BUILDING BACK BETTER: PLANNING WORKSHOP FOR CLIMATE RESILIENT INVESTMENT IN RECONSTRUCTION AND DEVELOPMENT IN CYCLONE AFFECTED REGIONS OF MALAWI, MOZAMBIQUE AND ZIMBABWE

RAINBOW TOWERS

HARARE

ZIMBABWE

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1.0 BACKGROUND

ECA (United Nations Economic Commission for Africa) in partnership with the Government of Zimbabwe, organised a technical workshop in Harare on 23 to 25 October to address issues related to reconstruction efforts after cyclones Desmond, Kenneth and IDAI devastated parts of Mozambique, Malawi and Zimbabwe earlier in the year.

The overall objective of the workshop was to initiate a series of activities to support the integration of climate information services and climate change considerations into resilience building in climate sensitive sectors of the economies of SADC countries. The workshop reviewed the status of climate information services in the region, explored tools and methods for enhancing the mainstreaming of climate change in development planning, and began to identify concrete actions towards climate proofing economic activities, ecosystems, human settlements and physical infrastructure especially in areas projected to be impacted by extreme weather and climate events. The workshop heard from countries' firsthand experiences of the impacts of cyclone Idai and shared lessons learned. Participants were introduced to the types of climate information that are available, as well as to tools and methods for analysing this information and its applications in decision-making. The workshop also reflected on the concept and practice of DRR in the context of cyclone IDAI and other hazards in SADC region.

2.0 OPENING

The Minister of Agriculture, Water, Climate and Rural Settlement officially opened the workshop. About 150 delegates attended the workshop, drawn mainly from Government Departments especially DRR and NMHSs of Zimbabwe, Malawi and Mozambique. Others were UN Agencies including UNECA, UNDP and WMO, various universities and research institutes as well as the Insurance sector, and WISER Coordinator in East Africa.

3.0 KEYNOTE ADDRESS: "CLIMATE INFORMATION SERVICES FOR DEVELOPMENT PLANNING AND PRACTICE"

The keynote address was delivered by the Director of GFCS, WMO. He elaborated the difference between climate variability and climate change. He demonstrated the increasing intensity and the frequency of extreme weather events around the globe paying special attention to the southern Africa region. He said that disaster risk reduction would go a long way in adapting to the changing climate.

The Director referred to the IPCC report which paints a grim picture of Sub Saharan Africa where climate change impacts will be devastating to agriculture, food security, fisheries,

livestock and income. He presented a simplified schematic of hazard analysis and mapping, exposure and vulnerability, potential loss estimates and decision-making. He emphasised on the need to provide climate information in a way that assists decision making by individuals and organization and the government. He pointed out that National Meteorological Services should be at the forefront in provision of CIS.

The Director also talked about the Global Framework for Climate Services (GFCS) and the need to develop and implement regional and national frameworks for climate services in Southern Africa as a way of enhancing delivery of climate services.

3.0 IMPACTS OF CYCLONE IDAI AND KENNETH IN SADC REGION

Several presentations were made during this session. Director of ACMAD highlighted the services provided by the institution, including:

- Climate advisory/watch and contingency planning
- Sub seasonal advisory/watch and preparation
- Medium/Short Range Forecasts/watch and early response
- Now-casting / go-actions of response and recovery

He advised the need for CIS at three levels, namely:

Policy Level: Move from firefighting to disaster risk prevention and preparedness

Planning level: update contingency plans and organize EWS

Practice Level**:** sensitize, warn, prepare, give instruction to evacuate then rescue.

The WMO also made a presentation during this session. Among other things, it was indicated that climate action requires an urgent shift in the mindset, commitment and concrete action by governments. Focus and associated investments should shift from disaster response to early warning. It was indicated that weather and climate forecasts are now much more accurate and reliable than before. However, it was noted the need for continuous capacity development and the need for Governments to be at the forefront in development of early warning systems and DRR efforts and that the private sector should supplement government activities. The meeting was informed that the relocation of the WMO Regional Office for Africa to the continent to be near the AUC and UNECA was a clear testimony that the time had come to take weather and climate information to the African governments and to the last mile. This would enhance mainstreaming weather and climate information in all socio-economic development plans at continental, regional national and local levels.

The three countries made country presentations regarding the impacts of the cyclones earlier in the year. In Malawi, 15 districts, 2 cities and 800,000 people were affected. 87,000 people were displaced,60 deaths and 672 injuries reported and hundreds of homes were destroyed as well as public works, schools and clinics, among others. In Mozambique, 1,800,000 people were affected. 240,000 houses were partially or totally destroyed. It was reported that recovery and reconstruction needs at least USD 3.2 Billion in Mozambique alone. In Zimbabwe, 320 deaths were reported, 344 missing, 42,165 affected and 17,608 rendered homeless.

