

## Researching into energy and climate change under the CIRCLE programme



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**Building Bi-regional Partnerships for Global Challenges**



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# Presentation outline

- About AAS
- Introduction to CIRCLE
- Energy research under CIRCLE
- Africa, energy and climate change
- Lessons from CIRCLE
- AAS post-CIRCLE thoughts

# AAS

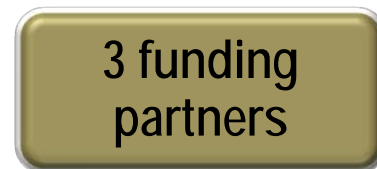
- Recognizing Excellence – 330 Fellows, Affiliates,...
- Think Tank Services
- Implementing STI programs: Health, Energy, Food...



Alliance for Accelerating Excellence in Science in Africa  
(AESA) **AU Summit endorsed 2015**

# AAS

- Recognizing Excellence – 330 Fellows, Affiliates,...
- Think Tank Services
- Implementing STI programs: Health, Energy, Food...



Professionally staffed with strong governance and stakeholder oversight:

Cross-cutting M&E and Strategy and Policy units

# AESA - 4 major programs under implementation



3 funding partners



**AESA**

Professionally staffed with strong governance and stakeholder oversight:  
Cross-cutting M&E and Strategy and Policy units

DELTA  
(Wellcome trust & DFID)

CIRCLE  
(DFID & ACU)

Grand Challenges  
Africa  
(BMGF)

Good Financial  
Grants Practice  
(WT & MRC)

