Science Agenda for Agriculture in Africa

A Synthesis Report on the Launch and Consultations towards Operationalisation

African Union

NEPAD

FARA
Forum for Agricultural Research in Africa

Science Agenda for Agriculture in Africa

A Synthesis Report on the Launch and Consultations towards Operationalisation

Johannesburg

26–28 November, 2014

Compiled by

Jürgen Hagmann, Irene Annor-Frempong, Mandi Rukuni
Edward Chuma, Nelson Ojijo and Geoffrey Mrema

Forum for Agricultural Research in Africa
12 Anmeda Street, Roman Ridge
PMB CT 173, Accra, Ghana
2015

Citation

Hagmann, J., Frempong, I. A., Rukuni, M., Chuma, E., Ojijo, N., and Mrema, G. 2015. *A Synthesis report on the launch and consultations towards operationalisation.* Forum for Agricultural Research in Africa (FARA), Accra, Ghana.

Forum for Agricultural Research in Africa

12 Anmeda Street, Roman Ridge
PMB CT 173, Accra, Ghana
Telephone: +233 302 772823 / 302 779421
Fax: +233 302 773676
Email: info@faraafrica.org
www.faraafrica.org

ISBN 000-0000- 000-0-00 (print)
ISBN 000-0000- 000-0-00 (pdf)

Design: BluePencil Infodesign, Hyderabad, India (www.bluepencil.in)

Printing: Pragati Offset, Hyderabad, India (www.pragati.com)

Contents

Introduction

The Science Agenda for Agriculture in Africa (S3A) was officially launched at the Birchwood Hotel, Boksburg, South Africa, 26–28 November 2014, at an event titled "CELEBRATING FARA" and themed: "Delivering Africa's future through science-led agricultural transformation". The main purpose of the meeting was to review institutional arrangements around science and technology, and the needed reforms and developments to accelerate agricultural transformation. The launch of S3A is one step along a chain of planned activities over the last few years, which have seen Forum for Agricultural Research in Africa (FARA), Sub-regional Research Organizations (SROs), African Union Commission (AUC), New Partnership for Africa's Development (NEPAD) and other partners, work closely with the CGIAR in a deeper partnership in support of the Comprehensive Africa Agriculture Development Programme (CAADP). Several work streams under that partnership were formulated and solidified through the signing of an MoU between the AUC and Consultative Group on international Agricultural Research (CGIAR) in January 2013 with the objectives to enhance the capacity of mandated African science institutions and strengthening synergies and complementarities between CGIAR African initiatives.

1.1 The context

The S3A, following its ratification by African Heads of State and Governments during its Summit in June 2014 in Malabo, is now adopted by the Africa Union and NEPAD as the guiding framework for science and technology's contribution to accelerating CAADP and for strengthening science for agriculture in Africa. The Science Agenda has the following strategic thrusts:

- An enduring vision foreseeing Africa as a major global player in science
- CAADP as a short term priority
- Research themes that connect institutions and policies with producers, consumers and entrepreneurs
- Strengthening solidarity and partnerships at national, regional and international levels
- Sustainable financing of science and technology
- Creating a favourable policy environment for science
- Establishing a special fund for the Science Agenda

Overall, the Science Agenda provides the framework and guidelines for identifying the broad areas of science to be developed in partnership with the main stakeholders. The vision resonates with and contributes to the AU Agenda 2024 [Science and Technology Policy of the African Union (STISA)] and AU Agenda 2063.

To build momentum towards operationalising the S3A, FARA has put in place several activities including an S3A draft operationalisation strategy for consultation.

The AU 2014 Malabo Declaration on Accelerated Agricultural Growth and Transformation (A3GT) calls for a commitment to CAADP Results Framework (RF) as an instrument to measure, track and report progress on the S3A commitments. The Declaration also calls for the preparation of an implementation strategy and roadmap for African Accelerated Agricultural Growth and Transformation (3AGT) . In this regard, the role and process of S3A in translating 3AGT is crucial and therefore main issue for dialogue in launching S3A.

Operationalising S3A means basically three fundamental thrusts that are interconnected and address the challenges of African agricultural research and development systems

i. ***Integrating*** sciences more effectively;

ii. ***Connecting*** science to end-users with greater impact especially for CAADP; and

iii. ***Strengthening*** the sciences and their application to agriculture.

1.2 Objectives of the sessions

The meeting during the FARA celebrations and launch of S3A focused on the following objectives:

- To validate the S3A and its emerging operationalisation strategy
- To explore institutional arrangements for the operationalisation of S3A
- To discuss and review the CGIAR partnerships in implementation of the S3A as part of continued CAADP-CGIAR alignment
- To launch the Science Agenda

2 The process and deliberations of the meeting

The session was officially opened by Dr Yemi Akinbamijo, Executive Director of FARA, and graced by Dr Haile-Gabriel Abebe, Director of DREA, AUC. The session was a prelude to the official launch of the S3A on the last day of the FARA celebrations on Friday, 28 November 2014 and sought to clarify issues and elucidate elements for operationalising the S3A. It was held in two sub-sessions on Wednesday (26 November 2014) and Thursday (27 November 2014).

Key presentations during the first sub-session included:

- Welcome address by Dr Yemi Akinbamijo, the Executive Director of FARA
- Session outline by Prof Mandi Rukuni, the co-facilitator for the workshop
- Putting the operationalisation of the S3A into the AUC political context by Dr Abebe
- Details of the draft AUC strategy to implement the Malabo Declarations on African Accelerated Agricultural Growth and Transformation (3AGT) by Mr Maurice Lorka of the AUC
- The Science Agenda by Dr Irene Annor-Frempong of FARA.

These were interspersed with panel and breakaway group discussion to distil key issues around the understanding and its implications.

The second sub-session probed the institutional arrangements for the operationalisation of the S3A. The main presentations included:

- A recapitulation of the S3A and possible ways to operationalise it by Dr Irene Annor-Frempong.
- CGIAR partnerships within the S3A, CAADP Results Framework and 3AGT by Dr Alain Vidal and by Dr Nienke Beintema.
- How Global Forum on Agricultural Research / Global Conference on Agricultural Research and Development (GFAR/GCARD) will engage with the S3A and the CGIAR-CAADP MoU by Dr Mark Holderness.

As in the first sub-session, panel and breakaway discussions were conducted to tease out the key issues around institutional arrangements at different levels in operationalising S3A.

