



**THE 4<sup>TH</sup> ASRIC CONGRESS  
NAIROBI, KENYA  
22 – 25 NOVEMBER 2021**

# **4<sup>th</sup> ASRIC Congress REPORT**

## **I. INTRODUCTION**

The 4<sup>th</sup> ASRIC Congress was held from the 22<sup>nd</sup> to 25<sup>th</sup> November, 2021 in Nairobi, Kenya at Emara Ole-Sereni hotel. The Congress was held in a hybrid mode as some participants attended online while some others participated physically. The Congress was preceded by a Pre-Congress Session that took place from 22<sup>nd</sup> to 23<sup>rd</sup> November 2021. The Pre-Congress session had the following sub-sessions: Scientific Session where presentations of Scientific Technical Papers that focused on the congress theme “Strategic Investment/Utilization of STI for Africa’s Economic Emergence” were made; ASRIC Flagship Project on Water for All; National Academies Dialogue; and the ASRIC Scientific Journals Management meetings. The Congress was conducted over two days 24<sup>th</sup> – 25<sup>th</sup> November, 2021 to elect and inaugurate the ASRIC II Bureau, and to elaborate on the congress theme with the aim to have a concrete output recommendations that will boost STI Africa’s economic emergence.

## **II. ATTENDANCE**

The Congress was attended by National Academies of Sciences, National Research Councils, Scientific Institutions, African Scientists from within Africa and Diaspora, ASRIC’s African and international partners, as well as Journalists among others. Over 80 participants attended physically while over 200 participants attended virtually.

## **III. AGENDA**

The attached agenda was presented and adopted.

## **IV. PRE-CONGRESS SESSION**

The pre-congress session took place from 22<sup>nd</sup> to 23<sup>rd</sup> November, 2021 and was sub-divided into four sub-sessions: the Scientific Session where presentation of Scientific Technical Papers addressing the four thematic areas of the Congress theme were moderated by: Dr. Ahmed Elmekass, Dr. Hawawu Hussein, Prof. Sammy Chumbow and Dr. Mohammed Kyari respectively. The ASRIC Flagship Project on Water for All meeting was moderated by Dr. Mohammed Kyari; the National Academies Dialogue meeting were moderated by Dr. Eng. Ahmed Hamdy, Prof. Mosto Onouha, and Prof. Sammy Chumbow; and the ASRIC Scientific Journals management meeting was moderated by Mr. Gilbert Byatuhair. Each of the sub-sessions came out with conclusive recommendations that were reported accordingly to the Congress, the highlights of these reports are mentioned under the output of the pre-congress activities below while the full reports of each of the sessions are attached here.

## **V. THE ASRIC 4<sup>TH</sup> CONGRESS**

The 4<sup>th</sup> Congress took place from the 24<sup>th</sup> to the 25<sup>th</sup> November, 2021. The following agenda items were discussed and way forward as well as decisions were taken.

### **i. ELECTION OF THE ASRIC II BUREAU**

This segment of the Congress was held at 09.00am on the 24<sup>th</sup> November 2021 in the Ball Room of Emara Ole-Sereni Hotel in a closed session where only the voting Members of the ASRIC participated. The Executive Director of the ASRIC, **Dr. Eng. Ahmed Hamdy**, gave a preview on the Statute of ASRIC and the ASRIC Rules of the Procedure and highlighted the processes to be followed during the election of the

ASRIC II Bureau. He further stated that the ASRIC Secretariat sent out a call for candidate nomination requesting national academies of science and national research institutions to present their candidates with a recommendation letter. As of the closing date, only 10 candidates' nominations were received by the ASRIC Secretariat. The names of the candidates and the positions they were running for was disclosed by Dr. Hamdy to the meeting. He further highlighted that some of the candidates were not able to participate physically in the meeting due to circumstances beyond their control such as COVID-19, travel restriction among others. He requested the participants to allow them participate virtually, which was accepted unanimously. Finally, an electoral Committee was set up from neutral Academies and research institutions i.e. those voting members that had no candidates contesting for election. The ASRIC II Bureau electoral committee was agreed unanimously by the participants to be consisting of Prof. Manasse Mbonye **Rwanda**, Dr Dikabo Mogopodi **Botswana** and Dr. Jane Bemigisha **Uganda** to oversee the election. The contestants were presented and election was conducted that produced the following results;

