

The PASET-Regional Scholarship and Innovation Fund for Applied Sciences, Engineering and Technology in Nigeria





Rsif in Nigeria



Research. Innovate. Transform Africa

Rsif - Designed for Impact

Flagship project of PASET



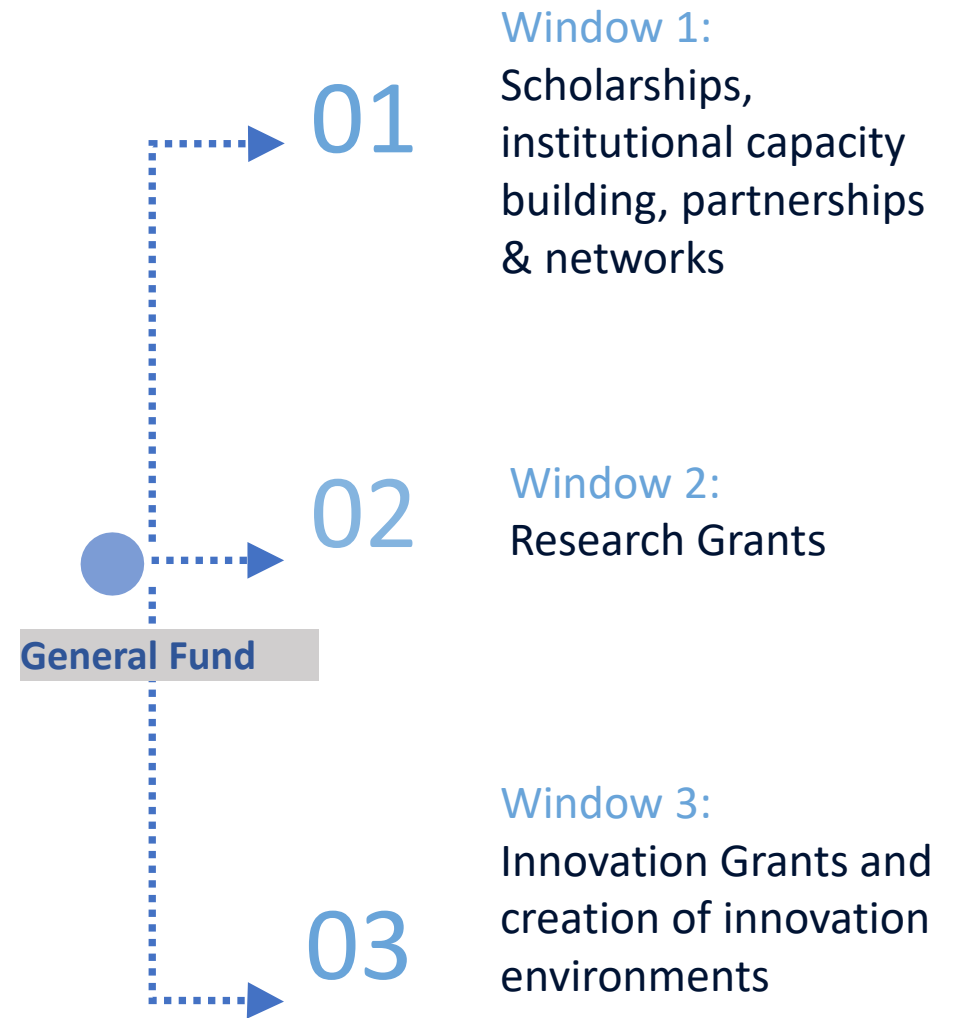
Building sustainable doctoral training, research and innovation ecosystems for development in Africa

Objectives

— Create a stock of highly skilled scientists, professionals and innovators in applied sciences, engineering and technology (ASET) areas

— Address imbalances in the number of women and disadvantaged groups in ASET fields in Africa

— Build African university capacity to provide relevant ASET training

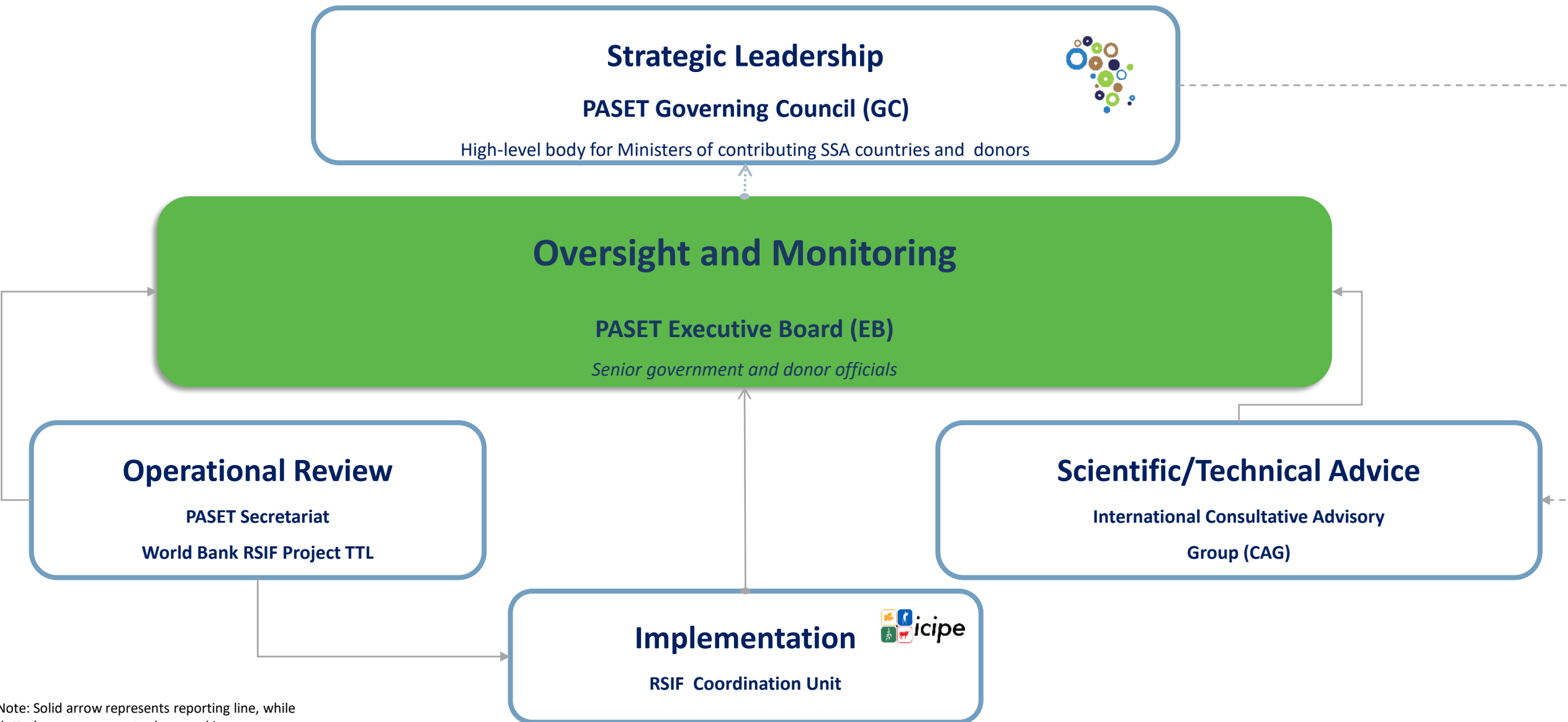


Rsif is a unique African initiative

1. Owned and managed by African governments through PASET (11 African governments)
2. To-date, investments from 9 African governments (between US\$1 -6 million each), the World Bank, Korea and other funders
3. Managed by an African led international research/innovation and training institution – *icipe*
4. Regional approach to grow Africa's STI agenda
5. Sustainability - vision to grow Rsif into a Pan-African science fund
 - establish a Permanent fund
 - exploring innovative financing and leveraging of private capital, e.g. blockchain technology, carbon credit, venture capital fund.



