

Africa Regional Scholarship and Innovation Fund for Applied Sciences, Engineering and Technology

Progress Report to the World Bank January– June 2020

Executive Summary

The Regional Scholarship and Innovation Fund of the Partnership for skills in Applied Sciences, Engineering and Technology (PASET) aims to strengthen the institutional capacity of African universities to train quality PhD graduates, enhance research and innovation environments at these institutions and to generate transformative technologies that respond to key African challenges. This Report provides summary of progress in implementation of the RSIF Program for the period January to June 2020. Despite some delays which occurred during the reporting period due to the COVID-19 situation as articulated in specific sections in the report, the Project remains on track. Key achievements during the period are:

- a) Following signature of the Subsidiary Agreement (SA) between Ghana and *icipe*, both Burkina Faso and Senegal have now fully executed SAs with *icipe*. As part of the World Bank ACE Impact Project, Benin and Nigeria are also expected to join PASET soon. There are now six African governments contributing to RSIF- Burkina Faso, Cote d'Ivoire, Ghana, Kenya, Rwanda and Senegal.
- b) In January 2020, a proposal writing workshop was organised for 35 staff from African Host Universities and their partners to develop proposals for capacity building in higher education under Erasmus+. A planned second workshop is currently on hold due to the Covid-19 situation, but online engagement continues without disruption. The RCU has also supported the preparation and submission of three other proposals in the period to funders.
- c) Lion's Head Global Partners (LHGP), the firm commissioned to conduct the feasibility study on establishment of the Endowment Fund, finalized a second draft progress. LHGP will in the next period prepare a detailed resource mobilization strategy for RSIF and share the final draft report to the PASET EB.
- d) A three-person independent panel constituted and commissioned by *icipe* to review the Kenyatta University PhD program and its accreditation status recommended that Kenyatta University should be maintained as a PASET-RSIF African Host University for the PhD program in Materials Science, and PASET-RSIF students should be allowed to start training in the PhD program. *icipe* has subsequently signed a partnership agreement with Kenyatta University outlining terms of collaboration with KU as an African Host University (AHU).
- e) Mohamed VI Polytechnic University (UM6P), Morocco, has committed to provide 20 PhD fellowships to RSIF scholars to support internships at UM6P and its partners in the north. A list of UM6P faculty and related topics of interest has been identified to facilitate matching with AHUs. Discussions are also underway with UM6P to explore co-hosting of the RSIF Technical Annual Meeting in Morocco next year.
- f) Fourteen grants were approved for award by the PASET EB on May 29, 2020. The awards are for the Innovation Capacity Building Program Grant (Innovation, Type 1) and RSIF Cooperability Grants (Innovation Type 2) and the RSIF Research Award (Research, Type 1). Awardees are currently revising their proposals and will contract with *icipe* during July 2020, prior to project implementation. Two virtual workshops have been held to support and guide the teams to finalize their proposals and to prepare for implementation. RSIF Students will be part of the implementation teams.
- g) The 15 RSIF students in Cohort 1 are progressing well, and have initiated their sandwich placements. Six students are currently placed at the Korea Institute of Science and Technology (KIST) and an

additional six at Worcester Polytechnic Institute in the USA while one is at the International Livestock Research Institute (ILRI) (Annex 4). Two students remain unmatched, and RCU is providing support for matching the students.

- h) During the last period, 67 RSIF PhD Scholars in the second cohort (27 women; 24 faculty) signed scholarship agreements. The students participated in an online orientation training. Kenya and Ghana citizens constitute the largest numbers in the cohort (12 & 11 students respectively) while Malawi, DRC, Sudan had the lowest number with one RSIF PhD student each.
- i) *icipe* published the Third call of RSIF PhD scholarships on April 30, 2020 with a deadline of June 22, 2020. Based on funding received from countries, the Government of Korea and expected contributions from potential partners/ countries, an estimated 116 RSIF PhD Scholars will be recruited for the third cohort. The selection is expected to conclude by September 2020.
- j) The RCU continued to strengthen communication for RSIF. From mid-May a weekly newsletter was initiated whose subscribers has grown to over 4600. A communications plan was developed and implemented for dissemination of the call for RSIF PhD Cohort 3 Scholarships. This explored specific target audiences with specific communications channels i.e. social media posts, newspaper adverts (in the PASET countries), television, e-media i.e. sciencedev.net, University World News, scholarships portals, universities websites, ministry websites, and student/alumni associations. A Draft communications strategy has been developed for RSIF and procurement for the communications firm will be finalised based on the strategy.

Key challenges during the period were:

- a. As expected, the major challenge during the period was COVID-19 and its real, perceived, and potential impacts. Lockdowns are relaxing somewhat, but there remains limited in-country movement, university closures, border closures etc. that are impacting scholars and will affect implementation of research projects. They have also affected the organization of face to face meetings. Delays are expected from Cohort 1 Scholars, for which students and their supervisors must make plans to ensure students finish on time. Some of the IPIs (such as ILRI) are also closed. The second cohort students are not able to proceed to AHUs and a strategy for managing the current situation is being implemented. Supervision, mentorship, monitoring, evaluation, and learning will all need to be strengthened, taking advantage of e-tools. The RCU remains fully functional and the COVID-19 situation is being monitored.
- b. There remains a challenge in identifying adequate numbers of qualified women applicants for RSIF Scholarships. The proportion of women applicants in both Cohort 1 and 2 was approximately 20%. For the third call, *icipe* has significantly enhanced communication channels, including by placing adverts in national newspapers in target countries. However, despite the better distribution of students across countries, there will be need for further intentional effort to ensure women participation.

Introduction

The Regional Scholarship and Innovation Fund (RSIF) aims to address fundamental gaps in skills and knowledge needed for increasing the use of science, technology and innovation for sustained economic growth in sub-Saharan Africa (SSA). This Report provides a summary of progress in implementation of the RSIF Program for the period 1st January 2020 to 30th June 2020. The report is arranged in the two RSIF program component areas: viz, Component 1: *Capacity Development for Operation of the Scholarship, Research and Innovation Fund*; and Component 2: *PhD Scholarships, research grants and innovation grants*. Some delays occurred during the reporting period due to the Covid-19 situation as articulated in specific sections in the report.

A. Component 1: Capacity Development for Operation of the Scholarship, Research and Innovation Fund

1.1 Capacity building for management of the RSIF General Fund and setting up the RSIF Endowment Fund:

1.1.1 Resource mobilization

The RCU continued to implement the interim resource mobilization plan and related activities to enhance the visibility and mobilise resources for the RSIF program. Key updates during the period are:

- k) African country contributions are at various stages (see Annex 1). Following signature of Ghana Subsidiary Agreement (SA) with *icipe*, both Burkina Faso and Senegal have now signed SAs with *icipe*. As part of the World Bank ACE Impact Project, Benin and Nigeria are also expected to join PASET soon. There are now six African governments contributing to RSIF - Burkina Faso, Cote d'Ivoire, Ghana, Kenya, Rwanda and Senegal.
- l) A side event to brief/update government delegations on RSIF was held at the Third ACE Impact and 12th ACE 1 Workshop in Abuja, Nigeria from 24-29 February 2020. The Session provided clarifications on emerging issues related to RSIF. Government delegations were from Côte d'Ivoire¹, Ghana, Burkina Faso, Senegal, and Nigeria among others. Side meetings were also held with government representatives and the World Bank to discuss subsidiary agreements, and related withdrawal procedures.
- m) Discussions previously initiated with other countries (including Mauritius, Tanzania, Malawi, South Africa, Uganda, Zambia, and Zimbabwe) could not mature due to the COVID situation. *icipe* dispatched the signed letters from the PASET Governing Council Chair to the respective Ministries of Higher Education, Innovation and Scientific Research and through Nairobi based embassies² in early February 2020 (See Annex 2). Several responses have been received and are being followed up including from Zimbabwe, Uganda, Malawi and most recently the Democratic Republic of Congo.
- n) Further engagement was done with prospective partners from Norway, Switzerland, the UK and Mastercard Foundation. Highlights are:
 - *icipe* held discussions with DAAD-Bonn on partnership with RSIF to strengthen institutional capacities for doctoral supervision and accreditation in African universities.
 - *icipe* visited Israel in January 2020 and also held discussions with partners in Switzerland.
 - *icipe* presented RSIF to Norwegian companies during the Norway-Kenya Business Forum and to participants at the 7th Sankalp Africa Summit in Nairobi in February.
- o) *icipe* has led and supported preparation of research funding proposals to competitive calls as below:

¹ Cote d'Ivoire made 1st Instalment of US\$1million towards membership. A second instalment of US\$ 1million is pending.