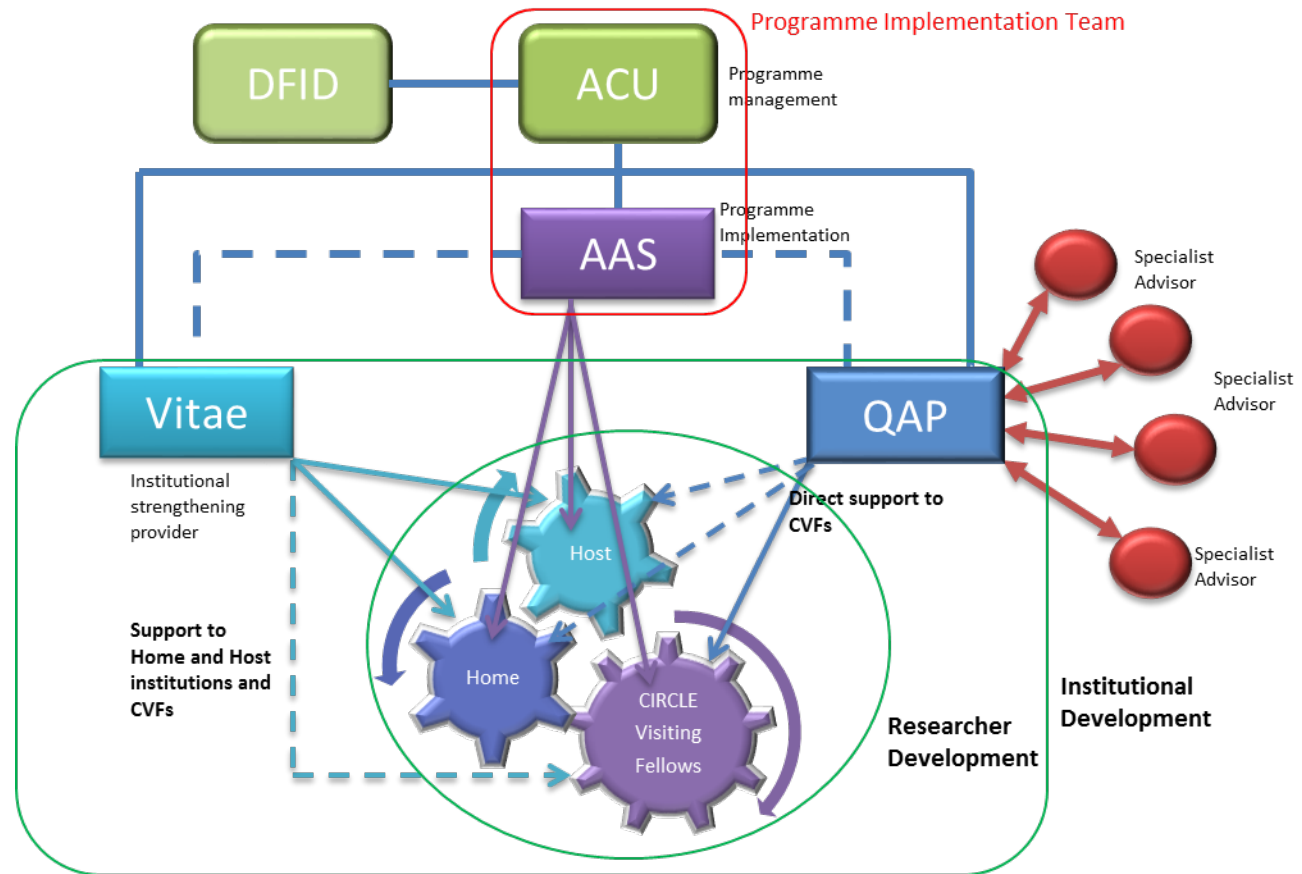
# CIRCLE

## *Climate Impacts Research Capacity Leadership Enhancement*

5 Years  
2014 - 2018

### Objectives:

- Researcher
- Institutions
- AAS



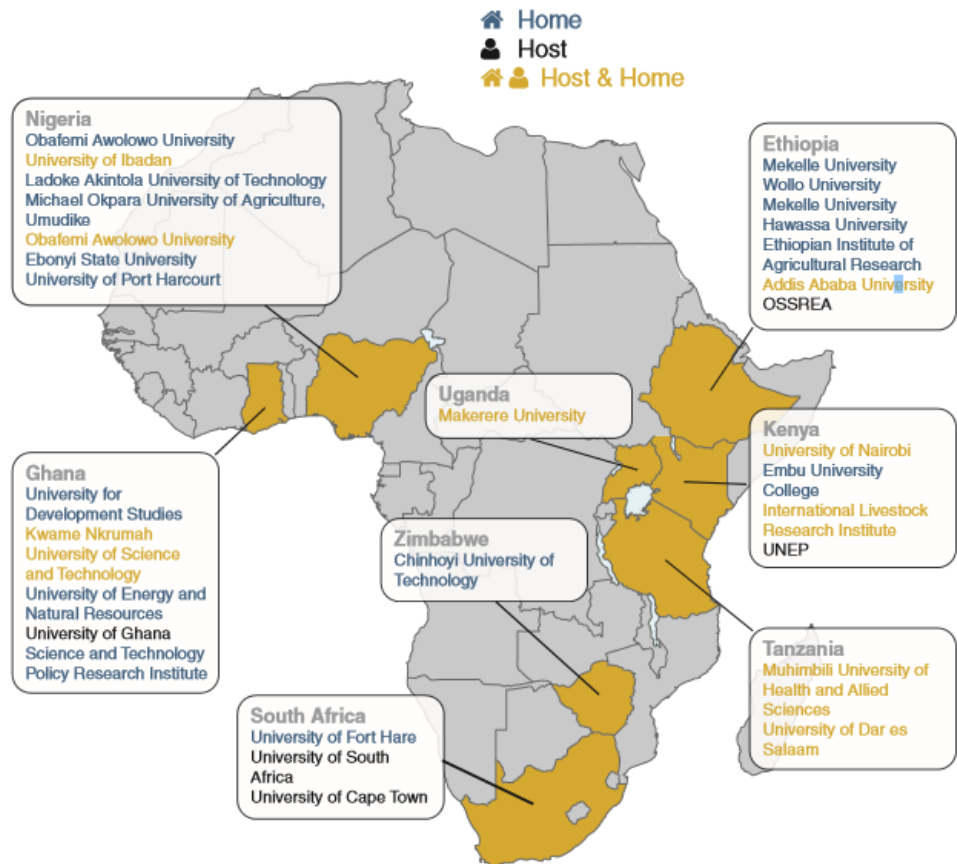
# CIRCLE

63 Fellowships awarded so far – out of 100

- 60% post-PhD; 40% post-Masters
- 52% Males; 48% Females

## CIRCLE VISITING FELLOWS (CVFs)

Country	Cohort 1	Cohort 2
Ethiopia	5	4
Ghana	5	6
Kenya	4	0
Nigeria	12	13
S. Africa	2	2
Sudan	1	0
Tanzania	3	2
Uganda	1	1
Zimbabwe	1	1
<b>Total</b>	<b>34</b>	<b>29</b>



# Thematic Focus of research

## Cohort 1 CVFs

- Agriculture – 18
- Water - 3
- Energy - 2
- Health and Livelihoods - 6
- Policy - 5

## Cohort 2 CVFs

- Agriculture -14
- Water - 1
- Energy - 2
- Health and Livelihoods - 8
- Policy - 4

Generally, the research cross-cuts two or more CIRCLE thematic areas but are broadly categorized based on dominant theme



# Progress so far – cohort 1

119

Articles submitted by CVFs in the fellowship year to journals

**By 29 CVFs**

5 CVFs yet to submit articles for publication

49

Out of 119 accepted for publication in international peer reviewed journals

45

Articles solely based on CIRCLE-funded research; Submitted by **22 CVFs**

The time away from Home Institutions takes CVFs away from heavy teaching load to focus on research

# Energy Research under CIRCLE

## CIRCLE Energy theme studies

- Potential Impact of Climate Change on Hydro-Power Generation in Ghana, West Africa
- 'Low carbon development strategies: issues and challenges in the West African Power Pool electricity
- Assessment and Analysis of Renewable Energy Technology for the Nigeria Coastline Communities
- Climate Change Adaptation as it affects Pyrolysis of Lignocellulosic Materials from Oil Palm Fruit Fibre and Physic Nut Shell at Low Temperature and Pressure for Energy and Chemical Productions

- 6% of CVFs are researching into energy and climate change;
- Might be a reflection of lack of critical mass researchers in energy and also interested in climate change.

