# **Meeting Report**

# of the Expert Meeting to review the proposal for establishing The African Chapter

# of the GFAR Global Agricultural Foresight Academy

**Date:** 29-31 May 2012

**Venue:** Teagasc Training Centre, Ashtown, Dublin

Organization: Robin Bourgeois, Senior Foresight and Development expert at GFAR

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**Hosting:** Lance O'Brien, Head of Foresight and Strategy at Teagasc

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# **Executive Summary**

To increase the development impacts of efforts in research, policy and investment related to agriculture, and to effectively address the important challenges that Africa now faces, there is a need to better position research in the broader context of development. The best way to do this is to use "foresight", a strategy tool that mobilizes stakeholders and facilitates coordination on complex issues, to better anticipate future challenges and opportunities and provide a broader range of options for decision makers.

There is a clear need for African foresight on African issues, driven by African organizations and carried out by African experts. Such thinking led to a proposal presented at GCARD1 in 2010 by FARA to create an African Foresight Academy. In the mean time GFAR had been developing the concept of a Global Agricultural Foresight Academy and thus the two were combined with the African initiative becoming the African chapter. This expert meeting was held to explore the idea, examine how the African chapter of such an academy might function and determine what needs to be done to bring it about.

This is the report of the Expert Meeting that was convened in May 2012 to review the proposal for establishing the African Chapter of the GFAR Global Agricultural Foresight Academy hereinafter referred to as the 'African Chapter'.

This meeting was held to explore the idea, examine how such an African Chapter might function and determine what needs to be done to bring it about. The meeting agreed that there should be an African Chapter and that it should be set up as a virtual institute hosted by FARA, which would provide administrative support. The meeting also agreed that more knowledge from experience is required to properly develop the African Chapter and for that purpose set in motion plans for a test foresight project that would, in addition to producing credible foresight products, also provide an essential opportunity for learning-by-doing.

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The participants gratefully acknowledge the contribution of:

- > Dr. Lance O'Brian in the organisation and hosting of the meeting
- Mr. Patrick Crehan's in facilitating the meeting and preparing the first draft of this report

The report is testimony to the strength of the commitment to creating an African agricultural foresight capacity that is shared by every one of the participants.

# **Background to the Expert Meeting**

There is increasing frustration at the failure of the African continent to realize its full potential for increased agricultural production, food security, agribusiness and employment. Such frustration has led to waves of disruptive reforms to agricultural research systems in Africa, but these reforms have not had the impact hoped for and a more comprehensive and evolutionary approach is necessary if we are to get it right next time.

Research programs in Africa can point to many achievements, but research alone is not enough to address current challenges on the scale required to achieve the millennium development goals. To achieve more in future, research initiatives will have to improve their coordination with initiatives in innovation, training, entrepreneurship and business development. Research in agricultural production will need to improve coordination with research, policy and investment in other areas such as health, nutrition, climate, industry, transport, energy, tourism and the environment. This will lead to better and more timely decisions about the future, better research, better polices and greater impact from investment.

This is not just an African challenge. It is a challenge in all parts of the world where <u>GFAR</u> - the <u>Global Forum for Agricultural Research</u>, is active. The best tool we know of to address this challenge is "foresight", a participative approach to mobilizing stakeholders and developing the knowledge needed to support decision making about the future.

Examples of foresight in Africa already exist. In 2006 African experts such as Dr. William Otim-Nape of the Africa Innovations Institute in Kampala and their British colleagues were involved in a foresight study convened by the UK government's Department for Business Innovation and Skills <a href="www.bis.gov.uk/foresight">www.bis.gov.uk/foresight</a> entitled "Infectious Diseases: Preparing for the Future — Africa". This study involved more than 50 experts from all over the African continent and had an important and almost immediate impact on the <a href="Infectious Diseases">Infectious Diseases</a> Policy Framework of the AU . Examples such as this, however, are few and far between. Many more are needed.

There is, therefore, a need to improve the strategic capability of African organizations, to enable them to be more pro-active in setting the research agenda and positioning research in the broader context of development. This is needed at all levels of governance throughout the Africa at continent, regional, national and local levels. Actions that address research on its own ignore this reality and are bound to fail.

