



# **National Innovation System for Resilience and Sustainable Development in Africa**

## **CONFERENCE PROCEEDINGS**

**5<sup>th</sup> International Conference**

*9<sup>th</sup> - 11<sup>th</sup> November 2022*

**Held at**

**The International Relations Institute of Cameroon (IRIC) Campus,  
University of Yaoundé II,  
Cameroon**

## Acknowledgements

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- Sida (Swedish International Development Cooperation Agency, Sweden)
- ACTS (African Centre for Technology Studies)
- University of Yaoundé II-Soa
- PAU Institute for Governance, Humanities and Social Sciences (PAUGHSS)
- The International Relations Institute of Cameroon (IRIC)
- Ethiopian Airlines



## Acronyms

ACTS	African Centre for Technology Studies
AIS	Africa Innovation Summit
ASTI	Advanced School of Translators and Interpreters
CBE	College of Business and Economics
CeSTII-HSRC	Centre for Science, Technology and Innovation Indicators- Human sciences research council
CINPE	International Center for Economic Policy for Sustainable Development
COSTECH	Tanzania Commission for Science and Technology
CSIR-STEPRI	Council of Scientific and Industrial Research-Science and Technology Policy Research Institute
FUTA	Federal University of Technology Akure
GVCs	Global Value Chains
IRIC	International Relations Institute of Cameroon
LICS	Low Income Countries
LMICS	Low Middle-Income Countries
LOC	Local Organizing committee
NACETEM	National Centre for Technology Management
NACs	North African countries
NRF	National research Foundations
NSI	National Systems of Innovation
PAU	Pan African University
PAUGHSS PAU	Institute for Governance, Humanities and Social Sciences
Sida	Swedish International Development Cooperation Agency
STEM	Science, Technology, Engineering and Mathematics
STIPRO	Science, Technology and Innovation Policy Research Organization
UDSM	University of Dar es Salaam

## Table of content

Acknowledgements	2
Acronyms	3
Executive summary	1
Background	2
The highlights of the conference	3
Overview of the conference programme	3
Conference paper submission and review process	4
Conference advertisement and papers submission	4
Conference review process	5
Opening ceremony	5
Keynote Addresses	6
National Innovation System for Resilience and Sustainable Development in Africa: Challenges and Issues for Universities	6
Knowledge Application for Economic and Enterprise Competitiveness in The Context of Africa's Development and Economic Transformation	6
Sustainable systems of innovation and economic policies for development: Examples from Central America	7
Thematic/ plenary sessions	9
Paper presentations	10
Book launch	10
Closing session	11
AfricaLics Scientific Board (ASB) Meeting	13
Social events	14
Media coverage	14
Results of the evaluation survey	17
Conference expenditure	20
Annexes	21
Annex 1: Thematic/plenary sessions	21
Annex 2: Participants list	27

## Executive summary

The African Network for Research Training on Innovation and Competence Building Systems (AfricaLics) is a network of scholars in Africa and beyond who are interested in innovation and development focused on Africa's development. One of the objectives of AfricaLics is to increase quality research in innovation within specific relevant areas for Africa's development and encourage its increased use by scholars and policy makers in the region and globally. One proposed activity towards this end is to conduct annual conferences thus creating a platform for domestic and international scholars to meet up towards achieving this endeavor.

The 5<sup>th</sup> AfricaLics Conference was hosted by The University of Yaoundé II in collaboration with the Pan-African University, Institute for Governance, Humanities, and Social Sciences (PAUGHSS). The conference brought together up to 85 PhD students, early-career and established researchers and scholars from various disciplines with the overall goal of improving the quality of innovation studies in relation to African development and growth. The conference specifically aimed at providing a space for presentation and discussion of research findings and for networking between researchers working in the field of innovation and development. This constitutes part of the AfricaLics efforts to build research capacity in Africa with strong links to users including policy makers and the private sector.

This report highlights the 3-day deliberations as well as other non-academic activities that contributed to a very successful event. Details of each of the activities are annexed to this report.



*Participants: 5<sup>th</sup> AfricaLics International Conference*

## Background

Since the network's inception in 2012, AfricaLics has aimed to hold a research conference every two years at the very least. The focus is primarily on the current state of research on African Innovation and Development for the academic community, but policymakers and business leaders are also targeted. It aims to bring together approximately 150 to 200 leading scholars working on innovation and development in Africa, as well as leading scholars from outside Africa, policymakers, and business leaders interested in this field.

The University of Yaoundé II in collaboration with the Pan-African University, Institute for Governance, Humanities, and Social Sciences (PAUGHSS) hosted the 5th AfricaLics Conference as local partners. The conference brought together up to 85 PhD students, early-career and established researchers and scholars from various disciplines with the overall goal of improving the quality of innovation studies in relation to African development and growth. This number excludes the local scholars and delegates, and facilitators and guests.

The 4<sup>th</sup> AfricaLics Conference was held in Dar es Salaam, Tanzania from the 22<sup>nd</sup> to the 24<sup>th</sup> October 2019. The conference's overarching theme was "Innovation and transformative capacities for growth and sustainable development in Africa." The event was a three-day event hosted by the Science, Technology, and Innovation Policy Research Organization (STIPRO) in collaboration with the University of Dar es Salaam (UDSM) and Tanzania Commission for Science and Technology (COSTECH) as co-hosts.

The 3<sup>rd</sup> AfricaLics Research Conference was hosted by the University of Oran 2 Mohamed Ben Ahmed in Algeria from 27<sup>th</sup> to 29<sup>th</sup> November 2017. This conference brought together over 120 leading scholars from 28 countries working on innovation and development in Africa, as well as some of the world's renowned scholars. The conference's overarching theme was '*Emerging Innovation Systems for Sustainable Development in Africa.*'

The 2<sup>nd</sup> AfricaLics research conference was the first of its kind held in Africa and exclusively focused on the current state of research on African Innovation and Development. The conference was held in Rwanda from November 17 to 19, 2015, and was hosted by the University of Rwanda, College of Business and Economics (CBE). It brought together 220 leading scholars from 30 countries working on innovation and development in Africa. The conference's theme was; '*Unpacking systems of innovation for sustainable development in Africa.*'

The 1<sup>st</sup> AfricaLics research conference was held in Maputo, Mozambique in 2013. The conference was organized as a research workshop with the goal of bringing together researchers from the innovation and development community to provide a space for creative thinking about new research projects or research dissemination projects in this field. It was a first step towards the potential funding of new networked research projects that focus on Africa's development considering its distinct context. The 1<sup>st</sup> conference's themes were guided by several thematic areas agreed upon during the launch of AfricaLics in Dar es Salaam in 2012. These themes are thought to be critical to the development of African economies and livelihoods.

## The highlights of the conference

This 3-day event was hosted by the University of Yaoundé II in collaboration with the Pan-African University, Institute for Governance, Humanities, and Social Sciences (PAUGHSS). The 9<sup>th</sup> AfricaLics Scientific Board meeting was embedded within the conference programme and happened a day before the conference, on 8<sup>th</sup> November 2022, to enable the board members to participate in the conference.

All events took place at the International Relations Institute of Cameroon (IRIC), and the first and second days featured keynote addresses and the presentation of research papers in parallel sessions with panel discussions and plenary lectures. Workshops and collaborative research facilitation events were held on the third day to promote learning and networking. Other interactive activities included NationaLics meetings and alumni meetings.

This report highlights key discussions from the conference's various sessions. Each of these activities is described in detail in the report's appendices.

## Overview of the conference programme

Table 1: The Conference Programme overview

<b>Conference opening ceremony</b>	<b>Official opening session</b> Director, IRIC Chair, AfricaLics network, Prof. George Essegbey Director, PAUGHSS-PAU-ESTI Rector, University of Yaoundé II  <b>Keynotes</b> Minister of Scientific Research and Innovation, Cameroon Minister of State, Minister of Higher Education, Cameroon
<b>Keynotes</b>	<b>Charles Awono Onana</b> , President of the university of the mountains Presentation Topic: National Innovation Systems for Resilience and Sustainable Development in Africa: Challenges and Issues at the Universities.  <b>Dr. Tijani Olatunbosun</b> , CEO Co-Creation Hub Presentation Topic: Networks, Innovation Ecosystem, and Innovation Capacity in Africa.  <b>Prof Olman Segura Bonilla</b> , Director general Centro Internacional de Política Económica para el Desarrollo Sostenible (CINPE) Presentation Topic: Sustainable Systems of Innovation: Examples from Latin America.
<b>Plenary Sessions</b>	Several sessions took place including the opening ceremony, open symposium, keynote addresses, expert panel session and the closing ceremony.