# Africa, Energy and climate change

## IPCC projection

- Energy: Access to energy is severely constrained in sub-Saharan Africa, with an estimated 51% of urban populations and only about 8% of rural populations having **access to electricity**. Extreme poverty and the lack of access to other fuels mean that 80% of the overall African population relies primarily on biomass to meet its residential needs, with this fuel source supplying more than 80% of the energy consumed in sub-Saharan Africa. Further challenges from urbanisation, rising energy demands and volatile oil prices further compound energy issues in Africa.

- Africa is home to 15% of the global population; yet represents only 5% of the global energy use;
- Africa consumes only one quarter of the global average energy per capita, using a mix of hydropower, fossil fuels and biomass – mostly in traditional uses;
- Over 600 million people – no access to electricity;
- 700 million (68% of the population) – living without access to clean cooking facilities.

# Africa, ENERGY and climate change

- If current energy access trends continue, by 2030:
  - there will still be 655 million people in Africa (42% of the population) without access to power;
  - 866 million (56% of the population) without clean cooking facilities.
- This will deprive the majority of the population of the opportunity to pursue a healthy and productive life.

# Lessons from CIRCLE

- The Status quo will not produce the levels of knowledge needed to address challenges and opportunities in energy and climate change for Africa;
- There has been many new collaborations formed by the researchers but has been among researchers and not industry;
- Research uptake and innovation, late introduced idea;
- New approach must make conscious effort to focus research on energy and climate change in Africa involving the private sector.

# AAS Post-CIRCLE Planning

- African academic institutions must collaborate with policy makers, private sector, development partners in setting the right agenda for energy and climate change research
- Possible link with CAAST-Net and involving EU/African national partners in developing the CIRCLE model:
  - Individual researcher development
  - Institutional development

Thank you  
Thank you



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