Inclusive, Efficient and Transparent Governance



Note: Solid arrow represents reporting line, while dotted arrow represents close working relationship

icipe Rsif - Fostering Excellence

- Highly Competitive Selection
- Ongoing Mentoring

- Selective Matching
- High Level of Interaction



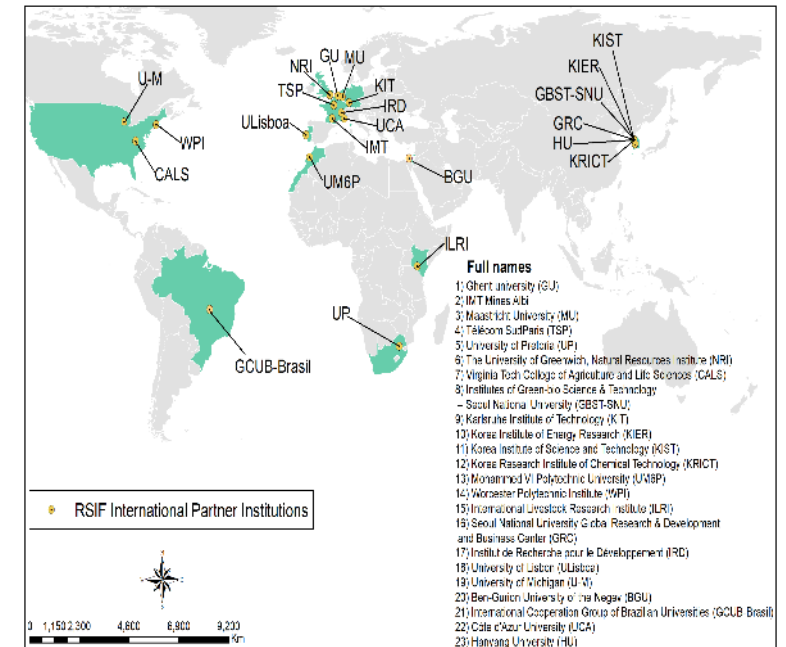
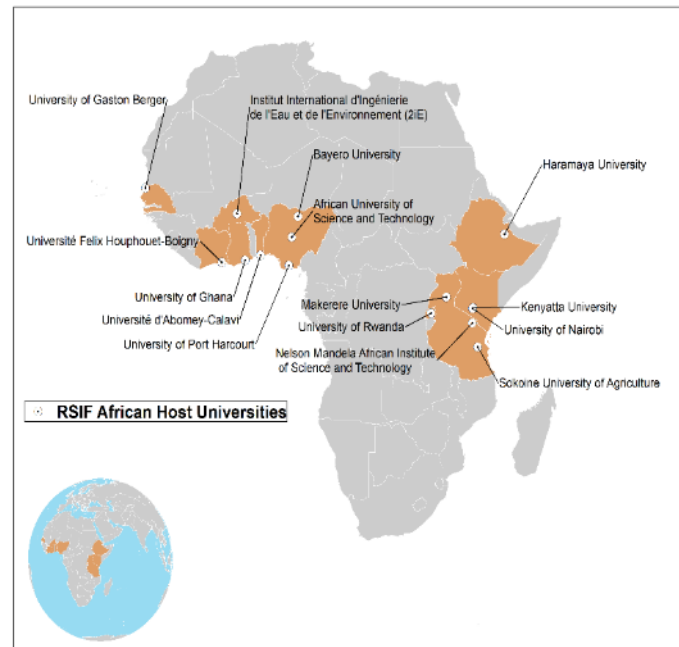
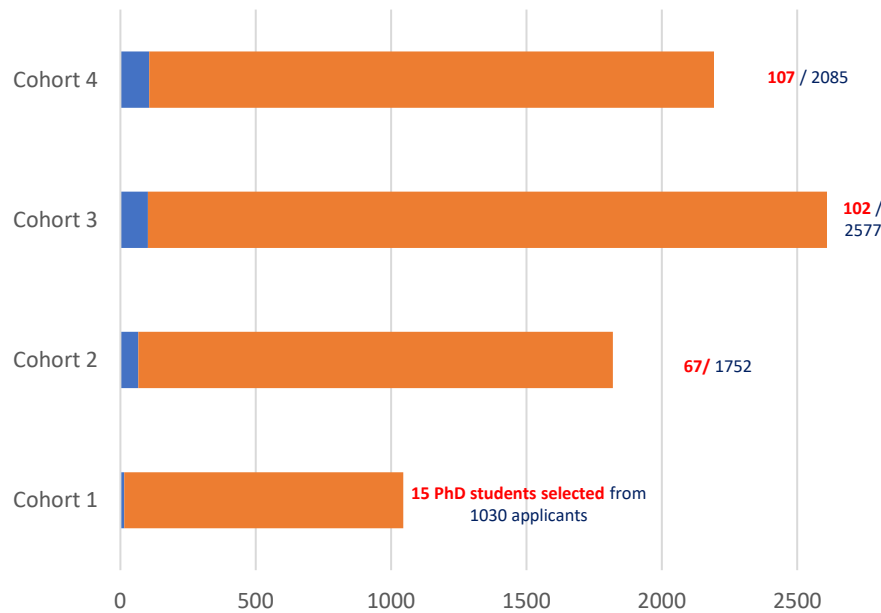
291 PhD Scholarships