<b>Paper sessions Parallel</b>	Each paper parallel session had 2-3 papers and lasted 90 minutes. The standard time schedule for the sessions devoted to presentation of papers is indicated below: <ul style="list-style-type: none"> <li>▪ Introduction - 5 minutes</li> <li>▪ First paper presentation by the author - 15 minutes</li> <li>▪ Second paper presentation by the author - 15 minutes</li> <li>▪ Third paper presentation by the author - 15 minutes</li> <li>▪ Discussant of all three papers - 15 minutes</li> <li>▪ General discussion and replies from the authors - 25 minutes</li> </ul>
<b>Thematic Sessions</b>	A few thematic sessions were organized during the conference and these sessions were organized as round table/ panel discussions and focused on specific themes. Participants chose specific thematic sessions to attend rather than flipping between the scheduled sessions.
<b>Social events</b>	1 <sup>st</sup> dinner was organized by the Local Organizing Committee (LOC) and the Gala dinner on the 2 <sup>nd</sup> day was organized by AfricaLics.
<b>Closing Ceremony</b>	Closing ceremony was held on 11 <sup>th</sup> November 2022.

## Conference paper submission and review process

### Conference advertisement and papers submission

The Secretariat initiated an open call that invited submission of applications of original unpublished papers for the conference in line with the main conference theme or one of the sub-themes. The requirements included submission of a full paper (in PDF) not exceeding 8,000 words (including notes, tables, appendices, list of references, etc.) through the online conference management system (ConfTool). The system helped in the management of the paper review process. The call encouraged the participation of young researchers and female scholars from Low-Income Countries (LICS) and Low Middle-Income Countries (LMICS). The conference advertisement went up in June 2022 and the interested participants had clear instructions on the process, which was also posted on the conference website page (see Table 2 below). The selection of the papers was based on a peer review process.

*Table 2: Paper submission/ feedback milestones*

Paper submission/ feedback milestones	Timeline
Submission of papers and registration	ConfTool opened on 1 <sup>st</sup> June 2022
Deadline for submission of papers	1 <sup>st</sup> July 2022
Notification of paper acceptance	15 <sup>th</sup> September 2022
Deadline for application for travel support	1 <sup>st</sup> July 2022
Response to applicants for travel support	15 <sup>th</sup> September 2022
Conference registration deadline	31 <sup>st</sup> November 2022
Deadline for uploading of final paper	10 <sup>th</sup> October 2022
Conference dates	9 <sup>th</sup> – 11 <sup>th</sup> November 2022



## Conference review process

The 5<sup>th</sup> AfricaLics Research Conference in Yaoundé, Cameroon received over 200 full paper submissions from which 85 were selected for presentation in Yaoundé. The selection of papers is based on a double-blind peer review process focusing on relevance, academic quality, and originality. A total of 100 scholars, appointed by the AfricaLics Secretariat, contributed as reviewers. The referee corps have been essential to ensure the quality of papers presented at the conference. The AfricaLics Scientific Board and the AfricaLics Secretariat are grateful for the contribution of scholars that dedicate their valuable time and support in reviewing the conference papers.

## Opening ceremony

The opening ceremony was graced by a number of guests. Dr. Daniel Urban Ndongo – Director IRIC delivered his speech and welcomed all delegates to the conference. He was grateful that this event was held in Cameroon. He was followed by the president of the AfricaLics network, Prof. George Essegbey, Prof. Elizabeth Sarange Bosire Abenga, Director, PAUGHSS-PAU-ESTI and the lastly the chief guest, Professor Adolphe Minkoa She, Rector of the University of Yaoundé II.

In his speech, the Rector, Professor Adolphe Minkoa thanked the AfricaLics network for choosing the University of Yaoundé II as the host of the conference. He then emphasized the importance of innovation for the achievement of sustainable development goals and economic growth. He also noted that this conference is timely both for the country, which focuses its development strategy on the national innovation system and for the university, which aims to be a technopole in social sciences. He noted that the conference was providing a platform for reflection on the role of the national system of innovation for the development of the Nation on the one hand and offers an emerging framework of research in social sciences to researchers of his University and the training of students on the other hand.

There were representations from the Minister of Scientific Research and Innovation, Cameroon, the Minister of State, and the Minister of Higher Education, Cameroon. The speakers expressed gratitude to the AfricaLics team and the Local Organizing Committee (LOC) team; The University of Yaoundé II and PAUGHSS as well as IRIC for the well-organized conference. Most of them spoke to the conference on a thoughtful theme: National Innovation System for Resilience and Sustainable Development in Africa.

## Keynote Addresses

### 1. National Innovation System for Resilience and Sustainable Development in Africa: Challenges and Issues for Universities

Prof Charles Awono Onana was the first keynote speaker addressing the topic mentioned above. He highlighted that the National system of innovation is supported by four pillars which include the organizational & strategic sphere, training, research and innovation, and production. A national innovation system includes complex interactions between many institutional actors and processes which encourage innovation towards sustainable development. The process of socio-economic changes in developing countries and specific regions has triggered lots of challenges for national innovation systems including readability, human capital, inclusiveness, infrastructure, visibility, private sector involvement, valorizing of results, funding opportunities as well as steering and governance. Prof Awono concluded by stating that the Kenya's Konza City (\$14 billion) is on track to be a world-class Smart City and a major economic driver for the country, with a diverse mix of businesses, workers, residents, and urban amenities. It will serve as the country's hub for innovative solutions in ICT, business, health, and education. In Western discourse, the Chinese citizen rating system aims to encourage Chinese citizens to become "exemplary citizens", reinforcing the idea that "keeping trust is glorious and breaking trust is disgraceful."



*Prof. Charles Awono, giving his keynote speech at the conference.*

### 2. Knowledge Application for Economic and Enterprise Competitiveness in The Context of Africa's Development and Economic Transformation

The second keynote was by Dr. Bosun Tijani, Co-Creation Hub, Nigeria & United Kingdom. Dr. Bosun mentioned that knowledge application is essential in Africa's context for development and economic transition, as everyday challenges are increasingly becoming opportunities for entrepreneurs to explore how they can apply technology. He emphasized that this can also help to accelerate investment in Africa.

*"We need to move away from the point where entrepreneurs are literally rent seekers. We only think of trading but are not thinking of creating new opportunities, and new markets, but also new solutions to old problems on the continent. So, the place for knowledge application is what I think we need to quickly accelerate."*



*Dr. Bosun Tijani, giving his keynote speech at the conference.*

Applied research and commercialization of research are essential and countries in Africa should intentionally act in prioritizing Science Technology and Innovation and investing in innovation. Technological innovation can be used in various sectors e.g., to improve the education system, improve the public health sector, as well as transportation. From his experience, collaboration is

crucial from different institutions, sectors, and/or countries, which could bring speedy progress, better connections and networks, and financial support systems within the partnerships.

There is still a big gap in contextualizing innovation with the real issues out there, the academic sector is still traditionally attached to the old systems. However, this should not be the case, there is a lot that can be used to study innovation in every region and in any sector. Investing in digital innovation in Africa has rapidly grown and is still promising. The increased mobile penetration, infrastructure investment, a young demographic, and other socioeconomic conditions on the continent have made technology an appealing investment opportunity, as well as increased connectivity, enabling policies, growth of tech and non-tech talents, and the rise of local angels & seed funding. Actors and networks on the continent are expanding rapidly, as are institutional breakthroughs. However, academic research institutions have not clearly led the knowledge and technology innovations, noting that there is no traceable innovation generated solely by the sector. Dr. Bosun concluded by emphasizing that the shape of knowledge today is changing and that we as a continent must account for this. Investing in innovation should be very intentional and he gave an example of China's massive sponsor of students to the best universities for their Ph.D. and taken back to the country to conceptualize and use the knowledge to challenge and build the status score. If we did that, Africa would move in a span of 2-3 years significantly. Africa should indeed broaden its perspective on discussions about innovation and learning.

### **3. Sustainable systems of innovation and economic policies for development: Examples from Central America**

The third Keynote address was delivered by Dr. Olman Segura-Bonilla, of Centro Internacional de Política Económica para el Desarrollo Sostenible (CINPE), Costa Rica.

In his address, Dr. Olman mentioned that Innovation is a way of approaching development. Africa needs to evolve if it wants to experience progress that is different from what we already see in a more traditional economy. To move from the traditional way of working, there must be new knowledge obtained from learning from different angles: organizational, technological, institutional, and/or market innovation, either incrementally or a radical change, through social, economic, or environmental forces. Changes must result from learning new information, and new information must result from learning. This new knowledge can be acquired from universities, books, videos, social media imitations, from experiences, and taking risks. A proper combination of material, knowledge and energy can lead to a production process and consumption of products and services.



*Dr. Olman Segura-Bonilla delivering his keynote speech at the conference.*

Dr. Olman explained how CINPE, a government-led initiative pays local communities to help protect the natural ecosystem. Costa Rica became the first tropical country to have stopped and subsequently reversed, deforestation. The reforestation was such a success and was awarded the prestigious Earthshot prize, an award created by Prince William to champion innovations and solutions helping save the planet. Not forgetting the inseparable link to coffee production, free coffee seeds were distributed by the local government as a means of promoting coffee production to bolster the

economy. Costa Rica is one of the most advanced coffee producing countries in Central America, much appreciation to the tireless innovators/innovations, extensive new knowledge and attention to production.