S/No	Position	Candidate	Region	Country
1.	Chair	Prof. Mostapha Bousmina	North	Morocco
2.	1 <sup>st</sup> Vice Chair	Prof. Elijah Wanda	South	Malawi
3.	2 <sup>nd</sup> Vice Chair	Dr. Amos Nungu	East	Tanzania
4.	3 <sup>rd</sup> Vice Chair	Prof. Vincent P. K Titanji	Central	Cameroon
5.	4 <sup>th</sup> Vice Chair	Prof. Ekanem Braide	West	Nigeria

## ii. OPENING SESSION OF THE 4TH ASRIC CONGRESS

After the conclusion of the election of the ASRIC II Bureau, all participants were called to participate in the Congress opening session. The Outgoing Chair of ASRIC, **Prof. Ratemo Michieka** gave his welcome remarks by appreciating the African Scientists and African Scientific Institutions for the support accorded to the Bureau during its tenure. He reiterated that ASRIC strength and the Bureau achievement so far would not be realized without the support from the ASRIC Members. He also stated that the ASRIC Secretariat is the key player in this success. The meeting was informed that the Chair will give a comprehensive achievement report later on. In furtherance, he affirmed that the outgoing Bureau will extend the support needed to the incoming Bureau to achieve the STISA 2024 vision and ultimately the aspirations of the AU Agenda 2063.

The Commissioner ESTI **H.E Prof. Sarah Anyang Agbor** in her opening remarks expressed her gratitude for the commitment and passion of the African Scientists for resilience in tackling Africa's challenges. This was proven by the ASRIC Movement to combat the COVID-19 pandemic and the mobilization of scholarship for young African scientists under the ASRIC Scholarship Scheme. She further stated that the ASRIC was able to launch its scientific journals in five thematic areas with publications of its first and second volumes just within three years.

She also stressed that to achieve the Africa we want; we must leverage on all existing flagship programmes just like the ASRIC flagship project on water for all. The progress made in bringing ASRIC to this level was magnanimous and could only happen with the commitment of scientists. She concluded by stating that all these achievements were made with minimal budget from the AUC. She concluded that we must all work really hard collectively, to build the Africa we want.

The Commissioner ESTI presented a certificate of recognition to **Dr. Eng. Ahmed Hamdy**, Executive Director of ASRIC for the role of the ASRIC Secretariat in the achievement and successes recorded.

### iii. PRESENTATION OF THE ASRIC II BUREAU ELECTION OUTPUT AND INAUGURATION OF ASRIC II BUREAU

The Executive Director of ASRIC, **Dr. Eng. Ahmed Hamdy**, made a presentation of the election outcome as in section V (i) above to the general Congress and the members applauded the outcome and congratulated the elected members and wish them successes in their endeavors.

The elected members of the ASRIC II Bureau were inaugurated and took allegiance to discharge their responsibilities to the best of their ability immediately. However, due to the unavoidable absence of the ASRIC II Bureau Chair-Elect **Prof. Mostapha Bousmina**, and the 1<sup>st</sup> Vice-Chair Elect **Prof. Elijah Wanda** physically at the Congress, the 2<sup>nd</sup> Vice-Chair Elect, Dr Amos Nungu, on behalf of the Chair gave the acceptance speech by appreciating the African Union and the ASRIC for the good job done to bring ASRIC to this level and thanked the electorate for the confidence reposed on him to be elected as the Chair of the ASRIC II Bureau. He promised to uphold ASRIC to a greater height and to work closely with other Bureau members to achieve the vision of ASRIC. He called upon the ASRIC Members and the African scientific community to grant the Bureau the ultimate support to achieve its mandate for Africa to prosper, develop, and become a well-recognized global force built by its own citizens. In furtherance, the 2<sup>nd</sup> Vice Chair, Dr Amos Nungu proceeded to chair the Congress meeting on behalf of the Bureau Chair.

### iv. HANDING OVER REPORT

The outgoing ASRIC Chair **Prof. Ratemo Michieka** in his handing over report stated the pioneer Bureau's achievement and challenges in the course of their tenure in office from November 2018 to November 2021. He appreciated and thanked the support and commitment received from the Bureau Members and the ASRIC Secretariat. He stated that without their support, there is no way they will achieve what they have achieved within these period. He then called upon **Dr. Mohammed Kyari**, Senior Scientific Officer to present the report. The report contains the following: Introduction, Enabling Environment, Institutional Statutory Meetings, Building Technical and Professional Competencies, ASRIC Scholarship Scheme 2020 and 2021, Innovation Capacity Building Programme (Inclusive and Community-based innovation), African Union Network of Sciences (AUNS), ASRIC Scientific Journals, Driving Environmental Protection through Eco-Innovation Systems to Build Human Capital and Green Economy in Africa, Diaspora Engagement, ASRIC Movement to Combat COVID-19; 1<sup>st</sup> ASRIC Conference on Engineering Science, International and Intra-Africa Cooperation, Fund Allocation 2018 – 2021 and Conclusion, the handing over report is annexed to this document.

