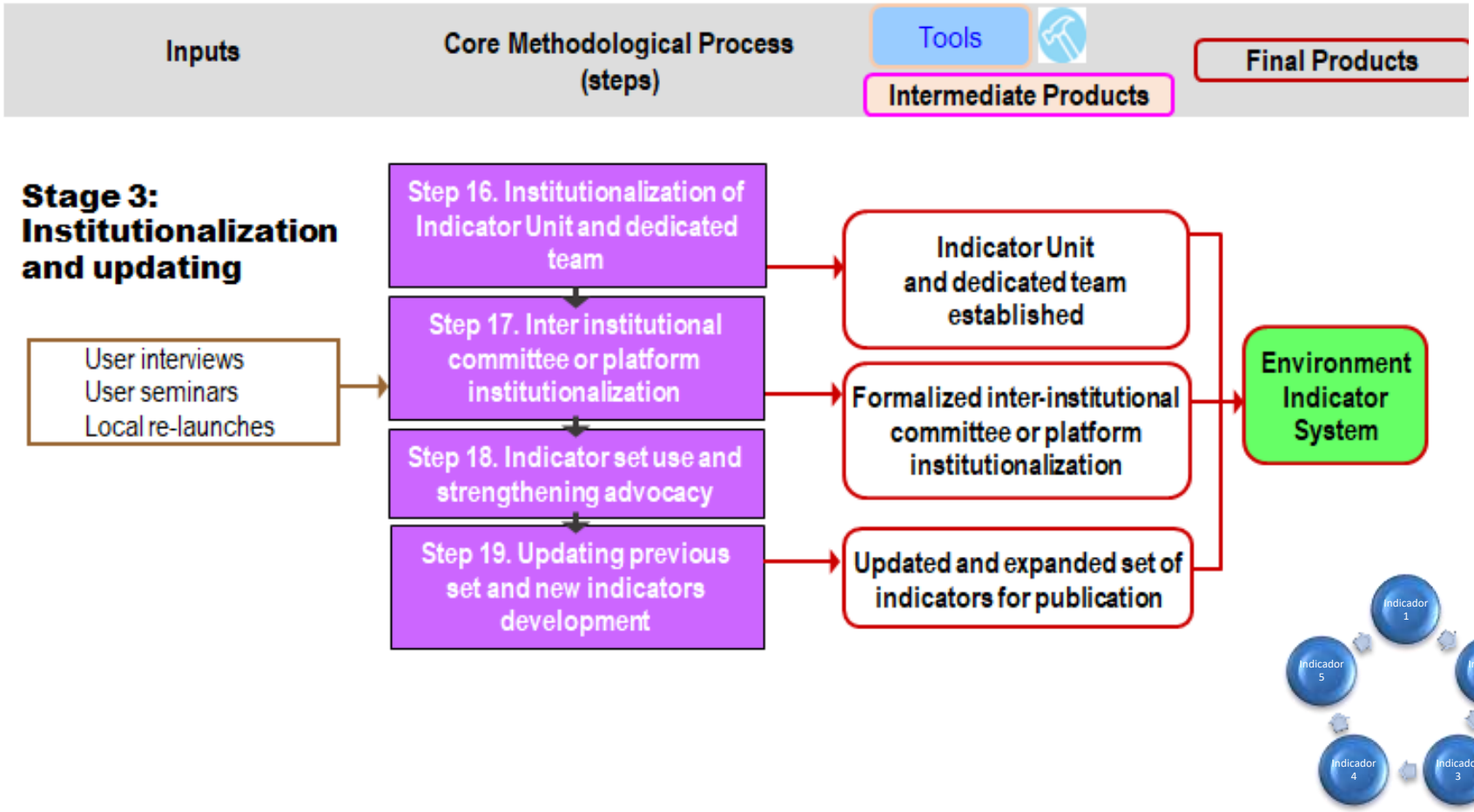
Stage II: Design and development of indicators

Criteria for selection of indicators (to be included in refined set)

- Indicator **relevance and pertinence** to target or policy objective
- Statistical **feasibility,** availability of data series
- **Data quality** of underlying variables
- **Robustness**
- **Simplicity**
- **Clarity** and **user friendliness**
- **Directionality** safety
- **Integrity** and **coherence** between fields in the methodological sheet
- **Optimal** representation and **graphic design** for dissemination purposes

No single indicator can report the full complexity of environmental or multidomain phenomena.
However, each indicator selected must provide sufficient statistical value to justify its place in the indicator set/system.

Stage III: Institutionalization and updating of indicators



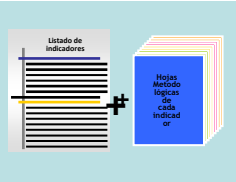
3

Products resulting from the indicator-building process

3. Products

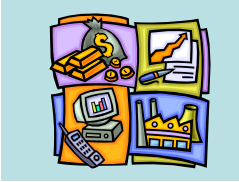
1. Developers of first set of indicators ➡ Indicators Unit

   Operations, team and resource allocation in annual program of work and regular budget



2. First set of Indicators

   Set of MS and dissemination template and platform Published or ready to be published



3. National environment/climate change/disasters indicator system

   Institutions, dedicated teams, resources, network and equipment

4. Inter-institutional committee or formal mechanism

   To organize and facilitate data sharing, regular updating and further development of new indicators

National workshop:

Generating climate change and disasters indicators for policy decision-making in Dominica

19 -21 July 2022

Thank you for your attention!

https://www.cepal.org/en/topics/environmental-statistics

UNITED NATIONS

ECLAC