15 African Host Universities
(4 AHUs admit first Rsif students in 2022)



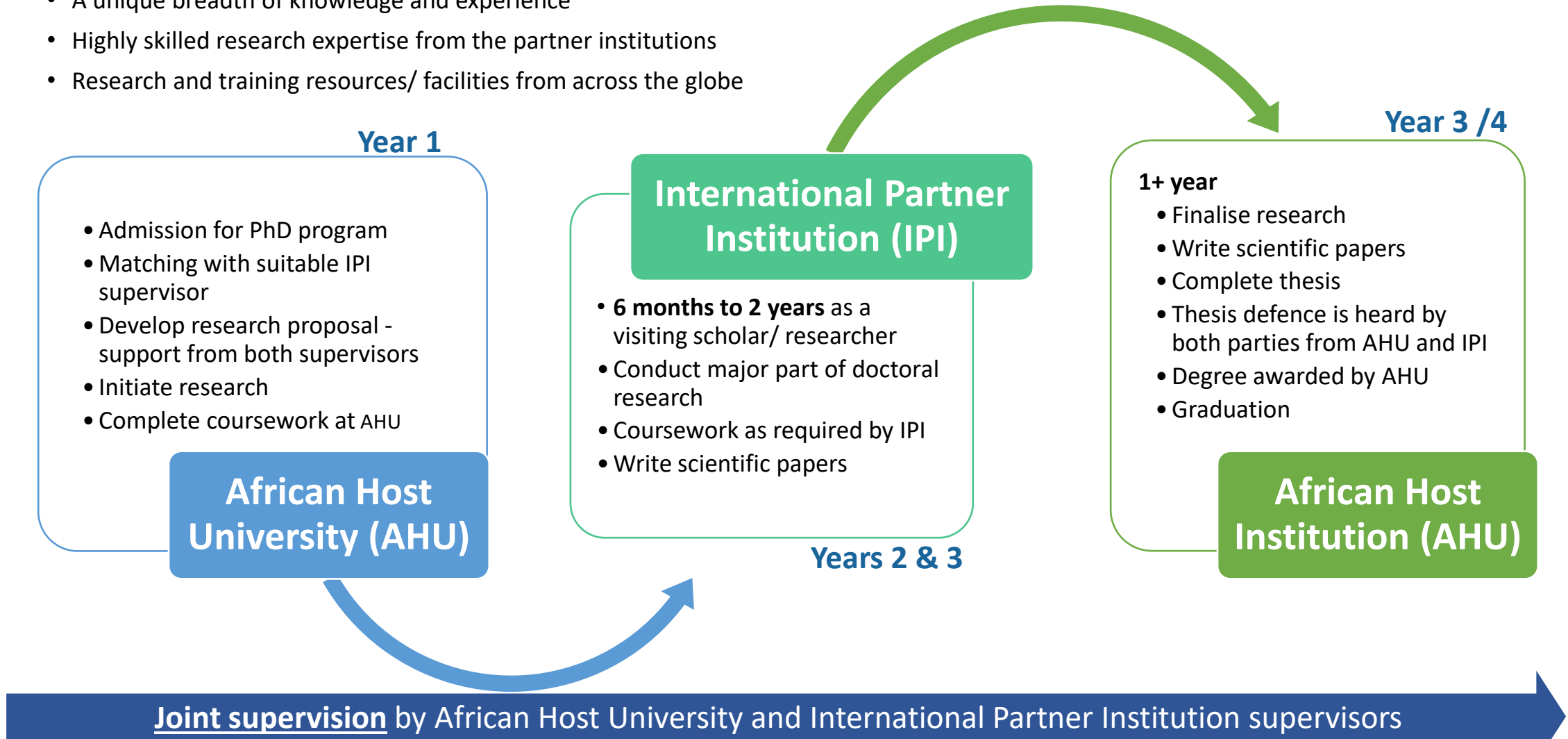
23 International Partner Institutes/universities



Rsif PhD Sandwich Model

Enables scholars and faculty members access to:

- A unique breadth of knowledge and experience
- Highly skilled research expertise from the partner institutions
- Research and training resources/ facilities from across the globe



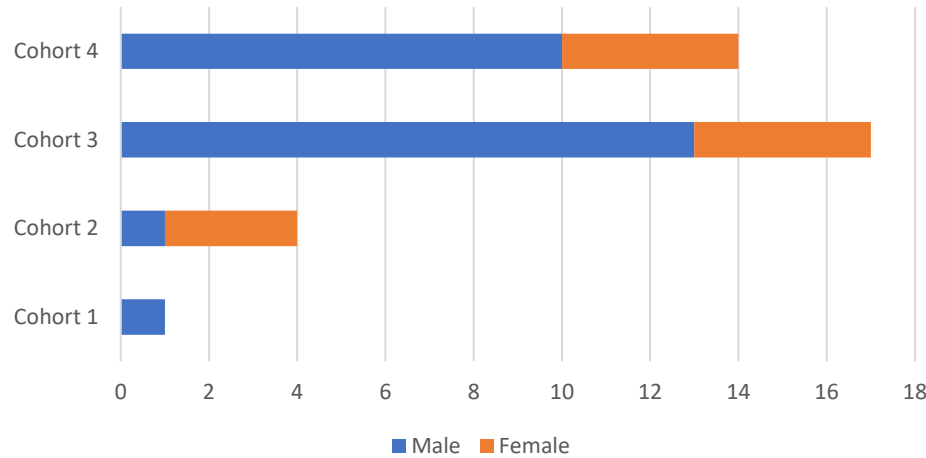
Rsif and Nigeria

- **Nigeria engaged with Rsif from the start**
 - Officially joined PASET in 2022
 - Nigeria participates in PASET governance.
 - Represented by the National Universities Commission
- **Investments in Rsif in pursuit of common agenda:**
 - supporting the building of international level PhD programmes anchored within African universities (i.e. AUST, BUK, Uniport)
 - accelerating high quality PhD training
 - strengthening capacity for innovative research and respond to African challenges
- **Significant benefits to Nigeria**
 - Pan-African approach, internationalization and intra-Africa mobility

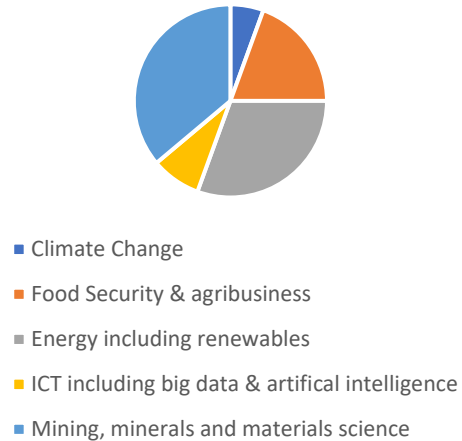


Nigerian Rsif PhD Students Overview

Nigerian Rsif PhD students



Nigerian national Rsif PhD students - by theme



- 36 Nigerian Rsif PhD students (31% women)
- Registered under 5 themes in 12 African Host Universities (reduced “in-breeding”)

Thematic Area	African Host University (AHU)	Nigerians
Climate Change (2) 6%	Bayero University Kano, Nigeria	1
	Haramaya University, Ethiopia	1
ICTs including Big Data & Artificial Intelligence (3) 8%	University of Abomey-Calavi, Benin	2
	University of Rwanda, Rwanda	1
Minerals, Mining and Materials Engineering (13) 36%	African University of Science and Technology, Nigeria	9
	Kenyatta University, Kenya	2
	Nelson Mandela African Institution of Science and Technology, Tanzania	2
Food Security and Agribusiness (7) 19%	University of Ghana, Ghana	5
	Sokoine University of Agriculture, Tanzania	1
	Makerere University, Uganda	1
Energy including renewables (11) 31%	University of Nairobi, Kenya	2
	University of Port Harcourt, Nigeria	9

Building Nigeria's Research and Training Ecosystem: Nigerian nationals' Rsif PhD Students (36) Status

Cohort 1

- 1 Scholar completed PhD Studies and graduated

Cohort 2

- 4 scholars at international placements or preparing to go

Cohort 3

- 17 scholars at their respective AHUs and collecting data in the field
- Matching for research placements

Cohort 4

- 14 scholars have reported to their AHU in first year of study



Emerging impact – set to “snowball”...

First Nigerian RSIF graduate

Dr. David Oluwasegun Afolayan, Nigeria,

RSIF Cohort 1 Alumnus

Graduated from African University of Science and Technology (AUST),
Nigeria

Placement at Worcester Polytechnic Institute, Boston, USA

3 journal publications in period

Selected for JIRA grant

Research project: Characterization of cleaved baryte surface-interfaces
and computational study of interactions of baryte ore-based middling
particles for enhanced mineral liberation and recovery

Founding member RSIF Alumni network

Training the next generation of science leaders. Solving critical problems.