The participants applauded the work of the ASRIC I Bureau and congratulated the Bureau Members and the Secretariat for the achievements despite the challenges of funding and the COVID-19 pandemic. They called upon the AU and ASRIC partners to support the ASRIC programmes financially.

### v. SESSION ON THE KEYNOTE ADDRESSES

Several distinguished and well renowned professors were invited to shed a light on the Congress theme and to stimulate the discussion between the participants with the ultimate goal to change the mindset and views on the utilization of STI as a driving force for Africa's economics emergence. These keynote speeches address the benefits from Africa free trade agreement; value added chain; eco and smart innovation; and building the needed human and institutional resources.

Director Centre for Entrepreneurship and Enterprise Development, – University of Maiduguri, Nigeria **Prof. Mohammed Dauda**, gave a keynote speech on **Africa free-trade market expansion** where he talked on transforming Africa to a knowledge based economy through taking advantage of the African Continental Free Trade Agreement (AfCFTA) to expand the intra-Africa trade by utilizing investment on STI that will

yield products and services of STI. He further stated that the AfCFTA is one of the flagship project of the AU Agenda 2063 with the potential to boost trade across the continent. He also called on participants to see that investment in the STI holds the key to the realization of continent's potentials.

Economic consultant and & Chancellor, Mulungushi University Zambia **Prof. Oliver Saasa** – gave a keynote speech on **Africa Transiting from Commodity-Based Economy to Knowledge-Based Economy**, where he stated that Africa is characterized by commodity-based economies and high dependency ratio on commodities, where 89% of Sub-Saharan Africa's income depends on commodity trade. Indeed, for Africa to benefit from its vast wealth of commodities value chain, processes need to be introduced to ensure that we export value added processed commodities rather than raw one. To achieve this, AU Member States with the support of their scientific community are urged to identify and implement the needed STI for such value added chain, it is imperative today for Africa to invest heavily in the continent's STI research and personnel.

**Prof. Youssef Oulhote** from University of Massachusetts, United States, gave a keynote speech on **From Cell to Society in Africa: Hidden Pandemic**. He highlighted in his speech that it is not possible for Africa to become an economic emerging power without giving proper attention to its citizens' well-being from early childhood while considering the interaction with surrounding environment, chemicals and toxic substances as vital to have healthy citizens to carry the flag for the betterment of Africa. It is evident now that the environment is an important determinant of child health, with increasing evidence that some chemicals are particularly toxic to the human brain. More than 140,000 new chemicals have been synthesized since 1950.

In his presentation, Prof Oulhote described the health effects, societal and economic implications of such contaminants and discussed the main challenges facing the African continent regarding both demographic and epidemiological transitions. For instance, it is estimated that lead poisoning alone costs the continent near 4% of its GDP, and that around half of Africa's children have high lead concentrations. He concluded by recommending the need to conduct a study and capacity building on Africa's population exposure to chemical contaminants and their potential health and economic effects, particularly on child brain development.

**Prof. Kirk Semple** of Lancaster University, UK, who made a pre-recorded presentation to the Congress and spoke on **Environmental Economics: Degradation, Pollution, Protection and Conservation**. He stated that as Africa is challenging itself for utilizing STI for its economic emergence, precautionary measures should be taken to safeguard the environment and to ensure its development model is a sustainable one. He further stated the environmental challenges affecting the globe and Africa: climate change, solid waste, water pollution, and others from anthropogenic sources. He stressed that Africa contributes little to the emission but bears the highest brunt of the pain from its impact. He further mentioned that Africa must brace up to attend to its challenges by developing its institutional capacities, human capacities and also put in place the needed mechanisms that includes robust enabling environment systems to safeguard its environment.

The need for revisiting the concept of the African Environmental Society was highlighted during the discussion, as such a society will be the voice of Africa's populace, civil societies, and the watch dog for protecting and safeguarding Africa's environment and wealthy biodiversity among others.

**Prof. Kavwanga E.S. Yambayamba**, President, Zambia Academy of Sciences gave a keynote speech on **Challenges of STI Education in Africa – Perspectives**. He stated that African leaders, at different times, have recognized the importance of trained Manpower in science, technology and innovation (STI); the importance of scientific and technical skills and know-how; and the role of science and technology in integrated economic development is key to Africa's economic emergence. The missing link is lack of

investment in STI education as such Governments need to pay more attention to the quality and quantity of the education process production.

**Prof. Olusola Oyewole**, Secretary General of the Association of African Universities presented a keynote speech on **Smart Universities for the Betterment of Education in Africa**. He stated that a major factor in economic development is education which is the fundamental driver of knowledge where all sectors of education (primary, secondary, tertiary and lifelong) are important. He echoed the lessons learned from the COVID-19 pandemic that change is imperative where our old ways of doing things must change. This will bring new thinking, digitalization and the concept of smart universities in which application of technologies and advances including smart phones, smart devices, smart systems and smart technologies for effective management and administration. This is a paradigm shift in the way education is served to any community, it is a unique opportunity for Africa to develop its STI education models and systems that is tailored to Africa's economic emergence and accessible by all of its citizens.

In the discussion, it was highlighted that there is a need to address issues related to open source; online world class curriculum and content in STI; conducting more seminars and interactions between African Scientists, mentors and mentees; envisaging the possibilities with African IT service providers to have affordable rate for African student and learning institutions.

**Output of the session on keynote addresses**, this session generated a lot of discussions and comments that culminated in producing the following recommendations.

- The ASRIC is to work with relevant partners to develop a database of STI products and services that are emanating from Africa to attract potential customers.
- The ASRIC and its members urged to develop STI research programmes that are market driven to ensure African made products are well positioned to have high market share in Africa. While the ASRIC Congress calls upon African Governments, philanthropists, venture capitalists to invest heavily in STI market driven research.
- It was requested that the AU Member States to work closely with their scientific communities to identify value-added chain mechanisms and processes to leverage on the benefits from Africa's vast wealth of commodities.
- There is a need for ASRIC and its members to engage in R&D programmes to build robust IT infrastructure, digital systems and applications which to benefit the African communities in all development sectors.
- It was recognized with concern the impact of chemical exposure on Africa's population and the Congress calls upon the ASRIC and its members to carry out study and a capacity building programme on Africa's population exposure to chemical contaminants and their potential health and economic effects, particularly on child brain development. The Congress further requests the ASRIC to make an enlightenment campaign to stakeholders on impact of exposure to chemical contaminants and calls upon the University of Massachusetts to support such campaign.
- The AU-STRC and the ASRIC to work together along with members of the ASRIC Congress to foster the establishment of the Africa Environmental Society (AES) to be the voice of Africa's populace, civil society and watch dog that to protect and safeguard Africa's environment.

- The ASRIC to liaise with the Division of Education at the Department of ESTI to develop new curriculum that is creative, qualitative, relevant, and appropriate to the needed knowledge, skills and know-how to integrate science and technology in Africa's economic emergence drivers.
- The AU Member States must invest in human capital development with critical thinking that youths are the main wealth of Africa. The Congress calls upon the AU Heads of State and Government to revisit all their commitments on STI and education from the various plans of action and implement them fully while a special attention to be given to Addis Ababa declaration on science and technology 2007.
- The ASRIC and AAU is to work closely with African and International Universities and other partners to develop and conceptualize a new initiative on Africa's skill development that focuses on open source, online world class curriculum and content in STI, more seminars and interactions between African Scientists, mentors and mentees.
- The ASRIC appreciates the role played by the internet service providers in Africa, which has a tremendous impact on the education system during the COVID-19 pandemic lockdown. The Congress calls upon the internet service providers to realize and utilize their corporate social responsibilities to avail affordable rates for African students and learning institutions while the call is extended to the national regulatory bodies to work closely with the service providers in this regard.

#### **vi. SESSION ON INTRA-AFRICA COOPERATION**

This session was to showcase intra-Africa cooperation and it is a call to build on each other's strengths, capabilities, and comparative advantage to address our common challenges towards Africa's economic emergence utilizing STI. It is widely accepted that each of the African institutions has their unique strength and value in term of expertise, equipment, infrastructure and finances, hence, it is the time where all actors came together to build a single strong system that respond collectively to Africa's development. The session was chaired by **Prof. Mosto Onuoha** the former 2<sup>nd</sup> vice chair of ASRIC.