For this reason, and in response to suggestions by those working on the front lines of research for development, GFAR is setting up a Global Agricultural Foresight Hub to support forward thinking in agricultural research for development. The Hub consists of a global agricultural foresight academy, a forward thinking platform and a series of policy dialogue platforms. The essentials of this concept are laid out in a two page brochure entitled "The Global Agricultural Foresight Hub: The role of GFAR in promoting forward thinking in AR4D". FARA had, at the first Global Conference on Agricultural Research for Development (GCARD1) in 2010, made the case for an African foresight academy. However, in keeping with the integrative and value adding principles of foresight, it is being integrated and advanced as the African Chapter of the global initiative.

The meeting reported here brought together experts from the African continent, Europe and elsewhere to discuss one specific aspect of the global hub - **the African Chapter.** The goal of the meeting was to clarify the concept of the African Chapter, establish what needs to be done to make it real, and set out the steps needed to move it forward.

The meeting was hosted by <u>Teagasc</u>, the national agency for research, training and advisory <u>services for the agrifood industry in Ireland</u>. In 2009, Teagasc completed a major foresight exercise entitled <u>Teagasc 2030</u>, which led to fundamental reform of the organization. Since then it has established a foresight and strategy unit to improve its planning for the future and it participates actively in agricultural foresight exercises at national and European level.

Holding the meeting in Dublin enabled the organisers to take advantage of the Foresight experience in Teagasc and other Irish expertise, as well as establishing the possibility of securing funding from Irish Aid for a test foresight study.

# The Main Results of the Expert Meeting

The first session of Day 1 allowed attendees to review the agenda (Annex 1) introduce themselves (Annex 2) and to set out their expectations for the workshop. It included a series of short introductory talks from GFAR (Annex 3) and FARA (Annex 4), as well as Teagasc and Irish Aid. This set the stage for the real work, involving a series of facilitated group working sessions that worked systematically through key aspects of the proposed African Chapter, its mission and organization, its activities and core values, as well as an action plan for immediate follow-up.

# **Core Values and Governing Principles of the African Chapter**

We spent some time brainstorming about the issue of what values motivate the African Chapter. We appealed to past experiences, good and bad, as starting points for thinking about the values that the African Chapter should uphold. The purpose of such a brainstorming session was to get beyond a list of simple ideas, such as honesty, integrity or customer service. These are values that govern any well run organization but are usually not enough on their own to guide an organization with a mission as specific as the Global Agricultural Foresight Academy's African Chapter.

In the first pass, we listed over 30 values that we felt were important. There were some overlaps, and with further discussions to clarify our ideas, the list was eventually reduced to 16. We then used a voting system to help identify the top four. Each of these is accompanied with a value statement which attempts to clarify what each of these concepts came to mean for us during the discussion:

- **RESPONSIBILITY:** in the sense of African professionals and organizations taking charge of their future by playing a pro-active role in setting research, policy and investment agendas, and by creating options for the future based on the collaboration that foresight requires and the anticipatory intelligence that foresight provides. This concept is closely related to **OWNERSHIP** and **APPROPRIATION** of the future.
- **OPENNESS:** in the broadest sense of openness to new ideas, even controversial ones, openness to diversity of opinion, new kinds of partnership and collaboration, as well as the involvement of young professionals in areas that tend to be the reserve of established senior experts who are already well advanced in their career.
- IMPACT and ACTION: in the sense that future research, policy and investment decisions have to achieve more than in the past if the full potential of agriculture for development in Africa is to be realized. Good science on its own will not lead to the results that Africa needs. Something extra is required in terms of innovation, entrepreneurship and coordination with a wide range of research-related policy domains. The role of the African Chapter is to ensure that this "something extra" is identified through foresight and that it figures prominently in the options that African foresight studies create.
- INDEPENDENCE: in the sense that the African Chapter will take an African, demandside approach to enabling foresight studies, using African expertise and a bottom-up approach in all of its activities, that will surface real issues and help achieve the greatest degree of relevance to the lives of real people. The concept of independence is also related to NEUTRALITY, in the sense that the African Chapter will operate in a politically neutral way independent of existing organizations, so as to support the emergence of truly independent thinking or ideas.

This last value of "independence" has important practical implications for the organization of the African Chapter that are discussed later in this report.