Nigerian Rsif PhD Students Cohort 1 & 2

No	Name of Student	Gender	RSIF African Host University	Research Topic	Status	International Partner Institution
1	Dr. David Oluwasegun Afolayan	Male	African University of Science and Technology, Nigeria	Optimization of Mineral Bioprocessing and Nano-based Strategies of Nigerian Barite Beneficiation for Utilization as Oil Drilling Mud and other Industrial Raw Materials	Graduated 3 publications Selected for RSIF JIRA grant.	Worcester Polytechnic Institute, USA
2	Susan Ojochide Simon	Female	Bayero University, Nigeria	Investigation and Prediction of the Spatio-Temporal Variation of Drought in Northern Nigeria Using Earth Observation Dataset and Climate Models	At NRI, UK	University of Greenwich, Natural Resources Institute (NRI), UK
3	Jacinta Nmutaka Umechukwu	Female	University of Ghana, Ghana	Migration, Rural Development, Poverty and Food Security among Agricultural Households in Imo State, Nigeria	At AHU	Matching in progress
4	Fabian Chidubem Eze	Male	University of Nairobi, Kenya	Modelling and Simulation of Solar-assisted Dual Source Heat Pump System for Space Heating and Cooling	At KIER, Korea	Korea Institute of Energy Research (KIER), Korea
5	Fawziyah Oyefunke Olarinoye	Female	University of Port Harcourt, Nigeria	Hydrate Control and Management in Subsea Facilities	1 publication	KIER, Korea

Nigerian Rsif students cohort 3 – (1)

No	Name	Gender (M/F)	African Host University	Research Area	Status	International Partner Institution
6	Abdulrahman Adeiza Musa	M	African University of Science and Technology (AUST), Nigeria	Design Optimization and Properties Evaluation of Hybrid Natural Fiber Reinforced Polymer Matrix Composite for Sustainable Automotive Materials	At AHU	Korea Institution of Science and Technology (KIST) (TBC)
7	Daniel Amune	M	AUST	High Performance Stable Perovskite Solar Cell Device Based on Layered Perovskite		To be confirmed
8	Joseph Ekhebuma Ogbezode	M	AUST	Production of Iron Oxide Nanoparticles from Goethite-hematite ore using Mechanochemical Method	At AHU	To be confirmed
9	Nkechi Elizabeth Offia-Kalu	F	AUST	A comparative study of the effect of carbonized coconut shell and rice husk nano particles in natural rubber composites		To be confirmed
10	Uchechukwu Ezealigo	F	AUST	Drug delivery system: Using iron oxide nanoparticle for the diagnosis and treatment of atherosclerosis		To be confirmed
11	Uchenna Obi	M	AUST	Hybrid PAN/PEO-Based Solid Polymer Electrolytes in Li-Ion Batteries		KIST, Korea (TBC)
12	Adetomilola Fafure	F	Kenyatta University, Kenya	Development of biomass-derived silicon-carbon composite anodes for electrochemical energy storage applications	At AHU	KIST, Korea, Matching in progress
13	Ishaq Kariim	M	Nelson Mandela African Institution of Science and Technology, Tanzania	Performance investigation of nano-hybrid catalysts in microwave-induced co-pyrolysis of biomass/polymer for biojet fuel production	1 publication	KIER, Korea
14	Joshua Oyetade	M	Nelson Mandela African Institution of Science and Technology, Tanzania	Development of nano-size doped polyaniline composites for catalytic degradation of selected industrial azo dyes		KIST, Korea, Matching in progress

Nigerian Rsif students cohort 3 – (2)

No	Name	Gender (M/F)	African Host University	Research Area	Status	International Partner Institution
15	Funminiyi Oyawole	M	University of Ghana, Ghana	Gender, land tenure and smallholder irrigation: Implications for agricultural household welfare under climate change in Nigeria		To be confirmed
16	Oreoluwa Fayemi	F	University of Ghana, Ghana	Farmers' Attributes Associated with Fish Farm Profitability and the Impact of Fish Farming on Household Food Security in Nigeria		To be confirmed
17	Baridor Samuel Odagme	M	University of Port Harcourt (Uniport), Nigeria	Development of rock strength correlation for Niger Delta formations to overcome drilling challenges and wellbore instability for cost effective energy production		To be confirmed
18	Godfrey Osemudiamhen Eseigbe	M	Uniport	Application of biosynthesized silver nanoparticles for enhanced oil recovery		To be confirmed
19	Humphrey Harry	M	Uniport	Studying the applicability of microwave spectroscopic techniques in petroleum reservoir formation evaluation		To be confirmed
20	Okon Okon	M	Uniport	Hydrate formation control and management in subsea production facilities		To be confirmed
21	Olatunde Babawale	M	Uniport	Towards efficient hydraulic fracturing program in tight shale assets: Advanced analytics approach		To be confirmed
22	Uyodhuzhiniye Udogadi	M	Uniport	Experimental investigation into the use of environmentally friendly plant fibre as fluid loss prevention material during drilling operations		To be confirmed

Nigerian Rsif cohort 4 students - 1

No	Name	Gender (M/F)	African Host University	Research Area	Status	International Partner Institution
23	Bernice Ngwi Abraham	F	African University of Science and Technology (AUST), Nigeria	Chemical bath deposition of ternary Lead Zinc Sulphide for solar cell applications		To be confirmed
24	Halima Saliu	F	African University of Science and Technology (AUST), Nigeria	Development of a Low Cost and Highly Efficient Industrial Scale Adsorbent for Wastewater Treatment		To be confirmed
25	Jonathan Odafe Eveso	M	Haramaya University, Ethiopia	Assessing bird species vulnerability to climatic changes and wetland use in the Hadejia-Nguru Wetlands, Nigeria		To be confirmed
26	Victor Mshi Igba	M	Kenyatta University, Kenya	Synthesis and characterization of metal oxide-based photoelectrodes as photoanodes for enhanced photoelectrochemical water splitting		To be confirmed
27	Toyin Beatrice Osho	F	Makerere University, Uganda	Screening for mosaic disease resistance and effect of genotype, age and fertilizer on hydrogen cyanide (HCN) content in cassava		To be confirmed

Nigerian Rsif cohort 4 students - 2

– in first year of study

No	Name	Gender (M/F)	African Host University	Research Area	Status	International Partner Institution
28	Mohammed Usman Sajo	M	Sokoine University of Agriculture, Tanzania	Comparative study of the genomic variability of Newcastle disease virus strains from Nigeria and development of an effective genotype-matched live attenuated vaccine	In first year of study	To be confirmed
29	Daniel Dzarma Ezra	M	University of Abomey Calavi, Benin	Operational risk optimization in agricultural supply chains	In first year of study	To be confirmed
30	Ismaeel Abiodun Sikiru	M	University of Abomey Calavi, Benin	Securing communication information in transit network systems using machine learning algorithm	In first year of study	To be confirmed
31	Oluwafunke Dorcas Komolafe	F	University of Ghana, Ghana	Impact of contract farming arrangement on youth employment: A case of young farmers' participating in the anchor borrower programme (ABP) in Ogun State, Nigeria	In first year of study	To be confirmed
32	Ufedo Monday SHAIKU	M	University of Ghana, Ghana	Enhancing farmers' resilience to conflict-related risks: Implications on food security and prospects of agricultural insurance	In first year of study	To be confirmed
33	Muhammed Omeiza Abdulmalik	M	University of Nairobi, Kenya	Electrical and optical characterization of betalain with polypyrrole (ppy) thin films on indium tin oxide (ito) as p-n heterojunction solar cell	In first year of study	To be confirmed
34	Oluwasegun Cornelious Omobolanle	M	University of Port Harcourt, Nigeria	An experimental study of the sealability of polymer-based gels for gas well cementing	In first year of study	To be confirmed
35	Thomas Odey Magu	M	University of Port Harcourt, Nigeria	The production of biodiesel from African non-edible seeds oil using some heterogenous nanocatalysts	In first year of study	To be confirmed
36	Abidemi Matthew Orimogunje	M	University of Rwanda, Rwanda	Development of a multicriteria algorithm to mitigate handover failure in 4G and 5G mobile heterogeneous network	In first year of study	To be confirmed