The Science Agenda was officially launched on the third day, 28 November by the commissioner of Agriculture of the AUC, Ms Rhoda Peace Tumusiime. It was preceded by several thought-provoking presentations by Prof Calestos Juma, Professor at Harvard, Dr Yemi Akinbamijo and Dr Kanayo Nwanze, President of International Fund for Agricultural Development (IFAD) and a panel discussion.

2.1 Summary of the deliberations

2.1.1 Opening

The discussions on the S3A side-event were officially opened by Dr Yemi Akinbamijo: He stated that the S3A was developed over the last 18 months and he emphasised the fact that economic transformation needs science. African economies are dependent on agriculture and S3A is the

horse for developing African economies. He stated that the side-event session was not just another workshop but an opportunity to input into the future we want and create history in terms of agricultural development in Africa (see Annex1).

2.1.2 Political endorsement of S3A:

Dr Abebe and Maurice Lorka then briefed the session on the Malabo Declaration and the approval process of the S3A. He stated that the S3A development process is not a monopoly, but should be co-owned by all stakeholders. The AUC will provide a platform to ensure the voices of all key stakeholders are represented in the S3A process.

The S3A has passed through the AUC approval process – notably the CAADP PP in Durban, Joint Conference of Ministers of Fisheries and Agriculture in Addis Ababa, and Ministerial Conference that approved the S3A – as one of the work streams to define the future agenda and was finally adopted as a Ministerial Resolution.

Dr Abebe also informed the session of the *3AGT* strategy for shared prosperity and improved livelihoods, which were adopted in Malabo in June 2014. The goals and visions that drive the 3AGT as approved in Malabo include: substantially increase contribution by agriculture by 50%; doubling production and productivity; reducing post-harvest losses by 50%; and enhancing resilience of households by 30% (see http://www.tralac.org/news/article/5874-malabo-declaration-on-accelerated-agricultural-growth-and-transformation-for-shared-prosperity-and-improved-livelihoods.html for details).

The AUC role, according to Dr Abebe, includes among others; biennial tracking of progress on implementation of the Malabo Declaration; elaboration of an implementation strategy for Malabo Declaration (under development); and call for action on the Declaration to facilitate the research, knowledge and innovation community to own the process and help achieve the goals.

The presentation by Dr Abebe was followed a presentation by Maurice Lorka of the AUC on the CAADP process and linkages to the S3A. He informed the session of the Malabo Declaration with seven principles of recommitment to - the CAADP process;

i. Re-affirms the principles and values of the CAADP
ii. Investment finance
iii. Eradicating hunger by 2025
iv. Halving poverty by 2025
v. Facilitating inter-Africa trade
vi. Enhancing resilience of livelihoods and production
vii. Mutual accountability to actions and results

The S3A was endorsed within the broader AUC/NEPAD/CAADP previous commitments. This leads to the necessity to link S3A to the AUC/CAADP processes.

An operational plan for the Malabo declaration is under way through a task team, where the vision 2025 is translated based on the Sustaining CAADP Results Framework. This will be submitted to the heads of state summit in January 2015

2.1.3 The S3A and first ideas on an operational framework

Dr Irene Annor-Frempong – of FARA Secretariat - then gave a presentation on the background to the S3A and the process of its development; key actions into implementation of the S3A including key deliverables and tasks completed so far, linkages and mainstreaming with the CAADP/AUC processes. She highlighted the earlier steps such as the discussion paper; the e-consultation; stakeholder consultation at the SRO and international levels as well as the commissioned studies.

She also outlined the main elements of the S3A; its goals; on-going efforts and Africa's preparedness towards realising the S3A vision; and implementing the S3A towards ensuring the creation of a balanced human capacity pyramid in countries.

She presented the initial ideas on an operational strategy for moving the S3A further now that the political approval process has been completed. The implementation framework is based on three main areas;

i. Integrating science at national and regional levels
ii. Connecting science at national and regional levels
iii. Strengthening science at national and regional levels

This was followed by detailed discussions and a further presentation on day 2 of the workshop to deepen understanding of the S3A and to clarify many of the issues that were raised during the discussion on both the process of developing the S3A and the proposed initial ideas on its implementation strategy. (see **http://www.scienceagenda.org/Presentations.aspx** for full presentation)

2.1.4 Commissioned studies / companion papers of the S3A

S3A benefitted from five commissioned studies that were done during the S3A development process. Two of them were presented in more detail, namely on partnerships and collaborative efforts by Professor Ajuruchukwu Obi and on agricultural extension and advisory services by Dr Dan Kisauzi. A panel discussion brought out a few key issues:

- Agricultural education systems should align with the CAADP to strengthen agricultural instruction, develop needed entrepreneurial skills, design multi-disciplinary programs and eradicate silo mode of operation
- Need to ensure that the institutional memory and knowledge be available for the next generation. This requires that we tap more and better into existing pockets of excellence, synthesise and make it available
- Extension systems are about to change and that provides opportunities to make them more science driven. Many countries do not have policies on agricultural extension.
- More participation by private sector and producer organizations in extension provision called for and mechanisms for sharing knowledge and information among extension agents are needed
- NAFSIPs are strong in research, but weak in extension

2.1.5 CGIAR Presentation

A presentation by Nieke Bientema on an Agricultural Science and Technology Indicators (ASTI) study raised a number of issues like the capacity issues in African National Agricultural Research Systems (NARS) in terms of declining funding in some cases; ageing staff; young staff who are being thrust into senior positions without adequate mentoring, etc. All these are challenges to the operationalisation of the Science Agenda.

Preceding a panel discussion, Dr Alain Vidal of CGIAR gave a presentation on CGIAR partnerships. The panel discussion with Dr Jimmy Smith - DG of International Livestock Research Institute (ILRI), highlighted how the CGIAR and its International Agricultural Research Centers (IARCs) is aligning itself with the CAADP process since the signing of the MoU with the AUC (see **http://www.cgiar.org/consortium-news/fara-celebration-engaging-in-delivery-of-the-science-agenda-for-agriculture-in-africa/** for details).

The key words here were alignment with CAADP and adding value and supporting the SROs; NARS and FARA. He accepted that the institutional framework with 15 centres and 15 CRPs may be a challenge to the NARS, especially the small ones –leading to a partnership overload. Contributing in the same panel discussion, the CEO of ASARECA highlighted the coordinating role of the SROs and that this was guided by the principle of subsidiarity.

