



SCIENCE GRANTING COUNCILS INITIATIVE IN SUB-SAHARAN AFRICA STRENGTHENING PARTNERSHIPS AMONG AFRICA'S SCIENCE GRANTING COUNCILS AND THE PRIVATE SECTOR

BASELINE SURVEY REPORT FOR BURKINA FASO

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Executive Summary

A baseline survey was conducted in Burkina Faso in early November 2017 to have insights into the state of partnerships between Science Granting Councils (SGCs), research institutions and the private sector in Burkina Faso, mainly facilitated by Fond National de la Recherche et de l'Innovation pour le Développement (FONRID). In all, eight institutions were visited and eighteen top management staff of these institutions were interviewed.

FONRID is the Science Granting Council of Burkina Faso under the Ministry of Scientific Research and Innovation. Its mandate is to provide research grants for researchers and innovators in Burkina Faso at the national level.

On the state of private-public partnership (PPP), FONRID has no formal Memoranda of Understanding (MOUs) with the private sector, universities, and researchers in Burkina Faso. However, there seem to some form of collaboration and partnership with some of these institutions which also has a rippling effects on the others in a chain. In terms of knowledge transfer, FONRID partners with Centre National de la Recherche Scientifique et Technologique (CNRST), the Government of Burkina Faso and other stakeholders in organising a bi-annual forum on Research and Innovation which brings together the public, private sector and researchers to showcase research and product on research, technology and innovation. The objective of the forum is to identify the needs of the private sector and find measures to put the research products at the disposal of the private sector.

Financial challenges, lack of interest in research output by the private sector, restrictions on Government's monopoly of research outcomes and innovations are some of the factors that constraint public-private research partnerships in Burkina Faso.

There is the need for FONRID to play a facilitating role in strengthening the partnerships and collaborations with the sectors of the economy- academia, researchers, private and public sector and mediate the process of sharing Government owned research outcomes and innovations with the private sector and other sectors of the economy.

1. Introduction and objectives of the baseline survey

The baseline survey was undertaken in Ouagadougou, Burkina Faso, on the state of research partnerships and collaborations that exist among Fond National de la Recherche et de l'Innovation pour le Développement (FONRID), researchers, academia and the private Sector.

In particular, the survey was conducted to:

1. identify the factors that constrain or promote public-private partnerships (PPP), scientific collaboration and knowledge transfer in Burkina Faso
2. take inventory of the SGC's capacity needs and skills gaps for collaboration with other organizations, especially the SGC; and supporting research - productive sectors linkages
3. review the legal and policy frameworks and environment under which SGCs operate (institutional and national) in so far as support to PPP and CP is concerned

2. Methodology

FONRID was the primary respondent for the survey and other respondents such as research institutions, universities and the private sector in Burkina Faso were selected using the snow ball method based. In all, eight institutions were visited and eighteen top management staff of these institutions responded to the survey questions. The team visited eight (8) institutions in Burkina Faso and interviewed 18 respondents from these institutions below (see also Appendix for the list of interviewees and their host institutions).

- i. Fond National de la Recherche et de l'Innovation pour le Développement (FONRID) which is the Science Granting Council of Burkina Faso under the Ministry of Scientific Research and Innovation
- ii. Centre National de la Recherche Scientifique et Technologique (CNRST) which the public research institution in charge of scientific research in Burkina Faso
- iii. Bureau D'études et de Recherches Appliquées Eau et Environnement which is a private sector player in water and sanitation
- iv. Agence Nationale de Valorisation des résultats de la recherche (ANVAR) which is the national agency in charge of valorizing research results in Burkina.
- v. Chambre de Commerce which is the parent body of all industries and small scale businesses in Burkina Faso
- vi. Institut International d'Ingénierie de l'Eau et de l'Environnement (2IE) which is a public-private higher education institution in Burkina Faso
- vii. Université OUAGA I- Public University in Burkina
- viii. Université OUAGA II –Public University in Burkina which specialises in Law, Economics, Management, Science and Technology.

KSemi-structured interview guide was used to elicit responses from respondents.