Benefits to Nigerian Institutions



Research. Innovate. Transform Africa

41 Rsif students hosted in Nigeria

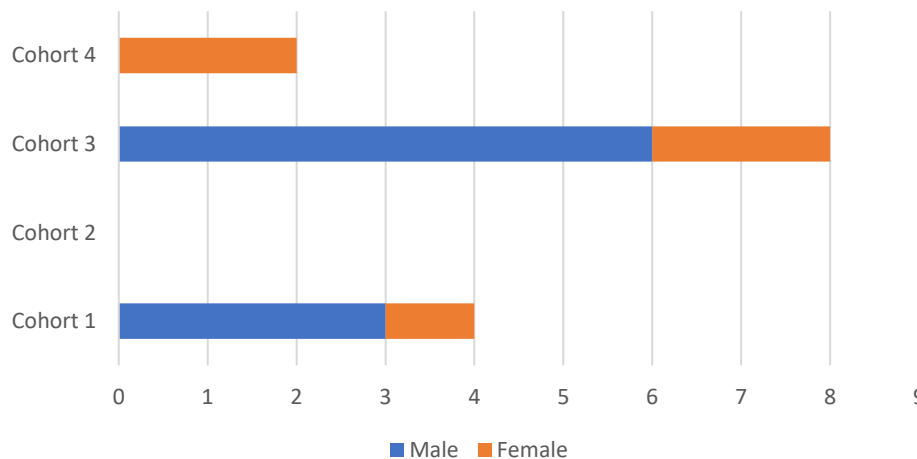
PASET Thematic Area	University	PhD programme	Number of Rsif students
Climate Change	Bayero University Kano	Centre for Dryland Agriculture, PhD in Natural Resource Management and Climate Change	15 (14 international students, 67% women)
Minerals, Mining and Material Science	African University of Science and Technology	Pan-African Materials Institute (PAMI)	14 (5 international students, 36% women)
Energy including renewables	University of Port Harcourt	Africa Center of Excellence in Oilfield Chemicals Research, PhD Program in Petroleum and Gas Engineering / Energy Economics	12 (3 international students, 17% women)

African University of Science and Technology (AUST) – an African host university

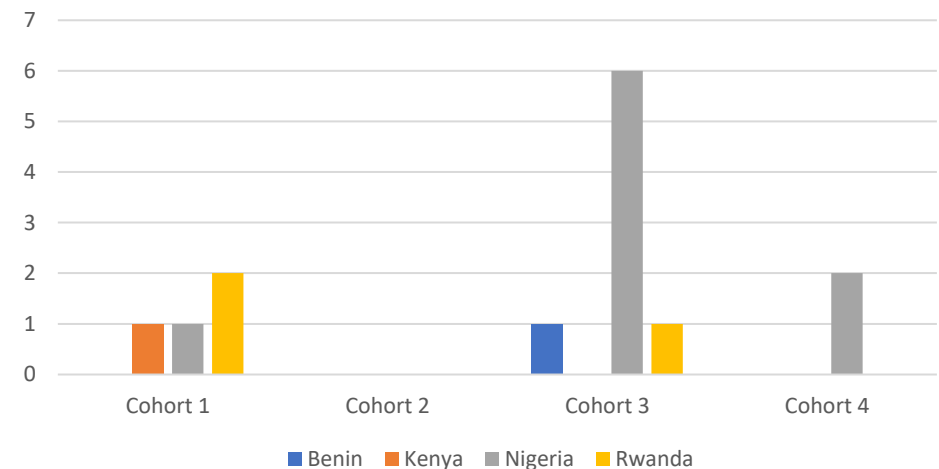
- Pan-African Materials Institute (PAMI)
- Hosting 14 Rsif PhD scholars (36% women, 5 international students)
- Four African nationalities represented (Benin, Kenya, Nigeria and Rwanda)
- The four cohort 1 students have all graduated
- So far 21 publications from Rsif AUST students



Rsif PhD students at AUST – Gender distribution



Rsif PhD students at AUST – 4 nationalities



Cohort 1 Rsif students at AUST: Completed and graduated

No	Name	Nationality	Gender	Research topic	Status	International Partner Institution
1	Dr. Richard Kipyegon Koech	Kenya	Male	Additive effects on the charge carrier dynamics and performance metrics of Formamidinium-rich mixed lead halide perovskite solar cell	Graduated 12 publications JIRA Award	Worcester Polytechnic Institute (WPI), Boston USA
2	Dr. David Oluwasegun Afolayan	Nigeria	Male	Characterization, Gravity Concentration, and Physicochemical Studies of Artisanal Mining and Processing of Baryte and its Ores for oil Drilling Mud	Graduated 4 publications JIRA Award	WPI
3	Dr. Jean Baptiste Habinshuti	Rwanda	Male	Optimization of Tantalum recovery from typical Rwandan and Nigerian tantalite ores	Graduated 8 publications	WPI
4	Dr. Jeanne Pauline Munganyinka	Rwanda	Female	Geometallurgical studies of selected gold ores with the application of environmentally friendly lixivants	Graduated 6 publications	WPI



Cohort 3 & 4 Rsif students at AUST

No	Name	Nationality	Gender	Research topic	Status	International Partner Institution
5	Gbetoglo Charles Komadja	Benin	Male	Engineering rock blasting in surface mining for maximum production and minimization of damages to surrounding environment	Cohort 3 - At AUST	To be confirmed
6	Abdulrahman Adeiza Musa	Nigeria	Male	Design Optimization and Properties Evaluation of Hybrid Natural Fiber Reinforced Polymer Matrix Composite for Sustainable Automotive Materials	In first year of study	KIST, Korea (TBC)
7	Daniel Amune	Nigeria	Male	High Performance Stable Perovskite Solar Cell Device Based on Layered Perovskite	In first year of study	To be confirmed
8	Joseph Ekhebuma Ogbazode	Nigeria	Male	Production of Iron Oxide Nanoparticles from Goethite-hematite ore using Mechanochemical Method	In first year of study	To be confirmed
9	Nkechi Elizabeth Offia-Kalu	Nigeria	Female	A comparative study of the effect of carbonized coconut shell and rice husk nano particles in natural rubber composites	In first year of study	To be confirmed
10	Uchechukwu Ezealigo	Nigeria	Female	Drug delivery system: Using iron oxide nanoparticle for the diagnosis and treatment of atherosclerosis	In first year of study	To be confirmed
11	Uchenna Obi	Nigeria	Male	Hybrid PAN/PEO-Based Solid Polymer Electrolytes in Li-Ion Batteries	At AUST	KIST, Korea (TBC)
12	Theophile Mugerwa	Rwanda	Male	Water contaminants removal using activated carbon developed from biomass	At AUST	To be confirmed
13	Bernice Ngwi Abraham	Nigeria	Female	Chemical bath deposition of ternary Lead Zinc Sulphide for solar cell applications	Cohort 4 - In first year of study	To be confirmed
14	HALIMA SALIU	Nigeria	Female	Development of a Low Cost and Highly Efficient Industrial Scale Adsorbent for Wastewater Treatment	Cohort 4 - In first year of study	To be confirmed

