



# **MALAWI UNIVERSITY OF SCIENCE AND TECHNOLOGY**



## **NDATA SCHOOL OF CLIMATE AND EARTH SCIENCES**

**27<sup>th</sup> February, 2017**

**THE ROLE OF INSTITUTIONS OF HIGHER EDUCATION  
IN NATIONAL ADAPTATION PLANS IN MALAWI  
: CASE STUDY OF THE MALAWI UNIVERSITY OF  
SCIENCE AND TECHNOLOGY (MUST)**

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# NATIONAL ADAPTATION PLAN (NAP) ROADMAP (MAY 2011)

- *The NAP Vision: A country with people, ecosystems and infrastructure that are resilient and have adaptive capacity to the impacts of climate change.*
- **Mandates:** The mandates for the NAP Process are to:
- Improve community resilience to climate change through enhanced agricultural production, infrastructure development and disaster risk management.
- Enhance sustainable utilization of natural resources especially forest, water, fisheries and wildlife resources.
- Improve environmental management especially soil and land management.
- Enhance conservation and/ or restoration of biodiversity and ecosystems.
- Integrate climate change adaptation in all development plans both at national, sectoral and district level.
- Provide climate change adaptation advocacy to policy makers and other stakeholders with a view to enacting, updating and enforcing laws and by-laws on climate change and environmental and natural resources management.

# NATIONAL ADAPTATION PLAN (NAP) ROADMAP (MAY 2011)

- SECTION: 8.3.3

**Enhancing capacity** for planning and implementation of adaptation.

## SECTION 8.4.4

**Outreach** on the NAP process and reporting on progress and effectiveness.

# NAP (MW) STOCKTAKING REPORT (APRIL 2016)

- **A GAP AND BARRIER ANALYSIS Recommendations:**
- Commission a comprehensive current climate risk assessment for Malawi and updated climate change projections for Malawi ;
- **Call for additional research on climate change's sectoral impacts in Malawi & Strengthen in-country climate change science generation capacity;**
- **Design and put in place more comprehensive data gathering and management systems in Malawi, at different levels;**
- **Create a searchable, user-friendly climate change science and adaptation information database. Invest in climate change and scientific communication efforts;**
- Align the NAP process with medium and long-term planning, and develop planning guidelines related to climate change for other planning processes in Malawi such the Malawi Growth and Development Strategy (MGDS) III or its equivalent;
- Ensure an enabling policy environment for climate change adaptation, including through the approval and publication and implementation of the National Climate Change Management Policy;

# NAP MALAWI STOCKTAKING REPORT (APRIL 2016) cont'd

- Improve coordination between different actors working on climate change adaptation in Malawi, such as through existing forums like the Donor Working Group or with improved collaboration with the Technical Committee on Climate Change;
- Strengthen the NAP process by improving knowledge of the NAP amongst stakeholders, establishing a strong and time-bound process in the NAP Roadmap to minimize delays, and prioritize the identification of a sustainable funding mechanism for adaptation programmes in Malawi;
- Develop a sustainable funding mechanism for the NAP process from government and other partners ; and
- **Develop an action plan to operationalise climate change learning strategies which has identified a number of human resources capacity gaps, including climate change adaptation related areas.**

# BRIEF ON MUST

- The Malawi University of Science and Technology (MUST) is a Public University and was established under an Act of Parliament (Act. No. 31 of 2012)- published on 21<sup>st</sup> December 2012.

- **The Ndata School of Climate and Earth Sciences (NSCES)**

It is one of the five Schools at MUST.

As its name suggests, the School focuses on Earth and Climate Sciences. Its **Mandate** is to provide training to both undergraduates and postgraduates, do research and outreach services in Earth and Climate Sciences for Socio-Economic growth and Sustainable Development of the country. Its **Mission** is to coordinate, facilitate and promote the participation of all stakeholders in training, research and outreach in Earth and Climate Sciences.

- The **overall strategic outcome** of the School is to ensure that there is an Increased Number of Experts and Research in Climate and Earth Sciences including CLIMATE CHANGE AND DISASTER RISK MANAGEMENT in the country.

# PROGRAMMES

- **A- Offered from 2015** (Total 110 students):
  - BSc (geology), BSc (Climatology and Meteorology)
- **B- Offered from August 2016** (Total 100 Students):
  - BSc (Disaster Risk Management), BSc (Geo-information and Earth Observation Sciences)
- **C- To be offered from AUGUST 2017: BSc in Water Quality Management and BSc in Sustainable Energy Systems.**
- Plans to launch postgraduate degrees (**MSc and PhD**) are underway.
- **Postgraduate diplomas and short courses** will also be offered



# PROGRAMMES CONT'D

- ❖ At MUST we make sure that every programme under **Ndata School of Climate and Earth Sciences** has a **CLIMATE CHANGE ADAPTATION AND ALSO DISASTER**-related course. For Example: Climate Change and Water Resources, Sustainable Energy Systems, Energy Resources and Climate Change, Early Warning, **Adaptation**, Mitigation, Resilience, Recovery, Preparedness etc.

# CENTRES OF EXCELLENCE

- MUST is in the process of establishing several CENTRES OF EXCELLENCE. One of such CENTRES is the **Center for Climate Change and Disaster Risk Management Research** .
- It will act as a Hub in terms of research, technology, innovation, entrepreneurship and outreach in climate and earth sciences in Malawi and also internationally.
- **DATA MANAGEMENT SYSTEMS.** This means apart from data collection, data storage from different institutions will be allowed at the CENTRE in liason with our library services.
- Will act as user-friendly, searchable **CLIMATE CHANGE SCIENCE AND ADAPTATION INFORMATION DATA BASE.**

# THE RELEVANCE OF THESE PROGRAMMES TO NAPs

- *MALAWI just like the rest of the countries in the World is not immune to NATURAL AND MAN-MADE DISASTERS*
- *Most common Natural Disasters in Malawi: floods, droughts, hailstorms, strong winds, earthquakes and landslides. Between 1979 to 2010, natural disasters have affected nearly 21.7 million people cumulatively and killed about 2596 people. Natural disasters have greatly contributed to economic losses and shocks to livelihood systems, household poverty and national economic growth.*
- *The Malawi 2015 Floods were the most devastating in terms of geographical coverage, severity of damage & extent of loss with 1,101,364 people in 15 districts being directly affected, 106 people dead and total damage and Loss estimated at US\$335MILLION. ((NDRMP, 2015).*
- *The frequency and intensity of hydro-meteorological related disasters appear to be on the increase mainly attributed to **CLIMATE CHANGE. THERE IS THEREFORE NEED FOR FORMULATING AND STRATEGICALLY IMPLEMENTING NATIONAL CLIMATE CHANGE ADAPTATION PLANS (NAPs)***

# RELEVANCE CONT'D

- *Our research has found out that although natural disaster risk is quite high for Malawi (mostly due to **CLIMATE CHANGE**), the country faces many challenges in terms of disaster risk management. Some of the main challenges are: (i) Lack of Skills and Expertise; (ii) Lack of understanding of disaster risk; (iii) Lack of disaster reduction enhancing mechanisms including an integrated People-Centred Early-Warning system; (iv) Lack of enhanced disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction; and (v) Weak disaster risk governance mechanisms and structures. **SO FINANCIAL RESOURCES & SKILLED HUMAN RESOURCE ARE BIG CHALLENGE. ALSO THERE IS NEED FOR RESEARCH & OUTREACH around ADAPTATION STRATEGIES AND SCIENCE. This will help in identifying CHALLENGES & OPPORTUNITIES that come with climate change.***

# INSTITUTIONS OF HIGHER EDUCATION (IHE) -GENERAL

- Institutions of higher education (IHE) including **MUST** have a critical role to play in preparing society to adapt to the impacts of climate disruption by providing **TRAINING, RESEARCH AND OUTREACH SERVICES** around **ADAPTATION**.
- They should increase their curricular offerings on climate adaptation. This can be done through mainstreaming the information in core courses and offering electives that specialize in the topic of **ADAPTATION**.
- Can act as ‘hubs’ in their local communities for creating, testing, and disseminating knowledge on regional climate projections and adaptation strategies since even **IHE themselves are not spared** and should work directly also with their local communities to explain the science and implement solutions.
- Should aim to identify adaptation strategies that also contribute to mitigation efforts.

# INSTITUTIONS OF HIGHER EDUCATION RELEVANCE -GENERAL Cont'd

- IHE can make fundamental contributions to climate adaptation efforts by identifying the most pressing climate impacts through the provision of **cutting-edge scientific and social scientific research**.
- Climate **ADAPTATION** curricula should be updated regularly and taught across a diverse range of disciplines including business management, health, engineering, law, ecosystem management, community planning and land management, architecture, geology, educationists ,economists , communication experts, etc. to ensure professionals from different fields understand the impacts of climate change and the best practices for responding to them.
- Climate adaptation education should not be limited to the STEM disciplines (Science, Technology, Engineering, and Math). Social and behavioral disciplines are also very critical in climate adaptation. Training should be interdisciplinary since climate adaptation is a very complex subject.

# CONCLUSIONS

- Climate change threat is serious. However, there is need to look at it both as a challenge and also that it offers exciting opportunities to make our communities more dynamic and resilient through redesigning our systems and equip them to thrive in the new and changing climate.
- IHE are very critical in climate **change adaptation science** hence **EXTREMELY IMPORTANT** in the **Malawi NAP process**.
- **MEDIUM & LONGTERM: Training, Research and Outreach very critical.**

THANK YOU FOR  
YOUR  
ATTENTION!!!!!!!