3. State of research collaboration facilitated by the Fond National de la Recherche et de l'Innovation pour le Développement (FONRID) in Burkina Faso

Fond National de la Recherche et de l'Innovation pour le Développement (FONRID) is the Science Granting Council of Burkina Faso and was created by the Government of Burkina Faso under the Ministry of Higher Education and Research in October 2011 to provide funding for researchers and innovators. FONRID was created to solve issues only at the national level or orders from the Government. Since its inception in 2011, FONRID has collaborated with the private sector, researchers and other public institutions mainly through funding of projects in the domain of Science and Innovation. Currently, it has been able to finance 32 projects nationally which cut across the various sectors of the country such as Agronomy, Social Science, Health, Food Science, Roads, Innovation and other related scientific domain. The projects are managed within a period of 3 years with annual

financing plan from FONRID to the beneficiaries. Thirty (30) of the projects are in their final stages with 2 completed projects awaiting reports.

In funding projects, FONRID issues out calls on specific themes based on the need or the issues affecting the country or the different sectors. Research teams then submit their proposals and the best proposals will be selected for financing after vetting and quality check processes. A maximum of Francs CFA 30 Million¹ is given per project.

Table 1: Summary of recent projects at FONRID

Year	No. of Proposals Received	No. of Proposals Selected
2013	16	1
2014	60	12
2015	-	19
Total	76	32

In 2013, 16 proposals were received and only 1 project was selected for funding.

In 2014, 60 proposals were submitted and 12 were selected for funding

In 2015, The Government submitted 19 projects to be funded based needs of the country that need urgent attention.

Table 2: Examples of recent projects at FONRID

Project	Objective	Domain & Institution	Duration	Budget
1. Outreach Education project on the techniques for mass production of catfish	Increase the national supply of fish and improve the quality of processed fish in Burkina Faso	- Breeding - Groupement Teega-Wende	36 months	30,000 00 FCFA
2. Formulation and validation tests of insecticides made from local herbs	Result in the identification of a natural and ecological method of protecting cowpea , groundnut and maize during storage	- Environnement - IRSAT	24 months	34,5871 60 FCFA
3. Digitalization and safeguarding of audio-visual archives of INSS	Safeguarding of sound and audio-visuals in order for Research to have a reliable, secured and accessible database	- Documentat ion - INSS (Institut des Sciences des sociétés du Centre National de la Recherche Scientifique et Technologique)	24 months	30,000 00 FCFA

¹ 1 West African CFA Franc equals 0.0019 US Dollar as of February 2018

The mandate of FONRID limits its operations in terms of formal knowledge transfer since its prime focus is on administering funds to beneficiaries. However, it currently has a Memorandum of Understanding (MoU) with the SGC of Cote D'Ivoire, but the Implementation is yet to start. The aim of the collaboration is to finance together research between the two countries and resolve issues affecting both countries. The political terrain and financial position of the two countries within a given time frame/period is envisaged to be a major challenge that could stampede the collaboration between the two countries. FONRID also has a funding agreement with WaterAid which supports some projects in water sanitation, Ministry of Foreign Affairs in France (30 million Euros) and Leap-agri on sustainable agriculture. Currently, FONRID is exploring funding opportunities with the Islamic Bank for some projects.

4. State of PPP Collaborations and Knowledge Transfer facilitated by Fond National de la Recherche et de l'Innovation pour le Développement (FONRID)

Even though FONRID has no formal MOUs with private sector, universities, and researchers in Burkina Faso, there seem to be some form of collaboration and partnership with some of these institutions which also has a rippling effect on the others in a chain. For example, FONRID provides funding for some initiatives and projects of the National Centre for Scientific Research and Technology also known as Centre National de la Recherche Scientifique et Technologique (CNRST) which is the pivot of all research activities in the Burkina Faso. This National Centre also has four (4) Institutes namely Institut de recherche en sciences appliquées et technologies, Institut de l'environnement et de recherches agricoles, Institut de recherche en sciences de la santé et l'Institut des sciences des sociétés) which conduct all research work in the country through some funding from FONRID.