² Angola, Djibouti, DRC, Malawi, Sudan, Uganda, Zimbabwe.

- University of Rwanda led consortium applying to the Intra-Africa mobility call of the European Union in Artificial Intelligence (AI) and Big Data.
 - *Icipe* led partnership with the Agropolis Foundation in France, University Abomey-Calavi, in Benin and Gearbox Pan Africa Network Limited for strengthening innovation in West Africa in response to an innovation call for proposals from the European Commission.
 - Exploratory discussions with Swiss institutions, including École Polytechnique Fédérale de Lausanne (EPFL) for fundraising from the Swiss government TRANSFORM fund.
 - Contact with Norwegian institutions for possible joint proposal development in response to the NORHED II capacity building in higher education call for proposals.
 - University of Tokyo to partner with the University of Gaston Berger on several research topics, including applying to the AJ-Core call for proposals.
- p) In January 2020, a proposal writing workshop was organised for over 30 staff from African Host Universities and their partners to develop proposals for capacity building in higher education under Erasmus+. The key outcomes were: 1) Improved proposal writing skills of participating faculty and university staff, 2) Increased awareness of the relevant funding opportunities and how to develop winning proposals; 3) Innovative ideas/ challenges supported into proposals, including through partnership with RSIF AHUs and other partners and; 4) identification of research 'consortia' to respond to the needs of the broader RSIF agenda developed. A planned second workshop is currently on hold due to the Covid-19 situation, but online engagement continues without disruption.
- q) Several events from March 2020, including the *icipe@50* celebration where RSIF was scheduled to engage were cancelled/ postponed due to the Covid-19 situation. This included the Next Einstein Forum, GoFoWiser, and the Higher education and philanthropy in Africa dialogue through Carnegie Corporation of New York.
- r) *icipe* continued identifying and sharing information weekly with universities and students on new funding possibilities. From mid-May this was converted to weekly newsletter sent via Mailchimp, currently at above 4600 subscribers.

1.1.2 Endowment Fund design

Following approval of the Feasibility Study Inception Report in December 2019, Lion's Head Global Partners (LHGP), the firm commissioned to conduct the feasibility study, submitted a draft progress report to *icipe* in February 2020. Comments were received from key stakeholders including at the World Bank Implementation Support Mission on 25 March 2020. The comments highlighted the need for the report to better capture RSIF vision, in terms of its impact on building capacities for the science, engineering and technology sectors on the continent and how the Fund would deliver on this impact. The comments were revised into the report and further engagement was held with the CAG and *icipe* management on the second draft. LHGP will in the next period prepare a resource mobilization strategy for RSIF and share the final draft report to the PASET EB.

1.2 Capacity development for the operation and management of doctoral training scholarships in selected AHUs

1.2.1. Host university selection

Kenyatta University: A three-person independent panel was constituted and commissioned by *icipe* to review the KU PhD program and its accreditation status and provide recommendations to *icipe*. The Panel recommended that Kenyatta University should be maintained as a PASET-RSIF African Host University for the PhD program in Materials Science, and PASET-RSIF students should be allowed to start training in the PhD program. *icipe* has subsequently signed a partnership agreement with Kenyatta University outlining terms of collaboration with the PhD Programme in Materials Science as an African Host University (AHU).

African University of Science and Technology (AUST): In a previous period, AUST had been excluded from participation in the RSIF Second Cohort process pending response to concerns raised by the Government of Nigeria through its National Universities Commission (NUC). A mission was organized by RSIF (Dr. Moses Osiru, Ms Sagal Abdulle & Ms. Ruth Charo) to NUC in February 2020 to review the status of the university. Subsequently, the PASET Executive Board (EB), on receipt of official communication from the NUC Secretary General, approved the participation of AUST in the RSIF Third Call for Proposal.

1.2.2 Capacity assessment on RSIF AHUs and third Call for AHUs:

icipe undertook an assessment of the current capacity of the 11 African Host Universities (AHUs) to train PhDs to guide the future selection of additional AHUs and RSIF PhD scholars. The assessment revealed a gap in the capacity of current RSIF AHUs to match the vision of RSIF and adequately absorb the number of RSIF PhD scholars requiring training for the upcoming third cohort (in some thematic areas) and subsequent cohorts. Based on the assessment, *icipe* prepared a third Call for AHUs that was submitted to the EB meeting of May 29th, 2020. The EB recommended that *icipe* should narrow the focus of the call, including to three thematic areas of ICT including big data and artificial intelligence, Climate Change, and Energy. A revised Call for Proposals is being prepared.

1.2.3 International Partner Institutions (IPIs)

Guidelines for selecting and working with International Partner Institutions were developed and reviewed by PASET EB. Over and above the existing eight international partners with signed MoUs, in this period PASET signed MoUs with the International Livestock Research Institute in Nairobi, Kenya, and University of Greenwich, Natural Resources Institute, UK; Karlsruhe Institute of Technology (KIT), Germany and the Global R&DB Center, SNU, Korea. Progress continues through ongoing discussion with prospective partners including, Keele University, UK; John Innes Center, UK; the University of Tokyo, Japan; Albi Mines, France; Kobe Institute of Computing, Japan; Carleton University, Canada; Penn State, USA; Arizona State University, USA; and the University of Pretoria and Stellenbosch University in South Africa

Mohamed VI Polytechnic University (UM6P), Morocco, has committed to provide 20 PhD fellowships to RSIF scholars to support internships at UM6P and its partners in the north. A list of UM6P faculty and related topics of interest has been identified to facilitate matching with AHUs. A draft call for RSIF scholars to engage in sandwich training at UM6P is under review. Further discussions were also held with UM6P for linkage with OCP group on joint research areas to pursue for Cohort 2 and 3 scholars. Discussions are also underway with UM6P to explore co-hosting of the RSIF Technical Annual Meeting in Morocco next year.

1.2.4 Strategies for increasing the participation of women in PhD training

As part of the study to identify barriers to women participation in PhD programs, site visits were completed at four RSIF-host institutions in three countries: Kenya, Rwanda, and Senegal. Each site visit comprised interviews with faculty members and focus group discussions with current MSc and PhD students. An online survey was completed by 262 PhD alumni (about 2/3 women) from 40 institutions in 15 countries in West, eastern, and southern Africa. The study results have been used to develop a draft RSIF gender strategy that recommends 11 interventions to enhance women's participation in ASET fields in SSA. A technical report to accompany the gender strategy is near completion. The gender strategy was presented in mid-June to *icipe*

management, AHU lead contacts, women scientists from academia and research organizations, and representatives of organizations working to advance women in ASET in Africa. Feedback has been incorporated into the draft RSIF gender strategy to be presented shortly to the EB. Two manuscripts are being prepared based on the research described above.

1.2.5 Information Communications and Technology

The procurement of video conferencing equipment for the RCU is now complete and *icipe* awaits installation from the supplier in the next period. *icipe* has also procured a firm for the development of a management information system (MIS) for RSIF to support the automation of the scholarship and innovation components of the program. The RSIF Website revamp is ongoing involving new design, database restructuring, web 2.0 improvement and Search Engine Optimization (SEO). Other key updates include in the development and design of the RSIF repository and knowledge hub and continuation of the Enterprise Resource Planning implementation.

1.3 Capacity development for improving the quality of PhD programs and research in ASET fields

1.3.1 Assessment of AHU accreditation status

In the period, the RCU assessed the international accreditation status of the 11 AHUs through online meetings with the AHU contact persons and other university officials who are involved in accreditation and quality assurance at the respective AHUs (Table 1).