Dr. Olman further explained that Africa needs academic institutions to start talking about the power of Innovation on concepts. It shouldn't just be entities that are there to train the workforce only but also challenge the status quo in terms of knowledge to help find great ways for companies to adopt this knowledge to create solutions.

If Costa Rica has been recognized for creating and promoting innovations that serve as a bridge for economic and social progress, then any nation can do it and Cameroon is not an exception. His recommendations were as follows.

- To continue focusing on taking advantage of the strengths of the systems of innovation of each territory.
- To connect innovation efforts and technology with the type of development that each country needs. In Cameroon, it would probably be linked to natural resources, mines, forests, agriculture production and so forth.
- To ensure that the triple helix works together: productive sector, government, and academia.
- In transition it is important to build upon the knowledge economy, in order to: constantly adapt to changes in technology; manage natural capital and produce eco-innovations; Educate and change our development paradigm; reduce carbon emissions and promote entrepreneurship and eco-innovation for the green economy.

He concluded by urging Africans to take a cue from Costa Rica and alter their chemical processes and production methods. Universities and policymakers should also collaborate with the producers to create new processes, products, or by-products that will be sold in the market.



*Figure 1: Participants: Day 1 of the conference*



## Thematic/ plenary sessions

In addition to the parallel paper sessions where full papers were presented, 6 thematic sessions were organized to take place in parallel on day 2 and 3 of the conference. The thematic sessions were organized as round table/ panel discussions and focused on specific themes.

- The first thematic session, “African Innovation and development studies: The emergency of a new field”, highlighted the opportunity for the development of a new field of research. This thematic session aimed to present and discuss key findings from a yet unpublished article on the scientific roots of the field of I&D in Africa and how the field has developed over the past 15-20 years as well as some emerging priorities and ways forward in consolidating the field.
- The second thematic session, “AIS and the promotion of innovation ecosystems for Africa’s development” highlighted the need to support Africans in their efforts to build robust innovation ecosystems to facilitate socioeconomic transformation.
- The third thematic session, “Making innovation in the STEM landscape more gender inclusive: policy limitations and barriers building on gender-disaggregated data from STEM studies in Ghana, Benin, and Zimbabwe” focused on the need to improve the participation of women in STEM fields, particularly in the higher education contexts.
- The fourth thematic session, “Measuring innovation in the informal sector in Africa: theoretical and methodological considerations” aimed to stimulate discussions in an effort to address the following questions: How suitable are the existing measurement frameworks and related instruments for the informal sector, considering that these have been designed for formal enterprises? What alternative theoretical and/or methodological frameworks may be suitable for measuring innovation in the informal sector, with a view to generating results that are relevant for policy and practice? What lessons can be learned from current efforts to put together a measurement framework that responds directly to the need to understand innovation activity in the informal sector on the continent, and how can these be linked to existing measurement programs of formal sector innovation?
- The Fifth thematic session, “Future of work in Africa: Impact of four industrial revolution (4IR) on global value chains (GVCs) and Production Systems” highlighted how 4IR has disrupted patterns of GVCs. It elicited discussions that aimed to address the following questions: What are the foundational requirements necessary for the development of production capabilities in Africa? What are the channels of building capabilities for Africa to participate in global value chains?
- The sixth thematic session, “From emerging Innovation systems to transformative innovation: what issues for North African Economies” aimed to bring some thoughts and empirical evidence on some of the issues by examining different sectors of higher education; the mechanical sector and the digital sector. The session also interrogated social innovation as a basis for both youth employment creation and inclusion. It further explored environmental innovation policy and energy transition in Algeria by analyzing the determinants of environmental innovation at a firm level where social responsibility and ethical concern make it easier to promote innovation towards achieving SDGs.

Apart from the thematic sessions, we had one plenary session which aimed at addressing the core question “**How to influence Science, Technology, and Innovation Policy and practice in Africa**”. The plenary session articulated the following broad questions:

- How do we ensure the relevance and impact of African STI policies towards the achievements of the relevant global and regional agenda?
- Does Africa have the STI capacity to generate localized evidence that is commensurate with challenges facing the continent including the growing population of youth and the important role of the informal sector in economic development?

## Paper presentations

The paper's parallel sections were grouped and presented in 5 sessions (Inclusive innovation, Transformative innovation, Technology management, Innovation management & Innovation, and sustainable development).

Each session had a pre-identified discussant and a chair and 2 or 3 paper presenters. Other participants would opt to join any of the 2 sessions that were running in parallel.

## Book launch

This session was dedicated to the launching of written books by some of the members of the network. Details are indicated below.

Prof. Mammo Muchie is currently a DST/NRF Research Professor at the Faculty of Management Sciences, Tshwane University of Technology, South Africa. Book titles were;

- *Engineering Design and Mathematical Modelling: Concepts and Applications.*
- *Science, Technology, and Innovation in BRICS Countries.*
- *Solar Energy in Africa Possibilities & Capabilities.*
- *Science, Technology and Innovation Indicators: Lessons from the Development Experience in Africa.*

Prof. Abdelkader Djeflat, Director of the Master on International Cooperation and lectures at the University of Lille in France. Book titles are indicated below;

- *Emerging Innovation Systems (EIS): A new conceptual framework for analyzing GCC and Maghreb Countries policies.*
- *Building Science, Technology and Innovation Systems in Africa: Experiences from the Maghreb.*

Prof. Rebecca Hanlin, Innovation & Development specialist, Director SBSEAL & Visiting Professor at University of Johannesburg. Book titles indicated below;

- *Health Systems strengthening rethinking the role of innovation.*
- *Low-carbon Innovation and Development.*
- *Learning, Innovation and Inclusive development: new perspectives on economic development strategy and development aid.*

Dr. Sandeep Kaur is currently an Associate Professor & Head Department of Economic Studies School of Social Sciences, Central University of Punjab. Book title indicated below;

- *Revisiting India East Connections: Problems and Prospects.*



*Pictures taken of the book authors during the book launch session.*

## Closing session

Prof. Nadine Machikou thanked the participants for their participation in the 5<sup>th</sup> Conference in Cameroon. She also appreciated the AfricaLics secretariat for the well-organized event, coordination, and the different sessions that took place in the days. She also thanked the local organizing committee for its cooperation and effort in ensuring that the event was a success.



*Prof. Nadine Machikou giving her closing remarks at the conference.*



The conference closing remarks were delivered by Dr. Ann Kingiri, Secretary General, AfricaLics, who thanked all for active participation and informative ideas on the just concluded conference themed "*National Innovation System for Resilience and Sustainable Development in Africa.*" She commended Ms. Esther Zaman for attending the conference with her 5-month-old child as a special participant and expressed gratitude to the network for recognizing gender and enabling women to participate even in demanding responsibilities. Dr. Kingiri introduced a model adopted by the network called the hub and spoke model. The model opens up opportunities for institutions to collaborate with AfricaLics. All nations present during the conference were invited to be part of the model. She announced that AfricaLics will offer researchers seed grants to conduct Innovation & Development research in Africa if Sida approves the application for phase 3 of the project. In order to generate proposals for joint or partnered research projects, researchers will be brought to Nairobi, Kenya in March 2023. She also mentioned that India will host the Globelics conference in 2023. Dr. Kingiri then invited the President of AfricaLics to close the meeting.



*AfricaLics' Secretary General, Dr Ann Kingiri , giving her closing remarks at the conference.*

AfricaLics' president, Prof. George Essegbey, thanked everyone for having collectively chosen the historic African country of Cameroon to host the conference, noting that the conference theme was also very relevant to the present status of an African nation. Prof. Essegbey mentioned that having the conference in Cameroon was timely since suddenly, all of Africa is at a crossroads of economic challenges and most African countries have joined the long queues to the International Monetary Fund (IMF) and with discussions regarding innovation, development, and sustainability in Africa, he is positive that African countries, despite their challenges can pull themselves up by attaining

respectable, sustainable development. For this conference, he encouraged everyone to develop new ways of thinking, new ways of learning, and new ways of doing things. He also appreciated the commitment of the partners involved in the conference; the University of Yaounde, through the leadership of Prof. Adolph Minkoa She, and PAUGHS, through the leadership of Prof. Elizabeth Abenga. He also thanked the conference's scientific committee, the local organizing committee, and the AfricaLics secretariat.



*AfricaLics' President, Prof. George Essegbey giving his closing remarks at the conference.*

He concluded by closing the conference and encouraged participants to continue working towards a common goal, i.e., to improve the access to quality education and promote the development of the African scholarly community, by diversifying and broadening the approach to innovation, development, and sustainable issues.

## AfricaLics Scientific Board (ASB) Meeting

The 9<sup>th</sup> physical meeting and the 18<sup>th</sup> virtual meeting of the ASB was held in Cameroon on 8<sup>th</sup> November 2022 at Hôtel Mont Fébé.