##### **a) ASRIC Scholarship Scheme**

The session chair Prof. Mosto Onuoha before calling on the presenters highlighted that the scholarship scheme of ASRIC was championed by the Euromed University of Fez, Morocco and that the university is a key ASRIC partner in the implementation of the ASRIC Scholarship Scheme. The University generously granted ASRIC a 50 PhD scholarship slots over a period of 5 years starting from the 2019 academic year. He also called upon other African Universities and international universities to follow the model of Euromed University of Fez, Morocco by availing scholarships to build Africa's capacities and personnel that able to stand firm for Africa's development challenges.

He then called upon **Prof. Maha Grima**, a senior professor in the Euromed University of Fez, Morocco to make a presentation on the ASRIC Scholarship Scheme that is being funded by the Euromed University. She spoke on the criteria and quality of students that are being admitted for the PhD program and the type of training they undergo in the course of their studies. The courses are that of high tech industry 4.0 and that the students are exposed to many industrial trainings and applications including visits to industries among others.

Two of the ten successful Ph.D. candidates from the 2019 session, **Mr. Ali Seid Ali and Mr. Olugbenga Ojubanire** were invited to share their experiences at the Euromed University on the quality of teaching and

research as well as exposure to international events and exhibitions. They started by expressing their appreciation to the Euromed University and ASRIC for giving them this rare opportunity to further their education. They mentioned that it is an eye-opener these as they are experiencing international exposure for the first time and the scholarship programme has both short-term and long-term impact on the capacity building of African Scientists. The students experienced cultural interactions different from where they came from which boost intra-Africa integration, and on completing the course of their studies, they are going back with the knowledge acquired, the network established with lecturers and senior professors, the know-how of the technologies that will be utilized in their home countries.

The discussion and way forward;

- The participants made a call to other universities both within and outside Africa to emulate the Euromed University of Fez, Morocco and lend similar support to ASRIC Scholarship Scheme so that many young scientists can benefit from such opportunities.
- It was recommended that the ASRIC and the Resource Mobilization Committee should organize a meeting of high profile partners and Universities with the view of mobilizing resources to fund the ASRIC Scholarship Scheme for the benefit of African young scientists.

#### **b) African Union Network on Ethical Research (AUNER)**

**Prof. Hany Sleem** of the Egyptian National Hepatology and Tropical Research Institute, made a presentation on the African Union Network on Ethical Research (AUNER), its background, facts on the continent where the continent does not have any continental body on ethical research, its objectives and the Statute of the AUNER. Where he highlighted that **AUNER** would be responsible for safeguarding Africa's Ethical research and other emerging issues related to Clinical Research in Africa. It will also promote effective use of research Ethics systems as a tool for economic, cultural, social and technological development of the continent as well as set Ethical standards such as Guideline For Improved Harmonized Good Clinical Research Practice For AU Member States. He further stated that the AUNER when established will develop, update, and harmonize a guideline for good Clinical Research practices including behavioral and social research for AU Member States that reflects the needs of the African Union Member States. It can also develop capacity of AU Member States on ethical research and other regulatory issues relating to ethics and research.

The COVID-19 pandemic has triggered a lot of research on the medical and technological front and there are lot of prospecting and exploitation of biological resources where ethics is a key in the protection and development. He stressed that since the call for the AU Member States to join the AUNER towards the establishment of AUNER only five countries responded that is Egypt, Sudan, Ivory Coast, Zimbabwe and Tanzania, which is not encouraging in this era where research is a priority of every nation.

In the discussion, the need to annex the AUNER Statute to this report was highlighted to facilitate the lobbying and publicity that is to be done by the ASRIC Members, National Academies of Sciences, National Research Institutions. The AUNER Statute is annexed to this report.

The ASRIC calls upon its members including the National Academies of Sciences, National Research Institutions to publicize AUNER among their national ethic committees in their respective Member States. In furtherance, the Congress directed the Secretariat to publicize the AUNER more and present its concept along with the Statute to the relevant Specialized Technical Committees of the AU.

### c) African Union Network of Sciences (AUNS)

**Mr. Gilbert Byatuhair**, the programme manager of AUNS made a presentation on the AUNS where he stated that AUNS is a virtual network that involves a wide range of individuals working together to address African science and technology development challenges. He pointed out that the development of AUNS is a cost effective and sustainable structure in the development of science. Where there is need to ensure the presence of qualitative and effective network of sciences, a network that is able to unify, revitalize and integrate our scientific community to respond to our development challenges directed by the STISA 2024. It is also an innovative way to enhance brain circulation and bridge the gap between African based Scientists and those in the Diaspora to address Africa's Challenges. It was also highlighted that AUNS was introduced to ASRIC to utilize the AUNS medium for its virtual meetings consultations and to propagate/advocate its scientific and technical activities as the most cost effective tool and platform. It is also the backbone of ASRIC where it can draw expertise from the AUNS database for its activities and consultations.

On the development and implementation of the network, he mentioned that there are four implementation stages as follows:

- Phase one will be to develop a survey on the existing Scientific network digital/physical and to request for their members information and lists;
- Phase two is to develop the Network portal, modules, data base and digital library;
- Phase three will focus on functionalization and publicity of the Network; and
- Phase four is continuous improvement and sustainability of the network.

Phase one is already completed and the database has about 12,000 scientists, however, the challenge is in the implementation of phase two which is the development of the network portal. He concluded by requesting for the assistance of ASRIC members, the National Academy of sciences, National Research Institutions for the development of the portal for functionalization of the AUNS.

## VI. SESSION ON THE OUTPUT OF THE PRE-CONGRESS ACTIVITIES

This session was moderated by the former 1<sup>st</sup> Vice Chair of ASRIC Mr. James Phiri, where a report on the pre-congress activities was presented to cover the following sessions: ASRIC Scientific Journals Management; ASRIC Flagship on Water for All; National Academies Dialogue on Intra-Africa Research; and ASRIC Scientific Session.

**Dr. Eng. Ahmed Hamdy**, Executive Director of ASRIC in his presentation highlighted the following:

**ASRIC Scientific Journals Management Meeting** –It was reported that the meeting focused its discussion on three areas: Sustainability and Financing; Management; and Journals Publicity through direct and indirect stakeholders. As such, the participants were divided into three groups, where each group focused on one of these areas. After long deliberation, each of the groups was able to identify the potential interventions deemed to be taken to ensure that ASRIC scientific journals are successful and outstanding journals.

The group on the journal Sustainability and Financing recommended several interventions and actions focusing on budgeting the journals, which includes the following:

1. Developing a business model for running the Journal as a business with appropriate management and resources for growth including advertisement of other materials on the portal of the ASRIC Scientific Journals.
2. The Secretariat to work with the Bureau and other members of the Congress to develop a membership scheme fee for National Academies of Sciences, National Research Councils, and Individuals to generate a fund to sustain the journals for the upcoming three years, this fee may be waived if the journals attain financial sustainability. It is also recommended that there should be a minimum and cost effective publication-handling fee.
3. The Secretariat to seek annual budgetary allocation fund from the African Union and mobilize other needed resources from international partners, publishing houses among others.

The second group deliberated on the Management of the ASRIC Journals, where they deliberated on the editorial management policies, operational management aspects, journal secretariat and editorial board framework. After extensive deliberation, the group came up with the following interventions and actions:

1. The Group applauds the establishment of the ASRIC's five thematic journals and requests the ASRIC Secretariat with the support of the Bureau to define strategic objective and scope for each of the journals, while more efforts to be made to ensure the journals are indexed.
2. The Group requests the ASRIC Secretariat to establish ASRIC Scientific Journals operational secretariat and to appoint editorial assistants to assist in the operational management of the journals while the secretariat to work closely with the Bureau and the Congress to fill up the remaining position of the editorial board.
3. The ASRIC Secretariat is to develop an open access ASRIC Scientific Journals portal and to ensure that all needed publishing software are to be in place e.g. plagiarism software among others, while it is advised to envisage the possibilities of publishing three volumes per year other than the two volume produced annually.

The third group deliberated on the general and strategic publicity/advocacy of the ASRIC Journals among stakeholders including university, research institutions, libraries, scientists among others. After extensive deliberations, the group came up with the following interventions and actions:

1. The Group requests the ASRIC Secretariat with the support of the Bureau and the Communication Committee to develop a communication strategy for the ASRIC Scientific Journals that includes hybrid communication (physical and virtual) and outreach programmes. Physical communication is to advertise the journal within and outside Africa in several STI conferences; learning and research institutions; collaborative publishing houses; using flyer, brochure, press releases. Electronic communication is to advertise the journals on popular website and social media platforms to increase the visibility of the ASRIC and its Scientific Journals within and outside the Continent.
2. The Group urged the National Academies of Sciences, National Research Institutions, senior professors and members of ASRIC to patronize the journals with their students to be publishing in ASRIC Scientific Journals and also urges their institutions to recognize ASRIC Scientific Journal as one of the accepted/recommended journal by their respective institutions. In furtherance, the Congress request the ASRIC Secretariat and the Bureau to nominate ASRIC Scientific Journal Brand Ambassador to carry the flag of the journals and assist in propagating and popularizing the journals.

3. The Group notes that the ASRIC Scientific Journal will ride on the good name and image of the African Union and request the ASRIC Secretariat to preserve the integrity and the international standards of the journals that to give high citation index and credence to the journals.

**ASRIC Flagship Project on Water for All, Under the ASRIC Initiative of Community/Inclusive Based Innovation** – It was reported that the meeting focused its discussion on the developed Moringa sand filter (MSF) water purification system where the meeting adopted the (MSF) hybrid technology as an initial solution for water purification and formed two clusters that is the Scientific Cluster and the Engineering Cluster to work on the MSF and UV disinfection system to overcome the challenges of water purification using different sources of raw water. The clusters are to determine the lifetime of the filter, how to clean or change the filter, optimum time of the UV contact with water from the MSF (in cloudy, partially cloudy and normal days), and any other thing that will improve the efficacy of the MSF. The research clusters are to work within 6 months and/or one year at most and report to the ASRIC Secretariat and the Congress.

1. The meeting applauded the scientific team and the Secretariat for the development of ASRIC Flagship Project on Water for All, under the ASRIC Initiative of Community/Inclusive Based Innovation and calls upon the ASRIC's scientific and innovation committee to invest more time and resources in similar laudable projects.
2. The ASRIC adopted the Moringa Sand Filter (MSF) hybrid technology with its second layer of purification UV disinfection and requested the working group to develop standard experimentation procedure that is to be conducted in their respective laboratories and request them to report on the findings to the next Congress.
3. It also requested the ASRIC Secretariat to develop a dissemination plan of such technologies to benefit the African communities, a plan that addresses publicity, outreach strategy and capacity building.

**National Academy Dialogue-** it was reported that the discussion on the National Academy Dialogue after each of the academies made a presentation on their programmes and projects resulted in the group identifying five 5 major domains that can ensure Africa's well-being these are Climate Change; Food Security and Nutrition; Wealth Creation and Add Value; Artificial Intelligence & Digitalization; and Health. Out of these domains and after lengthy discussions, the participants agreed to launch out the following flagship projects: Artificial Intelligence & Digitalization and Food Security and Nutrition with the participation of the following members Morocco (Project Lead), Egypt, Botswana, and Rwanda; ASRIC Flagship Project on Water for All, under the ASRIC Initiative of Community/Inclusive Based Innovation is to be implemented by the Water For All cluster.

Two promising ideas that unfolded during the meeting and need to be conceptualized further by developing a comprehensive framework for each which are: the Technology Hunter framework to benefit from existing technologies and disclose IPs of technologies that is fit to address Africa's problems. Therefore, a taskforce named "ASRIC Technology Hunter taskforce" was set in place to develop such a framework with the membership of Egypt, Botswana, Morocco, Rwanda and AAU jointly to draft the framework. While the other is Fighting Stuntedness Taskforce to develop a framework that is to address and highlight the challenges Africa is facing in stuntedness. The taskforce is composed with the membership of Zambia, Rwanda, and Prof. Youssef Oulhote the coordinator of the USA chapter of Diaspora.

1. It was noted with appreciation the output of the first National Academies Dialogue and the Congress commended the ASRIC Secretariat and the Bureau for initiating this dialogue. In furtherance, the Congress requested the Secretariat to ensure such dialogue to be conducted annually.

2. The participants endorsed the ASRIC flagship project on Artificial Intelligence & Digitalization and Food Security and Nutrition; and ASRIC flagship project on Water for All, and also endorses the two taskforces (ASRIC Technology Hunter taskforce, and fighting stuntedness taskforce) establishment. In furtherance, the Congress calls upon Africa's partners to sponsor these projects by supporting them technically and financially.
3. The Congress commended the leadership of the Academies, National Research Institutions, and Universities that stood to champion the newly defined ASRIC flagship projects and calls upon its members to voluntarily join the implementation of these flagship projects.

**Scientific Session** - It was reported that the meeting focused its discussion on technical papers presented by authors where the technical papers presentation was clustered to four thematic areas and moderated as follows; Agricultural Sciences moderated by **Dr. Ahmed Elmekass**; Natural Sciences by **Dr. Hawawu Hussein**; Social Sciences and Humanities by **Prof. Sammy Chumbow**, and the Engineering Sciences by **Dr. Mohammed Kyari**. The scientific session was extended over two days during the pre-congress activities where 23 scientific papers were presented physically and virtually. The session was attended by a good number of scientists from different levels of expertise such as senior outstanding scientists and early career researchers, however, most of the authors/presenters are young and early career researchers.