These four core values were not the only values elicited in the meeting and the others, which contain a mixture of values and principles, were:

- The African Chapter should encourage work that is of the greatest **RELEVANCE** to African stakeholders. That means work that addresses the needs of the poor and of small farmers.
- The African Chapter should demonstrate **ACCOUNTABILITY** and **TRANSPARENCY** to its stakeholders.
- As a body committed to producing PUBLIC GOODS, the African Chapter will make its resources available to the public and will not place any restrictions on the results of studies it encourages or supports.
- The African Chapter should respect the principle of **DEVOLVEMENT** in its activities, by working as much as possible in partnership with other organizations in Africa.
- In should help African professionals and organizations **CHALLENGE ASSUMPTIONS** about the role of research in development; what to do and how to do it, at every level. It should help to stimulate new thinking and support those who try to stimulate new thinking.
- The African Chapter should help to bring **CLARITY** to complex issues that cross the boundaries of science, technology, geography and politics. It should not try to oversimplifying the world or hide its real complexity.
- The African Chapter will **RESPECT THE PRINCIPLES OF TRANSFORMATION**, so as to achieve the greatest impact from the African foresight studies.

# **Stakeholders and Value Proposition**

To understand the African Chapter and clarify why it is needed, we identified various categories of stakeholders, clarifying what the African Chapter would provide for them through the so-called "value proposition". We identified five major categories of stakeholders and agreed that the African Chapter would provide a different value proposition for each.

**OWNERS** are the stakeholders who have power over whether or not the African Chapter can come to exist: they provide funding and other resources and provide the mandate for its activities. Examples of owners include national governments, organisations such as GFAR and FARA, as well as donor organizations. The value proposition for the owners is that the African Chapter will help donors and investors make better decisions and have greater impact by providing knowledge and perspectives and developed by Africans on African issues.

USERS are the organisations that will make direct use of the results of African foresight studies by incorporating the knowledge and insight they provide in their decision making and policy making processes. Examples of users include the ministries of African national governments, the Regional Economic Councils, the African Union Commission (AUC), the CGIAR Secretariat, UN agencies, NGOs and private enterprise. The value proposition for users is that the African Chapter will enable African decision makers at every level of governance - international, regional and national - to make better and timelier decisions in relation to policy, research and investment based on the intelligence provided in African foresight studies.

**ACTORS** are those who actually do the work of executing a foresight study. They are the experts and organizations that make up and lead the teams that execute the foresight studies. The value proposition of the African Chapter for actors is that it provides them with resources and guidance they need to get their work done. It provides visibility for their efforts and makes sure that the results are communicated at the highest possible levels of governance. It addresses a need for foresight on African issues driven by Africans and carried out by African experts.

The direct **BENEFICIARIES** are the people and organisations whose careers are advanced by association with the African Chapter, or whose skills and capabilities are developed by participation in its activities. It will provide Young African Professionals with opportunities to develop their careers by gaining in-depth and wide knowledge of the foresight topics in which they are involved, having the exposure required to be recognised by their peers and enabling them to contribute to decision making at the highest level in African policy arenas.

The indirect beneficiaries are those whose lives are affected by decisions about research, policies and investments. They are the ultimate beneficiaries of actual foresight studies. These groups vary from one study to the next, and include, for example, small-farmers or those whose source of food is at risk from drought. The value proposition of the African Chapter for them is that studies associated with the African Chapter are carried out based on recommended practises that emphasise the involvement of stakeholders groups and bottom-up approaches to gathering intelligence about the future. These studies will take full account of the reality experienced on the ground and are therefore less likely to make the mistakes that occur when a more distant hands-off approach is employed based on accepted wisdom or assumptions that may be false.

The **CHAMPIONS** are the 'cheerleaders' Global Foresight Academy African Chapter *The value proposition for champions is that the African Chapter will provide them with an agenda on subjects they consider important for the development of Africa, examples of activities to which they can point and sound bites they can use to press for progress.* 

More information on the stakeholder analysis is provided in Annex 5.

# Vision, Goals and Objectives

The **VISION** that inspires the work of the African Chapter is a vision in which African people and organizations employ their own strategic capabilities to take informed decisions about the future, in which they pro-actively anticipate the future and respond to emerging issues and opportunities, in which they choose their own preferred futures and in which they plot their own paths ahead.

The **GOAL** of the African Chapter is to enable and encourage African decision makers, organizations and experts to systematically use foresight as a strategic tool that will help them make better decisions concerning research, policies and investments in relation to agriculture for development.