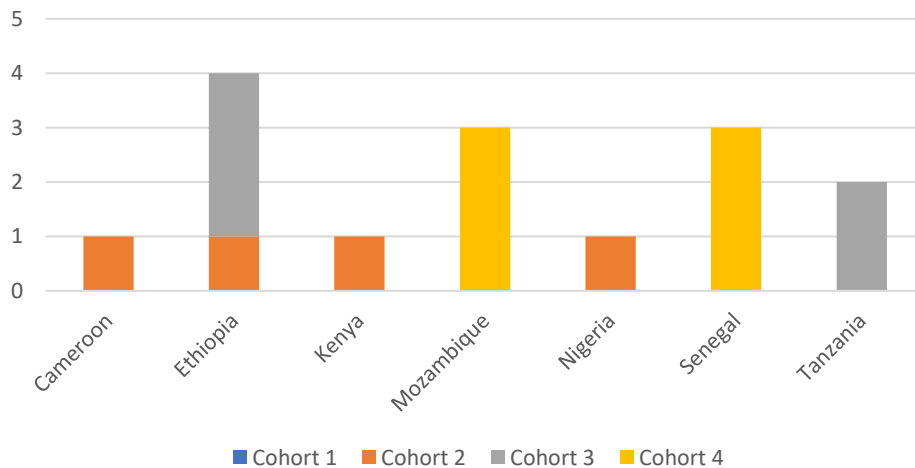
Bayero University Kano, an Rsif African Host University

- Centre for Dryland Agriculture
- PhD in Natural Resource Management and Climate Change
- Hosting 15 Rsif PhD scholars (67% women, 14 international students)
- Seven nationalities (Cameroon, Ethiopia, Kenya, Mozambique, Nigeria, Senegal and Tanzania)

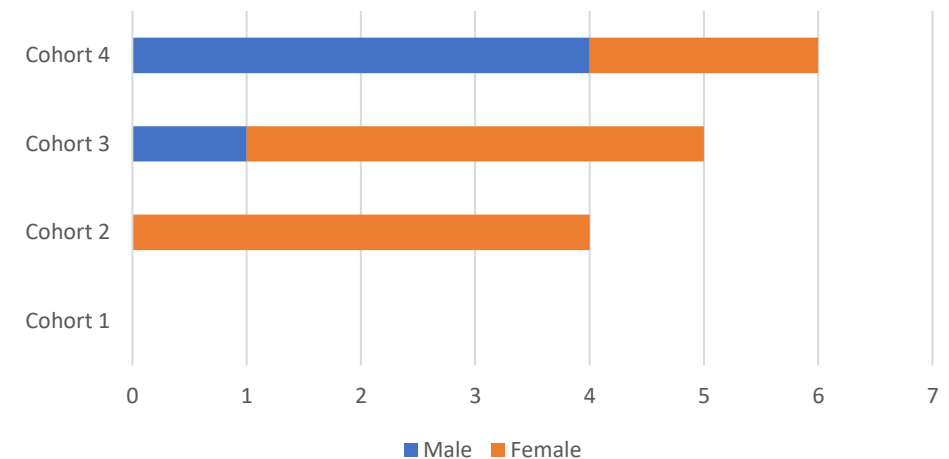


Photo: BUK signing agreement as PASET- Rsif African Host University in October-2019

Rsif PhD students at BUK - by nationality



Rsif PhD students at BUK - by gender



Cohort 2 Rsif students at Bayero University Kano

- on international research placement

No	Name	Nationality	Gender	Research Topic	Status	International Partner Institution
1	Ursula Hilary Tumamo Djuidja	Uganda	Female	Assessing farmers and pastoralists climate information needs for strengthening climate change adaptation strategies in the North region of Cameroon	At NRI, UK	NRI, University of Greenwich, UK
2	Fenet Belay Daba	Ethiopia	Female	Impact of Agricultural Adaptation Strategies to Climate Change and Variability on Farm Households' Food security in Ethiopia	At NRI, UK	NRI, University of Greenwich, UK
3	Jane Gachambi Mwangi	Kenya	Female	An assessment of suitable habitats and sites for conservation of East African Sandalwood in Arid and Semi-Arid, Kenya	At NRI, UK	NRI, University of Greenwich, UK
4	Susan Ojochide Simon	Nigeria	Female	Modelling the Spatiotemporal Variation of Drought and its Impact on Crop Yield in Semi-arid Regions of Nigeria	At NRI, UK	NRI, University of Greenwich, UK

Cohort 3 Rsif students at BUK – pursuing studies and preparing for research placement

No	Name	Nationality	Gender	Research Topic	Status	International Partner Institution
5	Birki Gurmessa	Ethiopia	Female	Climate change adaptation and mitigation strategies, and early warning systems to build pastorals resilience: empirical evidence from Borana pastorals, Southern Ethiopia	Preparing to go for research placement	IMT, France, Matching in progress
6	Desta Mulu/Gebeyehu	Ethiopia	Female	Implication of acacia decurrence tree-based (acacia woodlots for charcoal production) intensification to build resilience of socio-ecological systems to climate variability in Injibara, Northwestern Ethiopia		To be confirmed
7	Tsegaye Girma Bekalo	Ethiopia	Male	Soils Under Simulated Warming: Microbial Metabolic Response and Carbon Modelling		To be confirmed
8	Happyngess Ngonyani	Tanzania	Female	Adoption of indigenous knowledge and technologies in trans-boundary watershed management policies as a climate mitigation tool in Mara River basin of Tanzania and Kenya		UGent, Belgium, to be confirmed
9	Rehema Mrutu	Tanzania	Female	Microbial engineering to mitigate methane emission in ruminant livestock		GBST, Korea, to be confirmed

Cohort 4 Rsif students at BUK - in first year of study

No	Name	Nationality	Gender	Research Topic	Status	International Partner Institution
10	Thening Diouf	Senegal	Female	Combined influence of organic and mineral manures on the sustainable intensification of maize cultivation and its nutritional value in Senegal	In first year of study	To be confirmed
11	Rafael Francisco Nanelo	Mozambique	Male	Sustainable production practices as an element to mitigate the effects of climate change in the semiarid region	In first year of study	To be confirmed
12	Teofilo Damiao Nhamuhuco	Mozambique	Male	Evaluation of the effects of tropical cyclones Ana and Gombe on the mangrove ecosystem.	In first year of study	To be confirmed
13	Paulo Ester Da Conceicao Foguete Goba	Mozambique	Male	Contribution of Non-Timber Forest Products (NTFP) to livelihood and the ecological implication of its exploitation in Magoe National Park, Mozambique	In first year of study	To be confirmed
14	Khadidiatou Ba	Senegal	Female	Investigate the level of vulnerability of agriculture to salinisation in the context of climate change in the Kaolack region	In first year of study	To be confirmed
15	Momath Diankha	Senegal	Male	Ecosystem Services Assessment in West African Urban Forests and the impact on the dwellers' wellbeing between 1990 and 2020. Case study: Mbao Classified Forest Dakar (Senegal) and Urban Park Bangr Weoogo Ouagadougou (Burkina Faso)	In first year of study	To be confirmed