Table 1: Summary of accreditation status of RSIF PhD programs

No	University	Phd Program	Accreditation Status	Accrediting Authority	Comments
1	African Uni. of Sci. and Technology, Nigeria	Material Science and Engineering	Completed	HCERES*	Accredited for 5 years (Sept 2019 - Sept 2024)
2	University of Port Harcourt, Nigeria	Petroleum and Gas Eng/Energy Econ.	Completed	HCERES	Accredited for 5 years (Sept 2019 - Sept 2024)
3	University Felix Houphouet-Boigny, Côte d'Ivoire	Climate Change and Biodiversity	Completed	HCERES	Accredited for 5 years (July 2019 - July 2024)
4	Nelson Mandela African Institution of Science and Technology	Materials Science and Engineering	Initiated	AQAS	Conducting a self-evaluation
5	University of Rwanda, Rwanda	Internet of Things: Embedded Computing Systems	Initiated	ZEVA	In process
6	Bayero University, Nigeria	Nat. Res. Mngt & Climate Change	Initiated	HCERES	To complete in Dec 2020. Funding challenges.
7	Kenyatta University, Kenya	Materials Science	Not Started	TBI**	To include coursework-requested regulator
8	University of Ghana, Ghana	Applied Ag.Econ. and Policy / Agribusiness	Not Started	AQAS	Not affiliated with ACE, no plans for international accreditation.
9	Sokoine University of Agriculture, Tanzania	Food Security and Agribusiness	Not Started	TBI	Program to be renamed and nationally re-accredited.
10	University of Nairobi, Kenya	Physics	Not Started	TBI	To include coursework-requested regulator
11	University of Gaston Berger, Senegal	Computer Science	Not Started	TBI	Self-evaluation being undertaken .

*HCERES - High Council for Evaluation of Research and Higher Education; Agency for Quality Assurance Through Accreditation of Study Programs (AQAS), Germany; Central Evaluation and Accreditation Agency (ZEVA). **TBI- To be identified.

Three of the universities have successfully completed their international accreditation process each of them receiving five-year international certification up to 2024. These are the African University of Science and Technology; the University of Port Harcourt, Port Harcourt, Nigeria and the University Felix Houphouet-Boigny, Abidjan, Côte d'Ivoire. Three universities (Nelson Mandela African Institution of Science and

Technology, University of Rwanda and Bayero University, Nigeria have started the international accreditation process and are in different stages of the process. Five universities are yet to start with the international accreditation process. The RCU has initiated support to universities to move further along the process. Universities that are not part of either ACE 1, ACE 2 or ACE 3 were facilitated to join accreditation discussions for the relevant World Bank Projects.

1.3.2 RSIF Capacity Building Strategy

A detailed draft Capacity Building Strategy including courses has been developed. The strategy has been shared with AHUs for comments and feedback and will be submitted to the EB for approval. A survey was carried out amongst AHUs to assess the status of ICT facilities to inform the RSIF Capacity Building Strategy including the purchase of video conferencing facilities at universities.

1.3.3 Research Networks

A draft RSIF Network Partnership Agreement was completed and shared with RSIF AHUs. The network agreement will enable AHUs to establish strong, regional, and international multi-disciplinary technical working groups to further joint-research, innovation and academic collaboration.

1.3.4 Development of a Research Strategy for RSIF

With support from the World Bank, a consultant was engaged to review current research strategies at continental, sub regional and national levels within participating PASET countries. This will guide the development of RSIF's research strategy. The Strategy will support the implementation of RSIF research agenda including identification of research topics for PhD scholar research, and to some extent that for research and innovation grants, highlighting the key priority African challenges for which Africa would wish to invest in science-based solutions through the RSIF program. An inception report has been submitted.

1.3.5 Host University libraries and capacity building

As a result of the free access to journals offered by publishers during the COVID-19 pandemic, the number of journals accessible by AHUs has gone up to 38,030 journals (12,000 research4life and 26,030 free from publishers during COVID-19). Most publishers have opened their access until August 2020, AHU's and RSIF scholars can now access up to 38,030 journals in Applied Sciences Engineering and Technology. *icipe* is in the process of subscribing further 8,000 science direct journals and e-books for the 11 AHU's. This provides 210 licences for 11 AHU's for on and off campus access to their journals until 2022. In addition, *icipe* is subscribing to MyLoft – a remote access solution for journals and e-books. The RSIF digital repository was set up and content is being updated.

1.4 Capacity development for the operation and management of innovation grants

1.4.1 Implementation Status of RSIF Innovation Grants

The inaugural Calls for the award of Institutional Innovation Capacity Building Program Grant, ICBP (Innovation Type 1) and RSIF Cooperability Grants (Innovation Type 2) were published in September 2019. Nine (9) proposals were submitted in response to this Call³ of which two were ineligible and six recommended for funding by the GITC. The six recommended were subsequently approved by the PASET EB on May 29,2020.

For the RSIF Cooperability Grants⁴, four proposals were received. One of these was ineligible, and two were recommended for funding by the GITC and subsequently approved by the PASET EB. The full list of proposals approved for award under this category is provided in Annex 3. During the coming period, *icipe* will contract

³ Proposals were received from AUST, Bayero University, Gaston Berger University, Kenyatta University, NM-AUST, University of Port-Harcourt, Sokoine University of Agriculture, University of Ghana, and University of Nairobi. The University of Rwanda and University of Felix Houphouet-Boigny did not submit proposals.

⁴ Cooperability grants support strengthening of public- private partnerships that promote commercialization of research. Up to five grants of US\$50,000 were available for award.

successful grant applicants (Table 2) and provide support to the winning projects teams to refine their project documents in line with comments received from the independent expert reviewers and the Grants Independent Technical Committee. Additionally, the RCU will provide capacity building support to the teams to facilitate successful implementation of their projects to achieve the desired impact aligned with the PASET RSIF vision. A feedback workshop was held on June 29, 2020 to provide information and support to grantees to enable them finalise their proposals, taking into account comments provide by *icipe*. A second workshop was held on June 30 to support better understanding by grantees on the objectives of RSIF Window 3. *icipe* will also develop a concept note for discussion on the second call for proposals (Table 3).

Table 2. Timelines for award of approved research and innovation grants

Activity	Timeline	Comments
Feedback workshop to provide guidelines to successful applicants to revise their proposals	June 29,2020	Workshop opened by Prof. Emmanuel Tanyi, Chair of the GITC
Institutional Innovation Capacity Building Workshop for Innovation Type 1, Awardees	June 30,2020	To provide framework guidelines for strengthening innovation environment at the AHUs. Keynote presentations by Dr. Mafini Dosso, from the EU Joint Research Center in Spain.
Signing of Project Grant Agreements	July 30,2020	Following revision of proposals

Table 3. No. RSIF Pilot Grants approved by Category*

Type of Grant	No. of Grants Available	No. of Grants Approved**	No. of Unallocated Grants
Research Award (Research Grants, Type 1)	10	6	4
Institutional Capacity Building Program Grants (Innovation Grants, Type 1)	6	6	0
Cooperability Grants (Innovation Grants Type 2)	5	2	3
Total	21	14	7

*Based on budget availability; **Grants approved by PASET EB in May 2020.

1.4.2 A study of research and innovation ecosystems at African Host Universities

In the period ending March 2020, the RCU conducted visits to four (4) AHUs⁵ to: i) provide an analysis of university research and innovation strategic policy and practice related to technology transfer and intellectual property management; ii) analyze selected country national innovation systems (NIS) including key stakeholders, institutional functionality and available innovation infrastructure, and, iii) provide recommendations on research and innovation related interventions towards strengthening innovations ecosystems at RSIF AHUs and PASET RSIF participating countries.

1.4.3 Development of IP guidelines for RSIF

An analysis has been done of IP provisions in various policies relevant for RSIF research including; (i) AHU policies, (ii) PASET MoUs/agreements with International Partner Institutions (IPIs), (iii) *icipe*-student contracts and (iv) specific AHU agreements with IPIs to inform the process. *icipe* will draw from general guidelines and relevant materials provided by the World Intellectual Property Organization (WIPO) as well as expert review to draft the guidelines. A draft copy has been prepared and is currently under internal review. The final guidelines will be shared with the PASET EB in the next report.

⁵ AHUs visited: University of Nairobi, University of Ghana, Nelson Mandela African Institute of Science and Technology and University of Felix Houphouet-Boigny.