The **OBJECTIVES** of the African Chapter are to;

- O1: Operationalize "African foresight" by stimulating, catalyzing, encouraging and enabling foresight studies on issues of importance for Africa, that are led and executed by African teams.
- **O2:** Provide a platform for young African professionals that acknowledges their abilities as subject matter experts and allows them to participate in policy making processes at the highest level.
- O3: Support the development of African foresight capabilities at individual and organizational level in all countries and regions of the African continent.

# **Activities**

The activities of the African Chapter are those required for it to realize its three objectives.

# Table 1The activities required for realising objective 1

- Operationalize African foresight by stimulating, catalyzing, encouraging and enabling relevant foresight studies, are as follows:

01.1	Build awareness in Africa of foresight, its role and importance for good decision making as well as its ability to create more and better options.		
O1.2	Catalyze demand for African foresight studies.		
01.3	Generate awareness of timely, relevant subjects that require an African foresight approach.		
01.4	Stimulate demand for foresight skills and services based on this awareness.		
01.5	Support African foresight teams in launching and executing their foresight studies		
	O1.5.1 - Provide guidance in scoping the original foresight study idea O1.5.2 - Provide guidance in the development of the foresight action plan O1.5.3 - Provide guidance on process, method and communication O1.5.4 - Help assemble or complete the team needed to execute the studies O1.5.5 - Help the team access the occasional resources, skills or expertise needed to execute studies O1.5.6 - Help the team motivate or engage with key-stakeholders O1.5.7 - Help the team identify sources of finance for its study		
O1.6	<ul> <li>Recommend approaches to overall foresight study concept and delivery that are intended to:</li> <li>Embed foresight as a practice and support the further development of foresight skills,</li> <li>Involve young professionals,</li> <li>Adequately communicate the results at appropriate levels of authority, and</li> <li>Encourage emulation by those facing related issues are difference levels of governance.</li> </ul>		
01.7	Monitor the execution of foresight projects and offer quality assurance services.		
01.8	Assist in the broader dissemination of the results of African foresight studies.		

# Table 2 The activities required for realizing objective 2

- Provide a platform for young African professionals to develop their careers by enabling them to participate in and contribute to policy making processes at the highest level, are as follows:

O2.1	Encourage the involvement of young African professionals in foresight studies based on recommended practices for acknowledging their contribution and giving them visibility. This could be done in collaboration with YPARD.
O2.2	Support and facilitate a virtual community of practice involving young professionals in foresight and research, policy or investment- related decision making processes. This could link up with the Forward Thinking Platform of the Global Agricultural Foresight Hub proposed by GFAR.
O2.3	Maintain a database of available agriculture and development- related foresight competencies. Include young professionals in this database. Many starting points

	and related resources already exist for example the ASTI interactive database, or the database of the African Academy of Sciences.
O2.4	Maintain online resources, such as a portal for African foresight, that gives visibility to professionals involved in African foresight initiatives, especially in the case of young professionals. GFAR has already put up a webpage for the Global Agricultural Foresight Hub and is working on identifying relevant foresight resources and activities in Africa and elsewhere in the world.

# Table 3 The activities required for realizing objective 3

- Support the development of foresight capabilities at individual and organizational level throughout the African continent, are as follows:

03.1	Mentoring and coaching of African Foresight study leaders and teams. Done on the basis of real African foresight studies, this activity overlaps with some of the activities of Objective 1.
03.2	Measures to support appropriate training and skills development. The African Chapter is not a training institute but it can play a role in stimulating the development of relevant courses, curricula and training activities by:
	O3.2.1 – Identifying available and relevant capacity development services
	O3.2.2 – Encouraging the development of appropriate training initiatives as the need arises and where none already exist, for example by commissioning training events or 'assembling' them from available resources and services
	O3.2.3 – Clarifying the skill needs of professionals involved in foresight, in non S+T related skills for communication, facilitation, knowledge management, project management, consultation or the crowd sourcing of ideas, foresight friendly tools for ideation, the visualization of complex information or collaboration in large groups
	O3.2.4 – Advise academic and other providers of course and training material on all of the above to help them improve their services and the training they provide through the development of new modules or improved curricula
	Existing resources upon which we can build for validating and up-scaling the concepts include the African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE) and Regional Universities Forum for Capacity Building in Agriculture (RUFORUM).
03.3	Support for institutional capacity building based on:
	<b>O3.3.1</b> - The secondment of institutional experts from national research centers and other organizations to the study teams involved in African foresight studies
	<b>O3.3.2</b> - Encouraging organizations to permanently embed foresight as a strategy, policy or research planning- related activity.
03.4	Support the development of dedicated ICT infrastructure for African foresight based, for example, on FARA's Regional Agricultural Information and Learning System (RAILS).
O3.5	Support the development of African foresight related capabilities by providing access to appropriate material and resources via the African Chapter portal.