**The members present included** Prof. George Essegbey, Prof. David Kaplan, Prof. Mammo Muchie, Prof. Geci Karuri-Sebina, Prof. Opeyemi Eyitayo Ayinde, Dr. Rajesh Gopalakrishnan Nair,

Prof. Susan Cozzens, Prof. Erika Kraemer Mbula, Dr. Diran Soumonni, Prof. Abdelkader Djeflat, Dr. Bitrina Diyamett, Prof. Daniel Kitaw and Dr. Gregory Paulin Mvogo.

**Secretariat;** Prof. Rebecca Hanlin, Dr. Ann Kingiri, Dr. Margrethe Holm Andersen, Mourine Cheruiyot.

## Social events

Two social events were organized at the conference.

- On 9<sup>th</sup> November 2022, the welcome reception dinner was held, hosted, and sponsored by IRIC and University of Yaoundé II.
- On 10<sup>th</sup> November, AfricaLics organized a gala dinner, held at Hôtel Mont Fébé, where participants dressed up in their traditional attire. The dinner was graced by Cameroon traditional dancers.

## Media coverage

The conference attracted media coverage from one of Cameroon's Local TV Stations: Vox Africa: [https://youtu.be/5\\_1YlqM3Gmk](https://youtu.be/5_1YlqM3Gmk)

The event was also tweeted live and people from different parts of the world followed and commented on Twitter. Twitter content had a total of 5,119 impressions, 1390 profile visits, 31 new followers, and 47 Mentions during the conference period. The audience was delighted to see how the panel discussion conversations focused on how we can all work together to make a difference in our communities. Some of the tweets are shown below.

### AfricaLics Twitter, November 2022 Summary

#### Top Tweet earned 624 impressions

Congratulations to our very own [@HanlinRebecca](#) [@holm\\_ander](#) and [@annkingiri](#) on publishing their book. What a milestone! [#publishing](#) [#book](#) [#milestone](#) [#Congratulations](#)  
<pic.twitter.com/uhGXWprANX>



↳ 2   ↳ 4   ♥ 28

[View Tweet activity](#)

[View all Tweet activity](#)

#### Top Follower followed by 42.5K people



**Dr. 'Bosun Tijani** [@bosuntijani](#) [FOLLOWS YOU](#)

Innovation for a Better Society (CcHUB & iHUB). Funding the future of Africa (<https://t.co/Gvmj7p38Dn>). Sci Edu (<https://t.co/uFSM9x2uXj>). Adjunct Researcher - NIMR.

[View profile](#)

#### Top mention earned 202 engagements



**Dr. 'Bosun Tijani**  
[@bosuntijani](#) · Nov 10

Keynoting [@AfricaLics](#) International Research Conference in Yaounde today was such a special moment. Leaning on data and evidence from practice to highlight the need for a rethink of the role of NIS in innovation policy is an area I plan to spend more time in the coming years.  
<pic.twitter.com/eYg4Jad7FI>



↳ 3   ↳ 5   ♥ 18

[View Tweet](#)

#### Top media Tweet earned 609 impressions

Are you ready? Because we are! And so are your conference bags 😊

Final preparations for the [@AfricaLics](#) conference hosted by University of Yaoundé from 9th to 11th November 2022. Find the detailed programme from the conference website here.

#### Get your Tweets in front of more people

Promoted Tweets and content open up your reach on Twitter to more people.

[Get started](#)

#### NOV 2022 SUMMARY

Tweets

24

Tweet impressions

5,119

Profile visits





1,390

Mentions






47

New followers

31











	<b>AfricaLics</b> @AfricaLics · Nov 11 #africalics IRC is going on fabulously so far! We have had wonderful presentations and very insightful Alumni and Keynote panels. <a href="https://pic.twitter.com/1E76xrDILX">pic.twitter.com/1E76xrDILX</a> <a href="#">View Tweet activity</a>	179	44	24.6%
	<b>AfricaLics</b> @AfricaLics · Nov 11 Happening now! We are privileged to have our last keynote speaker for the #africalics International Research Conference @bonilla_olman #africalicsirc #africalicsirc2022 <a href="https://pic.twitter.com/6ssikCH69y">pic.twitter.com/6ssikCH69y</a> <a href="#">View Tweet activity</a>	208	15	7.2%
	<b>AfricaLics</b> @AfricaLics · Nov 11 Day 3! It has been good so far! One of the paper parallel sessions ongoing. The discussion here was on examining legitimacy of inclusive #innovation process. #Research #Sustainability <a href="https://pic.twitter.com/sKxSNygJjo">pic.twitter.com/sKxSNygJjo</a> <a href="#">View Tweet activity</a>	139	17	12.2%
	<b>AfricaLics</b> @AfricaLics · Nov 10 Emphasis should also go to :Renewed government commitment towards funding of STI research and an inclusive policy regime. <a href="https://pic.twitter.com/71TJqZCrEh">pic.twitter.com/71TJqZCrEh</a> <a href="#">View Tweet activity</a>	107	19	17.8%



	<b>AfricaLics</b> @AfricaLics · Nov 10 Another notable point is :Inclusive collaborations and partnerships #innovation #collaborations #partnership <a href="https://pic.twitter.com/KVdBk1R6WS">pic.twitter.com/KVdBk1R6WS</a> <a href="#">View Tweet activity</a>	90	15	16.7%
	<b>AfricaLics</b> @AfricaLics · Nov 10 For STI policies to remain relevant and impactful in achieving the SDG's and AU's agenda ,they should focus on a number of things:  1) Strengthening respective National STI System. <a href="https://pic.twitter.com/pvxKF5qtDP">pic.twitter.com/pvxKF5qtDP</a> <a href="#">View Tweet activity</a>	129	9	7.0%
	<b>AfricaLics</b> @AfricaLics · Nov 10 Panelist from the Ongoing plenary session who are discussing on how to influence science,technology and innovation policy and practice in Africa. #plenarysession #Innovationineducation #innovation <a href="https://pic.twitter.com/PnYoWObu11">pic.twitter.com/PnYoWObu11</a> <a href="#">View Tweet activity</a>	87	23	26.4%
	<b>AfricaLics</b> @AfricaLics · Nov 10 #Happening now! Day 2! We are very excited to host Today's Keynote speaker, @Bosuntijani <a href="https://pic.twitter.com/AjKOR87bVY">pic.twitter.com/AjKOR87bVY</a> <a href="#">View Tweet activity</a>	111	15	13.5%
	<b>AfricaLics</b> @AfricaLics · Nov 10 Thematic session 2 ongoing! African Innovation Summit and the promotion of innovation Ecosystems for Africas Development. <a href="https://pic.twitter.com/hg89e5MPbK">pic.twitter.com/hg89e5MPbK</a> <a href="#">View Tweet activity</a>	90	21	23.3%