B. Component 2: PhD Scholarships, Research Grants and Innovation Grants

2.1 Training of doctoral Students

2.1.1 Status of the Cohort 1 RSIF PhD Scholars

The 15 RSIF students in Cohort 1 submitted their quarterly reports and have received stipends for January-June 2020. Overall, students are progressing well, and most have initiated their sandwich placements. Six students are currently placed at the Korea Institute of Science and Technology (KIST) and an additional six at Worcester Polytechnic Institute (WPI) in the USA (Annex 4). Two students remain unmatched, and RCU is providing support for matching the students.

RSIF scholars on sandwich placement at WPI participated in a high-level forum at the World Bank Headquarters in Washington, DC on March 5, 2020. They were joined by members of their joint supervisory teams at WPI and shared their research and experiences. Cohort 1 scholars at KIST continue to undertake lab-based work and attend bi-weekly meetings with research teams. RSIF scholars on placement at WPI are currently engaged in remote supervision and have focused their energy in drafting research manuscripts. All scholars continue holding regular meetings with joint supervisory teams and are progressing. Some Cohort 1 scholars are assuming leadership roles at their AHUs and IPs, serving as academic mentors to masters and other students.

2.1.2 Selection of Cohort 2 RSIF PhD Scholars

During the last period, the EB awarded 71 students for the Cohort 2 of RSIF PhD Scholars from 17 African countries. Of the initial 71 scholars recommended for award, seven students declined the offer. The EB approved three replacements, bringing the total number of students to 67 (Table 4). The final list of 67 (27 women; 24 faculty) scholars in Cohort 2 have received award letters and scholarship agreements. Most are now registered at relevant AHUs. The final list of the 67 scholars is provided in Annex 5. Kenya and Ghana citizens make constitute the largest numbers in the cohort (12 & 11 students respectively) while Malawi, DRC, Sudan had the lowest number with one RSIF PhD student each.

2.1.3 Status of the Cohort 2 RSIF PhD Scholars

The second cohort of RSIF scholars are at various stages of reporting to the AHUs to start their PhD studies. They have been delayed somewhat by the COVID-19 situation because all African Host Universities are currently closed. The overall status of Cohort 2 RSIF PhD scholars at each African Host University is provided in Table 5.

2.1.4 Orientation and Training for Cohort 2 RSIF PhD Scholars

The aim of the orientation training was to facilitate the transition into the RSIF PhD program by introducing new students to the values and expectations of the program, to provide required skills for new RSIF scholars, and to initiate the establishment of an RSIF community. Due to travel restrictions caused by COVID-19 the Regional Coordination Unit organized and delivered a six-day orientation and training through live-streaming from *icipe*. The orientation training covered grievance redress mechanisms; sexual harassment; strategies for a successful PhD; PhD proposal writing; responsible conduct of research and research ethics; information literacy; research methods and statistics, data analysis and management; and research communications.

2.1.5 Selection of Cohort 3 of RSIF PhD Scholars

icipe published the third call of RSIF PhD scholarships on April 30, 2020 with a deadline of June 22, 2020. Based on funding received from countries, the Government of Korea and expected contributions from potential partners/ countries, an estimated 116 RSIF PhD Scholars will be recruited for the third cohort. The overall timeframe for the selection process for the Cohort 3 scholars is provided in Table 6.

Table 4: Distribution of Cohort 2 RSIF PhD Scholars by nationality, gender and faculty

	Nationality	Total awarded	#Female	#Faculty
1	Benin	4	1	1
2	Burkina Faso	3	0	0
3	Cameroon	4	2	2
4	Chad	2	0	1
5	Côte d'Ivoire	4	1	0
6	Ethiopia	2	1	0
7	Ghana	11	2	3
8	Kenya	12	9	6
9	Malawi	1	0	1
10	Nigeria	4	3	2
11	Dem. Rep. of Congo	1	0	0
12	Rwanda	8	2	3
13	Senegal	3	1	0
14	Sudan	1	1	1
15	Tanzania	3	2	1
16	Uganda	2	2	1
17	Zimbabwe	2	0	2
	Totals	67	27	24

Table 5: Status of the Cohort 2 RSIF PhD Scholars at RSIF AHUs

University	Status of cohort two scholars at the AHU
1. Bayero University, Nigeria	Students fully registered, have been assigned supervisors and have started developing their proposals.
2. University Felix Houphouët-Boigny, Côte d'Ivoire	Students have started online classes with the support of WASCAL. Courses are being offered by lecturers in Côte d'Ivoire and partner institutions in Benin, Kenya, Germany, and France. International RSIF students will not be registered until they arrive on campus at UFHB.
3. Sokoine University of Agriculture, Tanzania	Students have been admitted and are currently in the process of being assigned supervisors. Once supervisors are identified, students will develop and present their concept notes and proposals remotely.
4. University of Ghana	Eight Ghanaian students are fully registered and are completing end-of-term examinations. Two international students have deferred their admission and will begin their studies in August 2020.
5. University of Gaston Berger, Senegal	The registration process has been finalized by the general PhD committee and students will be provided with registration certificates. Students have been assigned supervisors and have started their proposal development.
6. University of Rwanda	Four students are fully registered and are currently developing their proposals. Supervisors have been allocated to students and are receiving remote supervision support.
7. University of Port Harcourt, Nigeria	Students have received provisional admission to the PhD program and have started the proposal development process through remote supervision.
8. University of Nairobi, Kenya	Students have received provisional admission for a period of six months as of May 20, 2020. Students have submitted their concept notes and will be assigned supervisors.
9. Nelson Mandela African Institution of Science and Technology, Tanzania	Students have received provisional registration and have been assigned supervisors.

Table 6: Recruitment Timeline for Cohort 3 RSIF PhD Scholars

Activity	Timeline (2020)
1 Call for Applications open	April 30
2 Deadline for application submission	June 22
3 Screening and completeness check by the RCU	July 6
4 AHU shortlisting	July 24
5 Shortlisted candidates' one-way interview	August 3
6 Desk review and evaluation of applications by IRC*	August 24
7 Evaluation by the Independent Evaluation Committee	September 7
8 Final selection of Cohort 3 Scholars	Mid- September 2020

*IRC- Independent Review Committee

2.2 Research Grants

2.2.1 Implementation status of Research Grants (Window 2, Type 1)

During the period, *icipe* advanced in the competitive selection of proposals for award of the inaugural call for Research Proposals for RSIF Research Award⁶. Eleven (11) eligible proposals⁷ were reviewed by a panel of three independent expert reviewers per thematic area and further evaluated by the Grants Independent Technical Committee (GITC⁸). Six (6) of the proposals were recommended for funding by the GITC and subsequently approved for award by the PASET EB on May 29, 2020. The full list of proposals approved for award and relevant thematic areas is provided in Annex 6.

C. Crosscutting activities

3.1 RSIF communications

Procurement of a firm to support RSIF communications is still underway. The firm will support *icipe* to develop and implement a brand strategy for RSIF. To increase the visibility of RSIF, additional communications materials have been developed and others are being finalized. These include seven posters, two flyers and a brochure for prospective RSIF students.

A communications plan was developed and implemented for dissemination of the call for RSIF PhD Cohort 3 Scholarships. This explored specific target audiences with specific communications channels i.e. social media posts, newspaper adverts (in the eight PASET countries), television, e-media i.e. sciencedev.net, University World News, scholarships portals, universities websites, ministry websites, and student/alumni associations.

The RSIF contacts database has grown from 2150 contacts as of January 2020 to 4627 as of 30 June 2020. Tweet activity between January 1, 2020 and June 10, 2020 has grown to 51,300 impressions over this period. Facebook reach between January 1, 2020 and June 30, 2020 grew to 8794. Currently there are 930 people following the RSIF Facebook page and it has 828 likes. RSIF Twitter account has 515 followers as of 30 June 2020. Strengthening of RSIF communications continues.

3.2 Monitoring and Evaluation

Following the sharing of the draft theory of change with the World Bank during the March 2020 Bank Support Mission, it was advised that more beneficiary focused results chains would be required for informing program management and implementation. Detailed results chains were developed for five potential beneficiaries including African Host Universities (AHUs), African PhD scholars and RSIF alumni, the private sector, countries participating in RSIF and spillovers to other countries in SSA. The results chains were shared with the World Bank for input.

