Building climate resilience across scales

participatory – farmer-led – community action

Sander Zwart
Climate change and water

Water – Climate impacts on food production systems

<table>
<thead>
<tr>
<th>Major challenges:</th>
<th>Rainfed systems</th>
<th>Irrigation systems</th>
<th>Wetland systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>onset, intensity, uncertainty)</td>
<td>rainfall patterns</td>
<td>increased water demands, reduced river discharges</td>
<td>lowered water levels, shortened flooding</td>
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<tr>
<td>Adaptation to:</td>
<td>prolonged drought spells and flood events</td>
<td>reduced irrigation water availability,</td>
<td>decrease wetland area, decrease fishing areas</td>
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<tr>
<td>Affected water users:</td>
<td>farmers, herdsmen</td>
<td>farmers, herdsmen, domestic users</td>
<td>fishermen, farmers, domestic users</td>
</tr>
</tbody>
</table>
Climate change adaptation options

**Farm-level solutions:**
Short duration/drought-tolerant crop varieties
Water conservation measures
Water productivity improvement

**Local solutions:**
Irrigation development
Water storage (small reservoirs)
Irrigation water savings
Digging wells
Landscape water planning
Scaling climate-smart water solutions

Challenges in scaling climate-smart water solutions for resilience:

- Adoption rates are low in development projects
- Solutions do not match the demand from the users
- A focus on infrastructure rather than services and users
- Actions are not sustainable and create unwanted impacts
- Poor planning and integration in other initiatives
- Actions are not supported by policies, laws and regulations
Scaling climate-smart water solutions

Technologies for African Agricultural Transformation (TAAT)

- Scaling low-cost irrigation + water & soil conservation technologies
- Demonstration site development, training of trainers
- Technology approach & linear scaling model
- High potential impact, low adoption
Scaling climate-smart water solutions

**Smart-Valleys approach**

- Low-cost approach for land and water development in inland valleys (bundling, drainage, land levelling for rice-vegetables rotations)
- Facilitating communities with design, implementation & maintenance
- High impact & high adoption rates observed
Approaches and solutions

The beneficiaries must be upfront and central, always!

- Co-design climate-smart water technologies & solutions
- Co-develop community/landscape plans for water resource allocation under climate change
- Co-implement projects, climate-smart water solutions and landscape plans
- Marginalized groups must be heard in processes

Ownership of the action is key to sustainability
Paradigm change in climate action

Researchers for development – not only saying it, but actually doing it (for example scaling readiness)

Developers of climate adaptation projects – design projects with different indicators for success, less infrastructure, more time available, focus on the people and inclusion of beneficiaries in design and implementation
PLEASE PUT YOUR QUESTIONS IN THE Q&A, CLICK
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