2.1.6 Launch of the Science Agenda

On day 3, S3A was officially launched. It was preceded by a presentation of the IFAD president Dr Kanayo Nwanze, (who also chaired the task force for developing the S3A) and a panel discussion including Dr Akin Adesina, Minister of Agriculture from Nigeria, Nepad CEO representative, the commissioner of Agriculture and the Director General of ILRI (see annex 2 for the speech by President Nwanze). The importance of the Science Agenda was emphasised in all contributions as being critical for a full utilisation of the potential of Africa's agricultural development.

3. Key issues emerging on operationalising S3A

3.1 Understanding of S3A and implications as perceived by stakeholders

The concept of 'Agenda' in S3A

In the discussion it came out that the concept of 'Agenda' is not clear among stakeholders. Some expect more practical science / research priorities. Generally participants felt that the operationalisation of the S3A would require simple abridged versions with clear guidelines for the people who actually implement the S3A at different levels in order to translate the agenda into reality. Such documents should clarify the S3A value proposition of being a compelling document and vision.

It needs to be very clear that the agenda is not a project, but a framework to which actors align. So, actors need to be very clear what it means to align to the agenda. It can only work if the actors themselves are clear and drive it. That requires a deep understanding and buy in and commitment for change and transformation. The challenge is to create that drive and coordinate efforts. The 'domestication process' for ownership by local, national and regional actors and the integration of actions into their local plans etc. will be crucial for its success.

It also needs to be very clear who will do what in the S3A operational strategy, what responsibilities at which level and actors. Clear actions and deliverables need to be developed and the role of FARA and all partners needs to be clear, what can they commit to deliver and what not.

Accountability of governments to deliver on S3A

A key issue raised was the accountability of governments to deliver on S3A. Mechanisms to hold governments and actors accountable need to be developed and key players – closely related to CAADP implementation at national levels – need to be nominated.

Integration / connection of disciplines, actors and scales

One of the key challenges in African agricultural systems is the connecting of elements to work as a system. Accordingly stakeholders brought out many issues around that thrust. Firstly, the need for involving all critical actors was mentioned; the producers, extension, private sector at large, consumers – and moving towards a perspective of innovation systems rather than focus on research alone. Secondly, the need for integration of disciplines, breaking the silos and looking beyond disciplinary borders for solutions in other arenas and sectors. Generally a need for doing business in a different way was emphasised. Thirdly, the integration of scales of intervention: from local to national to regional and also policy processes was mentioned as critical to open up new opportunities and to make the science in agriculture system work. Multi-actor and

trans-disciplinary programmes were seen as critical to put connection / integration into practice, where all actors have a common vision of approach for all stakeholders.

Generally integration entails — *integrating actors*, resources, institutional support, farmers and researchers, women and youth, pre and postharvest science; *integrating services* across the board; and *integrating science into agriculture*. Disconnect between the elements is the critical challenge. Integration in practice is challenging and if not done efficiently and effectively, integration and coordination can reach an enormous complexity. Thus, any integration needs to be around very concrete goals to achieve and be done through un-bureaucratic and light mechanisms.

Role of farmers and private sector

The role of farmers and private sector was unanimously highlighted as most critical. How would they use science to improve their businesses? The general notion was that without getting the action on the ground effectively S3A might end up as just another declaration of good intent. Private sector (including farmers) was seen as the key to make things happen.

Extension and knowledge systems and sharing

The need for effective knowledge management / sharing at all levels was emphasised as so much good work has ended up on shelves and is reinvented after being forgotten. Institutional memory and nurturing knowledge sharing systems including extension are centre stage to the Science Agenda to be effective.

A general weakness was seen in extension as even CAADP seems more focusing on research than extension. From policies for extension to the practice of knowledge exchange there seems to be a fundamental need to integrate new ways into the Science Agenda including private sector extension.

Investments in science and agriculture

The need for increasing the level of investments for achieving the S3A goal was pertinent, particularly from national governments and country resources. Africa-owned and Africa-led investments were favoured. The mobilisation of African resources will be the key for the success of S3A. S3A was suggested to provide a platform for investing in research and research institutions. The proposed African Solidarity Science Fund (ASSF) through the national research institutions is a good example.

3.2 Institutional arrangements and partnerships

The discussions on day 2 focused on institutional arrangements for operationalising S3A. Group and panel discussions brought out the key points and suggestions of the stakeholders at three different levels:

1. Integrating science at national and regional levels
2. Connecting science at national and regional levels
3. Strengthening science at national and regional levels

3.2.1 Institutional arrangements for *integrating* science at national and regional levels

Some key principles and mechanisms which were suggested:

- CAADP should be the organising framework, with its coordination structures; working groups and teams at country level. CAADP strategies should be strengthened to incorporate the S3A and to link the CAADP

teams with Innovation Platforms which serve as entry points for integration. It is noted that CAADP already has the Country CAADP Teams and these operate under the guidance of Country CAADP Implementers Guidelines. These guidelines are now being revised to include strengthening of S&T and implementation of S3A

- Need for a CAADP Cabinet at country level supported by a Secretariat; the Cabinet to have thematic groups, including the S3A thematic group, and programmatic groups responding to the thematic groups for accountability
- Integrating through creation and consolidation of centers of excellence that cut across researchers, private sector – as a way of integrating levels of science
- Organising at country level: countries should have functional NARS, but most countries only have NARIs not integrated with the other national agencies. The need for an effective NARS coordinated by an independent body was articulated strongly
- Integration through end users by moving resources to farmer based organizations who hold the actors accountable to support their development and performance.
- CRPs to use the S3A to integrate into national processes; GCARD should also use the S3A process to reach countries. S3A as a tool needs to be fully integrated in the National Agricultural Finance and Sector Investment Plans (NAFSIPs) which drive agricultural development investments priorities

3.2.2 Institutional arrangements for *connecting science* at national and regional levels

- Connecting is about effective multi-stakeholder processes where actors work together towards clear goals. Thus, Innovation Platforms are seen as good mechanisms where local priorities and needs are articulated and which go across value chains and certainly outside simple production. The local demand and interests are the base around which Innovation Platforms are built
- Enhance partnerships, need to strengthen capacity of Africans on partnerships; this should be based on openness, honesty in partnerships; individual interests should be relegated to African interests; some stakeholders selfishly use others to achieve own objectives
- RECs as mechanisms to harmonise policies and investment strategies and foster trade and investment