⁶ Window 2, Type 2 focuses on postdoctoral research awards for RSIF PhD students that have completed their studies and returned to their home institutions. This Call for this award will be issued at the end of Year 3 of the Project.

⁷ A total of 17 Proposal applications were received: Materials, Mining and Engineering – 4, ICT (Big Data and AI)-4, Food Security – 1, Energy (Including renewables)-6, Climate Change- 1, Other Non RSIF AHU submissions.

⁸ The GITC consists of 7 eminent experts in fields relevant to the program. They provide technical and advisory support to RCU in the review, selection and implementation of the research and innovation grants. The GITC evaluation meeting was held on April 17, 2020.

Two semi-annual satisfaction surveys, targeting the AHU contact persons and the PhD students, have been developed with input from RSIF staff. The two surveys will focus on understanding how clients (universities and students) perceive the adequacy of mentorship and support during the PhD training, the relevance of the RSIF program and solicit for areas for improvements in program management. The draft surveys have received comments from various stakeholders including the World Bank, PASET Secretariat and universities and students.

Project management has continued to track project progress against the set performance indicator targets. Information was collected to update the results framework during the fourth quarter.

3.3 World Bank Implementation Support Mission to *icipe*

A World Bank virtual Implementation Support Mission for the RSIF project was held on March 24 and 25, 2020. The key objectives of the mission were to: (i) review the status of recommendations from the mission conducted in October 2019, including fiduciary and safeguards actions; (ii) discuss the status of resource mobilization for RSIF, and related planned activities for the next quarter; (iii) review the status and management of the doctoral training component including the status of each student under cohorts one and two, and the next steps for cohort three students; (iv) review overall performance of the African Host Universities (AHU), and discuss the proposal for additional AHUs; (v) review implementation progress of windows 2 and 3 (research and innovation) and agree on the next steps to fast track these activities; (vi) review the status of the proposed RSIF Permanent Fund; (vii) review fiduciary and safeguards aspects of the RSIF project; and (viii) discuss implications of the coronavirus (COVID 19) for RSIF operations, and associated measures being taken for the students undertaking the sandwich program in international institutions. Key action points for the next period were discussed.

3.4 Safeguards and RSIF Grievance Redress Mechanism (GRM)

Through the procurement process, a consultant was identified and contracted to complete the GRM work that had stalled following the exit of the previous consultant. A new consultant, Mr. Dan Adino, has signed the contract with *icipe* and has initiated follow-up on agreed action points for the Project with regards to Safeguards.

3.5 Procurement

The on-going and completed procurement activities are included in Annex 7.

3.6 Key Challenges during the period

Key challenges during the period were:

- a. As expected, the major challenge is COVID-19 and its real, perceived, and potential impacts. Lockdowns are relaxing somewhat, but there remains limited in-country movement, university closures, border closures etc. that are impacting scholars and will affect implementation of research projects. They are also affecting meetings. Delays are expected from Cohort 1 Scholars, for which students and their supervisors must make plans to ensure students finish on time. Some of the IPs are also closed. The second cohort students are not able to proceed to AHUs and a strategy for managing the current situation is being implemented. Supervision, mentorship, monitoring, evaluation, and learning will all need to be strengthened to take advantage of e-tools. The COVID-19 situation is being monitored.
- b. There remains a challenge in identifying adequate numbers of qualified women applicants for RSIF Scholarships. The proportion of women applicants in both Cohort 1 and 2 was approximately 20%. For the third call, *icipe* has significantly enhanced communication channels, including by placing adverts in national newspapers in target countries. However, despite the better distribution of

students across countries, there will be need for further intentional effort to ensure women participation.

3.7 Key activities planned for the next period

The next period (July to September, 2020) will focus on the following key activities:

- a) Development of a resource mobilization strategy for RSIF and finalization of the feasibility study to establish the RSIF Endowment Fund;
- b) Complete the RSIF Grievance Redress Mechanism and make it functional;
- c) Support to cohorts 1 & 2 RSIF PhD students including matching; finalisation of selection for the third cohort and preparation of selection of the fourth cohort of RSIF PhD scholars;
- d) Development and implementation of the Third AHU call for RSIF PhD programs;
- e) Support establishment of at least five research networks;
- f) Implementation of the 14 RSIF competitive grants recently awarded and preparation of a second call for seven awards;
- g) Development of RSIF management information system; and,
- h) Strengthening of RSIF' communications.

3.8 Summary of utilization of funds from the Governments of Kenya, Rwanda and Côte d'Ivoire (January 2018 – May 2020)

INCOME	Recipient	Description			Total
B8501G00001	<i>icipe</i>	Balance from AAU			3,413,977
B8501G00001	<i>icipe</i>	From Ivorian Govt			1,033,497
	Total Income				4,447,474
EXPENDITURE	Payee	Description	Oct 18-Dec 2019	Jan 20 -May 2020	Total
B8501G30001	Maxwell Wambua Waema	Scholarship costs	14,400	-	14,400
B8501G30002	Sylvia Wairimu Maina	Scholarship costs	10,800	-	10,800
B8501G30003	Humphrey Andalo Mabwi	Scholarship costs	10,800	-	10,800
B8501G30004	Levi Omache	Scholarship costs	18,000	7,000	25,000
B8501G30005	Lilian Mulewa	Scholarship costs	3,600	-	3,600
B8501G30006	Gahamanyi Noel	Scholarship costs	14,400	-	14,400
B8501G30007	Jean Nepomuscene Hakizimana	Scholarship costs	18,000	10,600	28,600
B8501G30008	Emmanuel Effah	Scholarship costs	31,907	10,200	42,107
B8501G30009	Fatoumata Thiam	Scholarship costs	25,220	17,200	42,420
B8501G30010	Richard Kipyegon Koech	Scholarship costs	25,348	17,484	42,832
B8501G30011	Jeanne Pauline Munganyinka	Scholarship costs	25,653	17,484	43,137
B8501G30012	Jean Baptiste Habinshuti	Scholarship costs	25,348	17,484	42,832
B8501G30013	David Afolayan	Scholarship costs	25,348	17,484	42,832
B8501G30014	Sodedji Frejus	Scholarship costs	14,400	-	14,400
B8501G30015	Traore Abdoulaye	Scholarship costs	14,400	10,600	25,000
B8501G31201	Other PHD Expenses	Investigation costs- Lilian Mulewa separation	6,628	-	6,628
	Total Expenditure		284,252	125,536	409,788
	Balance				4,037,686

3.9 RSIF Funds Allocation Report -Government Contributions

INCOME		Notes	KENYA		RWANDA		COTE D'IVOIRE	TOTAL
Funds received		A	1,979,177		1,963,292		1,033,497	4,975,966
Less : AAU Admin charges		B	131,105		130,387		-	261,492
Funds available for Scholarships		C =A-B	1,848,072		1,832,905		1,033,497	4,714,474
Scholarship Cost per student (4 years)		E	97,300		97,300		97,300	
Number of Scholarships Available		F=C/E	18		18		10	46
Allocation of Scholarships								
80% to Nationals	80%	G	15		15		8	38
20% to Non-Nationals	20%	H	3		3		2	8
Scholarships Awarded								
Nationals	60%	I	6	80%	4		-	10
Non Nationals	40%	J	4	20%	1		-	5
Scholarships to Award								
Nationals		K=G-I	8		11		8	27
Non Nationals		L=H-J	-		2		2	4
Funds spent on Scholars								
By AAU		M	178,000		89,000		-	267,000
By <i>Icipe</i>		N	238,712		171,076		-	409,788
Fund Balance		O=C-M-N	1,431,360		1,572,829		1,033,497	4,037,686