In terms of knowledge transfer, FONRID partners with CNRST, the Government of Burkina Faso and other stakeholders in organising a bi-annual forum on Research and Innovation which brings together the public, private sector and researchers to showcase research and product on research, technology and innovation. The objective of the forum is to identify the needs of the private sector and find measures to put the research products at the disposal of the private sector. Again some staff at FONRID and academics at the National Research Institutions lecture serve as part time lecturers in some of the universities and also receive student interns for training.

In addition to the forum that is organised every 2 years, an open day activities is organised every year to showcase research products and results reports from research works to the public. After the forum another institute takes up the challenge (ANVAR) by having a monitoring and evaluation activity

ANVAR is the last point of contact with the research results, they are in charge of valorising research results or the exploitation of research results. The end results do not belong to the researchers since they are public researchers, their results belong to the CNRST, thus the government.

ANVAR identifies promising results or results that can be exploited and some of the results have to be protected from the pilot institutions or other stakeholders. They also have results of national interest for example, Maize prototype was tested in different regions in the countries, which is now very useful to the nation. Their aim is to transfer promising research results to the private sector but this is not yet the case. The results still stay with the government with no added value. They are planning to have a data base of the research results provided by the researchers since not all results can be exploited or valorised. ANVAR only valorises research results that are of national interest.

When results are brought to ANVAR, they are tested, certified before they can be made available to the population or for national use. As of today, 40 improved seeds were presented to ANVAR and only 6 have been proven exploitable. These improved seeds have been tested in Burkina Faso, in Mali, in Niger considering the fact that their climate conditions are similar.

Even though the Chamber of Commerce of Burkina Faso which is the parent body of all industries, companies and firms in Burkina Faso does not have formal MOU with FONRID, some of its

members receive direct funding from FONRID to undertake projects which have a national benefit. The Chamber of Commerce was established on 11 June 1948 with about 70,000 commercial, industry, education and general firms in Burkina Faso. The chamber of commerce provides industries with information and also organises programs to support industries. Even though the chamber of commerce is the bridge that links the research institutions and the private sector, the chamber has no partnership or collaboration with any research institution. However, they are invited to attend programmes and events such as the bi-annual forums. The chamber also organises programmes that bring the research institutions and the private sector together. The chamber does not have any formal collaborations with academia however, some of its members support academia in terms of teaching and providing funds for research even though it on the rare side. The chamber does not depend on scientific research in making decisions. No decision relating to industries or private sector is taking without consulting the chamber of commerce.

5. Factors constraining PPP collaborations and Knowledge Transfer

Interviewees from FONRID identified the following factors that influence or constrain PPP collaborations and Knowledge Transfer activities of FONRID

- i. **Finance:** FONRID's challenge that affects their partnership with other sectors is finance. They are unable to finance all the proposals sent to them when calls are issued. For example, the last call had a total number of 218 concept notes/proposals but only 20 candidates were selected due to funding challenges. In some instances, funding does not come on time from the government.
- ii. **National Context:** FONRID is unable to partner with many of the private sectors and industries due to the scope of their mandate as a national or public institution. Each call issued must have a national context or focus and not a private initiative which most of the private sector players in Burkina lack. For example, during the Ebola period a call was sent out at the national level for research organisations and other sectors to apply for funding for research to solve the epidemic at the national level. Basically, the projects that are financed should meet the demand of the country not at the industrial level, not at the private level but nationally. For example, if they want to improve the production of groundnut in the country, a call will be sent out to contract experts or researchers to meet the demand of the nation.
- iii. **Lack of interest in research by the private sector:** Private sector and industries in Burkina show very little commitment to research thereby creating a huge gap between industry and researchers. In instances when researchers showcase the outcome of the research to the industries and even when a meeting is organised to bring on board the two sectors, there is always a lower turn out from the industries and private sector. The private sector gives the impression that they do not need the researchers, do not see the importance of research, they do not trust the research from nationals but rather prefer to consult external experts.