3.2.3 Institutional arrangements for *strengthening science* at national and regional levels

Strengthening science involves five elements – human resources, funding, policy and institutions, research activities, information systems. The following suggestions came up:

- Human resources at national level – curricula review (content, ways of delivery, more practical); involve private sector in the process of education through partnerships between private sector, universities and institutions; capacity development.
- At regional level – specialised centers at regional level with shared information mechanisms between countries
- Funding – national fund for research at 1% of national budget allocated to science; regional fund for research with innovative fundraising – allocate a percentage of the national budgets to the fund; SROs to work with all stakeholders effectively
- Policy and institutional arrangements – national policy for science and a national strategy (legislation policy); national science council (in the Head of State's Office) to link all the actors, partners for coordination and connection; harmonisation at regional level
- Information systems – need for reliable data for monitoring and evaluation, put in place systems to collect needed data, and create public access for the data

- Strengthening at country level – innovations, public private partnerships, value chains, farmer based organizations contributing fully as facilitated by the government

3.2.4 Some critical issues on institutional arrangements

Overall there was the realisation that once the operationalisation strategy for S3A was firmed up, it then follows that appropriate institutional arrangements have to be crafted. Therefore a flexible step by step operationalisation strategy that can be flexibly adapted to each context was suggested, which is fast in learning and strategising while making first steps. The countries should build their own systems and capacity and decide who should coordinate the S3A.

While the country CAADP teams seem effective, previously the research component in them was very weak in most countries. The fundamental challenge is that only few countries have a well-functioning NARS as shown by ASTI (the presentation highlighted issues affecting agricultural research in Africa south of the Sahara including staff turnover, female participation, widespread under investments -governments fund salaries and operational costs- high donor dependence for research funds, high funding volatility and vulnerability to funding shocks). The transformation to an agricultural innovation system which includes all actors and is not skewed towards researchers and universities is to be promoted.

A major discussion revolved around the issue of coordination of S3A at national and regional levels: should it be a loose formation or a formal structure which is coordinating S3A. No conclusive answer was found. The suggestion was that one should allow for creativity and flexibility as the optimal structure is not visible. Contexts vary tremendously in different countries. For effective operationalisation, decisions need to be made on the programmatic focus, guiding frame and open mechanisms.

4 Implications for the operationalisation of S3A

The discussion brought out many critical points to be considered in the further operationalisation of S3A, which FARA will have to consider in developing a road map.

4.1 Need to create commitment and ownership through making S3A fully understood by stakeholders

A key challenge that emerged from the discussions is the understanding of S3A by stakeholders. Without being crystal clear one would not expect them to engage and pursue the agenda themselves. Therefore a major emphasis in the next year needs to be on making it understood and mainstreaming it. Some points are:

- The distinction between science for agriculture (as envisioned in the S3A) and agricultural science, the latter referring to the hard and traditional disciplinary areas, is crucial to the S3A process and implementation. S3A challenges traditional conceptions and incorporates social learning and it needs to be brought out, in crystal clear terms what the new way of doing business should be
- What an agenda is and what it can do and what it cannot do needs to be clearly articulated. There is need to clarify and/or reiterate what the S3A is and what it is not. The S3A is a long-term strategic framework that puts a premium on science, technology and innovations in agricultural development within Africa. Its purpose is to *advocate for the importance of scienc*e *as part of the transformation process of agriculture in Africa.* It was apparent from the two day discussions that this issue needs further clarification/elaboration amongst key stakeholders. It needs to be clear "why S3A now?", the value proposition and the link to previous frameworks like Framework for African Agricultural Productivity (FAAP) etc... Three items were discernible in the S3A process: a) engaging science explicitly as a development engine; b) fostering development through research; and c) mobilising resources to conduct research.
- There is confusion whether S3A as an 'agenda' is a guiding framework to follow or a more structured action which will have deliverables and resources to implement. Learning from CAADP, where the confusion about programme and later framework became a central issue, it is important to clarify what agenda actually means in practical terms for stakeholders. The operationalisation of an 'agenda' and a more structured action is very different, with different institutional arrangements and coordination mechanisms and it needs to be clear what is expected by whom.
- There are an increasing number of policies, frameworks, mechanisms and processes {e.g. CAADP, A3GT, Science and Technology Policy of the African Union (STISA), S3A} all parallel in the arena, which can easily confuse stakeholders. It needs to be articulated extremely well how all these frameworks fit together and relate to each other in practice and even more important, what it means for stakeholders. They will not have the time and energy to go into details of many frameworks. They need a few key parameters which they understand and can relate to their work and business and reality. Anything that cannot be articulated in 3-5 key points at the most will not be embraced as people first have to dig into documents before they can say it in their own words.
- FARA needs to communicate S3A for targeted audiences in a simple language. Messages which all stakeholders can understand and a communication strategy to make them visible and easy to understand and mainstream need to be developed. The accompanying documents can also help to clarify, for different stakeholders, what the S3A means in their working domain.

4.2 Moving the S3A operationalisation process further

The S3A framework itself has been approved, but the document is a living document which will be updated regularly with new data, information and experiences from foresight studies and global mega trends. The operationalisation needs to be developed further based on experiences and lessons learnt. Some points to consider in the further development are

- FARA and SROs to develop an implementation framework with specific outcomes and milestones over the next decade for the operationalisation of the S3A in the three areas of integrating; connecting and strengthening.
- Undertaking in-depth studies on the capacities required for implementation over the short, medium and long term; especially at the national and sub-regional levels given the attrition due to retirement, resignations, etc.
- S3A should include issues about foresight and modeling to help respond to future challenges
- The S3A process needs to rethink the role of the private sector to ensure sustainability and governments also need to be serious on investing in agricultural research.
- The integration of different actors, disciplines and scales needs further thinking and envisaging models and frames on how it can be done without being lost in complexity.
- S3A operationalisation needs to think through more in depth the design of knowledge management and exchange systems at national and regional levels and what the role of S3A should be in making them more effective and efficient. Different mechanisms might be required and an overall higher focus on knowledge exchange / extension in the countries is required
- A number of operational questions need to be answered when going deeper in some areas and to help in defining the implementation process of the S3A. Some of these questions are:
    - How other developing regions have fared in developing their Science Agendas and what lessons Africa can learn from that experience. In this regard FARA could liaise with GFAR and other regional fora in Asia etc.
    - How the numerous success cases in agriculture in Africa have used science to achieve what they have done over the past 40 years. The Science Agenda document and companion documents such as the S3A Discussion Paper provide good insights on the success cases in African agriculture including tea and horticulture in East Africa; beef in Botswana/southern Africa; cotton and cocoa in western Africa; and spread of hammer mills for processing . The institutional, technological and innovation aspects of these cases could be summarised as basis for learning lessons.
    - How other sectors have fared in Africa – cell-phones; MPESA and why they have succeeded when compared to agriculture. We seem to be too inward looking in the agricultural sector.
    - How the CGIAR IARCs and their CRPs will fit and work with the emerging Centers of Excellence which are being established under the auspices of the SROs in the sub-regions. This is particularly important now as the CRPs are going to reviewed/evaluated during the coming 3 -5 years.
    - How to avoid the mistakes of the past and learn from those experiences? In order to avoid the mistakes of the past, in operationalisation one needs to be aware of the lessons and experiences in institutional restructuring and engineering which occurred in the 1980s and 1990s in SSA when the NARS were being reformed, the SROs being established and the experimentation with different partnership modalities were undertaken.

4.3 Further engagement of stakeholders

While further developing the framework and the operationalisation, FARA needs to engage with stakeholders deeply, specifically:

- In depth engagement of all stakeholders at the REC/SRO and national levels on how to internalise the concepts in S3A and developing operational mechanisms and plans for integrating, connecting and strengthening of science
- Further engagement of the IARCs and CGIAR system to internalise the elements of S3A in their programmes especially in the three areas of integrating; connecting and strengthening of science. In the two days discussions, the CGIAR representatives were talking of aligning their programs while the FARA/SRO were talking of integrating, connecting and strengthening – there is need for a meeting of minds on these issues.
- Bring in the other partners whose potential role in the operationalisation of S3A has not been deeply explored e.g. the Advanced Research Institutes [ARIs]; Non CGIAR Centers in Africa [e.g. ICIPE; CABI; CTA; AATF, etc.]; the Private Sector; Extension services; Farmers Organizations, etc. Although these organizations may have been part of the consultative process in crafting S3A they now have to be engaged specifically to explore any critical role these could play in some aspects of the three areas – integrating; connecting; strengthening of science in African Agriculture. Particularly private sector is still weak – even in the CAADP processes in countries, and needs special attention to be fully involved as a driver for agribusiness.

4.4 Need to move from declaration to practice: institutional architecture to implement

Completing the draft operational strategy and plan soon is crucial for credibility of S3A process. Institutional arrangements to implement the S3A include '*connecting*' through Innovation Platforms and multi-stakeholder processes, '*integrating*' around existing national and regional CAADP structures and centres of excellence, and '*strengthening*' human resource base, funding mechanisms, policy and institutions, and information systems.

Some key areas in developing institutional arrangements are:

- The institutional arrangements at country level need to be flexible and adaptive and best developed step by step as they are very context specific.
- The CAADP structure (country CAADP teams,) is the main base for implementing S3A. The integration of S3A into the NAFSIPs is critical if investment should support S3A
- Subsidiarity has been the guiding principle in assigning roles and tasks to the different partners under the present institutional architecture in research (NARS-SRO-FARA) and this should continue to be respected and prevail when implementing the S3A
- The NARS concept is not optimally operational in many countries, therefore Innovation Platforms and other mechanisms for engaging the right stakeholders at the right time for the right job need to be explored and utilised for S3A. The 'integration' thrust of S3A can be a soft and flexible approach towards developing a NARS in practice in future
- The RECs have a key role in integrating science at regional level and ensuring the knowledge exchange and policy harmonisation is fostering the impact of science generated solutions. Their active engagement and links with the SROs is critical in future to make S3A a coherent framework in practice
- The role of FARA in S3A development and implementation process needs to be further elaborated amongst many stakeholders. The Dublin Process initiated the S3A process and the Accra consensus developed the

process, FARA has been mandated by AUC and NEPAD to take S3A to African institutions and CAADP. FARA adopted the guiding principles of African ownership and leadership and wide consultation and stakeholder participation (State and Non-State Actors). FARA also weaved the S3A into Africa's existing implementation modalities including the AUC, NPCA, FARA, RECs, SROs, Member States, DPs. These facts need to be clearly articulated and understood by all key stakeholders to avoid misconceptions.

- New innovative partnerships and PPPs need to be at the forefront of bringing actors together. Partnerships have been developed but their effectiveness needs to be improved, also with CGIAR and specifically with private sector and farmer organizations. Scaling up depends on partnerships (based on subsidiarity) defined by heterogeneous factors. Practical examples of such partnerships include Innovation Platforms, incubation, mentorships, and others.
- Mutual accountability frameworks need to be developed among the different actors and monitored effectively to ensure performance in pursuing commitments

4.5 Need to develop sustainable financing mechanisms

- During the 1990s there were quite a number of Sustainable Financing Initiatives (SFI) for agricultural research. However, with increased donor funding during recent years many of these appear to have been abandoned. There is need to revive these initiatives as we are likely to enter another period of austerity and declining funding from both donors and national governments. Agricultural research has to anchored on long term stable and sustainable financing and this should be one of the work streams for the implementation of the S3A.
- Need for S3A to provide a platform for investing in research and research institutions. The proposed ASSF through the national research institutions is a good example.

5 Way forward – early actions in 2015

The way forward towards operationalisation of the S3A builds on the analysis above. A range of key actions were identified for the next phase, which will be a mainstreaming phase lasting at least through 2015, but continuing afterwards. The following priorities and steps need to be tackled:

- **Development of simple to understand messages and materials for different stakeholders** which can be used for communicating S3A effectively. Together with the materials a communication strategy needs to be developed outlining which actors and constituencies to target and how to create the understanding and compelling ownership. This also requires a set of key targets which can be easily communicated and help actors to get oriented in the right directions. Engagement in various fora, dialogues and programmes running regionally and nationally will help in enhancing the message output and to contextualise them better.
- **Develop architecture of an engagement process** at different levels and a framework for operationalisation of S3A based on critical factors required to make it a success. An oversight group to oversee and learn rapidly from the experiences in operationalisation should be part of this architecture.
- **Build a group of competent practitioners and supporters** who can drive the mainstreaming process. This group would be nurtured by FARA continuously and one would learn fast from their experience to optimise the engagement and mainstreaming process. The choice of such experts is crucial as their influence will be central to the success and pace of mainstreaming the S3A.
- **Facilitate the engagement of actors in the process and utilise this engagement process for development of institutional arrangements**. This will be through specific sessions with specific actors to make them understand and co-create the framework for their engagement in the S3A process.
- **Facilitate the integration of S3A into the NAFSIPs** in a process in each region, where countries are brought together to work on their plans. This will make it clear what is required and will anchor S3A in the investment plans and create champions to drive it from different perspectives
- **Aggressively market S3A through champions** who can self organize in the countries and beyond to drive the S3A. These champions will be supported by FARA with ideas, materials, and understanding and will be involved in operationalising the S3A. These champions can be the same as in the third point above, but largely will be at a different level. They are more influential supporters in positions who will promote the S3A
- **Facilitate the SROs to put the practice of S3A** into their work plans and strategies.
- **Identify interesting initiatives to hook on to** in order to pilot and showcase concrete actions with impact on the ground based on the S3A principles.
- **Learn the lessons rapidly and regularly to continuously improve the operationalisation** and get more and more ideas and depth to put S3A into practice successfully. No blueprint will work in the diverse context we have and therefore we need to engage in a process of action learning at all levels. That process needs to be managed extremely well by FARA to ensure good and fast results.

The first year of implementation will provide a clear idea what needs to be done in the mid-term (2016-2020) and long term (2021-2025).

6 Annexes

Annex 1:
Statement by the FARA Executive Director at the launch of the Science Agenda for Agriculture in Africa

HIGHLIGHTS OF THE SCIENCE AGENDA FOR AGRICULTURE IN AFRICA

BY

YEMI AKINBAMIJO,

EXECUTIVE DIRECTOR, FARA

AT

THE LAUNCH OF THE '**SCIENCE AGENDA** FOR AGRICULTURE IN AFRICA'

AT THE 15TH ANNIVERSARY OF
THE FORUM FOR AGRICULTURAL RESEARCH IN AFRICA (FARA)

OR TAMBO CONFERENCE CENTRE, BIRCHWOOD HOTEL

JOHANNESBURG, SOUTH AFRICA

28 NOVEMBER, 2014

Excellencies
Honourable guests
Distinguished delegates
Ladies and gentlemen

Science, technology & innovation are critical to Africa's development, yet the attention they receive (for example as reflected in the investments devoted to them) falls far short of Africa's requirements.

Infrastructure for R&D is neglected, inadequate or decaying in many African countries and the eroded quality and relevance of education and research continues to undermine Africa's capacity to participate in global knowledge production.

Yet, we are in times when expectations from agriculture are growing while the production environment is becoming less favourable.

There is the expectation to produce more food on less land, with less water, chemicals, waste and greenhouse gases, and to produce safer, healthier more nutritious food as well as contribute meaningfully to global knowledge production.

This is happening at a time when the labour market is changing from public to private and creating a huge education gap for the demands of the job market.

The development of the Science Agenda was led by two teams, namely the Oversight Group and an 11-member Expert Panel.

The Oversight Group provided oversight and helped to build ownership and buy-in for the Science Agenda. It was constituted by representatives from the following organizations: the AUC, NPCA, FARA Secretariat, SROs (ASARECA, CCARDESA and CORAF/WECARD), Education networks (RUFORUM and ANAFE), AFAAS, PAFO, PanAAC, RECs (ECOWAS, SADC and COMESA), the CGIAR Consortium, the World Bank and IFAD.

The Expert Panel consisted of a 4-member Synthesis team that was charged with the writing of the Science Agenda, whilst the remaining team provided the peer-review of the document.

Consultations included a global e-consultation and national, regional and continental face-to-face consultations. These formed the basis for the writing of the Science Agenda.

After approval by the Board of Directors of FARA, the final version of the Science Agenda was submitted to the AUC and was taken through the AU processes for endorsement by the Heads of State and Government.

The Key Deliverables that we will be launching today include the following:

- The Science Agenda for Agriculture in Africa in 4 languages (English, French, Portuguese and Arabic)
- The Science Agenda Highlights also in 4 languages
- The Science Agenda Discussion Paper (in a soft copy format) in English and French
- The Accra Consensus: Process and Methodology for the development of the Science Agenda (in a soft copy format) in English and French
- Synthesis of commissioned studies and emerging Implementation Strategy for the Science Agenda in English and French

Your Excellencies, ladies and gentlemen, the Science Agenda articulates the breadth of science, meaningful engagements between disciplines and effective transfer of outcomes of science to end users

The Science Agenda envisions that;

"By 2030 Africa ensures its food and nutrition security; becomes a recognised global scientific player in agriculture and food systems and the world's bread-basket"

It puts forward six priority themes necessary for realising this vision, namely:

1. Sustainable productivity in major farming systems
2. Contextually appropriate mechanisation
3. Food systems and value chains
4. Post-harvest handling, food processing, safety and storage
5. Agricultural biodiversity and natural resource management
6. Responses to Mega trends and emerging challenges for agriculture in Africa

And three cross-cutting themes on:

1. **Sustainable intensification**, as an organising framework for enhancing productivity, at all scales of production.
2. **Modern genetics and genomics** to give better understanding of gene function, leading to more specific targeting of genetic improvement in agriculturally important species of crops, livestock, fish and trees;
3. **Foresight capabilities**, including strategic planning, modelling, and analysis of 'critical technologies', as a means to determining the future agriculture we want.

In the short-to-medium term the Science Agenda aims to achieve three objectives: (i) increase domestic public and private sector spending (ii) create the enabling environment for sustainable application of science for agriculture, and (iii) build the basic science capacity at national and regional levels with special attention to the youth and women

These objectives are means to the long-term goal of doubling the current level of Agricultural Productivity by 2025 through application of science for agriculture.

To realise this vision the following are necessary:

- Connecting the components of the science for agriculture system
- Ensuring capacity at the national level
- Enhancing supra-national collaboration and collective action (regional, continental and global)
- Sustainable financing of the Science Agenda
- Upholding African Solidarity in Science, and
- Creating a favourable policy environment for science

Your Excellencies, ladies and gentlemen,

The Science Agenda promises to guide the broad areas of science to be developed in partnership with the main stakeholders; the Science Agenda will therefore;

- Facilitate the necessary reforms and transformation of national science and technology institutions
- Help focus on the need for human capacity building at all levels
- Facilitate increased funding from diversified sources to support science
- Facilitate the alignment of actions and resources to ensure value-for-money and desirable impact

- Facilitate effective and need-based partnership among mandated African institutions at sub-regional/ regional levels and between these actors and their external partners
- We launch this agenda today with the full backing of the Ministers of Agriculture, Fisheries and aquaculture, and with the endorsement of the African heads of states and governments through the Malabo declaration of June this year.