Annex 1: RSIF engagement with countries

Country	Targeted/ expected Contribution (US\$)	Payment modality	Expected date of contribution	Current status
Angola	2 Million	Direct payment to RSIF	Unclear	No discussion during period due to COVID
Benin	2 million	World Bank ACE Impact Phase 2	Q4, 2020	Awaiting signing of SA
Burkina Faso	2 million	World Bank ACE Impact Phase 1	Q2, 2020	SA signed, awaiting authorisation and transfers
Ghana	2million	World Bank ACE Impact Phase 1	Q2, 2020	SA signed, awaiting authorisation and transfers
Malawi	Unknown	Unknown	Unclear	No discussion during Jan to June period due to COVID
Mauritius	2 million	Direct payments	Unclear	No discussion during period due to COVID
Mozambique	6 million	World Bank Country project	Q3 2020	Awaiting approval of Project by WB Board
Nigeria	4 million	World Bank ACE Impact Phase 2	Q4, 2020	Awaiting signing of SA
Senegal	2 million	World Bank ACE Impact Phase 1	Q2, 2020	SA signed, awaiting authorisation and transfers
South Africa	Unknown	Direct payment to RSIF	Unclear	No discussion during period due to COVID
Tanzania	2 million	World Bank Country Project	Unclear	Not clear
Zambia	Unknown	Unknown	Unclear	No discussion during period due to COVID
Zimbabwe	Unknown	Unknown	Unclear	No discussion during period due to COVID

*SA = Subsidiary Agreement

Annex 2: List of invitations to participate in PASET* prepared by RSIF-RCU

COUNTRY	NAME OF MINISTER	TITLE
Angola	Hon. Maria do Rosário Bragança Sambo	Minister of Higher Education, Science, Technology and Innovation
Cabo Verde	Hon. Maritza Rosabal Peña	Minister of Education and Minister of Family and Social Inclusion of Cabo Verde
Cameroun	S.E. Pr. Jacques FAME NDONGO	Le Ministre d'Etat, Ministre de l'Enseignement Supérieur
Chad/Tchad	S.E. Dr Houdeingar David Ngarimaden	Ministre de l'Enseignement supérieur, de la Recherche scientifique et de l'Innovation
Djibouti	S.E. Dr. Nabil Mohamed Ahmed	Ministre de l'Enseignement Supérieur et de la Recherche
DRC	Hon. Thomas Luhaka	Ministre de l'Enseignement supérieur et Universitaire
Gambia	Hon. Mr. Badara Alieu Joof	Minister of Higher Education, Research, Science and Technology
Guinée	S.E. Abdoulaye Yéro Baldé	Ministre de l'Enseignement Supérieur et de la Recherche
Malawi	Hon. Dr William Susuwele-Banda	Minister of Education, Science and Technology
Namibia	Hon. Dr. Itah Kandjii-Murangi	Minister, Higher Education, Training and Innovation
Sudan	Hon. Dr Intisar El Zein	Minister of Higher Education
Togo	H.E. Prof. Koffi Akpagana	Ministre de l'enseignement supérieur et de la recherche
Uganda	Hon. Mrs. Janet Kataaha Museveni	First Lady and Minister of Education and Sports
Zimbabwe	Hon. Prof. Amon Murwira	Minister of Higher & Tertiary Education, Science & Technology Development

*Explanatory notes:

1. All sub-Saharan African countries are welcome to join PASET if they agree with the provisions in its charter and contribute to RSIF.
2. Letters to Mauritius and South Africa were sent previously. Additional countries not in this list that have since expressed an interest to receive communication from PASET-RSIF include: Central African Republic, Congo-Brazzaville, Eswatini and Lesotho.

Annex 3. Research and Innovation Proposals Approved for Award

Table 3.2. Proposals approved by the PASET EB for RSIF Institutional Innovation Capacity Building Program Grants (Window 3 Type 1)

Proposal #	Lead Applicant	RSIF AHU	Project Title	Budget (USD)
237	Prof. Irene Egyir	University of Ghana	Institutional framework to enhance the agri-innovation ecosystem within the University of Ghana	49,997
250	Prof. Jibrin Mohammed Jibrin	Bayero University	Initiatives for sustainable food security innovations in the drylands	50,000
246	Prof. Julius Mwabora	University of Nairobi	Capacity building for University-Industry business technology transfer	49,591
242	Prof. Peter Onwualu	AUST	From research to markets: strengthening the innovation capacity of AUST	50,000
247	Prof. Eron Karimuribo	Sokoine University of Agriculture	Innovative biosystems for self-sufficiency in molecular biology reagents in Africa	50,000
253	Prof. Onewuchi Akaranta	University of Port Harcourt	Strengthening institutional infrastructure for an innovation ecosystem	49,950

Table 3.3. Proposal approved by the PASET EB for RSIF Cooperability Grants (Window 3 Type 2)

Proposal #	Lead Applicant	RSIF AHU	Project Title	Budget (USD)	Thematic area
1775	Dr. Damien Hanyurwimfura	University of Rwanda	Smart Bee-hiving Technology	49,874	ICT Including AI and Big Data
1778	Dr. Brahama Camara	Universite Felix Houphouet-Boigny	Production durable et innovante de l'igname en Côte d'Ivoire par le contrôle des parasites post-récolte (Sustainable and innovative production of yams in Côte d'Ivoire by post-harvest pest control)	49,069	Climate Change

Annex 4: Status of Cohort I RSIF PhD Students

Host	Name of Candidate	Country	M/F	Research Topics	International Partner Institution* and Status
SACIDS	Maxwell Wambua Waema	Kenya	M	Development and evaluation of recombinase polymerase amplification assay for detection of porcine cysticercosis in resource-limited settings, Tanzania	KIST – Student at IPI
	Sylvia Wairimu Maina	Kenya	F	Potential use of medicinal plants of ethnoveterinary importance against small ruminants' morbillivirus	KIST – Student at IPI
	Humphrey Andalo Mabwi	Kenya	M	Micro-biome and Antimicrobial resistance metagenomics in Cattle	KIST – Student at IPI
	Levi Omache	Kenya	M	Epidemiological studies of peste des petits ruminants at the livestock-wildlife interface in the greater Serengeti ecosystem	N/A – currently not matched
	Emmanuel Kifaro*	Tanzania	M	Development of Microfluidic Multiplex PCR Assay for Simultaneous Detection of Hemorrhagic Swine Fever Viruses	KIST – Student at IPI
	Gahamanyi Noel	Rwanda	M	Determining transmission dynamics and Antimicrobial resistance of Thermophilic Campylobacter in humans, animals and the environment in Kilosa district, Tanzania	KIST – Student at IPI
	Jean Nepomuscene Hakizimana	Rwanda	M	Understanding genetic variation and epidemiology of African swine fever virus in Eastern and Southern Africa	N/A – currently not matched
MITIC	Emmanuel Effah	Ghana	M	Implementation of new fault tolerance solutions in a wireless sensor network in a multi-channel context	WPI – Student at IPI
	Fatoumata Thiam	Senegal	F	Designing self-optimized irrigation in the Sahel area based on the Internet of Things	WPI – Student at IPI
PAMI	David Afolayan	Nigeria	M	Optimization of Mineral Bioprocessing and Nano-based Strategies of Nigerian Barite Beneficiation for Utilization as Oil Drilling Mud and other Industrial Raw Materials.	WPI – Student at IPI
	Richard Kipyegon Koech	Kenya	M	Solar energy (Photovoltaics/solar thermal systems/energy storage)	WPI – Student at IPI
	Jeanne Pauline Munganyinka	Rwanda	F	Mining and Mineral processing: Development of methods to optimize Gold recovery and minimize waste and environmental hazards: Case study of Rwanda and Nigeria.	WPI – Student at IPI
	Jean Baptiste Habinshuti	Rwanda	M	Minerals development (optimization of beneficiation methods for Tantalum)	WPI – Student at IPI
CCBAD	Traore Abdoulaye	Ivory Coast	M	Effect of Orange Sweet Potato (PDCO) on the nutritional status of households in northern Cote d'Ivoire: case of Korhogo	ILRI – IPI currently closed
	Sodedji Frejus Ariel Kpedetin	Benin	M	Identification of biocompounds involved in the resistance of cowpea (<i>Vigna unguiculata</i> (L.) Walp) to the legume pod borer (<i>Maruca vitrata</i> Fabricius)	KIST – Student at IPI

*KIST - Korea Institute of Science and Technology (KIST); WPI - Worcester Polytechnic Institute; ILRI - International Livestock Research Institute

