OnePlanet FELLOWSHIP

Building a robust pipeline of scientists leading climate change research in Africa

Candidate Profile

Mamadou Lamine Mbaye

2019 One Planet Laureate Candidate

Position

Teacher-Researcher (Assistant Professor)

Institution

Physics Department, Department of Science and Technology, Ziguinchor University

Country

Senegal

Education

PhD, Climate Change and Water Resources

Mentor

Professor Saidou Moustapha Sall, Researcher, Atmospheric Physics, Polytechnic Schoo, Dakar,

Research Area

Climate Change and Water Resources

Mamadou Lamine Mbaye completed his infant, junior and secondary education in the region of Fatick, in Senegal. Outside school, he helped in the fields and raised livestock during his childhood, like many children in the region.

He left Fatick for the capital Dakar after obtaining his Baccalaureate series S2 in experimental sciences in 2001.

Mbaye had the ambition to work on environmental issues and had the skills to do so, taking into account his performance in physical and natural sciences throughout secondary school.

Between 2002 and 2006, he obtained a bachelor's and master's degree in Physics and Chemistry at the Faculty of Science and Technology at the Cheikh Anta Diop University in Dakar.

In 2007, he was admitted to the École Supérieure Polytechnique de Dakar after a file review, to do a Master's II research degree in engineering, meteorology, oceanography and arid environment management.

He did his end of study internship at the Siméon Fongang Laboratory of Atmospheric and Ocean Physics (LPAOSF / ESP / UCAD - Laboratoire de Physique de l'Atmosphère et de l'Océan Siméon Fongang) on climate and hydrological modelling in the upper Senegal river basin.

At the end of his Master's II, to deepen his knowledge of water resources, he applied for a second specialized master's in Integrated Water Resources Management (IWRM) at the International Institute for Water and Water Engineering Environment (2EI - Institut International d'Ingénierie de l'Eau et de l'Environnement) in Ouagadougou, Burkina Faso.

This master's was subsidized by the European Union and ended with a three month internship at the Directorate of Water Resources Management and Planning (DGPRE - Direction de la Gestion et de la Planification des Ressources en Eaux) in Senegal in 2009.

Subsequently, he did a second two month internship at the Senegalese National Society for Water (SONES - Société Nationale des Eaux du Sénégal).

Mbaye wants work with rural communities on development issues to enable them to take ownership of hydro-climatic services. His aim is to combine traditional knowledge with science to increase resilience to climate change.

After a few months of looking for a job, Mbaye obtained a temporary teaching position in physical sciences in 2011 at Fanaye Diéri high school (Saint Louis in Senegal).

In 2012, he was the Senegalese candidate for the WASCAL (West African Science Service Center on Climate Change and Adapted Land Use) programme funded by Federal Ministry of Education and Research (FMEE), Germany.

He was selected to do a doctoral thesis at the University of Abomey-Calavi in Benin. He works on estimating the impacts of climate change on the water resources of the Senegal river basin.

He defended his doctoral thesis in 2015 and was recruited the following year as a Teacher-Researcher at Assane Seck University in Ziguinchor (Senegal).

His research activities are mainly focused on water resources, climate change and its impacts, hydro-climatic variability, extreme hydrometeorological events, the modelling of hydrological processes, etc.

As part of the popularization of his results, Mbaye would like to focus his scientific work on issues relating to development in rural communities in order to allow them to appropriate hydro-climatic services.

He stresses the importance of this popularization and the appropriation of hydro-climatic services in rural communities, because some traditional methods are no longer topical.

It is therefore imperative, according to him, to combine traditional know-how with science to increase resilience to climate change.

Asked what his ambitions are in relation to his career, Mbaye has no doubt about his desire to become a full Professor.

He notes that this requires, among other things, to work with fervour, to publish his research results in renowned journals, to supervise students, to write research projects for funding, etc.

He is prepared for the task and finds in the "One Planet Fellowship" programme the ideal opportunity for capacity building, scientific sharing and collaboration on multidisciplinary research subjects.

Mamadou Lamine Mbaye is one of the growing number of candidates selected to participate in the One Planet Fellowship. The One Planet Fellowship is a career development initiative that is building a robust pipeline of highly connected, inter-generational scientists equipped to use a gender lens to help Africa's smallholder farmers cope with climate change. The One Planet Fellowship is funded by the Bill &Melinda Gates Foundation, the BNP Paribas Foundation, the European Union and Canada's International Development Research Centre (IDRC). African Women in Agricultural Research and Development (AWARD) and Agropolis Fondation are jointly implementing the Fellowship.