# Organization

The proposed African Chapter will have a very flat organization that supports but does not displace existing structures or organizations in Africa.

For the sake of clarity:

- It is a virtual African Chapter in the sense that it is not formally incorporated.
- It does not have buildings, personnel or other permanent resources.
- It is not a "place" where people can go and have careers
- It does not grant degrees or issue certificates.
- It draws upon resources available in Africa.
- It is run by and for Africans.

### In short, the African Chapter exists through its mission and activities.

As the African Chapter will support independent African Foresight studies, which will be carried out by foresight teams with their own team leaders, it needs to be provided with the necessary resources and visibility. Therefore a number of formal agreements and arrangements need to be put in place.

The Global Agricultural Foresight Academy will be hosted by GFAR, which hosts the Global Agricultural Foresight Hub. The Global Agricultural Foresight Hub contains not only the African Chapter, but also the AR4D Forward Thinking Platform and a series of Policy Dialogue Platforms. In this sense, the governing arrangements of the GFAR will also preside over the Global Agricultural Foresight Academy.

The African Chapter of the Global Agricultural Foresight Academy will be hosted by FARA on the basis of a hosting agreement. The use of a hosting agreement means that the African Chapter but FARA will not interfere in the studies which will be conducted by the independent teams. It is suggested that the Deputy Executive Director of FARA might act as the Executive Director of the 'African Chapter' of the Global Agricultural Foresight Academy. The African Chapter will draw upon the resources of the FARA Secretariat especially for awareness raising, ICT infrastructure, communications, logistics support and dissemination of its reports.

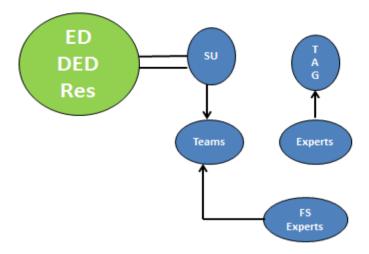
The current Executive Director of FARA, who is also the Chairperson of GFAR, is African. He understands foresight and highly recommends its adoption in Africa. He will have an important role to play in giving life to the African Chapter by:

- Building awareness for foresight and encouraging its use
- Encouraging teams to approach the African Chapter for assistance
- Stimulating ideas for African foresight studies and the emergence of demand
- Discussing priorities for foresight in the various research and policy related forums
- Obtaining a mandate for specific foresight studies from the members of these forums
- Informing them of progress in the execution of these projects
- Making sure that the results are disseminated to the highest level.

The African Chapter will stimulate, catalyze, encourage, enable foresight studies that will be carried out by Foresight Teams with their own Team Leaders. As a matter of foresight principle the Teams will remain totally independent. The African Chapter will not be a part of the Foresight team. In particular it will not play the role of team leader. The team members and the team leader will all come from outside the formal structure of the African Chapter. In this way the African Chapter will remain independent in the sense meant by the value statement.

The proposed organisation of the African chapter is illustrated in Figure 1. It will be headed by the Executive Director (ED) or Deputy Executive Director (DED) who will oversee the Support Unit (SU) which will provide logistic support to the implementation of the three objectives of the African Chapter. There will be a Technical Advisory Group (TAG) comprised of African experts in foresight and the topics being studied. The Support Unit (SU) will be staffed by two permanent staff a senior person as Head and an Assistant. The African Chapter will seek experts help in M&E and communications from the FARA Secretariat.

Figure 1 Structure of the Global Agricultural Foresight Academy: African Chapter



Suggested Structure of Foresight Academy

The African Chapter will work with the foresight study teams, to help them complete the team, engage appropriate stakeholders, define the action plan, as well as the processes or methods they will employ.

# **SWOT, Strategy and Action Plan**

For our purposes we focused on **OPPORTUNITIES** as external factors which have the potential to make the Global Agricultural Foresight Academy's African Chapter stronger, more enduring, and more useful. The opportunities we identified fell into five major categories:

- A new wave of funding for agriculture in Africa
- The availability of some African expertise in foresight
- A growing interest in agriculture and food security
- A growing recognition of the need for foresight in the region
- A very good supportive institutional environment.

