



## Rodrigue Pèlèbè Edéya Orobiyi

2021 One Planet Laureate Candidate

### Position

Research Assistant and External Collaborating Teacher - Postdoctoral Researcher

### Institution

Aquaculture and Aquatic Eco-Toxicology Research Laboratory (LaRAEAQ), University of Parakou (UP) Benin & African Centre of Excellence on Coastal Resilience (ACECoR), University of Cape Coast, Ghana

### Country

Benin

### Education

PhD, Fisheries and Aquaculture, University of Parakou (UP) and PhD, Hydrobiology, Université Félix Houphouët-Boigny (UFHB), Côte d'Ivoire

### Mentor

Prof. Pierre Bienvenue Irénikatché Akponikpè, Director of the Laboratory of Hydraulics and Environmental Modelling, University of Parakou (UP), Benin

### Research Area

Agronomic sciences and biological sciences.

Since 2016, Rodrigue Pèlèbè Edéya Orobiyi has been a research assistant at the Research Laboratory in Aquaculture and Aquatic Eco-toxicology of UP and a postdoctoral fellow at ACECoR at the University of Cape Coast since the end of 2020.

In 2019, he won third prize in the national competition "My thesis in 180 seconds" in Benin.

His research involved aquaculture, fisheries and fish product quality, aquatic ecotoxicology, molecular identification and population genetics of fish, climate change, and sustainable adaptation strategies for fish farmers and fishers.

His thesis focused on evaluating the possibilities of valorization of the many water reservoirs available in northern Benin for fish farming in an eco-toxicological context, associated with agricultural pesticides used in particular in the cultivation of cotton.

Among other things, he was particularly involved in the genetic study of the population of an invasive species of fish in a reservoir in his native town, Savè.

Today, he is more interested in documenting climate-resilient peasant fishing and fish farming practices.

With about 30 publications and technical documents (fact sheets and manuals), his passion for research permeates his life, from scientific research to teaching.

In addition, with several collaborative research (Benin, Côte d'Ivoire, Ghana, Senegal, Taiwan, Belgium) and several research axes to its credit, Rodrigue aims to be a well-equipped specialist in smart and resilient fish farming and fishing practices.

He has already benefitted from several scholarships for academic training and specific capacity building and research grants.

Rodrigue was born and raised in Savè, a commune in Benin's Collines department. He completed his primary and secondary education in the city. A brilliant student in primary school, he obtained his CEP (end of primary school exam) in five years instead of six.

He did his BEPC (middle school exam) at the Collège d'Enseignement Général 2 de Savè (CEG 2 Savè). His new college (CEG 1 Savè) was located far from his home, and he had a long walk to and from school every day. This certainly didn't discourage him: he was a brilliant student, always coming in at the top of his class during his studies at CEG 1 Savè. He obtained his scientific baccalaureate in 2010 with a good overall mark. Ambitious from an early age, his goal was always to go far in education from secondary school. His late father, a retired primary school inspector, insisted that he go to the École Normale Supérieure to follow this path. To please him, he took the entrance exam to the École Normale Supérieure de Natitingou and passed with excellent marks. He was on the way to becoming an Assistant Certified Professor of Earth and Life Sciences (SVT).

About a week later, he obtained a national scholarship to enter the École Nationale Supérieure des Sciences Agronomiques de Djougou (ENSTA-Dj) at UP.

He began classes at the École Normale without any real conviction. He was certain that he didn't want to settle on being an SVT teacher.

He is driven by the deep desire to leave his name in history through research, which is why he refused the career choice that his father offered him. He saw it as unambitious in his vision of the future.

"I wanted to go far in my studies and impact the world," he says.

After a few weeks, without informing anyone, he abandoned this program and left the city to go to the university center of Djougou to study agronomic sciences and techniques.

When he arrived in Djougou, he didn't have anywhere to sleep and found a room in an orphanage. Fortunately, the next day, he found an older friend from Savè who agreed to give him lodgings. Once all the registration formalities had been completed, he finally called his parents to inform them of his decision.

With a state scholarship from the first year onward, Rodrigue followed the common core. In the second year, he moved toward animal production. In 2014 (the academic year 2012-2013) obtained a professional degree in agronomic sciences: animal production science and techniques, with excellent overall marks and congratulations from the examiners. He graduated at the top of his class.

His end-of-training internship (about four months) for this diploma was at the NGO Aquaculture and Sustainable Development (AquaDeD) in southern Benin in a village in the commune of Adjohoun in the Ouémé valley. His activities focused on improving fish farming practices and promoting fish farming in the rural community.