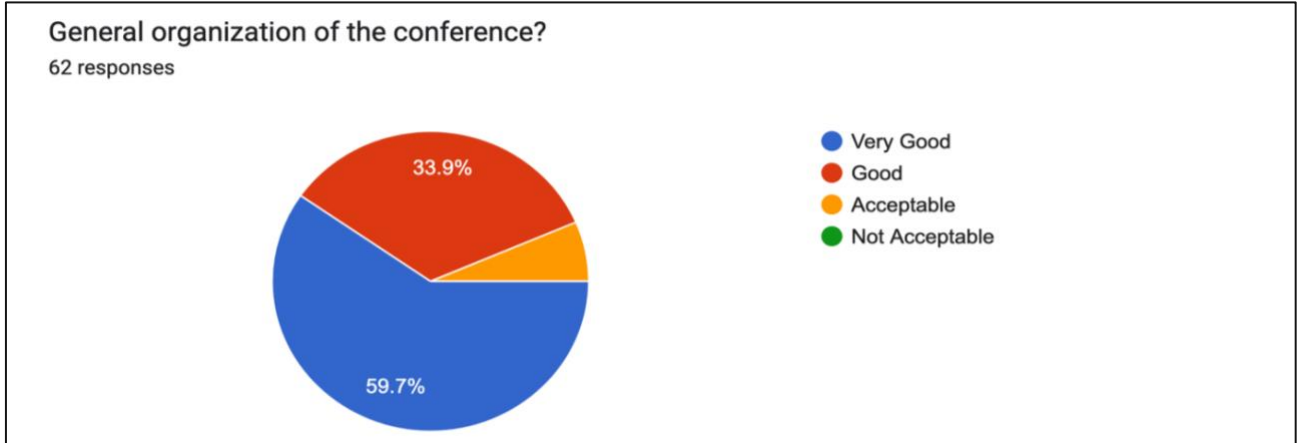




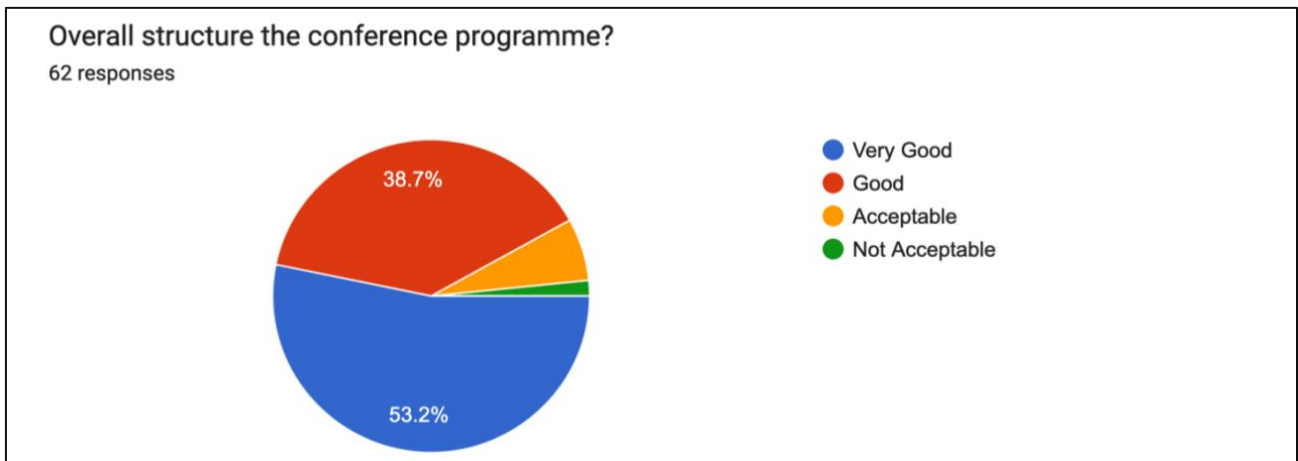
	<b>AfricaLics</b> @AfricaLics · Nov 10 A student presenting his paper at a thematic session themed 'Making innovation in the STEM landscape more inclusive: policy limitations and barriers building on gender-disaggregated inclusive: policy limitations and barriers building on gender-disaggregated data from STEM studies <a href="https://pic.twitter.com/7KpDgvUVQF">pic.twitter.com/7KpDgvUVQF</a> <a href="#">View Tweet activity</a>	170	27	15.9%
	<b>AfricaLics</b> @AfricaLics · Nov 9 Congratulations to our very own @HanlinRebecca @holm_ander and @annkingiri on publishing their book. What a milestone! #publishing #book #milestone #Congratulations <a href="https://pic.twitter.com/uhGXWprANX">pic.twitter.com/uhGXWprANX</a> <a href="#">View Tweet activity</a>	629	133	21.1%
	<b>AfricaLics</b> @AfricaLics · Nov 9 Congratulations Sandeep Kaur on publishing your book! We couldn't be more proud! <a href="https://pic.twitter.com/zY2xFTxly6">pic.twitter.com/zY2xFTxly6</a> <a href="#">View Tweet activity</a>	173	16	9.2%
	<b>AfricaLics</b> @AfricaLics · Nov 9 Also present, Dr Daniel Urban - Director @iricuy2 ,Prof George Essegbey - Chair @AfricaLics , Prof Elizabeth Sarange - Director @PaughssO , Prof Adolph Minkoa - Retor @universityofyaounde2 among others. #africalicsirc2022 #African #africalicsirc <a href="https://pic.twitter.com/pb10HEtF9t">pic.twitter.com/pb10HEtF9t</a> <a href="#">View Tweet activity</a>	213	32	15.0%
	<b>AfricaLics</b> @AfricaLics · Nov 9 Get familiar with our Day 1 keynote speaker, Prof Charles Anowo Onana who came in fully loaded with Knowledge and Experience. #africalicsirc #africalicsirc2022 <a href="https://pic.twitter.com/LjrLKFkU7">pic.twitter.com/LjrLKFkU7</a> <a href="#">View Tweet activity</a>	151	10	6.6%
	<b>AfricaLics</b> @AfricaLics · Nov 9 Day 1 of #africalicsirc conference. Some of the paper presenters attending the Research conference in Yaoundé, Cameroon. #innovation #development #research #africa <a href="https://pic.twitter.com/GSzQJLlCHH">pic.twitter.com/GSzQJLlCHH</a> <a href="#">View Tweet activity</a>	115	12	10.4%
	<b>AfricaLics</b> @AfricaLics · Nov 9 Current at the #Africalics International Research Conference on 'National Innovation System for Resilience and Sustainable Development in Africa' happening at @iricuy2. #africalicsirc #research #innovation #development #africalicsirc2022 <a href="https://pic.twitter.com/62aJzWLzCA">pic.twitter.com/62aJzWLzCA</a> <a href="#">View Tweet activity</a>	110	15	13.6%
	<b>AfricaLics</b> @AfricaLics · Nov 8 Chair of NigeriaLics @opeyemiayinde reporting to AfricaLics Scientific Board on NigeriaLics activities and plans. #Africalicsirc #Africalicsirc2022 #africalicsirc <a href="https://pic.twitter.com/USr5qxRyod">pic.twitter.com/USr5qxRyod</a> <a href="#">View Tweet activity</a>	120	7	5.8%
	<b>AfricaLics</b> @AfricaLics · Nov 8 Greetings from Yaoundé Cameroon. One of our ASB member @Mammomuchie and keynote speaker @Olman Segura Bonilla are here and ready for the 2022 AfricaLics Research Conference. #AfricaLicsirc #africalicsirc <a href="https://pic.twitter.com/UsY7TvFRgb">pic.twitter.com/UsY7TvFRgb</a> <a href="#">View Tweet activity</a>	227	36	15.9%
	<b>AfricaLics</b> @AfricaLics · Nov 7 Reporting live from IRIC! Our conference venue! We are looking forward to having great conversations with all of you here in Yaoundé, Cameroon! @AfricaLics @IRIC #researchconference #Africalicsirc #Africalicsirc2022 <a href="https://pic.twitter.com/dyNoHkdUmo">pic.twitter.com/dyNoHkdUmo</a> <a href="#">View Tweet activity</a>	209	21	10.0%

## Results of the evaluation survey

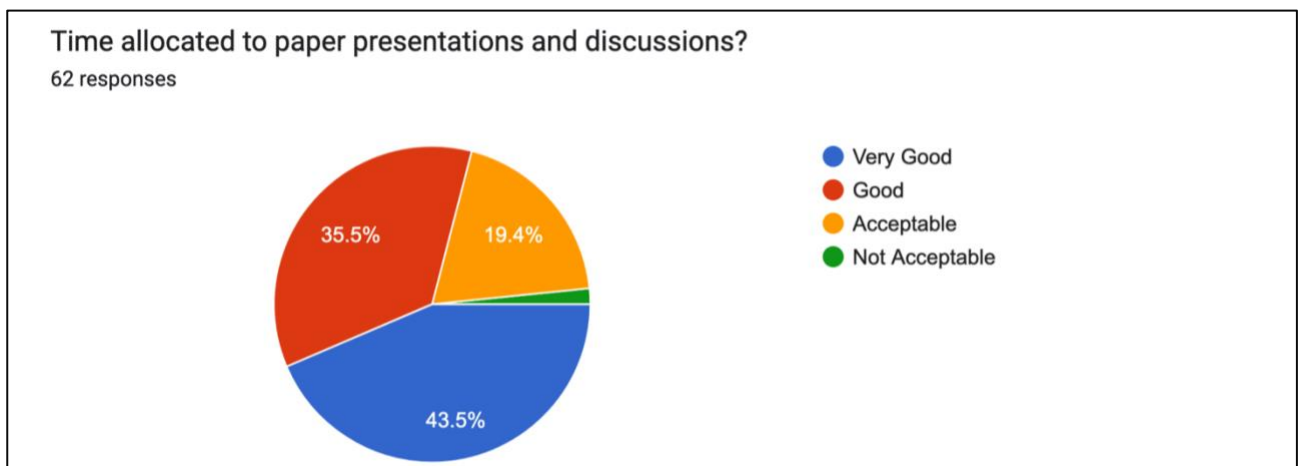
As shown in the results below, participants were satisfied with the general organization and overall programme structure of the conference.



