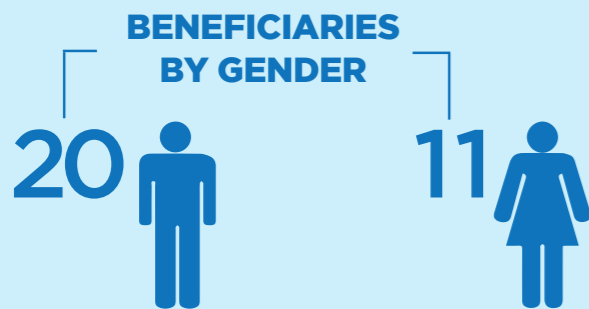


- **Guided training:** theoretical inputs in seminar (Interest/importance, principles); observations and field works.
- **Individual self-training:** the student learns the main theoretical notions and practice from available pedagogic materials;
- **Supervision:** there is a supervision team for each student to help him and correct his work. The supervisor keeps in touch through internet contact at the beginning of the training and will follow up according to the needs of the student.

INVESTMENT BY BMBF SO FAR
€3,363,226

Investment breakdown per each batch:



NUMBER OF THESES WRITTEN SO FAR | 19



*Combating Climate Change.
Improving Livelihoods*

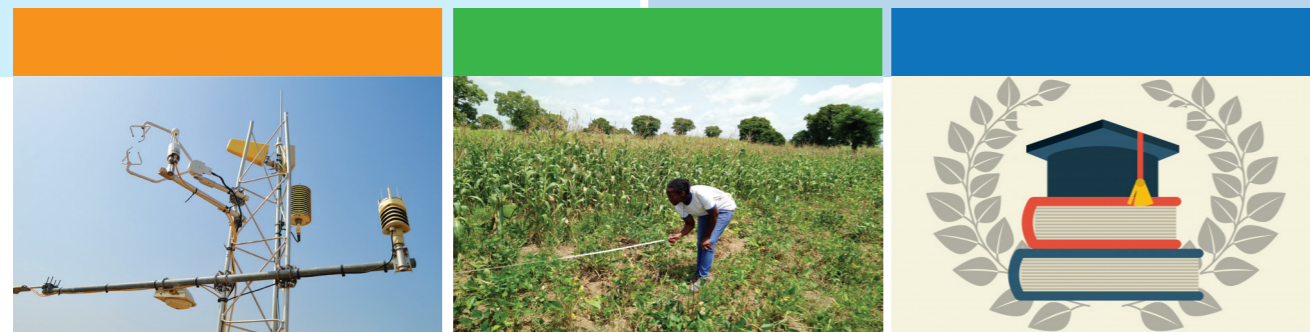


www.wascal.org

FACTSHEET

Doctoral Research Programme in Climate Change and Agriculture, MALI

Director in Charge of Programme: Dr. Yacouba Diallo



WASCAL Capacity Building Programme facilitates academic education amongst 12 West African universities in collaboration with German institutions through the Graduate Studies Programme (GSP). Each programme selects students from each of the WASCAL member countries through open calls for applications (scholarship and fee-paying students). WASCAL has since 2012, maintained its strong commitment, under the sponsorship of the German Federal Ministry of Education and Research (BMBF) to provide climate change solution through capacity building by helping educate the next generation of scientists attain an in-depth knowledge of different climate related issues in order to help the region develop suitable management strategies.

and Doctoral students are expected to participate in four months language training in English (University of Cape Coast, Accra-Ghana) and French (University of Lomé - Togo) for Anglophone and Francophone students respectively.

PROGRAMME RELEVANCE TO CLIMATE CHANGE

The Third World countries, particularly Africa are threatened by the predicted effects of climate change because of their economic dependence on climate for development whose backbone is Agriculture. There is strong evidence from the World Meteorological Organization (WMO), Intergovernmental Panel on Climate Change (IPCC) and United Nations Environmental Programme (UNEP) that, the observed increases in greenhouse gases particularly Carbon dioxide (CO₂) may lead to global warming, sea level rise and space-time

VISION

WASCAL seeks to become one of Africa's leading institutions in the provision of climate and environmental services in and for West Africa.

OUR MISSION

WASCAL seeks to provide information and knowledge at the local, national and regional levels to its West African member countries to cope with the adverse impacts of climate change. We do this through Capacity Building support to young West African Scholars in fields of natural and social sciences and by strengthening West African universities and climate service departments in WASCAL member countries. We combat climate change and improve livelihoods.

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changes in climatic zones and seasons on the globe.