Interviewees from Research Institutions identified the following factors that influence or constrain PPP collaborations and Knowledge Transfer of activities of research organisations

- i. **Weak coordination and partnerships:** Despite the attempts to bring all actors together on a common platform to foster collaboration, the private sector in Burkina seem not interested in such partnerships. Burkina Faso does not also have the long term goal partnership culture where a private sector can sign a 10 years contract with any expert or any research institute in the country. It appears the private sector does not need researchers and other actors. For example, researchers in Burkina have managed to manufacture biscuits but the private sector has not had any collaborations in order to increase the productivity.
- ii. **Low patronage in research outcomes:** Results from research is not utilized since the private sector expects researchers to produce end-result products that can be readily used by the private sector. The private sector does not have confidence in the research products produced nationally, there are no considerable commitments on the side of the private sector that fund

- products that have long term results or take time to blossom. The research products are expected to give immediate results when presented during these forums or open day activities and there is absolutely no room for trials, mistakes or investment in terms of time and Funds.
- iii. **Government's Monopoly:** All research results and outcomes in Burkina Faso belong to the government and as such are not easily made available to the private sector to be put to good use. Even when results are tested and have won the trust of the stakeholders or public sectors, the government at times does not release the products to the private sectors for sale or partnership.
 - iv. **Branding and ownership of Innovations/inventions:** Another key factor also is that when researchers come up with technologies, innovations or research results they are unwilling to entirely release them to the government because they believe in intellectual property and feel that either the government does not make good use of the results or takes full credit for the results they provide. One example of the result product that was not made to good use by the government is the vaccine for Malaria invented by Dr. Tinto years ago which was tested locally , regionally but the excuse was still to get it tested by WHO or backed by an International Pharmacy. So the argument is if the product must also be backed by an International Pharmacy, what the researcher stands to gain. Automatically, even if tested and proven the credit will not be given to the researcher. The government was supposed to certify it and make it available to the nation. Another example, is the case of Sickle cell disease, where a research was done and there were products that would have been made affordable to sickle cell patients but the government is silent about it.
 - v. **Inadequate funding:** Funding is one of the major issues that constrains partnership in research related activities in Burkina Faso. The government does not also give flexibility to CNRST and other research centres to deal with the private sector.

Interviewees from the Private Sector identified the following factors that influence or constrain PPP collaborations and Knowledge Transfer activities of private sector organisations

- i. **Lack of initiatives:** They have not taken the initiative and the other sectors have not also approach them. In Burkina, research is mainly done by the government or it's an activity that is managed purposely by the government. The government does not involve other sectors and takes upon itself the mandate thereby isolating itself from other stakeholders. So if there should be any form of partnership, the initiative must come from the government, they have to involve other parties. The government is indirectly saying that they don't need anyone.
- ii. **Lack of policy:** There is no policy and framework on partnership between Private Sector, Academics and government. The idea of partnership has not yet been conceived. The term PPP is really new to them. There was only one occasion where the government collaborated with a private economic sector who financed a project with other benefits. In terms of partnership at the scientific level, nothing has been done as of today.
- iii. Other challenges include Politics, insufficient funding and unskilled/half trained graduates due to bad educational system.

Interviewees from the academia identified the following factors that influence or constrain PPP collaborations and Knowledge Transfer activities of academia

- i. **Capacity of Industries:** Industries in Burkina Faso do not have the capacity to absorb all students who apply for internships. There is a high demand of student internship and the students are more than what the industry can cater for.
- ii. **Low Investment in Research:** The private sector and industries in Burkina Faso show very little interest and concern in research results and therefore do not budget for research activities or they are insignificant. The private sector does not really invest in research products. The only good case example is Total which has a strong collaboration with a private sector. Total has a lab in ZIE.

5.1 Policy Framework

Even though FONRID does not have any specific internal policy framework which governs their knowledge transfers and collaborations, it is been guided by their strategic plan and the national constitution in the discharge of their mandate and operations.

5.2 SGC Capacity

FONRID has 31 staff which is made up of research and programmes, finance, Human resource and cooperation, Communication and IT department, research and programmes, and resource mobilization Unit.

