Climate change crisis = existential threat for Africa

Warming increasing (WMO, UNEP reports):

- 2015–2019 warmest five-year period on record
- Global average temperature has increased by 1.1°C since the pre-industrial period
- Africa experiencing higher warming

- Shifts in agro-ecological zones
  - Change in production patterns and comparative advantage of countries
- Change in distribution and form of disease vectors
  - Risks to public health programmes
  - Resistant disease vectors
  - Stranded investments in new drugs
Climate change is likely to result in reduced yields of all major food staples in sub-Saharan Africa, as well as a loss of area that is currently suitable for these crops.
Climate change economic impacts

Up to 15 loss of GDP of Africa

Africa incurred an estimated economic loss of $2 billion and suffered a mortality of 2,600
Between 2015 – 2019

Some countries spending between 2 – 9 % of GDP on unplanned response weather and climate impacts

Cyclone Idai:
- About 1000 lives lost: Costs range $700mil- 1billion loss in infrastructure
- Mozambique GDP forecast revision from 6.6% to 2.5% for 2019
Zambezi river basin very vulnerable to climate change impacts

Climate change impacts on the Kariba Dam could lead to:
- 60% loss in hydropower production
- More blackouts
- 300% increase in electricity costs
- Huge economic impacts
Climate change increases water risks in Africa which has high water dependency ratio:

- increased conflict between communities and countries
- Increased food security risks
- Hydropower production risks
- Economic losses risk

Carefully managed, climate change impacts, including water risks can enhance regional integration and peace through benefit-sharing from use of natural and transboundary resources.
• Zooming into southeastern Africa, it becomes clear that physical water risk varies within countries and across communities.
WATER RISK IN SOUTH EAST AFRICA

• By highlighting areas facing crisis-level food insecurity, it becomes clear that physical water risk can have serious implications for affected communities.

Crisis-level food insecure areas: These tend to overlap with places facing high water risk.
Machinga, located in the southeast, stands out as particularly at risk, with 73 percent of its population living in highly climate vulnerable areas.

88% of households have experienced drought
### Sectors covered in African INDCs

<table>
<thead>
<tr>
<th>Sector</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy</strong></td>
<td>Transport and Infrastructure</td>
</tr>
<tr>
<td><strong>Agriculture</strong></td>
<td>Health</td>
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<tr>
<td><strong>Forestry</strong></td>
<td>Ecosystem and Biodiversity</td>
</tr>
<tr>
<td><strong>Industrial Process and Product Use (IPPU)</strong></td>
<td>Water Resources</td>
</tr>
<tr>
<td><strong>Waste management</strong></td>
<td>Coastal Zone Protection</td>
</tr>
</tbody>
</table>

**10 sectors:**

Addis Ababa, Ethiopia Light Rail
Adaptation – INDC contributions by Sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
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<tr>
<td>Waste</td>
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<tr>
<td>Transportation…</td>
<td>18</td>
</tr>
<tr>
<td>Health</td>
<td>19</td>
</tr>
<tr>
<td>Coastal &amp;…</td>
<td>21</td>
</tr>
<tr>
<td>Ecosystem &amp;…</td>
<td>26</td>
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<tr>
<td>Energy</td>
<td>27</td>
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<tr>
<td>Water Resources</td>
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</tr>
<tr>
<td>Forestry</td>
<td>31</td>
</tr>
<tr>
<td>Agriculture</td>
<td>45</td>
</tr>
</tbody>
</table>
Mitigation – INDC contributions by Sectors

- **Energy**: 53
- **Agriculture**: 37
- **Forestry**: 41
- **Transportation**: 29
- **Ecosystem &…**: 3
- **Water Resources**: 2
- **Health**: 1
- **Marine &…**: 0

Number of Countries Contributed to INDC by Sectors

Alignment with Africa’s Transformation agenda
Clean energy actions in Africa’s NDCs

All African countries have submitted nationally determined contributions to climate action (NDCs) under Paris Agreement

- Electricity
- Hydro
- Solar
- Geothermal
- Wind
- Transport
- Heating
- End users

22,000 MW clean power actions in Africa’s NDCs – close to US$ 50 billion of investment

Room for greater ambition. Can realistically add 200 GW by 2030 ~ investment opportunity of about US$400 billion.
Renewables deployment in Africa on the rise since 2013
THANK YOU!

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