In terms of other damages, more that 50% of land under maize crop and banana in the affected districts was destroyed in Zimbabwe, 362 cattle and 514 goats lost. Above 90% of road network damaged in Chimanimani with 584 km of roads destroyed. Some financial resources for recovery had been raised mainly from Government and a few other organisations such as UNDP and OXFAM but there was great need for more resources.

4.0 DISASTER MANAGEMENT: GAPS AND NEEDS

The speaker set the stage in this session and said urgent actions are needed to address the following:

- The gap in **raising awareness** for broad ownership, support and communication to adapting to climate variability and change;
- The gap in **climate risk management** for strategic planning and disaster risk reduction;
- **Climate-based services support** to governments, the private sector and civil society are required; and
- **Improvement** of observations, data management and infrastructure to provide essential data to cover the first three gaps above.

He said this would be possible only with:

- collaborative management approaches that meaningfully put affected people at the centre of the innovation process and share decision-making over the adaptation process;
- sustainability-led programming that addresses the barriers to replication and scaling up of promising adaptation interventions; and
- capacity development for evidence-based policy design, programming, implementation and monitoring and evaluation

After that introductory presentation, a panel discussion was open with the countries representatives who presented gaps and needs in their respective countries.

All three shared experiences and the devastation caused by the rapid onset tropical cyclones: Idai, Kenneth and Desmond and the severe drought currently gripping the region. The various experiences demonstrated inadequate levels of preparedness due to under resourcing of institutions dealing with DRR at both National and Regional Level. The gross underfunding of the CIS negatively affects DRR initiatives; this situation often results in costly interventions after the hydro-meteorological hazards needlessly became disasters, which constitute more than 90% of natural disasters.

Whereas costs of interventions after the disasters typically runs into billions of US dollars and tragic loss of invaluable lives, preparedness costs are an order of magnitude less, with much less loss of life. The shortcomings in the effectiveness of DRR were, in part, because policy makers have not been capacitated to fully appreciate the high return of SEBs on adequate investment in CIS. This would require that decision makers and policy makers at national and development institutional level are capacitated in the use of the tools of SEBs on CIS. The

studies have shown high favourable benefit/cost ratios. Knowledge of the SEBs tools will result in the formulation of policies that make Nations provide the needful investment in CIS and Disaster Management in order to derive maximum benefits for communities.

The countries noted the role that SADC should play to coordinate geophysical and hydro-meteorological, and other hazards of transboundary nature. Institutions such as the SADC DRR Unit and Climate Services Centre needed to be strengthened to be more effective in assisting countries in the region to brace themselves for foreseen climate risks posed by climate changes.

In terms of CIS capacity, the main observations were the similarities in all countries of the gaps in the CIS capacity ranging from equipment, human resource levels and the specialist skill levels. These gaps made it difficult for the three countries to take the early action to effectively avert the impacts of hydro-meteorological hazards.

For instance, for rapid onset hazards such as tropical cyclones, weather radars would be necessary to make real-time monitoring and now casting of the evolving hazard. Depending only on satellite images or projections from global centres showed the lack of the required resolutions of the scale and extent of the intensity of rains. The countries would take short (1-2years), medium (2-5years) and long-term (more than 5 years) to fill the CIS gaps. In the meantime, efforts were required for the user-community to understand information and prediction services in order for them to efficiently and effectively carry out their work related to relief, preparedness consistent with Building Back Better (BBB) initiatives. This would require National Governments to make the necessary budgetary allocations, while Development/Cooperating Partners would provide assistance in the interim. In this regard the SEBs on CIS would need to be up scaled and customized to country level so that the policy makers would be made to appreciate the high return in the investment to improve the capacity CIS.

5.0 TOOLS, METHODS AND FRAMEWORKS FOR BUILDING BACK BETTER FROM WEATHER & CLIMATE INDUCED DISASTERS IN SADC

The WMO gave a detailed explanation of the WMO Climate Service Toolkit that is being used in some countries to bring users and producers together. He urged the three countries to familiarise themselves and to apply the tool and pledged WMO's support in this endeavor.

Mr. John Mungai of WISER presented an overall overview of WISER Programme in the East African region. He also presented details of some of the projects in EA whose approach would make an impact if implemented in Southern Africa. He particularly talked of the need for Impact based forecasts, Multi hazard early warning services, CIS approaches in urban setting and decentralization of forecast services. He drew parallels of the CIS needs in EA with Southern Africa and pointed out the replicability of the efforts in EA elsewhere in the continent.

