West African Science Service center on Climate Change and Adapted Land Use (WASCAL)

Presentation at:

**CAAST-Net plus Workshop**
Accra, 04-06 November, 2013

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What is WASCAL?

A German (BMBF) initiative ……

Aims at strengthening research, policy, capacity and competency of West-African countries ………

to deal with issues of climate change through adapted land use on a scientific basis ………

in partnership with German institutions.
WASCAL partner countries

- Benin
- Burkina Faso
- Côte d’Ivoire
- Gambia
- Ghana (HQ)
- Mali
- Niger
- Nigeria
- Sénégal
- Togo
WASCAL OBJECTIVES

1. significantly improve climate change research infrastructure and capacity in West Africa,

2. explore science-based scenarios and options for enhancing the resilience of human and environment systems in the face of climate change,

3. help educate the next generation of scientists and policy makers to acquire intimate knowledge of the different climate related issues and to help the region in developing suitable coping strategies
WASCAL Components:

- Competence Center in Ouagadougou
- Core Research Program
- Capacity Building Program
Competence Center serves as a hub:

1. connect regional partners in data-gathering, analysis and data sharing networks

2. offer them infrastructure and expertise to analyze the impacts of climate change and develop strategies and policies to cope with them

3. cover disciplinary know-how in climate, hydrology, land use, economics and social sciences, each with a strong modeling competence

4. coordinate and carry out collection of meteorological, hydrological, biological and household data within a “climate modeling window” using where possible a common sampling frame.
Competence Center (cont’d):

Stakeholders and Networks

National Services of the target countries
  – Meteorological
  – Hydrological
  – Land
  – Biodiversity
  – Household

River Basin Authorities
Concept of WASCAL Competence Centre observatory network
Core Research Program

Aim: strengthen the analytical capability of the Competence Center by the development of integrated models (link bio-physical and societal processes and feed-backs)
Core Research Program (cont’d)

• Conceptual Framework: Resilience of social-ecological systems
• Small watersheds (100 km²)
• Different land use intensity
Core Research Program

Key driving forces, their associated indicators, and their impacts on social-ecological systems
Core Research Program (cont’d)

Participants:

- Regional & national universities together with German partner universities
- UNU
- Regional & international institutes
- National research centers
Core Research Program (cont’d)

Research Clusters:
1. Climate and weather
2. Land Dynamics
3. Agricultural Systems
4. Markets and livelihoods
5. Risk management
6. Integrated assessment
Capacity Building Program

Objective:

Established regional graduate research programs on priority climate change topics

The graduate research program is based at a lead university and networked across the region

Supported by WASCAL Competence Center and the research community in Germany.
The GRPs are based at a university campus (lead university) of one of the participating countries.

Each GRP accepts 10 doctoral students per year.
Capacity Building Program (cont’d)

The Graduate Research Program on Climate Change and Water Resources

• Lead University: University Abomey-Calavi of Benin (Prof. Abel Afouda)

• Partner Universities: UCAD of Senegal, Abobo-Adjame of Cote d’Ivoire, KNUST of Ghana and University of Bonn, Germany
Capacity Building Program (cont’d)

Doctoral Programme (six)

1. West African Climate System – FUTA, Nigeria
2. Climate Change and Water Resources – UAC, Benin
3. Climate Change Economics – UCAD, Senegal
4. Climate Change and Land Use – KNUST, Ghana
5. Climate Change and Agriculture - IPR/IFRA & UB, Mali
6. Climate Change and Biodiversity – UFHB, Cote d’Ivoire
Capacity Building Program (cont’d)

Master’s Programme (four):

1. Climate Change and Human Security – UL, Togo
2. Climate Change and Adapted Land Use, – FUT Minna, Nigeria
3. Climate Change and Energy – UAM, Niger
4. Climate Change and Education, UTG, The Gambia
International Advisory Board

- Scrutinizing and finalizing the GRP curriculum to ensure the high standards targeted by the programme through

- Selecting the students for the GRP

- Participating in students proposal defense

- Ensuring high academic standard of the GRP
GRP through teaching, student supervision and exchange of cross-boarder experience offers

- Strengthening of trans-national communication and capacity building
- Connecting universities with experts and other Institutes
- Encouraging interdisciplinary working approach
IMPLEMENTATION AND QUALITY ISSUES

• Curricula
  • Lead Uni. + input from Advisory Board
• Selection of students
  • One each per participating country
• Language (English)
  • Six weeks intensive English course at University of Cape Coast
• Lecturers
  • Host Uni. and country, regional, German partners involvement
• Research and Supervision
  • Host country or students country, visit to Germany
  • Host Uni., Country of research, German supervisors
## Academic staff strength (KNUST)

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Lecturers</th>
<th>Batch 1</th>
<th>Batch 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td></td>
<td>10 (59%)</td>
<td>13 (72%)</td>
</tr>
<tr>
<td>Germany</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Nigeria</td>
<td>1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Senegal</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Benin</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>18</strong></td>
<td></td>
</tr>
</tbody>
</table>
Capacity Building Program (cont’d)

Time Frame:

Doctoral (Three years):

• six months: lectures and proposal development
• 12-24 months: field research
• Six month: thesis write up and possible offer of up to six month stay at a German host institution

Masters (Two years)

• 12 months: course work and research outline
• Six-Nine months: field work
• Three-Six months: thesis write up
## Present GRP Status

<table>
<thead>
<tr>
<th>Milestones</th>
<th>Total Expected</th>
<th>Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctoral Programs Established</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Master’s Programs Established</td>
<td>4</td>
<td>2 (+2)</td>
</tr>
<tr>
<td>Number of Curriculum / Regional Advisory Boards</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Number of Students Through English Proficiency Courses</td>
<td>140</td>
<td>102</td>
</tr>
<tr>
<td>Number of Doctoral Students</td>
<td>120</td>
<td>98</td>
</tr>
<tr>
<td>Number of Master’s Students</td>
<td>80</td>
<td>20 (+40)</td>
</tr>
</tbody>
</table>
Doctoral Programme Offers:

1. High quality research and education on CC and its impact on human environmental systems
2. Up to six months as a host in an institution in Germany
3. Interdisciplinary working approach
4. International lecturers and supervisors
5. English language classes
6. Scholarship and research budget + laptop computer
• Next Calls for Application: Jan/Feb 2014

• www.wascal.org
THANK YOU