Crops, livestock and fisheries are highly dependent on specific climate conditions. Trying to understand the overall effect of climate change on our food supply can be difficult. Increases in temperature and carbon dioxide (CO2) can be beneficial for some crops in some places. But to realize these benefits, nutrient levels, soil moisture, water availability, and other conditions must also be met. Changes in the frequency and severity of droughts and floods could pose challenges for farmers and ranchers. The economy of most of the sub-Saharan African countries is based on agriculture sector. This sector is the most affected by the seasonal and inter-annual variability of the climate. The warming, the change in rainfall quantity, the increase of CO2 concentration in the atmosphere are some effects of the Climate Change that are likely to modify positively or negatively livestock, crop and forest productivities. Therefore, training of

highly qualified human resources (having relevant infrastructures and equipment) constitutes one of the major adaptation strategies to climate change.

The Doctoral Research Programme on Climate Change and Agriculture at the "Institut Polytechnique Rural de Formation et de Recherche Appliquée (IPR-IFRA)", in the framework of the West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL) is designed to train experts for West African countries in anticipating the effects of climate change, define and to implement strategies towards adaptation and mitigation to the negative effects of climate change in agriculture, strengthen the synergistic relationship between the West African Universities and the partnership with German Universities.

The programme is combating climate change through its training activities and research output that are geared towards specific objectives as follows:

Guided training: Theoretical inputs in seminar (Interest/importance, principles); observations and field works.

Individual self-training: The students learn main theoretical notions and practice from available pedagogic materials;

Supervision: There is a supervision team for each student to help correct their research works. The supervisor keeps in touch through internet contact at the beginning of the training and will follow up according to the needs of the student.

HOST UNIVERSITY

The Institut Polytechnique Rural de Formation et de Recherche Appliquée (IPR-IFRA) of Katibougou runs this doctoral programme since 2012. It is the

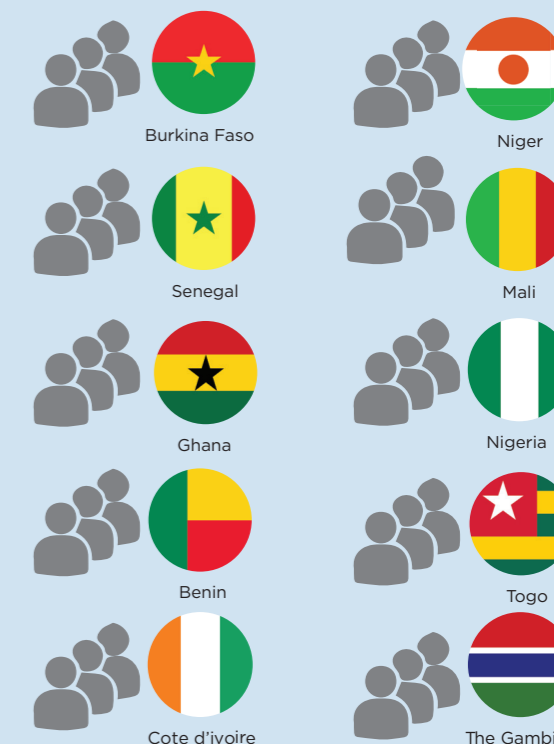
host University of the PhD programme (infrastructures and equipments for lecturer, student, management board, teaching and supervision tasks). The programme is implemented in partnership with USTTB and UCC according to the Doctoral School regulations and WASCAL

rules and regulations. It is an institution that trains professionals in the area of agriculture since 1897. The institute has trained thousands of technicians and engineers in all areas of agricultural science including agriculture, forestry, animal sciences, and rural economics. It is the main institution of tertiary education in the area of agriculture in Mali. The institute has an annex in Bamako where training and research activities are coordinated within 4 teaching and research departments:

- Agricultural science techniques ;
- Livestock Science and techniques ;
- Rural engineering and water forestry;
- Social and economic science.

IPR/IFRA also conducts research in the areas of agro-physio-genetics and plant biotechnology, soil science, ethno-botany plant protection, animal production systems, forestry, agroforestry and environmental protection, economics and social sciences, innovation systems, and renewable energies (biogas, biofuel). IPR/IFRA will collaborate with the University of Sciences, Techniques and technologies of Bamako to implement the Doctoral Programme.

COUNTRY BREAKDOWN OF BENEFICIARIES SO FAR



MODE OF ADMISSION

Call for application (through advert) for scholarship as well as for fee-paying students and then selection through the relevant committee with the involvement of the School of Post-graduate Studies (SPGS). Recommendations are then sent to the International Advisory Board.

BENEFICIARIES SO FAR

30 West African students

Full scholarship scheme: accommodation, tuition, travel, and cost of research.



19 graduated
2012-2019



11 students in 4th batch

- admitted in 2019
- completion in 2022

DURATION OF PROGRAMME

40 months

NUMBER OF STUDENTS ADMITTED SINCE INCEPTION
30

NUMBER OF STUDENTS WHO HAVE GRADUATED
19

IMPACT

To come up with climate change associated impacts on agriculture in Africa, a pedagogic approach of the graduate PhD programme was based on some strategic training methods: