Applying Downscaled Climate Models for Adaptation Planning

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Background

- Malawi has not been spared from the impacts of climate change
- Most notable in the last few decades the country has experienced dry spells, floods and urban flooding
- The country has prioritized adaptation interventions to build resilience
- Created an Enabling Policy framework to support adaptation needs
Climate modelling

- DCCMS is responsible for climate modeling (historical data)
- DCCMS mandate is provision of climate services for the country
- EAD is the coordinating entity for the NAP Process
- Global Climate modelling is applied in Malawi through DCCMS to provide climate data and information and projections
- DCCMS has managed to downscale climate models to EPA level at a better and useful resolution
Why downscaling?

• Crucial in decision making for medium to long term adaptation planning - Climate trends and projections
• Data will inform the NAP process for Malawi
• Results used for National Communications
• Contribute towards resilience building and disaster risk management
Stakeholders

- DCCMS (historical data)
- Ministry responsible for agriculture
- Ministry responsible for Water resources
- NSO
- MVAC
- DoDMA
- Academia
- Research institutions
Rainfall example (Neno District)
Temperatures (Zomba, Dzaone)
Dry spells (Zomba, Dzaone)

Longest Dry Spells For Dzaone North
RCP8.5

Jan Dry spells For Dzaone North
RCP8.5
Capacity required

- Build more skills among staff in institutions doing climate modelling
- Expand to other institutions
- Improved IT equipment with fast processors
- Coordination and collaboration among sectors involved in climate services
Enabling conditions

- Robust CC policy framework (NCCMP, MET Policy etc)
- Coordination structure
- Decentralization (brings demand for climate services needed in a specific location)
- Availability of climate information centers
- National framework for climate services (in development) - brings coordination among users of climate information and institutions producing data - enhances accessibility
Policy makers engagement

- Linking with National Development Agenda (MGDS)
- Mainstreaming in sectoral policies - there is no sectoral specific information
- Need for forum at policy level for climate services that includes all relevant sectors
Challenges and Next steps

Challenge experienced:
- Limited skills and capacity in climate modelling
- Inadequate coordination and collaboration among sectors involved in climate services

Next steps:
- National framework for climate services (in development)- brings coordination among users of climate information and institutions producing data -enhances accessibility