The session was a great opportunity to build the capacity of the early career scientists and to expose them to large multi-disciplinary conferences. On the other hand, it was an arena where they are able to communicate with Africa's senior outstanding scientists for guidance, mentorship and networking.

The meeting on the scientific session recommended several interventions and actions that focused on the following:

1. It applauded the ASRIC secretariat for conducting the scientific session annually and recognized it as innovative way to build Africa's early career scientists capacity while it is an avenue for networking Africa's scientific talent.
2. It encourages the young scientists and Africa's senior outstanding scientists to participate more actively in ASRIC's future activities including conferences, and scientific meetings.

## **VII. REPORTS FROM ASRIC DIASPORA CHAPTER**

The ASRIC is determined to implement the integration the African Diaspora which is in the top agenda of the African Union where in 2003, the AU amended its Charter so as to encourage the full participation of the African Diaspora as an important part of the continent in order to develop the continent. This paves the way to launch a loud call for more participation of Diaspora in ASRIC.

### **Report on the ASRIC Diaspora UK Chapter**

**Prof Bamidele Adebisi** of University of Manchester, UK made a presentation on behalf coordinator of the ASRIC Diaspora group, Dr. Akanimo Odon. The UK Diaspora had two meetings where they discussed extensively among the members and a draft framework on UK Diaspora Engagement with ASRIC was presented.

## **Report on the ASRIC Diaspora Australia Chapter**

**Prof Mimmie Watts** interim coordinator of the chapter made a presentation on the Australian Diaspora who had three meetings where they discussed the various ways that they can be involved in ASRIC and contribute to Africa's development. There are similarities between the two presentations of the chapters.

The discussion and way forward;

1. It was noted with appreciation the role played so far by the Diaspora chapters in UK and Australia in mobilizing African Diaspora, and the Congress also welcomes the nomination of Prof Youssef Oulhote as the coordinator of the ASRIC USA and Canada Diaspora chapter.
2. The participants reaffirmed their position in recognizing the vital role of Africa's Diaspora in shaping Africa's STI landscape and calls upon African Diaspora communities, institutions, scientists, philanthropists to hold to their commitment to develop their mother land by contributing heavily to the human resource and financial resource of ASRIC.

## **VIII. CONSTITUTION OF ASRIC COMMITTEES OF ASRIC II BUREAU**

The ASRIC Committees are a statutory part of the ASRIC Structure as stipulated in the ASRIC Statute and the ASRIC Rules of Procedure where core programmatic activities are executed through the committees and the former ASRIC Chair **Prof. Ratemo Michieka** moderated the session.

### **Presentation on ASRIC Committees Mandates**

**Dr Mohammed Kyari** Senior Scientific Officer made a presentation on the three ASRIC Committees' mandate as stated in the ASRIC Statute and the ASRIC Rules and Procedures. These Committees are: Scientific and Innovation Committee, Communication Committee, and Resource Mobilisation Committee. The presenter called on members of ASRIC to join the Committees and several members volunteered to join.

## **IX. PRESENTATION OF THE OUTPUT OF THE CONGRESS**

The Executive Director of ASRIC, Dr Ahmed Hamdy presented the outcomes of the Congress meetings namely: ASRIC Scientific Journal meeting, ASRIC Water Flagship project meeting, National Academy Dialogue and the ASRIC Scientific Session. He promised that the Congress report and the Congress Communique would be sent to all participants via email after consultation and finalization with the ASIC II Bureau.

The Congress applauded all the efforts of the ASRIC Secretariat and the Bureau and appreciated the successful outcome of the 4<sup>th</sup> ASRIC Congress and endorsed unanimously the report and the Congress communique.

## **X. CLOSING SESSION**

The meeting was closed by the 2<sup>nd</sup> Vice Chair elect of the ASRIC Bureau, **Dr Amos Nungu** who appreciated the participants for attending the Congress, the National Academies of sciences for moving the ASRIC vision forward and on the election of the Bureau and he promised that the Bureau will surely move the ASRIC forward. The Executive Director of ASRIC **Dr. Ahmed Hamdy** equally appreciated the participants for their time, commitment and support for ASRIC, the ASRIC Secretariat for their tireless

efforts to make the Congress a success and appealed to the National Academies of Sciences to take the message of ASRIC home to their respective countries, universities and research institutions. The participants were reminded that they are “change agents of ASRIC” and to do their best to make Africa better.