6. Conclusion

There seem to be a huge disconnect among the various actors in Burkina Faso. Even though some of the institutions are doing well, there is a weaker partnership and collaborations amongst them. Institutions that have some good examples of partnerships are doing informally without MoUs and partnership agreement. While the government and public research institutions have no policy framework in sharing their research outcomes with the private sector, the private sector also seem uninterested in the activities of researchers since they are “produce, buy and sell” oriented.

There is a need for the SGC to build synergies and foster a stronger partnership/ collaborations with the other sectors and liaise with the Government of Burkina Faso to develop policy framework that will ensure transfer of knowledge from the public research institutes to the private sector and vice versa.

Based on this baseline, we recommend the following at the SGC to increase research collaboration in Burkina Faso.

- i. The SGC needs to play a facilitating role of strengthening the partnerships and collaborations with the sectors of the economy- academia, researchers, private and public sector.
- ii. In-service training for the staff
- iii. Proper monitoring and Evaluation of the projects and activities.
- iv. Organise programmes and for all these actors to brainstorm on the development of Burkina Faso.

Appendix

List of Respondents, contacts and positions held in their Institutions

S/N	Name of respondent	Name of Insitution	Email Address	Position of respondent
1.	Some T Issa	Universite Ouaga I	Tsome66@gmail.com	Director of Research
2.	Lompo Olge	Universite Ouaga I	olgalompo@yahoo.fr	
3.	Couliati Patrice	Universite Ouaga I	Couliati.patrice@yahoo.fr	Interpreter/ Translator
4.	Mr. Yacouba S. Traore	Bureau d'études de Recherche appliquées	yacoustraore@gmail.com / bera@fasonet.bf	Director General
5.	Dr. Didier Zida	Centre National de la recherche scientifique et technologique (CNRST)	didierzida@hotmail.com	Director of Programmes
6.	Dr. Yameogo Georges	Centre National de la recherche scientifique et technologique (CNRST)	Georges.yameogo@yahoo.fr	Deputy General
7.	Mr. Daouda Nayete	Agence Nationale de la valorisation des resultats de recherche et des innovations(ANVAR)	Nayete61@yahoo.fr	Head of administrative and financial department
8.	Mr. Rayaguedewinde Simon Zemodo	Agence Nationale de la valorisation des resultats de recherche et des innovations(ANVAR)	Simonzemodo21@yahoo.fr	Director
9.	Pr. Stanislas Ouaro	Universite Ouaga II	ouaro@yahoo.fr / soauro@univ-ouaga2.bf	President
10.	Mr. Abdoul-Wahab Annou	Institut International d'Ingenierie de l'eau et de l'environnement (2iE)	Abdoul-wahab.annou@2ie-edu.org	Business Developer
11.	Giraude Adeossi	Institut International d'Ingenierie de l'eau et de l'environnement (2iE)	Filde.adeossi@2ie-edu.org	CSR-Fundraising Professional
12.	Pr. Hamma Yacouba	Institut International d'Ingenierie de l'eau et de l'environnement (2iE)	Hamma.yacouba@2ie-edu.org	Director of Research
13.	Mr. Kouame Kouassi	Institut International d'Ingenierie de l'eau et de l'environnement (2iE)	Kouassi.kouame@2ie-edu.org	Secretary General
14.	Mr. Thimothée Dabire	Chambre de Commerce et d'industrie du Burkina faso	Thimothee.dabire@cci.bf	Director
15.	Dr. Blandine Bila	Fond National de la recherche et de l'innovation pour le developpement (FONRID)	blandinebila@yahoo.fr	Director of Resoource mobilisation
16.	Mr. Sedoao Sonda K. Eleonore	Fond National de la recherche et de l'innovation pour le developpement (FONRID)	elosomd@hayoo.fr	Human Resource
17.	Dr. Zongo Inoussa	Fond National de la recherche et de	zinoussa@hotmail.com	Director

		l'innovation pour le developpement (FONRID)		
18.	Traore Hamed	Fond National de la recherche et de l'innovation pour le developpement (FONRID)	Hamedtraore71@yahoo.fr	Director of IT and Communication