

Regional Climate Information for Risk Management: Need

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Structure of the White Paper (26 pages)



- **PRESENT STATUS OF REGIONAL CLIMATE INFORMATION USAGE**
 - **REGIONAL FEATURES AND REQUIRED CLIMATE INFORMATION**
 - REGIONAL CLIMATE FEATURES
 - SOCIO-ECONOMIC REQUIREMENTS
 - **PRESENT STATUS OF USE OF REGIONAL CLIMATE INFORMATION**
 - TYPES, CONTENTS AND QUALITY OF REGIONAL CLIMATE INFORMATION
 - INFORMATION SOURCES
 - **PRESENT STATUS OF COMMUNICATION BETWEEN USERS AND PROVIDERS OF CLIMATE INFORMATION**
 - **DELIVERING REGIONAL CLIMATE INFORMATION BASED ON REGIONAL CIRCUMSTANCES**
 - **FUTURE PLANS**
 - **RECOMMENDATIONS**

Regional cases



- The needs white paper of Regional Climate Information for Risk Management will depict problems of particular regions of the world.
- The regions are
 - the small island states of the Pacific,
 - the maritime continent Southeast Asia,
 - the Greater Horn of Africa (GHA),
 - the Southern Africa region
 - the South American region and
 - the Europe for energy sector

REGIONAL FEATURES AND REQUIRED CLIMATE INFORMATION



- Tropical region has nice seasonal predictability but low modeling performances
- the small island states of the Pacific: **cyclones, El Nino**
 - the maritime continent Southeast Asia: **El Nino, MJO, decadal variability, sea air interaction and ocean climate**
 - the Greater Horn of Africa (GHA): **monsoon, ENSO**
 - the South Africa: **extreme variability of wind and rainfall**
 - the South American region: **ENSO and diverse and harsh land cover condition**
 - the Europe for energy sector: **not seasonal capable prediction; marine, continental, Mediterranean climate**

TYPES, CONTENTS AND QUALITY OF REGIONAL CLIMATE INFORMATION



Tropical region has nice seasonal predictability but low modeling performances

- the small island states of the Pacific: **Agriculture, fisheries, tourism, mining and forestry** (in limited areas)
- the maritime continent Southeast Asia: **forestry, fisheries, water resources, health, tourism, mining and infra structures**
- the Greater Horn of Africa (GHA): **agriculture, livestock, fisheries, tourism and mining**
- the South Africa: **agriculture, health, power utilities, water resource management, and environment**
- the Europe for energy sector: **energy sector, agriculture, retail and wholesale, transport, public health, utilities, communications, construction, tourism**

PRESENT STATUS OF COMMUNICATION BETWEEN USERS AND PROVIDERS OF CLIMATE INFORMATION



- **Regional Climate Outlook Forums (RCOFs)** bring together national, regional and international climate experts, on an operational basis, to produce regional climate outlooks based on input from NMHSs, regional institutions, Regional Climate Centres (RCCs) and Global Producing Centres of long range forecasts (GPCs) and other climate prediction centres.
- Through interaction with sectoral users, extension agencies and policy makers, RCOFs assess the likely **implications of the outlooks** on the most pertinent socio-economic sectors in the given region and explore the ways in which these outlooks could be made use of.
- RCOFs also **review impediments to the use of climate information**
- In southeast Asian countries with the support of Asean Secretariat, there are many exchange program on climate information services such as the **climate field school**.
- WMO has helped establish RCOFs across the world with an overarching responsibility to produce and disseminate a regional assessment of the state of the regional climate for the upcoming season. Built into the RCOF process is a regional networking of the climate service providers and stakeholders including user-sector representatives

DELIVERING REGIONAL CLIMATE INFORMATION BASED ON REGIONAL CIRCUMSTANCES



- There are different type of Regional Climate Outlook Forum established in different region for different purposes such as health, forest fire, El Nino etc;
- In many regions, the users benefiting from the RCOFs are true stakeholders, contributing to the organization and growth of the sessions, thus ensuring their sustainability, and applicability to meeting user needs;
- In some region such as the small pacific island states, the contribution of developed country is quite significant and in some other region the pilot project from the developed countries has put strong basis for sustainable RCOF in the region; and
- Setting up the regional needs among different type of regions shall consider the main climate phenomena over the region, people activities that mainly govern the character of the region and the capacity of the region in coping with climate issues as well as the preparation in their infra structure to support the RCOF acitivties.