*Participants' perspective on the general organization of the 5th research conference*



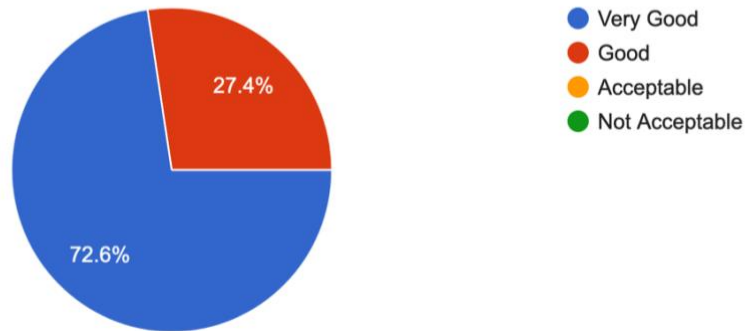
*Participants' perspective on the overall structure of the 5th research conference programme*



*Participants' perspective on the time allocated to paper presentations and discussions during the conference*

### The relevance of the conference theme chosen?

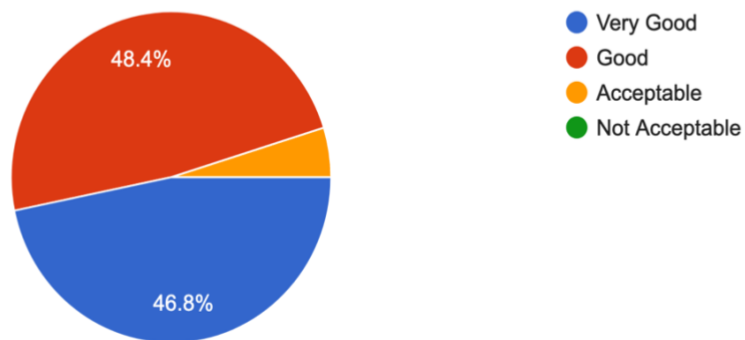
62 responses



*Participants' perspective on the relevance of the selected themes of the conference*

### Approaches used to enhance interaction among conference participants?

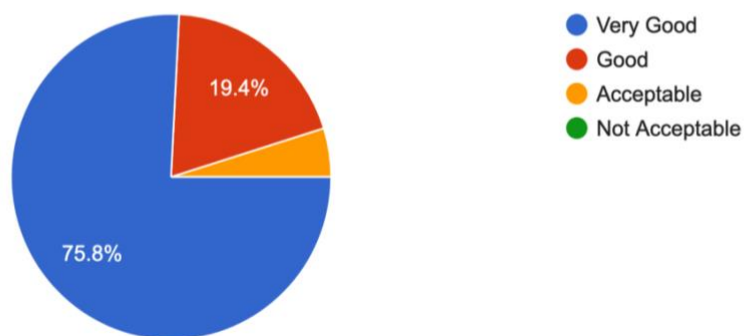
62 responses



*Participants' perspective on the approaches used to enhance interaction among conference participants during the conference.*

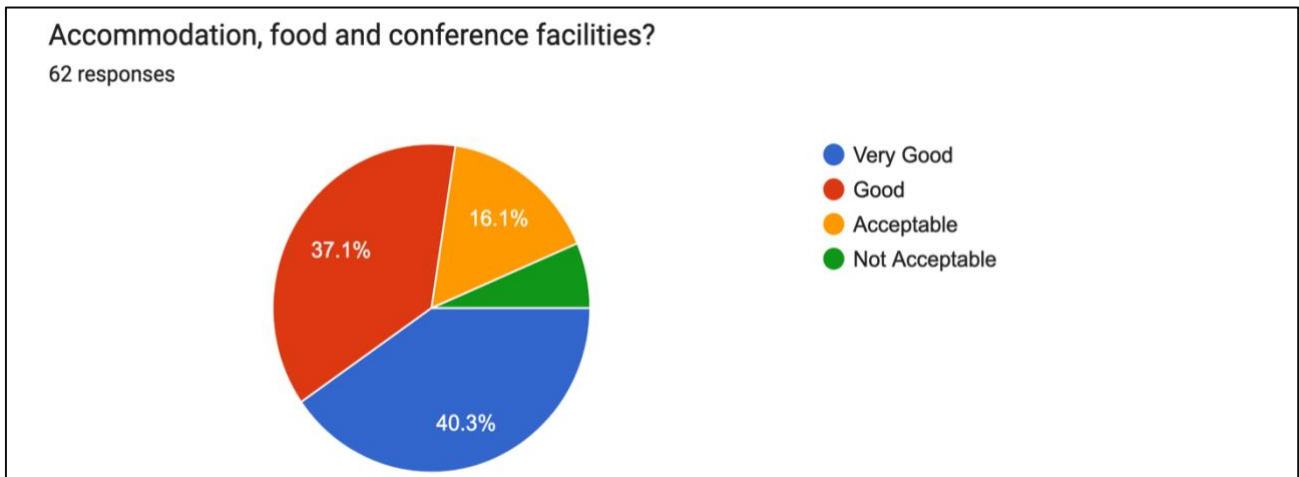
### Overall usefulness of the conference?

62 responses

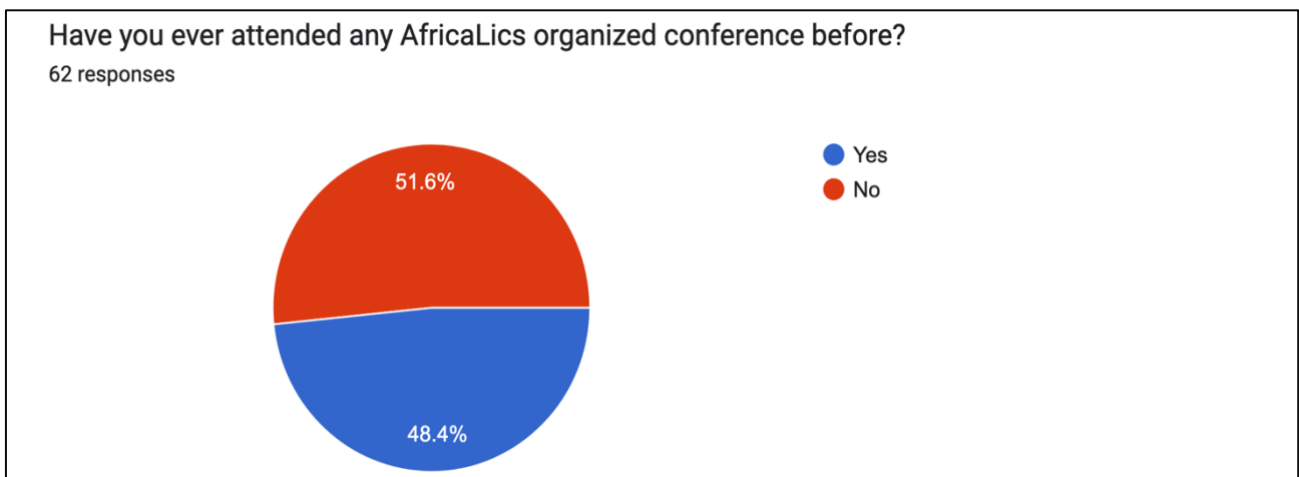


*Participants' perspective on the overall usefulness of the conference*





*Participants' perspective on the quality of accommodation, food and conference facilities during the conference*



*Participants' attendance of previous AfricaLics conferences*

### **A summary of suggestions for future conference**

The following question was posed to the respondents: *Any other comments or feedback on the scores given above that we can use to improve the organization of future AfricaLics conferences?*

The feedback is summarized below.

- There is a need to include social activities in the programme.
- The programme schedule was too tight and did not provide sufficient time for networking with other participants at the conference.
- Internet connectivity was not adequate both at the conference venue and hotel. The accommodation facilities and food were not commensurate with the costs and the staff were not too keen on hospitality, customer care, and hygiene. The language barrier may have contributed to poor customer care and the classification of the country dictated the standards of available accommodation. Airport transfers need to be improved for future events.
- The organizers should provide additional support to participants from LICs and LMICs to cover conference registration and visa fees.

- It was a very good conference. I learned a lot. I would suggest inviting more researchers from other countries for a better global dialogue on innovations and development.
- The papers presented were grouped into clear thematic streams and this stimulated interesting and robust conversation during the parallel sessions. However, the time allocated for presentations was too brief and some rooms did not have translators. 20 minutes would have been ideal for each presenter.
- The conference provided an excellent networking platform and there was plenty of time to conduct informal discussions and forge partnerships which was commendable.
- Plenaries should give space to fresh research by young/ emerging scholars.
- Some of the thematic sessions should be brought back in the next edition of the conference. e.g., informal sector.
- Participants who receive travel support can be given air tickets to attend the conference instead of looking for funds to pre-finance.
- Post Conference follow-up is very important for the development of researchers.
- AfricaLics should facilitate the publication of papers presented at the conference.
- Hygiene facilities should be provided at the conference venue as well as toilets cleanliness always.
- Improve collaboration with Francophone researchers/scholars for more papers to be submitted and presented at future AfricaLics events.
- Increase support and supervision of young researchers in order to improve the quality of their work.

