PARIS21 Expert workshop – Synthesis note

A data ecosystems approach to support policies, decision-making and reporting for climate action[1]

On 14 December 2021 PARIS21 convened an expert workshop that brought together representatives of statistical agencies and other key stakeholders for a facilitated discussion on the benefits of adopting a data ecosystems approach to climate change policies, decision-making and reporting.

This document presents an initial high-level synthesis of the themes and ideas that emerged throughout the discussion on 14 December. It will help to inform further work and documents as PARIS21 continues to explore this area of opportunity in 2022.

Discussions at the expert workshop were broken into two sessions on two different topics.

Session One - The potential of a climate change data ecosystem: What is it and where do we stand?

This session was organized around three questions:

1. In your view, what are the most important elements of a climate change data ecosystem?
2. What challenges do you perceive to realizing a coherent climate change data ecosystem?
3. Based on your experiences, how can a climate change data ecosystem be beneficial across the data value chain, including data production, processing, dissemination and use?

Discussions in this session touched on a number of themes and ideas relating to the elements of a CCDE as well as challenges and benefits related to developing such an ecosystem. Important elements of a CCDE include taking a needs-driven approach, integrating existing data and reporting models, and balancing official statistics with other data types. Challenges discussed include political will, resource and capacity constraints, and the complexity of the ecosystem. Benefits of a CCDE range from providing a global public good to making it easier for under-resourced countries to do required climate reporting. Main themes and ideas are presented in more detail below, organized around the main questions.

- **Elements of a CCDE:**
    - Need to balance existing or official structures with emerging or unofficial structures to:

[1] This synthesis was prepared by the Centre for Open Data Enterprise (CODE).

        - Leverage existing efforts and avoid duplicating work
        - Expand existing data ecosystems to include the range of actors stewarding, using, or being affected by data.
        - Include more human-centered data - e.g. gender data
        - Explore climate-relevant data for mitigation, adaptation, resilience
    - Start by identifying needs. From there, identify what resources already exist and what need to be developed.
        - The development of a CCDE should be demand-based
        - Identify the key stakeholders - partners, institutions, producers, users, etc.
        - Identify necessary capacity development for low- and medium-income countries
    - CCDE needs to integrate with varying country data models
    - CCDE needs to support data and information needed for reporting under the Paris Agreement
    - Needs to support granular, high quality, and transparent data, including:
        - Provision of robust metadata
        - Ensuring interoperability
    - May benefit from an independent coalition solution, e.g. a Climate Change Data Authority that includes NSOs and other stakeholders
- **Challenges:**
    - Political will
        - Other challenges are easier to tackle if political will exists
    - Resource and capacity constraints
    - Coordination and communication
    - How to approach governance?
    - Potential complexity of the ecosystem
        - How to best decide what is included?
        - Statistics vs. non-statistical information
        - Different, related types of data, including data for monitoring and assessing climate change, data to help implement mitigation and adaptation strategies (“climate-relevant” data), and broader environmental data
        - How to integrate socioeconomic, gender, and other relevant data?
- **Benefits across the value chain:**
    - CCDE enables a single-lens view of a complex topic
        - Makes it easier to understand gaps and set priorities
    - Integration between various data sources, domains
        - Removes silos
        - Data for decision making and policy making. Can help data users share stories and reshape how data is consumed.
    - Ease burden on under-resourced countries trying to fulfill international data reporting requirements
    - Show domestic value of data to under-resourced countries

- Provide global public good
  - E.g. global coordination around land use

Session Two - The practical aspects of a climate change data ecosystem: What are the barriers and opportunities at country-level?

This session was organized around two main questions:

1. What can be the role of national statistical offices/your institution in a climate change ecosystem in capacity-constrained contexts?
2. What 'good practices' at the sub-national, country, regional or other level can be used to develop, implement and govern a climate change data ecosystem?

The main themes and ideas from the Workshop are presented below, organized around the two main questions as well as an additional theme - challenges and barriers - that emerged as particularly important during the discussions. The Workshop highlighted the important role of NSO's, but made it clear that they will be one part of a much larger landscape. The breadth and complexity of this landscape presents some challenges, including the fact that not all countries are equally able to use data, with resource-constrained countries facing special challenges. Finally, participants at the Workshop shared a number of good practices around process and governance, data, and technology.

- **Role of NSOs:**
  - Important role to play, but as one group of actors in a broader landscape.
    - There is a lack of interaction between the climate community and the statistical community
    - Explore collaboration with NGOs and private sector
    - Collaboration can avoid duplication of work, cut back on wasted resources, and help with information quality
    - Engagement is necessary between NSOs, line agencies, and others to integrate various data sources.
      - NSOs can play a coordinating role
  - Unique ability to develop necessary statistical frameworks
    - Climate change data is anchored in environmental statistics. Map climate reporting to statistical framework. Environmental statistics - different aspects are housed under different departments but NSOs can coordinate.
  - There is a conflict between "official" and "unofficial," with narrow definitions of statistics that NSOs will have to navigate. NSOs can and should play a role in collating "unofficial" statistics related to the environment and managing a broader spectrum of data
    - Need to incorporate more data sources, e.g. remote sensing or model data, to address data gaps in official statistics

- **Barriers and Challenges:**
  - Coordination across different ministries is needed to gather and manage data
  - Data is being produced globally, but not necessarily used by countries
    - Data capacity gaps, including GHG emissions, especially in developing countries
    - Need to identify minimum scenarios for country participation. For example, since all countries are required to report on GHG emissions, can start by building that capacity and move from there
    - International community should recognize/help build capacity
    - Adopting data from UN's global set to match local statistics
  - Broadness of topic
    - CCDE data mandate can include, for example, risk data for financial institutions to use to measure FDI, data from various scientific disciplines, socioeconomic data, data for adaptation, data on vulnerability etc.
    - Lack of clear concepts for indicators
  - Lack of financing
    - Limits data collection
  - Need indicators that help countries identify the most vulnerable populations
  - Need communication around the idea of an ecosystem to engage more players
  - Need more outreach to developing countries - potential role for PARIS21
- **Good practices:**
  - Governance/Process
    - Identify shared objectives among stakeholders
    - Establish processes and guidance around ethics and data use
    - Start with user needs rather than reporting requirements or needs of statistical agencies
    - Partnership and capacity building programs. E.g. SIDA's collaboration with other NSOs
    - Mainstreaming climate change in NSDS process
    - Ecosystem Services as a framework - how to manage or organize data, rather than set limits on data
  - Technology
    - New technology's ability to help
    - Global satellite imagery and modeling can potentially be helpful in freeing up NSO resources
  - Data
    - Focus on the gender/environment nexus
    - Need more advocacy and education around climate reporting

Conclusion – Way forward and next steps

PARIS 21 plans to build on these discussions and continue exploring the potential of a climate change data ecosystem in several ways.

- First, PARIS21 will publish a paper on potential approaches to developing a climate change data ecosystem, based on lessons learned from the Workshop as well as additional research
- PARIS21's Spring Meeting, scheduled for 5-6 April 2022, will be dedicated to the topic of climate change data
- Further work will be done to examine the potential of a climate change data ecosystem at the country level