SIDE EVENT
Monitoring forest contributions towards national adaptation goals
Adaptation Monitoring in Uganda
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Content of the Presentation

- Background to adaptation monitoring
- What Institutional arrangements for Adaptation Monitoring
- Tools for Adaptation monitoring
- Climate Vulnerability Assessment opportunity for Adaptation monitoring in Uganda
Background to Adaptation monitoring in Uganda

• The United Nations Framework Convention on Climate Change (UNFCCC) initiated the development of National Adaptation Programmes of Action (NAPA) at its 7th Conference of the Parties (COP 7) in Marrakech, Morocco.

• The NAPA provide a quick process for identifying priority activities that respond to an urgent and immediate needs to adapt to climate change those for which further delay would increase vulnerability and/or costs at a later stage.

• The Ugandan NAPA was launched in 2007.

• 8 Important areas for intervention were identified as non specific project profiles including **Community Tree Growing Project**, **Land Degradation Project**, **Strengthening Meteorological Services**, **Community Water and Sanitation Project**, **Water for Production Project** **Drought Adaptation Project**, **Vectors, Pests and Disease Control Project**, **Indigenous Knowledge and Natural Resources Management Project** and **Climate Change and Development Planning Project**.
• The NAPA implementation strategy for Uganda focuses on the enhancement of resilience

• Adopts an integrated/programmatic approach to implementation of the above interventions.

• Implementation strategies of the NAPA rely on community and ecosystem adaptation in the most vulnerable communities of Uganda.

• Full implementation will lead to communities resilient to the impacts of climate change.

• The urgent call therefore for having a system to capture information and monitor implementation
Institutional Arrangements

- The Ministry of Water and Environment through the Climate Change Department is responsible for monitoring the implementation of climate change action (Adaptation and Mitigation).

- Focal point/climate change desk officers in all other MDAs

- At lower local governments the office of the Natural Resources Department is responsible for monitoring climate change action as designated within the National Climate Change Act 2021
# TOOLS FOR ADAPTATION MONITORING - MRV

## Integrated National MRV System

<table>
<thead>
<tr>
<th>Component 1: National GHG Inventory</th>
<th>Component 2: NDC Implementation/ Mitigation Actions</th>
<th>Component 3: NDC Adaptation Actions</th>
<th>Component 4: Climate Finance Flow</th>
<th>Component 5: Sustainable Development Goals (SDGs)</th>
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</thead>
<tbody>
<tr>
<td>- GHG emission sectors</td>
<td>- NDC implementation roadmap - Priority mitigation actions</td>
<td>- NDC implementation roadmap - Priority Adaptation actions</td>
<td>- Climate finance for NDC implementation actions</td>
<td>- SDGs mapping and Monitoring for NDC actions based on UNDP CAIT</td>
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<tr>
<td>- Monitoring and data collection</td>
<td>- Tracking mitigation actions</td>
<td>- Tracking NDC adaptation actions</td>
<td>- Finance &amp; resources deployment schedule</td>
<td>- Data for SDGs impact monitoring</td>
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<tr>
<td>- GHG emission calculation</td>
<td>- Monitoring and reporting</td>
<td>- Monitoring and reporting</td>
<td>- Monitoring and reporting</td>
<td>- Review and analysis</td>
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<td>- Analysis and reporting</td>
<td>- Results and communication</td>
<td>- Results and communication</td>
<td>- Results and communication</td>
<td>- SDGs Impact Reporting</td>
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**Integrated MRV Report**, NDC Report (National GHG Inventory Report (NIR), National Communications (NC), Biennial reports (BR) and Biennial Update Reports (BUR), International Financial & Technical Support
The Ministry of Water and Environment in Partnership with UNEP is implementing the Climate Vulnerabilities Assessment (CVA) project with the main aim of identifying and measuring national climate vulnerabilities and to track adaptation efforts and resilience.

The key output of the CVA are indicators for measuring resilience at National level for all key adaptation sectors within the Uganda’s NDC.
CVA-The process of Index development for risk and vulnerability assessment in Uganda

- **Risk and vulnerability framing**
  - Literature analysis
  - Stakeholder consultation

- **Selection of indicators**
  - Literature analysis
  - Criteria for selection

- **Data collection and processing**
  - Data collection at district from different sources
  - Data cleaning and normalization

- **Weightage**
  - Importance of indicators
  - Equal weights

- **Aggregation**
  - Weighted average technique
  - Consultation for different equations

- **Index validation**
  - Reliability test e.g., Cronbach’s alpha and Gutmann’s Lambda
  - Sensitivity analysis

- **Assessment representation**
  - GIS based maps, charts, tables
  - Integrative maps using qualitative information
## CVA: Proposed Indicators

<table>
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<th>Risk component</th>
<th>Proposed indicators</th>
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<tr>
<td><strong>Hazard</strong></td>
<td>Rainfall (daily or at least monthly average), Rainfall (daily or at least monthly average), Historical drought, Temperature (daily max and min), Elevation (angle of slope - hillslope, morphology), Soil type and quality, Lithology type, Landcover (vegetation, forest, grassland, cropland, wetland, settlement etc.), Rainfall, Heavy precipitation</td>
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<tr>
<td><strong>Exposure</strong></td>
<td>Elements at district level:, Population, Livestock, Crops, Settlements, Infrastructure, Impact indicators:, The population affected, The cropped areas destroyed, Buildings and infrastructure damaged</td>
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<tr>
<td><strong>Vulnerability</strong></td>
<td>Number of hospital beds per 1000 or 10,000 population, Number of doctors per 1000 or 10,000 population, Number of nurses/paramedic staff per 1000 or 10000 people, Percentage of population living within 5km of a health facility, Adults living with HIV , Child mortality rate, Malaria mortality rate, Gross school enrolment, Gender parity in education or female literacy, Adult literacy rate, Access to safe drinking water, Access to improved sanitation facilities , Percentage of the population under the poverty line, Percentage of vulnerable Population, Percentage of households with less than two meals a day, Food price index Prevalence of undernourishment, Annual cellular subscribers, Internet users, Access to adequate and affordable electricity sources</td>
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<tr>
<td><strong>Sectoral data</strong></td>
<td>Electricity backlog ,Energy diversification index, Electricity disruption frequency, Soil quality/moisture/salinization, Evapotranspiration, Fertilizer availability/amount used , Access to fertilizers, Value of crops output per hectare, The yield of crops (general or per specific crops) , Agriculture support staff, Farm output value per hectare of surface water, Population by district, Population density, stribution of Cattle, Goat, Sheep, Pig, and Poultry , Number of veterinary doctors per district Number of veterinary hospitals per 100000 livestock, Road network, Railroad network, Bridges, Dams, Transmission lines, Power generation stations</td>
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THANK YOU