## Conference expenditure

Item	Total Cost (USD)
Travel – paper presenters/ facilitators, AS & ASB members (tickets)	35,074
Accommodation (facilitators, papers presenters, AS and ASB members comprising of dinner, bed and breakfast, Lunch, refreshments)	44,350
Conference venue	In kind by IRIC
Miscellaneous expenditure (conference management system, taxi/bus hire, printing etc.)	12,805
Conference materials printing – programmes, bags and banners	In kind by IRIC
Volunteers	In Kind by University of Yaoundé II
Buses	In kind by IRIC
<b>Total</b>	<b>92,229</b>

## Annexes

### Annex 1: Thematic/plenary sessions

Thematic session	Focus	Organizer	Panelists
<p>African Innovation and development studies: The emergency of a new field.</p>	<p>A review of the status of research and researchers in Africa working on issues studied within innovation studies highlights the opportunity for the development of a new field of research. This new field we term African ‘innovation and development studies’ or ‘I&amp;D studies. The field is distinct from innovation studies and from development studies as researchers take methods and concepts from innovation studies (and often innovation systems thinking) and use these to tackle developmental problems affecting the African continent. Researchers are more likely to have an interest in mobilizing innovation for sustainable and just transitions, being focused on how innovation can address societal challenges.</p> <p>When AfricaLics was established 10 years ago, there was a limited number of researchers on the African continent working on innovation and development, but with increased attention to innovation as an important part of solving key challenges on the continent we are now approaching a critical mass of researchers on the continent in the field. Admittedly, many of the studies conducted are empirical in nature and have been made based on existing innovation theories developed in advanced and emerging economies. But the development of a cadre of researchers in the field provides options for addressing the critiques of innovation studies and its application to developing economies – thereby contributing to the development of more grounded theory on innovation and development issues in Africa for Africa.</p> <p><b>Purpose and Objectives</b> This thematic session aims to present and discuss key findings from a yet unpublished article on the scientific roots of the field of I&amp;D in Africa and how the field has developed over the past 15-20 years as well as some emerging priorities and ways forward in consolidating the field</p>	<p>AfricaLics Secretariat</p>	<ul style="list-style-type: none"> <li>▪ Dr. Margrethe Holm Andersen (Chair) - AfricaLics Secretariat, Denmark</li> <li>▪ Dr. Ann Kingiri - ACTS/AfricaLics Secretariat, Kenya</li> <li>▪ Prof. Rebecca Hanlin - AfricaLics Secretariat/University of Johannesburg, South Africa.</li> <li>▪ Prof. Abdelkader Djeflat - University of Lille/ MAGHTECH Network, France/Algeria</li> <li>▪ Dr. Abiodun Egbetokun - NACETEM, Nigeria</li> </ul>

<p>AIS and the promotion of innovation Ecosystems for Africa’s Development</p>	<p>The AIS is aimed at supporting Africans in their efforts to build robust innovation ecosystems to facilitate socioeconomic transformation. AIS has taken this path because the emergence of national innovation systems is crucial for ensuring resilience and sustainable development. As an innovation system in action, AIS brings together stakeholders and promotes collective actions in support of building well-performing, inclusive innovation ecosystems. In addition to bringing the stakeholders together and facilitating collaboration, AIS is building platforms to find and scale up innovations across the continent. The AIS platform brings together innovators, entrepreneurs, investors and people with the ‘power to act’ to direct resources towards solving Africa’s developmental challenges. It also engages the scholars, researchers and civic actors to help frame the questions, steer means, and assess solutions.</p> <p><b>Proposed Special Session</b>  AIS proposes to host and facilitate a special session that would serve as:</p> <ol style="list-style-type: none"> <li>1) <b>A Convening</b> of Quadruple Helix (Q4) participants to engage with scholars as well as to explore the future of AIS, and how best the AIS can serve as an enabling platform towards the emergence of robust innovation ecosystems for resilience and sustainable development in African countries and communities.</li> <li>2) <b>A Launch</b> of the second AIS book: “Innovation Ecosystems Africa: Solving the problems that we have” edited by Olugbenga Adesida, Geci Karuri-Sebina, João Resende-Santos &amp; Mammo Muchie; and</li> <li>3) <b>A Facilitated Workshop</b> to facilitate inputs on the design of one of AIS’s new flagship initiatives: the Africa-wide innovation ecosystem assessment/diagnostics studies.</li> </ol>	<p>Africa Innovation Summit (AIS)</p>	<ul style="list-style-type: none"> <li>▪ Prof. Geci Karuri-Sebina (Chair) - South African Cities Network, South Africa</li> <li>▪ Dr. Olugbenga Adesida - Africa Innovation Summit, Cabo Verde.</li> <li>▪ Prof. Erika Kraemer-Mbula - University of Johannesburg, South Africa</li> </ul>
<p>Making innovation in the STEM landscape more gender inclusive: policy limitations and barriers building on gender-disaggregated data from STEM studies in Ghana, Benin, and Zimbabwe</p>	<p>The sustainable development goals (SDGs) have largely been adopted by most countries as part of their 2030 development targets. However, in addition to the many difficulties already faced by most developing countries in attaining these goals, they are also experiencing emerging challenges such as COVID-19 pandemic, epidemics, various conflicts and so on. Mitigating and enhancing chances to overcome these challenges and reach national targets connected to the SDGs can hardly occur without adequate, innovative and resilient systems to solve complex problems. Such systems require sufficient and relevant human resources, including female and male scientists, researchers, technologists, engineers, as well as significant national investments. Yet, research has illustrated that due to an array of issues most developing countries quantitatively and qualitatively lack both</p>	<p>The International Development Research Centre (IDRC)</p>	<ul style="list-style-type: none"> <li>▪ Dr. Mavis Akuffobe-Essilfie (Chair) - Council for Scientific and Industrial Research, Ghana</li> <li>▪ Dr. Rose Omari - Council for Scientific and Industrial Research, Ghana</li> <li>▪ Dr. Tèko Augustin Kouevi - University of Abomey-Calavi, Republic of Bénin</li> <li>▪ Dr. Dominica Chingarande - University of Zimbabwe, Zimbabwe</li> </ul>

	<p>women and men in most science, technology, engineering and mathematics (STEM) fields. However, the participation of women in these fields, when compared to men, is much lower. This panel session will explore the reasons for the limited representation of women STEM specialists in developing countries and how to improve this situation in the concerned countries. Panelists will do this by sharing findings from case studies done at universities in three sub-Saharan African countries, Benin, Ghana and Zimbabwe. Mechanisms to improve the participation of women in STEM fields, particularly in the higher education contexts, will be emphasized.</p>		
<p>Measuring innovation in the informal sector in Africa: theoretical and methodological considerations</p>	<p>The importance of measuring innovation in Africa, for policy design, monitoring and evaluation, is now well recognized. Over ten years ago, innovation measurement using the Oslo manual was introduced and supported in African countries, as part of national efforts to promote STI, and continental efforts to produce internationally comparable indicators (AUDA-NEPAD, 2019). From the outset, there was extensive debate on how the standard instruments could be adapted to contexts with low levels of technological capability and industrialization, and major human development challenges.</p> <p>A concern for African countries, where large parts of national economies are informal, is that focusing measurement only on innovation in formal businesses potentially misses extensive innovation activity. Whereas measuring innovation in formal enterprises has evolved over decades through the iterations of the Oslo Manual (OECD/Eurostat, 2018), there is little international precedent for measuring innovation in informal enterprises. An important starting point for measurement is clearly defining what is being measured.</p> <p>This special session aims to stimulate discussion, to address the following questions:</p> <ol style="list-style-type: none"> <li>1. How suitable are the existing measurement frameworks and related instruments for the informal sector, considering that these have been designed for formal enterprises?</li> <li>2. What alternative theoretical and/or methodological frameworks may be suitable for measuring innovation in the informal sector, with a view to generating results that are relevant for policy and practice?</li> <li>3. What lessons can be learnt from current efforts to put together a measurement framework that responds directly to the need to</li> </ol>	<p>CeSTII-HSRC</p>	<ul style="list-style-type: none"> <li>▪ Dr. Glenda Kruss, (Chair) - CeSTII, South Africa</li> <li>▪ Lukov Seke, AUDA-NEPAD</li> <li>▪ Dr. Il-haam Petersen, CeSTII</li> <li>▪ Isabel Bortagaray, Universidad de la República, Uruguay</li> <li>▪ Mr. Gernot Piepmeyer, NCRST, Namibia</li> <li>▪ Dr. Nazeem Mustapha, CeSTII, South Africa,</li> <li>▪ Nicole van Rheede, CeSTII, South Africa.</li> <li>▪ Dr. Abiodun Egbetokun NACETEM, Nigeria.</li> <li>▪ Dr. David Adeyeye, NACETEM, Nigeria</li> </ul>