We have come this far because of the hard work of all our partners; the AUC, NPCA, SROs (ASARECA, CCARDESA and CORAF/WECARD), AATF, AGRA, several NARIs, ANAFE, RUFORUM, AFAAS, PAFO, PANGOC, PANAAC, RECs (ECOWAS, SADC, COMESA) the CGIAR Consortium and several advanced research institutions notably CIRAD and TEAGASC (Ireland).

We are grateful to all our Development Partners especially the EC, IFAD, ACIAR, Irish-Aid and the World Bank for their confidence in FARA and for providing the funding that has positioned Africa on a path to agricultural transformation.

I will call on all of you to continue to support Africa as we move into the more critical stage of operationalising and implementing the Science Agenda.

I thank you.

Annex 2:
Statement by IFAD President at the launch of the Science Agenda for Agriculture in Africa

I am so proud to be here this morning, both to look back and to look ahead.

Seventeen years ago, agricultural research in sub-Saharan Africa was at a crossroads.

The three sub-regional entities – CORAF/WECARD, ASARECA and SACCAR – had been established and done excellent work in sharing knowledge. And so had the Special Program for African Agricultural Research, known as SPAAR.

But, as the Chair of a task force at the time, I know we felt strongly we needed a single body for agricultural research — one that could represent the entire continent, and one that was managed not just for Africans, but by Africans as well.

Our recommendations planted the seeds for the Forum for Agricultural Research in Africa (FARA). Over the past 15 years, those seeds have proven hardy and resilient, and today, we are celebrating the harvest. There is a saying that he who plants a walnut tree does not live long enough to harvest its fruits. This is one occasion when that adage is not true!

So many people have contributed to the success of FARA since its creation in Conakry. I cannot mention them all, but allow me to single out my good friend and colleague Dr Moctar Touré. As Executive Secretary of SPAAR, he managed the transformation that created a truly made-in-Africa approach to agricultural research.

In a relatively short time, FARA has emerged as an important vehicle for agricultural growth in Africa. I'm pleased that my organization, the International Fund for Agricultural Development (IFAD), has been a supporter right from the start.

IFAD, as both a United Nations specialised agency and an international financial institution, is unique in combining a hard head for business with a soft heart for human rights and dignity.

IFAD has been directly associated with two of FARA's flagship initiatives.

First, we teamed up with the European Commission to finance (most of) the Sub-Saharan African Challenge Programme. The Programme has had a huge impact on smallholder farmers through Integrated Agricultural Research for Development, or IAR4D. Indeed, it has become a model for its participatory approach to strengthening value chains.

Whether it's organic pineapples from Uganda or high-quality tomatoes from Malawi, the Programme is helping smallholders develop innovative products and get them into the marketplace.

IFAD is proud of its contribution to this work, but it's the second project that I want to speak about today: the Science Agenda for African Agriculture.

Our launch today is both the culmination of a comprehensive process, and the beginning of what I hope will be a commitment to concrete and meaningful investment in agricultural research for development in Africa.

The Science Agenda reflects the Accra Principles of mutual respect, mutual benefit and mutual accountability.

Allow me to reflect on why the Science Agenda is the right policy at the right time.

Today, there are positive signs of an economic resurgence in Africa. Consumer spending is expected to reach at least US$1 trillion by 2020. Meanwhile, Foreign Direct Investment has tripled over the past decade.

I am proud that many African nations are becoming economic powerhouses. However, much of this growth comes from the extractive sector, which does not create jobs for Africa's poor and hungry.

Remember that around two-thirds of Africans earn their living from agriculture, livestock and fisheries. They too deserve to benefit from the continent's economic gains.

This is not yet the case. While extreme poverty rates may have fallen, the absolute number of people living in poverty has risen steadily between 1981 and 2010. And this is the only continent where this is happening.

Africa needs to scale-up productivity so agriculture contributes to the health and prosperity of the poor women and men living in rural areas.

We must also ensure that higher productivity and income translates into better nutrition. All too often it is African smallholders and their families who are hungry and malnourished.

In other words, agriculture must generate enough and diverse food to eliminate hunger, and enough income to eliminate poverty.

Three conditions must be met for this to happen.

First, we need policies that encourage inclusive growth so smallholders are not left behind. Such policies must reduce the risks of investment in agriculture for farmers and private sector partners alike. And they should give special attention to marginalised groups, such as rural women and youth.

Second, we need investment in rural infrastructure. This includes processing plants, electricity, warehouses, roads and ports. These strategies can both reduce post-harvest waste and improve access to markets. And we also need to invest in social services - such as schools, clinics and hospitals.

Third, we need better fiscal management and enforcement of regulations. According to this year's Africa Progress Report, illicit outflows cost the continent some US$50 billion. This is money that should be building the future of Africa, not lining the pockets of corrupt officials.

All this requires a major shift in how we look at agriculture. Farming must be seen for what it is: a business enterprise that feeds people and generates wealth. When we do this, we will begin treating smallholder and family farmers with the dignity and respect they deserve.

I do believe this shift is already starting to occur.

When the African Union declared 2014 as the year of agriculture and food security in Africa, it sent an important message. It said, "We are ready to recommit to agriculture."

Today, with the launch of the Science Agenda, we can build on this momentum. Like FARA itself, the Science Agenda is African-owned and African-led. It envisions that, by 2030, Africa is food and nutrition secure, a global scientific player and the world's breadbasket.

This vision for transforming the rural economy through science is completely in sync with the African Union's Agenda 2024 and Agenda 2063.

No country has ever achieved lasting social or economic progress without harnessing the power of science in dominant sectors. This role is too important to outsource.

And when I say science I do not just mean biology, chemistry and physics. Or agronomy, plant breeding and plant protection. I also mean the softer sciences -- the social sciences, human behaviour and the dynamics of policies. We need to know who we are trying to reach and ask ourselves: What are their needs? How will the cultural norms affect – their behaviour? And, of course, we need to invest in Information Technology, such as mobile telephones -- which can provide farmers with crucial market and weather information, and software to help farmers analyse soil or locate local suppliers.