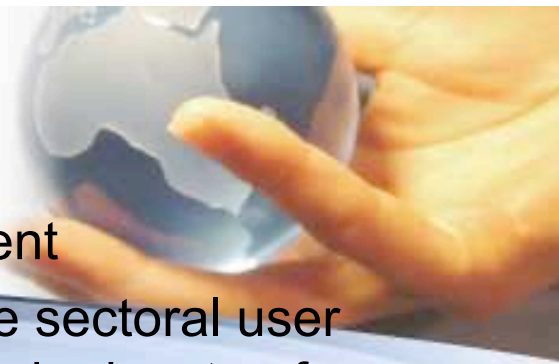
FUTURE PLANS



- Building a strong historical databases of sectoral impacts to continually improve the understanding of impacts of climate variability on different sectors especially the socio economic benefit;
- Capacity-building of user organizations to translate climate forecast information into usable information for decision-making purposes; and
- Setting up systems to continually evaluate the usability of forecasts and improve methodologies to translate forecasts into actionable information.
- Streamlining climate information policy and management into climate sensitive sector to optimize the operational and planning of the respective sectors.
- The regional climate outlook forum stimulate the development of climate capacity in the NMHSs and do much to generate decisions and activities that mitigate adverse impacts of climate and help communities adapt to climate variability.

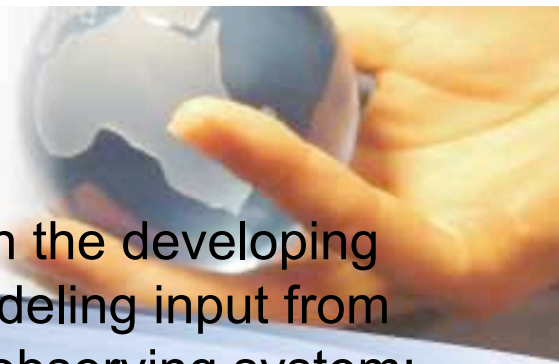
RECOMMENDATIONS

- Reconstruction of a **better climate data** management
- Capacity building on **user perception** especially the sectoral user needs based on the regional climate characters and educate of more intermediaries to **translate NMHS product languages into user perceivable language** in all climate sensitive sectors;
- **Regional cooperation in delivering climate information** with regard to common issue especially the transboundary issue and to develop **regional climate analyses tools** with basic climate information and data and increase knowledge of risk minimization after utilization of the climate information;
- Need to **increase NMHS personnel capacity** by training on communicating forecasts and related uncertainties in climate prediction, **to design and delivery to satisfy the needs of end-users**, to establish **partnership with the user community** and to acquire relevant feedback from the climate information they provided;
- Needs to have more **pilot or demonstration project** on climate information application and product as well as **socio economic benefit** of the climate information



RECOMMENDATIONS

- Enhance capacity of **climate prediction modeling** in the developing countries as well as better **provision** of climate modeling input from **Global data product** of reanalyses and integrated observing system;
- Regular fora with users of sectoral institutions and collaboration with other specialized regional centers;
- Need to include active **participation of private companies** in evaluating risk management and calculation of financial risk benefit;
- Need to **include disaster management authority** to assess the climate impact, vulnerability and risks at national and regional level and access to **adequate funding** in order for the region to make realistic programmes for effective disaster preparedness and management;
- Need for **internationally agreed means** of communications to **disseminate warnings to specific authorities in the region**;
- Warnings to be disseminated must be **based on best available technical and scientific knowledge, timely and access unrestricted between countries, accurate and reliable in line with international standards**, strengthen of weak links in the early warning system research.





THANK YOU VERY MUCH