	<p>understand innovation activity in the informal sector on the continent, and how can these be linked to existing measurement programmes of formal sector innovation?</p>		
<p>Future of work in Africa: Impact of 4IR on GVC and Production System.</p>	<p>Structural transformation has led to a change in the way businesses now operate. Most businesses are increasingly becoming automated, phasing out low-skilled jobs but creating opportunities for some highly skilled positions. As a result, the labor-intensive/absorbing industries are thinning while the technology/knowledge-intensive sectors rapidly expand. Today, the business world has already moved into the digital age where humans and machines interact to increase productivity. Indeed, conventional ways of doing work involving a large amount of human labor are phasing out gradually and increasingly being replaced by machines, robots, and software, amongst others. The fourth industrial revolution brings with it many advantages. One obvious benefit is increased productivity. Just as recorded in the previous industrial revolutions, the productivity of each industrial era went up significantly.</p> <p>In this era of the fourth industrial revolution, only countries with a robust competitive edge can significantly benefit from the industrial revolution. The rise of global value chains on the other hand has revolutionized the way that production processes are carried out. Production is fragmented over different countries, leading to the creation of jobs and expansion of some sectors of the economy. The fourth industrial revolution technologies will significantly disrupt the patterns of global value chains (GVCs), which will, in turn, disrupt the production systems. Looking ahead, only countries with robust industrial policies and smart technologies will have a competitive advantage and be able to produce larger quantities at a much lower cost or accurately produce according to specification. Hence, the global production sharing will be redistributed among these countries that can use the fourth industrial revolution technologies. At the moment, Africa does not significantly participate in GVCs because of its low production capabilities, resulting from many other challenges.</p> <p>This special session aims to stimulate discussion, to address the following questions:</p> <ol style="list-style-type: none"> <li>a) What are the foundational requirements necessary for the development of production capabilities in Africa?</li> <li>b) What are the channels of building capabilities for Africa to participate in global value chains?</li> </ol>	<p>CeSTII-HSRC and Obafemi Awolowo University</p>	<ul style="list-style-type: none"> <li>▪ Dr. Oluseye Jegede (Chair) - CeSTII, HSRC, South Africa</li> <li>▪ Dr. Caleb Adelowo - National Centre for Technology Management, Nigeria</li> <li>▪ Dr. Adeyemi Oluwaseun Adepoju - Federal University of Technology, Akure (FUTA), Nigeria</li> </ul>

<p>From emerging Innovation systems to transformative innovation: what issues for North African Economies</p>	<p>The issue of Science and Technology (S&amp;T) has attracted policy makers' attention and to a lesser extent researchers for several decades in North African countries (NACs). However, innovation came into the agenda at the beginning of the 2000's in the academic arena and became of real concern for policymakers in the last decade through political resolution and institutional reforms. Yet the reality shows that it did not translate effectively in real innovation dynamics as shown by scores and rankings of most innovation indicators of the countries. Their National Systems of Innovation (NSI) have been through long periods of construction and their mode of emergence appears to take a different path and trajectories from those of advanced countries. In other words, they need more appropriate emerging innovation policies (EIPs) to be able to promote innovation systems which could lead growth and employment and move the economies of the region out of the middle-income trap.</p> <p>It is in this context of the complex emergence phase that transformative innovation is taking place both as a new paradigm and a basis for a new brand of policies, the transformative innovation policies (TIPs) that are addressed by scholars in various parts of the world. Therefore, Transformative innovation will face both needs to be addressed simultaneously: growth and development needs (driven by thriving industrial sectors in particular) through the acceleration of the emergence stage, and climate change and inequality issues in North African economies.</p> <p>The aim of our panel is to bring some thoughts and empirical evidence on some of the issues raised above by examining different sectors: higher education; the mechanical sector and the digital sector. We also interrogate social innovation as a basis for both youth employment creation and inclusion. We further explore environmental innovation policy and energy transition in Algeria. The objective here is to analyze the determinants of environmental innovation at firm level where social responsibility and ethical concern make it easier to promote innovation towards achieving SDGs.</p>	<p>MAGTECH Network, Algeria</p>	<ul style="list-style-type: none"> <li>▪ Prof. Abdelkader Djeflat (Chair) - University of Lille, France/Algeria</li> <li>▪ Prof. Samah Souleh - University of Biskra, Algeria</li> <li>▪ Prof. Samir Maliki - University of Tlemcen, Algeria</li> <li>▪ Dr. Younes Ferdj - CREAD, MAGHTECH Network, Algeria</li> <li>▪ Dr. Fatiha Beddek - University of Oran 2, Algeria</li> <li>▪ Dr. Myriam Amghar</li> <li>▪ Tin El Kadi-Ihsan - Doctoral student</li> </ul>
<p>How to influence Science, Technology and Innovation Policy and practice in Africa</p>	<p><b>Plenary session</b> Africa is inspired globally and regionally by the UN - SDGs and AU's Agenda 2063, both of which have got STI implications. There is therefore a need to ensure that National STI policies steer both the UN and AU agenda. It is noted that the more STI-advanced the region is, the higher the</p>		<ul style="list-style-type: none"> <li>▪ Dr. Bitrina Diyamett (Chair) - STIPRO, Tanzania</li> <li>▪ Dr. Rahel Belete - Kilimanjaro Innovation Hub, Ethiopia</li> </ul>



	<p>GDP per capita. Further, countries with the least STI capacity have the least GDP per capita.</p> <p>Arguably, for STI policies to remain relevant and impactful in achieving the SDGs and AU’s agenda, they should be focused on a number of key things:</p> <ul style="list-style-type: none"> <li>▪ Strengthening respective National STI Systems</li> <li>▪ Inclusive collaborations and partnerships</li> <li>▪ Enhanced participation of the private sector including the informal actors.</li> <li>▪ Renewed government commitment towards funding of STI research and an inclusive policy regime</li> </ul> <p>Considering that a one-size-fits-all strategy may not be feasible in the context of Africa, and the fact that capacity building in the development and use of STI will be required at different scales, this session will articulate the following broad questions:</p> <ul style="list-style-type: none"> <li>▪ How do we ensure relevance and impact of African STI policies towards achievements of the relevant global and regional agenda?</li> <li>▪ Does Africa have STI capacity to generate localized evidence that is commensurate with challenges facing the continent including the growing population of youth and the important role of the informal sector in economic development?</li> </ul> <p>The panelists, in accordance with their areas of research interest and expertise, will steer a discussion aimed at addressing the above questions. They will take the innovation systems approach as a starting point, recognizing that institutional frameworks and local context are critical for STI policy development and implementation in countries under transition.</p>	<ul style="list-style-type: none"> <li>▪ Prof. George Essegbey – CSIR-STEPRI, Chair of the AfricaLics Board, Ghana</li> <li>▪ Prof. Charles AWONO ONANA – Cameroon</li> </ul>
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## Annex 2: Participants list

Last name	Firstname	Organisation
Ababu	Teshome Mulugeta	Dire Dawa University
Abibo	Abebaw	University Of Gondar
Abisuga	Oluwayemisi	University Of Ibadan
Addison	Monica	Kwame Nkrumah University Of Science And Technology
Adedeji	Tawakalitu Funke	African Insistute For Science, Policy And Innovation, Oau
Adeleke	Musefiu Adebowale	University Of Ibadan, Ibadan
Adelowo	Caleb	North-West University
Adelowo	Abimbola David	Obafemi Awolowo University, Ile Ife, Nigeria
Adeosun	Oluyemi, Theophilus	University Of Lagos
Adepoju	Adeyemi Oluwaseun	Federal University Of Technology, Akure
Adeyeye	David	National Centre For Technology Management, Ile-Ife
Adinew	Moges	Addis Ababa University
Adu-gyamfi	Yaw	University Of Johannesburg
Agutu	Fredrick Odiwuor	Egerton University
Ahabyoona	Faith Mugisha	Cavendish University Uganda
Akuffobea-essilfie	Mavis	CSIR-Science And Technology Policy Research Institute
Alani	Jimmy	Makerere University
Amadou boubacar	Hamsatou	University Felix Houphouet Boigny
Anyango	Dolphine Caroline	University Of Kabianga/Soroptimist International
Asogwa	Uzoamaka	Agricultural And Rural Management Training Institute Ilorin, Nigeria
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Ayinde	Opeyemi	University Of Ilorin
Belete	Rahel	Kilimanjaro Innovation Hub
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Bitting	Cyrille Dominick	University Of Yaoundé 2
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Chingarande	Dominica	University Of Zimbabwe
Choudhury	Pradeep Kumar	Jawaharlal Nehru University
Cozzens	Susan	Georgia Tech
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Diyamett	Bitrina	STIPRO
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Djijo tiakou	Audrey Jennie	Cheikh Anta Diop University
Djournessi	Yannick Fosso	University Of Dschang
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Eloundou okala	Eugène Bertrand	University Of Yaoundé Ii Soa
Endalamaw	Tefera Belay	Wondo Genet College Of Forestry
Essegbey	George Owusu	Science And Technology Policy Research Institute (STEPRI) Council For Scientific And Industrial Research (CSIR)
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Kaur	Sandeep	Central University Of Punjab , Bathinda
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Kruss van der heever	Glenda	Human Sciences Research Council
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Mbaya	Martin	University Of Pretoria
Mreji	Pamela	Technical University Of Kenya
Mtei	Heric Thomas	Science, Technology And Innovation Policy Research Organization (STIPRO)
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Mugume	Regean	EPRC
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Okrigwe	Festa Ndutimi	National Centre For Technology Management
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Sadaf	Jahan	
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Wainaina	Ruth Wambui	Kenyatta University
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