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CÔTE D'IVOIRE

Population: 28.2 million (2022)

Research and development expenditures as a proportion of GDP: 0.0704 % (2016)

Researchers (in full-time equivalent) per million inhabitants: 69.1383 (2005)

Scientific and technical journal articles: 241 thousand (2020)

Source: World Bank Data 2023

## CÔTE D'IVOIRE Country Report 2023

Côte d'Ivoire is on a positive economic trajectory, with an annual GDP growth projected at more than 7% annually in 2023 according to the African Development Bank. Investing in human capital to develop a skilled workforce is one of the ways to sustain this impressive growth.

The priority to this workforce development through higher education, research and innovation is already provided for and will play a critical role to reach the ambition of Côte d'Ivoire's Vision 2030 as well as the UN Sustainable Development Goals.

World-class scientists and more skilled labour will add value to improved value chains, a thriving manufacturing industry and business ecosystems, thereby creating prospects for quality jobs and improved livelihoods.

## **Contribution to PASET-Rsif**

Côte d'Ivoire is one of nine African countries investing in the Regional Scholarship and Innovation Fund (Rsif) of the Partnership for skills in Applied Sciences, Engineering and Technology (PASET), since 2019 (*Figure 1*). Its initial contribution of USD 1 million is used to train Ivorian PhD students in selected African host universities and collaborating international partner institutions.

Through PASET-Rsif, Côte d'Ivoire will build strong institutions and future science leaders to drive a science and technology-led growth and development.

## **Rsif thematic areas**



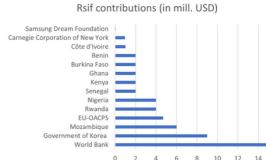
Data science, including artificial intelligence Sustainable food systems including agribusiness



Minerals, Mining and Material Science

## Rsif in Côte d'Ivoire at a glance









Energy including renewables



## Strengthening research and innovation capacity in Côte d'Ivoire

University Félix Houphouët-Boigny (UFHB) is one of the 15 Rsif African Host Universities (*Figure* 2).

The Africa Center of Excellence for Climate Change Biodiversity and Sustainable Agriculture (CCBAD) is hosting 22 Rsif funded PhD students from across the continent (36% women, 10 nationalities) doing research in the climate change thematic area. UFHB benefits from linkages with other African universities as well as the Rsif international partner institutions for the Rsif 'sandwich' programme where students spend 6-12 months at an advanced institution conducting collaborative research (*Figure 3*).

Rsif also provided video-conferencing equipment, facilities for e-learning and access to a wide range of scientific journals to the UFHB library and its students.

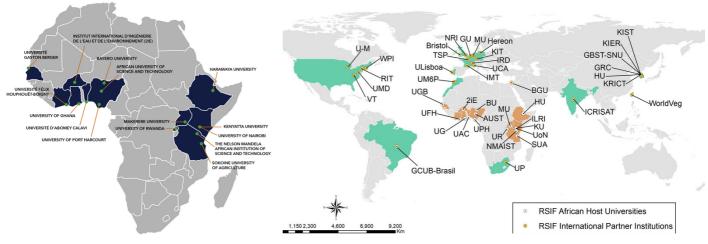


Figure 2: Rsif African Host Universities

Figure 3: Rsif International Partner Institutions

By working closely with academic institutions, relevant investors and governments, and other stakeholders; specialized knowledge will be integrated in the region and transferred to the future generation.

## **Spotlight on Ivorian Rsif Scholars**



#### Adjata Kamara, Ivorian, 26 years old

PhD student in Life and Environmental Sciences at Université Felix Houphouët-Boigny. Research placement at the Natural Resources Institute (NRI), University of Greenwich, United Kingdom.

Research area: Study of the diversity of fungi responsible for post-harvest rots of yams in Côte d'Ivoire in the context of climate change and research into control methods using biopesticides.

Her innovative research in biopesticides to protect yam crops is contributing to reduced post-harvest losses and increased income for farmers and traders.

She was celebrated as a Côte d'Ivoire Citizen of Honor on 15 April 2023.

Winner of the 2022 L'Oréal-UNESCO For Women in Science Sub-Saharan Africa Young Talents Awards - *Biopesticide against post-harvest rot of yam.*  Investing in training and harnessing excellent science leaders have tangible socio-economic returns for the nation and continent at large

#### **Food Systems**

#### **Material science**



#### Dr. Fréjus Ariel Kpêdétin Sodedji, Beninese

First Rsif alumni from UFHB, Côte d'Ivoire. Currently affiliated with Université d'Abomey-Calavi, Benin. Research placement at Korea Institute of Science and Technology (KIST) with support from the Samsung Dream Scholarship Foundation.

Research area: Strengthening resilience to climate change through the promotion of mungbean production and uses in Benin

#### **Vaccine development**



#### Charlie Frank Arthur N'guessan Amoia, Ivorian

Rsif PhD student at SACIDS, Sokoine University of Agriculture, Tanzania. Research placement at Virginia Tech, USA

Research area: Use of the Newcastle disease virus LaSota backbone for the synthesis of a recombinant vaccine



#### Kicoun Jean-Yves N'Zi Touré, Ivorian

Rsif PhD student in material science at Kenyatta University, Kenya. Research placement at Worcester Polytechnic Institute, Boston, USA.

Research area: Valorization of coffee wastes: Elaboration and performance properties of green composites

#### **Data science**



#### Kpangni Alex Jérémie Koua, Ivorian

Rsif PhD student in Computer Science at University of Gaston Berger, Senegal. Research placement at Rochester Institute of Technology (RIT), USA

Research area: Healthcare data analysis: Anomaly detection, profile discovering, segmentation, classification. Rsif awards competitive research and innovation grants that complements the PhD training at African universities by supporting research that promotes scientific excellence and use of knowledge for sustainable development impact.

# Reducing post-harvest losses and opening international markets for Ivorian producers



Dr. Brahima Camara (left) and Dr. Julius Ecuru, icipe (right)

West Africa contributes 89% of the world's production of yams. The innovation involved testing and production of biopesticides of plant origin, to treat fungi in yam.

Consumers are increasingly concerned about the quality of their food and the impact of food production methods on their health and the environment thus the urgent need to shift to biopesticides which have minimal health and environmental hazards.



Biopesticides of plant origin, used to treat fungi in yam

**Project title:** Sustainable and innovative production of yams in Côte d'Ivoire by post-harvest pest control

**Project leader:** Dr. Brahima Camara, UFHB

**Collaborating private sector partner:** SODIPEX SARL

Rsif PhD student Adjata Kamara was a member of the research team under the guidance of her supervisor Dr. Brahima Camara.

Her L'Oreal-UNESCO award brought visibility of this research and the wider institution to the international stage.

6 products have been patented, and for yams, two products have been approved by the Ministry of Agriculture.

Producers are being trained in the use of the biopesticides thus reducing post-harvest losses, increasing food security and incomes.

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In view of these excellent results, the university decided to set up an Industrial Research Unit on Biopesticides (URI-Biopesticides), of which I am in charge. I was also appointed Head of the Department for the Valorization of Research Results and Technological Innovation at the Scientific and Innovation Center on the UFHB Bingerville Campus.

Dr. Brahima Camara, 2023



### **Contact us**

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