Strengthening Research Networks for Bayero University

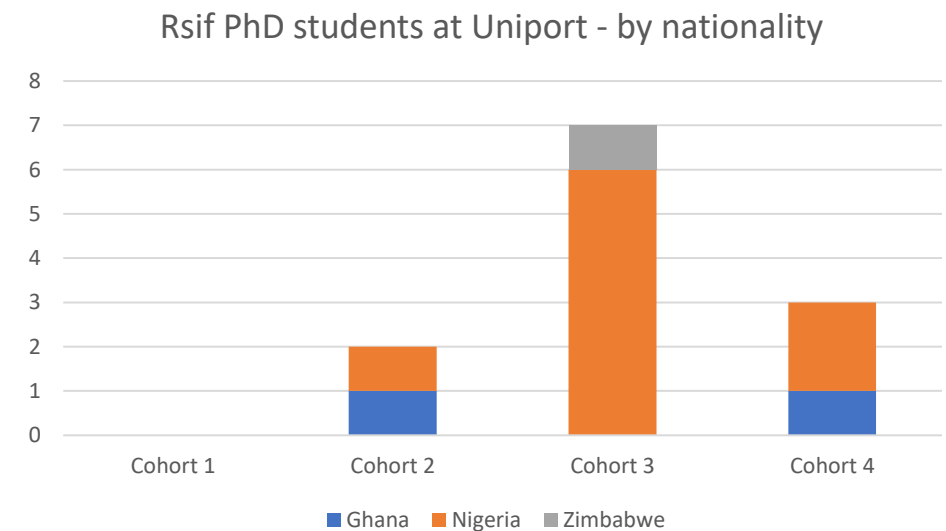
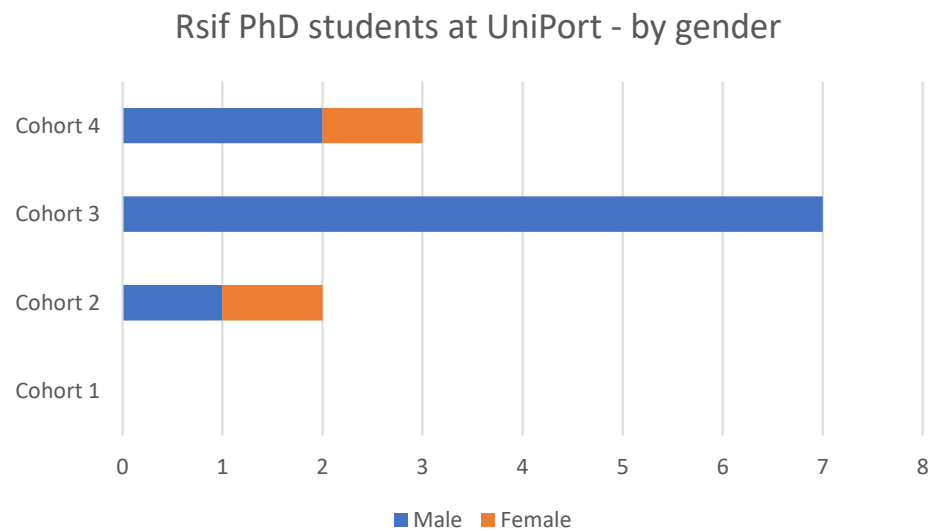
International Partner Institutions (IPIs) signing agreements and exchanging staff and students with Bayero University Kano

- University of Greenwich, Natural Resources Institute (NRI), United Kingdom –Ghent University, Belgium - **Four cohort 2 students currently on research placement**
- IMT Mines Albi, France
- Institutes of Green-Bio Science & Technology – Seoul National University (GBST-SNU), Korea
- University Mohammed VI Polytechnic (UM6P), Morocco



University of Port Harcourt – an Rsif African Host University

- Africa Center of Excellence in Oilfield Chemicals Research
- PhD Program in Petroleum and Gas Engineering / Energy Economics
- 12 RSIF PhD scholars (17% women, 3 international students)
- Three nationalities (Ghana, Nigeria, Zimbabwe)
- So far 2 publications from Rsif students – to increase as cohort 3&4 progress



12 Rsif students at UniPort - 1

No	Name	Nationality	Gender	Research topic	Status	International Partner Institution
1	Shaibu Mohammed	Ghana	Male	Emulsion properties of locally sourced materials for enhanced oil recovery	Preparing to go for research placement; 1 publication	To be confirmed
2	Fawziyah Oyefunke Olarinoye	Nigeria	Female	Agro-Waste Based Amino Acids as Kinetic Hydrate Inhibitors	Preparing to go for research placement; 1 publication	Korea Institute of Energy Research (KIER), Korea
3	Baridor Samuel Odagme	Nigeria	Male	Development of rock strength correlation for Niger Delta formations to overcome drilling challenges and wellbore instability for cost effective energy production	In first year of study	To be confirmed
4	Godfrey Osemudiamhen Esegbe	Nigeria	Male	Application of biosynthesized silver nanoparticles for enhanced oil recovery	In first year of study	To be confirmed
5	Humphrey Harry	Nigeria	Male	Studying the applicability of microwave spectroscopic techniques in petroleum reservoir formation evaluation	In first year of study	To be confirmed
6	Okon Okon	Nigeria	Male	Hydrate formation control and management in subsea production facilities	In first year of study	To be confirmed
7	Olatunde Babawale	Nigeria	Male	Towards efficient hydraulic fracturing program in tight shale assets: Advanced analytics approach	In first year of study	To be confirmed
8	Uyodhuzhiniye Udogadi	Nigeria	Male	Experimental investigation into the use of environmentally friendly plant fibre as fluid loss prevention material during drilling operations	In first year of study	To be confirmed
9	Itai Mutadza	Zimbabwe	Male	Reactive flow in porous media for Carbon Capture and Storage	Matching in progress	Korea Institute of Science and Technology (KIST)

Rsif students at UniPort - 2

No	Name	Nationality	Gender	Research topic	Status	International Partner Institution
10	Gloria Adjei	Ghana	Female	Catalytic Conversion of CO2 into Valuable Fuels Using a Hybrid Approach	In first year of study	To be confirmed
11	Oluwasegun Cornelious Omobolanle	Nigeria	Male	An experimental study of the sealability of polymer-based gels for gas well cementing	In first year of study	To be confirmed
12	Thomas Odey Magu	Nigeria	Male	The production of biodiesel from African non-edible seeds oil using some heterogenous nanocatalysts	In first year of study	To be confirmed