Annex 5: Distribution of Cohort II Scholars

S/N	Name of Scholar	Nationality	Gender	RSIF African Host University	Provisional PhD Research Topic
1	Fenet Belay Daba	Ethiopia	Female	Bayero University, Nigeria	Climate Change Adaptation Strategies Nexus Household Food Security in Ethiopia
2	Ursula Hilary Tumamo Djuidja	Cameroon	Female	Bayero University, Nigeria	Analysis of cocoa farmers' practices/strategies for climate change adaptation in Cameroon and implication on carbon stock
3	Jane Gachambi Mwangi	Kenya	Female	Bayero University, Nigeria	Environmental and genetic factors influencing the variation of oil quality and quantity on East African Sandalwood in Kenya
4	Susan Ojochide Simon	Nigeria	Female	Bayero University, Nigeria	Investigation and Prediction of the Spatio-Temporal Variation of Drought in Northern Nigeria Using Earth Observation Dataset and Climate Models
5	Nduwayezu Anastase	Rwanda	Male	University Felix Houphouët-Boigny, Côte d'Ivoire	The effect of climate change on potato pests and diseases: impact on intensity and yield, and farmer perceptions
6	Yefounngui Souleymane Yeo	Côte d'Ivoire	Male	University Felix Houphouët-Boigny, Côte d'Ivoire	Characterization of fungi responsible of mango stem end rot in cote d'ivoire for the adequate implementation of a sustainable management
7	Adjata Kamara	Côte d'Ivoire	Female	University Felix Houphouët-Boigny, Côte d'Ivoire	Bacteriosis of the mango tree, distribution, molecular characterization, disease incidence and evaluation of environmentally friendly control methods in a context of climate change
8	Goudjo Habib Toessi	Benin	Male	University Felix Houphouët-Boigny, Côte d'Ivoire	Impact of climate change on the population dynamics of fall armyworm (<i>Spodoptera frugiperda</i>) in corn cultivation in Benin
9	Jean-Fabrice Akouemaho Dominique Adanve	Benin	Male	University Felix Houphouët-Boigny, Côte d'Ivoire	Biological control of major causal agents of diseases on mango and cashew trees: Impacts of Climate Change on the population dynamic of locally available antagonist agents
10	Haftu Mengesha	Ethiopia	Male	University Felix Houphouët-Boigny, Côte d'Ivoire	Ecosystem service and biodiversity response to climate and land use change in Hugumburda Grat-Kahsu National Forest using machine learning models, Northern Ethiopia
11	Petronille Dusingizimana	Rwanda	Female	University Felix Houphouët-Boigny, Côte d'Ivoire	Analysis of impacts of future emission in Rwanda, an emphasis on major crops and their suitability in Rwanda

12	Fatima Awadalla Abass Elhassan	Sudan	Female	University Felix Houphouët-Boigny, Côte d'Ivoire	Assessment effect of climate change on Land Suitability and Soil Classification, Using Remote Sensing and Geographic Information System Case Study: El Semyh Area, North Kordufan State_ Sudan.
13	Isidore Nsengimana	Rwanda	Male	Sokoine University of Agriculture (SUA), Tanzania	Linking serological, molecular and spatial epidemiology to elucidate the Rift Valley Fever Virus activity in Rwanda after the 2018 epidemics
14	Rogia Saïdath Adéline Gomez	Benin	Female	Sokoine University of Agriculture (SUA), Tanzania	Characterization of duck breeds raised in Benin and comparative study of the quality of their meats
15	Yacouba Ouedraogo	Burkina Faso	Male	Sokoine University of Agriculture (SUA), Tanzania	Climate change impact on Fumonisin B1 (FB1) distribution: case study in Burkina Faso
16	Charlie Frank Arthur N'guessan Amoia	Côte d'Ivoire	Male	Sokoine University of Agriculture (SUA), Tanzania	Newcastle disease in traditional livestock systems in south of Côte d'Ivoire: epidemiology, disease management and socio-economic impact
17	Jean-Yves Ekra	Côte d'Ivoire	Male	Sokoine University of Agriculture (SUA), Tanzania	Study of the polymorphism of the candidate gene, close to the marker, involved in the immune response of trypanotolerance in the population of bovine in Ivory Coast
18	Ivy Sylvia Okello	Kenya	Female	Sokoine University of Agriculture (SUA), Tanzania	Pathogenicity and drug sensitivity pattern of African trypanosomiasis
19	Faith Njeri Njeru	Kenya	Female	Sokoine University of Agriculture (SUA), Tanzania	Application of nanobody technology as a diagnostic tool for maize lethal necrosis disease
20	Hissein Hassan Abdel-Razakh	Chad	Male	Sokoine University of Agriculture (SUA), Tanzania	Studies of the in vitro anticancer, antimicrobial and antioxidant potentials of some selected Chadian medicinal plants
21	Catherine Wangui Mbuthia	Kenya	Female	Sokoine University of Agriculture (SUA), Tanzania	Migratory birds as health indicators of environmental pollution: antimicrobial resistance profiles assessment in eskape isolates recovered from migratory calidris alba and ciconia abdimii and their dissemination to goats and poultry along Lake Turkana Region
22	Grace Wanjiku Gachara	Kenya	Female	Sokoine University of Agriculture (SUA), Tanzania	Post-harvest practices in addressing food insecurity in Kenya: Systematic review of farming practices and mycotoxin contamination
23	Celestin Sirimu	Rwanda	Male	Sokoine University of Agriculture (SUA), Tanzania	Stress activation of dynamically freeze dried starter cultures
24	Julius Joseph Mwanandota	Tanzania	Male	Sokoine University of Agriculture (SUA), Tanzania	Genomic Surveillance of important sheep and goats respiratory diseases for improved productivity through strategic diseases control in Tanzania

25	Harry Bleppony	Ghana	Male	University of Ghana	Examining the Effect of Firm Characteristics on Performance and Survival of Agricultural Non- Traditional Export Firms in Ghana
26	Benjamin Sarfo	Ghana	Male	University of Ghana	Adaptive Capacity and Mitigation Strategies against Climate Change Implications on Food Security. Smallholder Farmers Perspective, Ghana
27	Esther Aba Eshun	Ghana	Female	University of Ghana	Food and nutritional security status and gender integration: a case study of female-headed households in selected districts of northern savanna ecological zone (nsez)
28	Saani Nassam Iddrisu	Ghana	Male	University of Ghana	Enhancing food security through mushroom production and value addition in Greater Accra, Ghana
29	Nana Okyir Baidoo	Ghana	Male	University of Ghana	Social Impact Analysis of Private Sector Investments in The Ghanaian Cocoa Sector
30	Motin Bashiru	Ghana	Male	University of Ghana	Vulnerability of smallholders to farm investment risks: emerging strategies and farmers' response for sustainable farm enterprises in northern Ghana
31	Rosalyn Naa Norkor Baddoo	Ghana	Female	University of Ghana	Livelihood and food security status of rice value chain actors in the volta and north east regions of Ghana
32	Benjamin Musah Abu	Ghana	Male	University of Ghana	A Quadruple-Hurdle Model of Production and Market Participation of Farm Households in Ghana
33	Jacinta Nmutaka Umechukwu	Nigeria	Female	University of Ghana	Sustainable rural development and poverty alleviation through enhanced agriculture (case study of Nigeria)
34	Jean Claude Dusabumuremyi	Rwanda	Male	University of Ghana	Zero Energy Cooling and Drying System for Reduction of Postharvest Losses of Fresh Carrot (<i>Daucus Carota L</i>) In Rwanda
35	Safia Kalisa	Rwanda	Female	University of Ghana	Overcoming Agricultural Value Chain Challenges, a Gateway to Food Security and Economic Growth
36	Zakaria Sawadogo	Burkina Faso	Male	University of Gaston Berger, Senegal	Automatic comment sorting by an Artificial Moderator
37	Gerard Kponhinto	Benin	Male	University of Gaston Berger, Senegal	Optical Wireless Transmission Technology Applied to Indoor Healthcare Monitoring System
38	Chimango Nyasulu	Malawi	Male	University of Gaston Berger, Senegal	SMS-based question answering system in Healthcare service delivery