Africa's leaders must invest more of their countries' own resources in agricultural research and development. They must reform their institutions to improve both the adoption and impact of agricultural innovation systems. And they must support the marriage of traditional technology with this culture of innovation.

We have no excuse for neglecting agriculture. Africa has the largest share of uncultivated land with rain-fed crop potential. Only around five per cent of cultivated land in Africa is irrigated, compared with 41 per cent in Asia. On the average, we apply only 10 to 13 kg of fertiliser per hectare of cultivated land compared to more than 100 kg in South Asia.

It would not take much for Africa's productivity to double in the next five years. And as I said earlier, Africa needs to scale up productivity, not necessarily by exploiting and expanding agricultural land, but by improving the productivity of existing land. Africa's gap between potential and actual crop yield is the world's largest. This is a failed business -- who would want to invest in it?

Certainly, there is no shortage of demand. Today, Africa imports US$35 billion worth of food every year. Yet, rather than increasing the productivity of existing systems, we import food.

Why? This is food that can be and should be grown in Africa by Africans. This is money that should be flowing in to support African businesses, not out.

And why are we creating jobs for people in other countries when we have more than 200 million young people and nearly 22 per cent of them are unemployed or under-employed?

Agriculture is a well-documented engine for economic growth and poverty reduction in developing nations. But there is also evidence that growth derived from staple crops has more impact on poverty reduction than growth from export crops such as coffee, tea and tobacco.

In other words, we can grow more food, feed more people and reduce poverty in the process. The strategy has worked in Asia so why not Africa?

The good news is that Africa is already investing more in agricultural research for development. African institutions, like FARA, have been integrating science into the development agenda. And with the Science Agenda, we have a broad framework to scale-up this commitment.

There is nothing to stop us but a failure of imagination and willpower.

Excellencies, ladies and gentlemen,

Let me finish with a few thoughts on FARA's future role with the Science Agenda.

Whenever I meet African heads of State, I encourage them to adopt a policy of allocating a percentage of agricultural GDP to agricultural science. But it's one thing to agree to such a policy, and another to deliver on a commitment.

FARA, together with other bodies, could monitor the investment of African governments in agricultural research. The publication of an annual report would hold governments to account, and put pressure on them to respect the agreed-upon targets.

Indeed, FARA could continue to build a strong case for better budgetary allocation at high-level forums of the African Union. This is role that I foresee IFAD could support.

With the official launch of the Science Agenda today, it's time to plan the next steps how to translate the Agenda into action. There is no question that FARA will be central to this process.

I want to congratulate FARA, along with its partners, for the hard work and creative thinking that went into completing the Science Agenda.

It is a fitting way to celebrate your 15th anniversary.

Thank you.

Dr Kanayo F. Nwanze
President, IFAD, Rome, Italy
Johannesburg, South Africa
28 November 2014

About FARA

The Forum for Agricultural Research in Africa (FARA) is the apex continental organization responsible for coordinating and advocating for agricultural research-for-development. (AR4D). It serves as the entry point for agricultural research initiatives designed to have a continental reach or a sub-continental reach spanning more than one sub-region.

FARA serves as the technical arm of the African Union Commission (AUC) on matters concerning agricultural science, technology and innovation. FARA has provided a continental forum for stakeholders in AR4D to shape the vision and agenda for the sub-sector and to mobilise themselves to respond to key continent-wide development frameworks, notably the Comprehensive Africa Agriculture Development Programme (CAADP).

FARA's vision: Reduced poverty in Africa as a result of sustainable broad-based agricultural growth and improved livelihoods, particularly of smallholder and pastoral enterprises.

FARA's mission: Creation of broad-based improvements in agricultural productivity, competitiveness and markets by continental-level strengthening of capacity for agricultural innovation.

FARA's value proposition: Strengthening Africa's capacity for innovation and transformation by visioning its strategic direction, integrating its capacities for change and creating an enabling policy environment for implementation.

FARA's strategic direction is derived from and aligned to the Science Agenda for Agriculture in Africa (S3A), which is, in turn, designed to support the realisation of the CAADP vision. FARA's programme is organised around three **strategic priorities**, namely:

- **Visioning Africa's agricultural transformation** with foresight, strategic analysis and partnerships to enable Africa to determine the future of its agriculture, with proactive approaches to exploit opportunities in agribusiness, trade and markets, taking the best advantage of emerging sciences, technologies and risk mitigation and using the combined strengths of public and private stakeholders.
- **Integrating capacities for change** by making the different actors aware of each other's capacities and contributions, connecting institutions and matching capacity supply to demand to create consolidated, high-capacity and effective African agricultural innovation systems that can use relative institutional collaborative advantages to mutual benefit while also strengthening their own human and institutional capacities.
- **Enabling environment for implementation**, initially through evidence-based advocacy, communication and widespread stakeholder awareness and engagement and to generate enabling policies, and then ensure that they get the stakeholder support required for the sustainable implementation of programmes for African agricultural innovation

Key to this is the delivery of three important results, which respond to the strategic priorities expressed by FARA's clients. These are:

Key Result 1: Stakeholders empowered to determine how the sector should be transformed and undertake collective actions in a gender-sensitive manner

Key Result 2: Strengthened and integrated continental capacity that responds to stakeholder demands within the agricultural innovation system in a gender-sensitive manner

Key Result 3: Enabling environment for increased AR4D investment and implementation of agricultural innovation systems in a gender-sensitive manner

FARA's development partners are the African Development Bank (AfDB), the Canadian International Development Agency (CIDA)/ Department of Foreign Affairs, Trade and Development (DFATD), the Danish International Development Agency (DANIDA), the Department for International Development (DFID), the European Commission (EC), The Consultative Group in International Agricultural Research (CGIAR), the Governments of the Netherlands and Italy, the Norwegian Agency for Development Cooperation (NORAD), Australian Agency for International Development (AusAiD) and The World Bank.


2014
NESBUR

FARA
Forum for Agricultural Research in Africa

Forum for Agricultural Research in Africa
12 Anmeda Street, Roman Ridge
PMB CT 173, Accra, Ghana
Telephone: +233 302 772823 / 302 779421
Fax: +233 302 773676
Email: info@faraafrica.org
www.faraafrica.org