Strengthening Research Networks for University of Port Harcourt

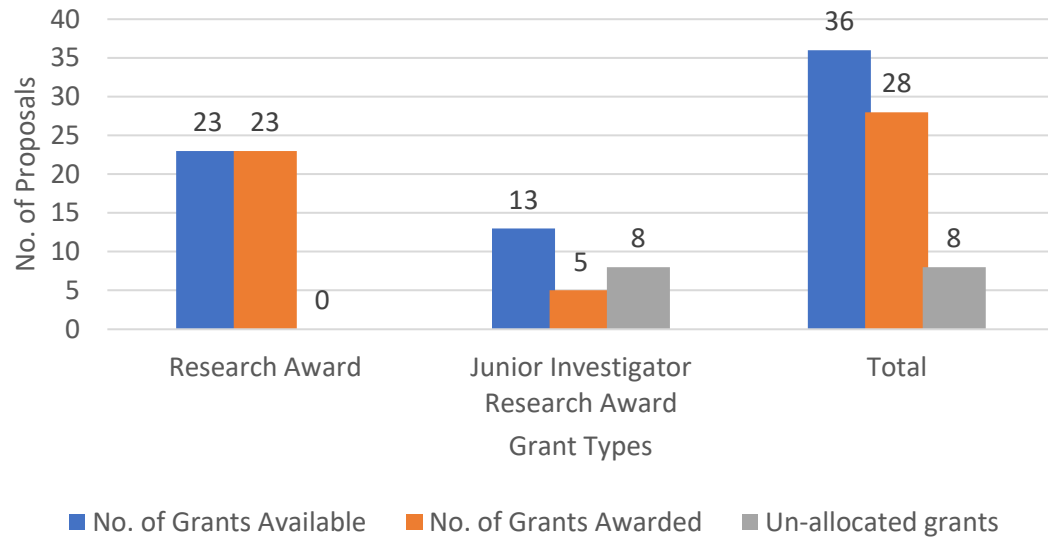
International Partner Institutions (IPIs) signing agreements and exchanging staff and students with University of Port Harcourt

1. Korea Institute of Energy Research (KIER), Korea
2. Korea Institute of Science and Technology (KIST), Korea

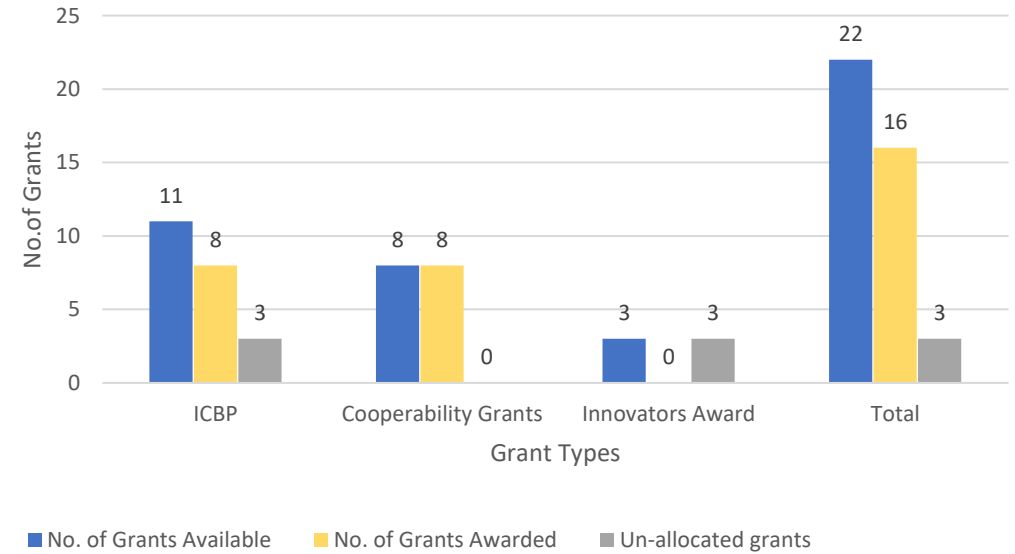


Enhancing Research and Innovation Excellence

RSIF Research Grants



RSIF Innovation Grants



Total Grants Awarded: US\$ 3.2 M

44 Research and Innovation Grants awarded to **7** SSA countries

Strengthening Research and Innovation Capacity at the African University of Science and Technology (AUST)



- **Enhanced innovation ecosystem within the university (1 Institutional Innovation Capacity Building (ICBP) Grant**
 - From research to markets: Strengthening the Innovation Capacity of AUSTInspire
- **Increased opportunities to translate research outputs into commercial products (1 innovation commercialization grant awarded to faculty)**
 - Large-Scale Manufacturing of Personal Protective Equipment for the Medical Industry in Nigeria and Sub-Saharan Africa via 3D Printing

Strengthening Research and Innovation Capacity at the Bayero University Kano



- **High quality research on key developmental issues**
(1 *Research* Grants awarded to faculty)
 - Do-It-For-Yourself Adaptation: New Pathways For Community Flood Risk Communication

- **Enhanced innovation ecosystem within the university** (1 *Institutional Innovation Capacity Building (ICBP) Grant*)
 - Initiatives for Sustainable Food Security Innovations in the Drylands

Strengthening Research and Innovation Capacity at University of Port Harcourt



- **High quality research on key developmental issues (1 *Research Grant* awarded to faculty)**
 - Developing Orange Mesocarp and Red Onion Skin into Multifunctional Materials for Oilfield Applications



- **Enhanced innovation ecosystem within the university (1 *Institutional Innovation Capacity Building (ICBP) Grant*)**
 - Strengthening Institutional Infrastructure for an Innovation Ecosystem

Accelerating Inclusive Green Growth through Agri-based Digital Innovation (AGriDI) - Nigeria

Two Rsif-AGriDI funded innovation projects under implementation in Nigeria.



Improving Women's opportunities to access microfinance for solar-powered agro-processing equipment (MarketMap) - Sosai Renewable Energy

- MarketMap is a digital mapping tool that aims to overcome barriers that potential women entrepreneurs face in accessing microfinance for purchasing agro-processing equipment





Photo: *Icipe* team on project visit to FUNAAB SMARTSOIL

Digital Soil Mapping for Optimal Agricultural Yield and Sustainable Soil Biodiversity in Southwest Nigeria Using Artificial Intelligence

- provides hyper-local soil information in a way that is easily accessible and affordable to farmers
- will guide farmers for the sustainable use and management of soils resources as well as agronomic advisory service to improve agricultural yield and productivity, food security, promote soil biodiversity conservation and management, and adaptation to climate change among smallholder farmers.
- a partnership between Department of Computer Science and Department of Soil Science and Land Management, FUNAAB in collaboration with Safefood Africa Agroenterprise, Ogun State, Nigeria.

Multiple benefits to Nigeria's research and innovation ecosystem

1. RSIF graduates, with strong research networks, able to “win” additional research awards.
2. Reduced “inbreeding” at Nigerian universities
3. AUST, BUK and UniPort received video conference equipment, library resources and benefit from various trainings e.g.
 1. Over ten staff trained in proposal writing training workshops
 2. Arranged exchange visits for AUST, BUK and UniPort staff to Morocco and Japan
4. New institutional research and training networks.
5. Graduates equipped with advanced technologies, cross cutting and technical skills and relevant international, regional and national networks
6. So far 23 journal publications from Rsif students in Nigerian universities in high impact journals
7. Nine Rsif research and innovation projects under implementation.
8. Research outputs and knowledge generated in line with national priorities

Thank You

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