39	Madicke Mbaye	Male	Male	University of Gaston Berger, Senegal	Device for detecting fraud on electricity consumption thanks to the electrical signatures of devices combined with embedded systems, the Internet of Things and Big Data
40	Ndeye Penda Fall	Female	Female	University of Gaston Berger, Senegal	Intelligent IoT data classifier
41	Bara Diop	Male	Male	University of Gaston Berger, Senegal	Automatic categorization of pages in a semantic wiki
42	Sibitenda Harriet	Female	Female	University of Gaston Berger, Senegal	Predicting terror threats using mobile big data
43	Fidele Maniraguha	Rwanda	Male	University of Rwanda	Agriculture pest insect's species monitoring with a Polarimetric Weather radars a case study: Agriculture pest insect's species monitoring with Meteo Rwanda Polarimetric Weather radar
44	Barbara Kabwiga Asingwire	Uganda	Female	University of Rwanda	Delay Minimization Scheme for Heterogeneous Traffic in Internet of Things-Based Health Care Services
45	Safianu Omar	Ghana	Male	University of Rwanda	An IoT-based Decision Support System for small-scale Farming
46	Eric Nizeyimana	Rwanda	Male	University of Rwanda	Structural Design Patterns of Smart Devices for designing a system to monitor the Air Pollution in East Central Africa
47	Prudence Munyaradzi Mavhemwa	Zimbabwe	Male	University of Rwanda	Usable security mechanisms in the design and use of internet – of - things in the health sector
48	Fawziyah Oyefunke Olarinoye	Nigeria	Female	University of Port Harcourt, Nigeria	Natu-electric supply of power to Africa vis-à-vis natural gas
49	Shaibu Mohammed	Ghana	Male	University of Port Harcourt, Nigeria	Analysis of Oil and Gas Well Production Data: Accounting for Varying Decline Exponent of a Well Production Data
50	Sami Florent Palm	Burkina Faso	Male	University of Nairobi, Kenya	Techno-economic impact of photovoltaic solar power plants connected to the electricity network under Sahelian climate
51	Martin Ansong	Ghana	Male	University of Nairobi, Kenya	Technical Assessment and Environmental Impacts of Renewable Energy and Electric Vehicles In Ghana
52	Jorim Okoth Obila	Kenya	Male	University of Nairobi, Kenya	Fabrication and Characterization of Methyammonium Iodide (CH ₃ NH ₃ SI ₃) Perovskite Solar Cells

53	Mwende Mbilo	Kenya	Female	University of Nairobi, Kenya	Morphology control of caesium halide perovskites: a pathway towards increasing ion migration barrier for photovoltaic applications
54	Fredrick Mwange Mulei	Kenya	Male	University of Nairobi, Kenya	Optimization and integration of variable renewable energy sources in development of affordable decent smart green buildings in Kenya
55	Kay Nyaboe Nyakundi	Kenya	Female	University of Nairobi, Kenya	Geothermal Energy system integration- Combined Flash and binary power plants for Kenya
56	Alice Achieng Kasera	Kenya	Female	University of Nairobi, Kenya	Design and Construction of an Automated Biogas System (Mini- Factory) From Hyacinth Plant in Lake Victoria Regions in Kenya
57	Erasmus Muh	Cameroon	Male	University of Nairobi, Kenya	Dynamic optimization of renewable energy systems for off-grid applications in sub-Saharan Africa
58	Ahmed Ali Kabir	Chad	Male	University of Nairobi, Kenya	Characterization and optimization of magneto rheological nanofluids (mrnf) for heat transfer in solar thermal concentrators and energy storage systems
59	Jacinta Okwako	Kenya	Female	University of Nairobi, Kenya	Fabrication and characterization of al doped zinc oxide nanoparticles for dye sensitized solar cells application
60	Fabian Chidubem Eze	Nigeria	Male	University of Nairobi, Kenya	The Impact of Occupancy on Building Energy Consumption and the Indoor Air Quality (IAQ)
61	Mohamed Raoul Ibrahim	Cameroon	Male	Nelson Mandela African Institution of Science and Technology (NM-AIST), Tanzania	Synthesis and characterization of nanoparticles for solar heterogeneous photocatalysis applications
62	Linda Bih Numfor	Cameroon	Female	Nelson Mandela African Institution of Science and Technology (NM-AIST), Tanzania	Heavy Metal Removal by Moringa Oleifera Activated Carbon for water treatment
63	Alde Belgard Tchicaya	Congo	Male	Nelson Mandela African Institution of Science and Technology (NM-AIST), Tanzania	Effect of the earth-to-air heat exchanger in Congolese buildings
64	Ruth Lorivi Moirana	Tanzania	Female	Nelson Mandela African Institution of Science and Technology (NM-AIST), Tanzania	Investigation of the efficiency of biochar on enhancing methane production and denitrification process in wastewater treatment

65	Bethwel Kipchirchir Tarus	Kenya	Male	Nelson Mandela African Institution of Science and Technology (NM-AIST), Tanzania	Beaded electrospun nanofibers for ultra- and micro-filtration in wastewater treatment
66	Zvirevo Chisadza	Zimbabwe	Male	Nelson Mandela African Institution of Science and Technology (NM-AIST), Tanzania	Optical and Electrical Characterisation of TiO ₂ based Dye Sensitised Solar Cells
67	Alfredy Tusekile	Tanzania	Female	Nelson Mandela African Institution of Science and Technology (NM-AIST), Tanzania	Removal of heavy metals from water by capacitive deionization electrode materials derived from chicken feathers

Annex 6: Proposals approved by the PASET EB for RSIF Research Award (Window 2 Type 1)

Proposal #	Lead Applicant	RSIF AHU	Project Title	Budget (USD)	Thematic Area
1755	Dr. Thomas Kivevele	NM-AIST	Solar-assisted heat pump dryer with energy storage for drying biomaterials	81,133	Minerals, Mining and Material Engineering (MMME)
1754	Dr. Yusuf A. Chande	NM-AIST	Fluoride removal from drinking water using capacitive deionization	90,000	MMME
1776	Dr. Aliyu Salisu Barau	Bayero University	Do-It-For-Yourself Adaptation: New pathways for community flood risk communication	90,000	Climate Change (CC)
1774	Dr. Fredreric Nzanywayingoma	University of Rwanda	Real time assessment of the indoor air pollution in Sub-Saharan households (Case study: Rwanda rural and urban areas)	90,000	ICT Including AI and Big Data (ICT)
1756	Prof. Francis Nyongesa	University of Nairobi	Research and Development of Photovoltaics based on Lead-Free Perovskite Solar Cell Technology	89,789	Energy Including Renewables
1758	Prof. Irene Egyir	University of Ghana	Building Resilient Agribusiness Practitioners through Design Thinking Approach	89,748	Food Security and Agri Business (FS&AB)

Annex 7– Status of Procurement

S.No	Procurement Activity	Status as at June 2020
1	Procurement of office furniture	Completed in February 2020
2	Consultancy firm for French-English translation services	Consultancy in progress until February 28 th 2021
3	Feasibility Study on Establishment of an Endowment Fund for RSIF	Consultancy in progress until 15 th July 2020. Request for a no cost extension in progress
4	Individual consultancy for Development of a Strategy for Enhancing Women’s Participation in PhD Programs and Research in Applied Sciences, Engineering, and Technology (ASET) fields at African Universities	Consultancy ended on 30 th April, 2020
5	Consultancy firm for Redesign and Development of the RSIF Website	Consultancy in progress until August 6 th 2020
6	Individual consultant for Proposal writing workshop services	Consultancy in progress until June 30 th 2020
7	Individual Short-term consultancy for Communications officer	Renewal requested for an additional 30 working days. At contracting stage.
8	Consultancy Firm for Communications, Branding and Outreach for the Regional Scholarship and Innovation Fund (RSIF).	Process temporarily on hold.
9	Purchase of Video Conferencing equipment, Camera and accessories.	Awaiting delivery of equipment by June 30 th 2020
10	Development of safeguards and grievance redress mechanism framework (Social Risk Management)	At contracting stage. Requisition done for 40 working days.
11	Consultancy for development and design of a Scholarships and Grants Information Management System	At contracting stage. Presentation planned on 15 th June 2020. Evaluation report is under review.