

# Workshop: Enhancing Observations to support preparedness and adaptation in a changing climate

10-12 February 2015


12/02/2015



## Session 4 – Systematic observation in support of adaptation strategies across climate time scales

### Brazil Status

- Increasing and intensified impacts are not being properly monitored
- Important signs: reduced pluviosity in SP leading to unprecedented water crisis 2014-2015, alternation of intensified droughts and floods in Amazonia 2005-2014, three year of continuous drought in semiarid northeast (2011-2014).
- Elaboration of National Adaptation Plan and the System for Monitoring and Observation of Impacts of Climate Change



# Do not reinvent the wheel: GCOS Workshop on Observations for Adaptation to Climate Variability and Change

## **NEEDS AND RECOMMENDATIONS:**

1.5 Establish the core set of data, data characteristics, and information technologies to maintain the minimum acceptable level of stewardship in the management of climate risk to communities, resources and infrastructure, for implementation at national level.

2-2 Provide high-quality information how climate changes sub-nationally on a 5-10 year scale and regular, incremental updates to seasonal forecasts; establish meaningful thresholds.

**And many others ...**



# Brazil Status

## UNEP Recommendation:

**Identify gaps in current knowledge base and the related need for knowledge production.**

**Address when possible weak or missing integration of different bodies of knowledge.**

**Consider in strategies the limited transfer and uptake of existing knowledge by decision-makers at different levels**




# Brazil Status

## Main Gaps – National Adaptation Plan Context

- Premise: difficulty to individualize climate change impact from natural variability in country
- Context: inaccessible basic meteorological data needed to improve impact knowledge, increment risk perception and reduction and support the attribution of climate change.
- Ideally: Climate service to integrate information on meteorological monitoring and modelling of future climate change – with public dissemination also.
- Ideally? Climate service customized to government, private sector and society





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# Brazil Status

## Main Gaps – National Adaptation Plan Context - Sectorial

- **Specific and sectorial monitoring systems:**
  - Hydrological sector: increment spatial monitoring coverage, create a pristine reference monitoring network, define regional indicators of alarm for drought and floods considering human and economic vulnerability. Implement ground water monitoring .
  - Coastal Zones: implement marine observing systems, implement altimetry and bathymetric system, storm observing and alarm system to orient disaster prevention – concentrates 80% of Brazilian population.
  - Disasters Prevention – CEMADEN – Investment in radars and improvement of storm detection in critical areas is in implementation, lack of a national database on risk areas and definition of national risk parameters.

# Brazil Status

## Main Gaps – National Adaptation Plan Context

- **Specific and sectorial monitoring systems:**
  - Infrastructure sector: lack of basic knowledge. Need to increment debate on specific indicators to risk prevention on energy, transport, ports and harbors, and industry.
  - Biodiversity: Lack of basic knowledge database to help define baseline. Integration of climate and biodiversity databases needed. Ecosystems threshold are unknown, and this is a very important vulnerability in Brazil. Necessary to improve knowledge on ecosystem approaches, and on climate services provided by biodiversity.
  - Health: integrate monitoring systems of CC and infectious diseases, increase air quality monitoring. In future: improve climate comfort indicators, improve communication and alarm on dehydration, and discuss climate impact on well being.



# Brazil Status

## Main Gaps – National Adaptation Plan Context

- Agriculture – More advanced sector: Climatic Risk Zoning for 5565 municipalities in construction, will answers to the questions about what?, where? and when? to plant. Needs improvement in information dissemination, 70 million small farm agricultures are the target
- Studies needed to be improved in relation to irrigation security and conflicts with others sectors.

### Under construction:

Project for human vulnerability monitoring for subnational level: pilot study in Pernambuco and Espirito Santo States – FIOCRUZ/MMA

Monitoring and Observation System of Climate Change Impact - Sistema de Monitoramento e Observação de Impactos – SISMOI - MCTI



# Brazil Status

Reflections after the workshop:

- Problems faced in Brazil related to access and dissemination of climate information are similar to challenges faced in global scale.
- Most important gaps are on data access and interpretation by non scientists.
- Interesting efforts could be on data harmonization guidelines, to support institutions on data translation into information, and capacity building of non scientists community (include ngos and governments staff).

# Question and Challenge

**Question** – How international networks and organizations can help on establish an international harmonized pattern for data collect, share, systematization and dissemination across countries to support climate change monitoring and adaptation measures definition? Which organizations can lead this process?

**Challenge** – Translation of raw data into useful information for different users, specifically decision makers, society, researchers and private sector. Considering also institutional design.



# Thank You

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