There was also a presentation on Social economic Benefits of Climate Services and the workshop was informed that a study had been conducted with the help of WISER through ACPC and a Strategy developed on SEB of CIS.

He summarised his presentation as follows:

1. Hydro-meteorological disasters costs are 5 to 14% of GDP across the globe.
2. Investments in CIS are low, < 0.1% of GDP; Currently CIS investment is between 30 to 60% of ideal situation;

3. SEB of CIS for DRR have been successfully demonstrated through system dynamics modelling; currently Benefit Cost Ratio are 4-7 times;
4. Investment in generating and applying CIS will greatly reduce disaster impacts on communities and increase GDP growth;
5. Benefits Cost Ratios of much greater than 7-11 times the investments.

6.0 INITIATIVES ADDRESSING CLIMATE INDUCED DISASTERS

Presentations were made on WISER, Climate, Energy, Water (CLEWS) Nexus and Zimbabwe Resilience Building Fund.

The various impacts of climate change were enumerated. It was pointed out that rainfall projection shows that by 2050 most of Africa will get reduced rainfall especially Southern Africa, which is projected to get 40 % less rainfall. There will be a reduction of GDP of up to 3-5 % due to Climate change. In Agriculture, there will be a 10% reduction of total crop output. Human security would be impacted and there is possibility of conflict over pasture, water and migration. In order to manage the above effects of Climate change there is need for development to be informed by Climate Information Services (CIS). WISER project seeks to improve provision and uptake of CIS in order to enhance resilience.

He described the achievements of the ACPC led WISER component and indicated that ACPC had achieved and in some cases exceeded most of the output targets.

Some of the achievements include:

i) Modernization of CIS plans in selected NMHSs and RCCs;
ii) Attraction of additional funds;
iii) In research post Doc Grants given to 21 African researchers through CR4D Programme;
iv) Knowledge management;
v) Co-production strengthened

Some of the lessons learnt in the implementation of WISER include the numerous uncoordinated efforts by various organizations in Africa as well as gender imbalance in the CIS efforts.

The CLEWS presentation began by describing the vision, focal areas, theory of change and mentioning the various initiatives including CLEWS. His presentation mostly focused on CLEWS. He said the initiative was piloted in Ethiopia and Cameroon. The main idea is for institutions to work together through projects to support development planning and build resilience.

He also informed the participants on the need to make good investment decisions that take care of projected climate futures.

Also discussed was the need for Africa to have open data systems that can be used to develop vulnerability to flooding maps. He noted that developed nations avail such data and have in fact mapped all vulnerable areas and this guides their development activities and it is time for Africa to adopt such approached to development in order to avoid disasters. In order to be resilient to the changing climate there is need to do what is required i.e. climate proof development using, among others, existing environmental, climate and hydro meteorological

data sets. He indicated that AFRI-RES, the Investment Facility will help in to build capacity to climate proof development and that the initial funding is from the NORDIC fund will support such initiative.

The devastation caused by cyclone Idai was noted. UNDP, with funding from CIDCA is therefore investing USD 600,000 to rehabilitate critical assets in Chimanimani and Chipenge in Zimbabwe that were damaged or destroyed by the cyclone. In order to encourage the local community to be involved in the reconstruction the project had also established a Cash for work programme. Some of the assets being repaired/rebuilt include Dip tanks, irrigation infrastructure, rehabilitation of communication infrastructure and housing units. UNDP is Partnering with CARE international as well as the relevant Government Departments. Other infrastructure being repaired include rehabilitation of boreholes, Weir/ dam and water tanks with solar pumps, Schools, toilets, clinics and household units.

7.0 CONCLUDING REMARKS

There exist gaps in DRR and CIS in Southern Africa. There is need to put in place Standard Operating procedures in DRR as well as in provision of CIS. Impact based forecasting should also be introduced. There is need to address gaps in communication/dissemination of climate information and promote uptake of the same. A better observation and monitoring system is also required including weather Radars. SADC should develop a regional framework for climate services while the individual countries should implement respective National Frameworks for Climate Services.

Sharing of data across borders should also be encouraged. SADC as a regional economic community is uniquely placed to drive some of these agendas. The SADC Climate Centre needs to be strengthened further to be able to play a more proactive role in provision of CIS. There is need for a WISER type approach in southern Africa that encourages more interactions between providers, intermediaries and users of climate information services.