United Nations Framework Convention on Climate Change

Developments under the UNFCCC of relevance to global climate observations - including from space -

Open session on "Space and Climate Change"
31st session of the Inter-Agency Meeting on Outer Space Activities
UNHCR, Geneva, 16 – 18 March 2011

Firstname Lastname, Job Title
UNFCCC secretariat, programme

Outline

Background

Update UNFCCC negotiations: Cancun

Rationale/ need for observations

Systematic observations in UNFCCC process

Needs and gaps in observations identified in UNFCCC

Background

Convention

Ultimate objective: 'stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'

Article 4.1 (g)

Parties to promote and cooperate in scientific, technological, technical, socio-economic and other research, ***systematic observation*** (SO) and development of data archives…related to climate change

Article 5

Parties to support:

International programmes, networks, organizations in defining, conducting, assessing & financing research & SO

Strengthen SO and national scientific & technical research capacity, particularly in developing countries

Update UNFCCC negotiations

UN Climate Change Conference (COP 16): December 2010, Cancun

Cancun Agreements

Shared vision for long-term cooperative action:

limit increase on global average temperature to 2 C

Enhanced action on adaptation:

Cancun Adaptation Framework:

call to undertake and support adaptation at all levels

enhance climate change related disaster risk reduction strategies and early warning systems

improve climate-related research and systematic observation for climate data collection, archiving, analysis

Cancun Agreements (cont.)

Enhanced action on mitigation

Developed country Party commitments

Nationally appropriate mitigation actions by developing country Parties, REDD+

Measurement, reporting and verification (MRV)

Finance, technology and capacity building

Green Climate Fund

Review of the adequacy of the long term goal

best available scientific knowledge

observed impacts of climate change

Why observations (from space)

- **Monitoring of GHG emissions, C- monitoring**
- **Improved availability, reliability and accuracy of data with enhanced coverage and resolution**
- **Climate change research, improved modeling, projections**
- **Improved understanding of past, current and future climate**
- **Inform climate change decision making for adaptation, mitigation, and long-term goals**

Why observations (from space)

Inform climate change decision making

Political options on long term global goal for emission reductions:

- **GHG concentrations in atmosphere**
- **Limitations in global temperature increase**
- **Level of global GHG emission reductions**

***Mitigation*: reference emission levels, forest monitoring, estimation of GHG emissions and removals (GHG inventories)**

***Adaptation*:**

- **sound information & knowledge base, high quality data on past and current climate trends, and forecasting**
- **assessment of vulnerability and impacts; adaptation planning, assessing and managing climate-related risks & extreme events**

→ enhance ability of countries to adapt

UNFCCC

Systematic observations in UNFCCC process

Cooperation with relevant global observing systems (GCOS, GTOS, GOOS) and others:

key element for the implementation of systematic observations of the climate under the UNFCCC (e.*g. GCOS implementation plan in support of UNFCCC & ECVs)*

Including ***cooperation with space observations community****:*

- *Coordination through Committee of Earth Observation Satellites (CEOS):* **coordinated response from space agencies involved on global observations to the needs of GCOS and UNFCCC (since 2005/2006)**
- Regular reporting through CEOS invited and welcomed by UNFCCC

Systematic observations in UNFCCC process

Key messages emerging from CEOS reporting in UNFCCC

Welcomed progress by space agencies in responding to needs of GCOS and UNFCCC, and the support of CEOS to space-based observations of GCOS

Space agencies invited to implement actions identified in CEOS reports & continue responding in a coordinated manner through CEOS

GCOS and CEOS encouraged to continue their partnership for **linking space-based capabilities with global climate observing requirements**

Welcomed commitment of CEOS member agencies to work towards improved **availability of current and future data for forest carbon monitoring**

Systematic observations in UNFCCC process

Key messages emerging from CEOS reporting in UNFCCC (cont)

Encouraged CEOS & space agencies to continue/accelerate development of methodologies, and validation of **satellite-based applications for the terrestrial domain**.

Parties encouraged to improve access to space-based climate observations to all interested Parties

At COP 15 (2009), Copenhagen: Decision on Systematic observations

encourages CEOS to continue **coordinating** and **supporting implementation of the satellite component of the GCOS**, and to work on long term continuity of observations and data availability

Needs and gaps in observations identified under UNFCCC

Despite progress made in the provision of knowledge, information and data in many countries, **limits in the coverage and length of data records** still hinder robust risk assessment and decision-making

Examples of needs & priority areas for further work and climate data & information

Improving **availability, accessibility, application and relevance** **of climate & environmental data** at appropriate spatial and temporal scales, including

- **climate observations** and scenario data;
- meteorological parameters; geographic data, national statistics;
- agricultural data; information on natural resources

Enhance **analysis** and **interpretation** of such data & observational information

Needs and gaps in observations identified under UNFCCC

Examples of needs & priority areas for further work and climate data & information (cont)

- Enhancing effectiveness and adequacy of **early warning systems,** e.g. information on size and frequency of extreme events
- Improve performance of **regional** climate change models
- Enhance validation of climate models with observations of ECVs (including **space-ECVs**)
- Enhance – especially in **developing countries** - **technical capacity** for systematic observation, data collection, processing and archiving, analysis and modelling
    - more effective interaction and understanding between users and providers of climate data to facilitate its appropriate use and enhance its relevance for decision-making
    - calls to international organizations to address identified needs in relation to observations

Needs and priorities identified under UNFCCC: *Cancun Agreement*

Calls on climate-related systematic observation under Cancun Adaptation Framework :

- enhance climate change related disaster risk reduction strategies & early warning systems, strengthening data, information & knowledge systems,
- improve climate-related research and systematic observation for climate data collection, archiving, analysis and modelling in order to provide decision makers at national and regional levels with improved climate-related data and information,
- International organizations invited to support adaptation at all levels

Support and expertise from UN system can support such efforts, especially on data observations and space technology

THANK YOU

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