He next requested an internship at the research unit in aquaculture and aquatic ecotoxicology (now LaRAEAq) of the agronomy faculty at UP, directed by the co-supervisor of his bachelor's thesis, associate professor, and missionary in Djougou. Rodrigue served concurrently as a part-time teacher of fishing and aquaculture at the Agricultural Technical High School of Kika.

A whole year after the bachelor's degree (mandatory professional internship year), he did not obtain a master's degree scholarship. His family supported him financially for the specialized master's in fisheries management and aquaculture at the Faculty of Agronomic Sciences of the University of Abomey Calavi (UAC).

Rodrigue is a well-equipped specialist in smart and resilient fish farming and fishing practices. His research interests include aquaculture, aquatic ecotoxicology, molecular identification and population genetics of fish, as well as smart, sustainable and climate change resilient fish farming and fishing practices.

Rodrigue defended his master's, once again achieving very good overall marks with congratulations from the jury. His research was part of a research and development project funded by the Belgian cooperation and coordinated by his bachelor's supervisor, who was also his co-supervisor for his master's degree. In particular, he assessed the effects of pollution of water reservoirs in Benin's cotton basin by pesticide residues on the histology of organs (gonads, liver, and kidney) and the physiological state of tilapia in the Nile.

Rodrigue continued with a thesis at the doctoral school of agronomic and water sciences at UP in collaboration with the biosciences training and research unit of the UFHB in Côte d'Ivoire.

When he began his research work on Benin's water reservoirs, he had no guaranteed funding except for the technical facilities in his laboratory. He then obtained a doctoral training scholarship from the French government through the French Embassy in Benin.

In the process, his research work was financially supported by the International Foundation for Science (IFS), the West African Economic and Monetary Union (WAEMU), and the African-German Network for Excellence in Science (AGNES). His research results have contributed considerably to the development of fish farming practices in reservoirs, adapted from a zootechnical and health point of view to the eco-toxicological context related to agricultural pesticides in the cotton basin of northern Benin.

Three years later, Rodrigue had obtained a PhD in animal production, with a specialty in fisheries and aquaculture from UP and a PhD in biodiversity and valorization of ecosystems, with a specialty in hydrobiology from UFHB, still under the supervision of his mentor from the UP in Benin and another associate professor from Côte d'Ivoire.

Do you have any further questions? Send an email to: [oneplanet.award@cgiar.org](mailto:oneplanet.award@cgiar.org)

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In the beginning, Rodrigue was not in the field of climate change but was a specialist in aquaculture and fisheries. He acknowledges that his interest was aroused in 2017 when he was selected by his current mentor as an associate consultant to address the livestock and fisheries production components of a study on climate-smart agriculture commissioned by FAO in Benin. Thanks to this study, he understands the field's importance and the issues and challenges.

He works with rural communities that participate in real-world experiments. A practitioner, he is a founding member of two NGOs: Ecological Nature (ECO-NATURE NGO) and Aquaculture and Wetland Protection (AProZH NGO).

Dynamic and enterprising, he is a member of the Bureau d'Études et de Recherche en Agronomie pour un Développement Durable (BEP AGRO-DEV) and also co-promoter of an agropastoral and fish farm in the commune of Savé.

Rodrigue received information about the One Planet Fellowship through a network of friends.

In terms of professional career, he aspires to become a full professor and, later, an international civil servant.

His goal as a researcher is to help solve societal problems, inspire joy in producers, and leave his name through his high-impact publications.

A determined man, Rodrigue is aware of his main weakness, namely his low level of networking. He is therefore delighted to have the opportunity to join the network of One Planet winning candidates with the hope of developing other collaborative networks in Africa and Europe in the near future.

Regarding the technical component, he is happy to receive more training on approaches to evaluating climate-smart practices, strategies to obtain macro-research funding, scientific diplomacy, and marketing. In addition, he aspires to improve his knowledge of weather process analysis and

manipulation of large climate data sets with adapted software.

Although he has already completed several capacity-building and personal development training sessions, Rodrigue is convinced that this opportunity will strengthen his leadership qualities.

Rodrigue is working at two institutions: as a research assistant and member of the laboratory and external collaborating teacher at UP in Benin, and as a postdoctoral researcher at the University of Cape Coast in Ghana. This training will undoubtedly benefit the two institutions that support him.

This fellowship will also facilitate collaboration with AWARD.

Rodrigue's research products benefit rural communities since he always bases them on real societal problems.

He believes the main challenge is still financial—"we know that research funding is still poorly promoted in our countries."

**Rodrigue Pèlèbè Edéya Orobiyi** 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.

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