We focused on **THREATS** in terms of external factors with the potential to adversely affect the African Chapter. These ideas fells into four major categories:

- Political unrest and instability in some parts of Africa
- A lack of specific funds dedicated to or ear-marked for foresight studies
- A relatively low level of awareness of foresight itself and consequently no demand
- Possible hostility towards foresight if it is seen as threatening vested interests or if the African Chapter sparks a turf war with organizations that feel insecure in their position.

In order to deal with these threats the strategy will have to: de-link the African Chapter from political instances; target specific resources available for foresight works; select champions who can advocate for foresight and convince African institutions of the benefit to engage in collaborative works through the African Chapter

To analyze our **WEAKNESSES** we looked at those things in which the proposed arrangement is likely to perform poorly. The results of our brainstorming fell under 6 headings:

- The risk of weak leadership or championship for the launch phase of the African Chapter
- The possibility of not securing lasting institutional support from hosts
- A possible over-reliance on third party competencies and external resources
- The overall scarcity of experienced human resources in foresight and in the management of foresight studies
- The possible flight of skilled people once trained in the practice of foresight
- The lack of an immediate pipeline of concrete foresight study proposals

In order to overcome these weaknesses the strategy will have to: ensure that prominent African and World Champions support the African Chapter; mobilize existing African capacities in foresight through attractive flagship studies to start with; work with African institutions to offer career development in Africa for the brightest young professional engaged in these studies.

As current **STRENGTHS** we considered all of those things that are likely to make the African Chapter strong, any aspect that adds value to it and makes it stand out from other existing arrangements.

- It deals directly with a very important issue agriculture
- It has a very strong compelling set of values
- It provides policy makers with pragmatic defendable options
- It shows a way to bring about change in a non-traumatic evolutionary way
- It will help prepare next generation of decision makers and agribusiness professionals
- It has solid institutional backing from FARA
- There are enough local experts to get it started
- Being neutral independent and public, our proposal provide a unique value proposition
- Those who took part in the meeting showed determination and commitment to the idea
- It has a very low start up cost involving no bureaucracy and an adapted strategy
- A partnership and team work approach give it access to the skills it needs to make it work
- There are possibilities for specific funding to get the African Chapter off the ground.

It will be very important for the African Chapter to built its progressive development upon these strengths which currently make it a unique instrument in Africa. These strengths associated with the core values will have to be reflected in all the works facilitated by the African Chapter, starting with the first studies to be launched as pilot project.

Although we see that there are WEAKNESSES in the current position, the overall feeling seems to be that we can overcome these, that our STRENGTHS are enough to help us make it happen and that the OPPORTUNITIES far outweigh the THREATS, provided that the strategic elements indicated above will guide the next steps of the African Chapter.

The meeting also considered the factors that will motivate people to be involved in foresight activities and concluded that they were:

- 1. Doing exciting and useful work
- 2. This work help move ahead in their career
- 3. Recognition of excellent potential

### Other related Incentives were:

- Actions and opportunities that will help individuals to move ahead
- Access to cutting edge information and tools
- > Contact with the best persons in their fields
- > Exposure in major arena/events
- > Scientific recognition
- > Sponsorship

# The Strategy

In the course of our meeting we discussed a variety of issues related to the detailed running of the African Chapter such as

- Who would head up the Support Unit?
- What systems of incentives could be put in place?
- What is the appropriate way to select members of the Technical Advisory Group?
- How to select foresight study ideas for presentation to the "OWNERS"?
- How to obtain a mandate for the execution of priority projects?
- How to operationalise accountability to stakeholders
- To what extent will our first pilot project could fully embody our core values?

However, there was no time to make progress on these issues and the skeletal outline presented here still has to be fleshed out in a more detailed articulation of the African Chapter and how it will operate.

There was general consensus however on accepting the advice of the participants with experience in conducting foresight studies that the final design of the African Chapter must be informed by practical experience in foresight. In other words that the best approach to moving forward must be on the basis of a concrete foresight test study that will enable us to fill in the gaps using a "learning by doing" approach. This will also demonstrate to everyone what the African Chapter is, how it works and why it is important on the basis of something very real and tangible, a specific foresight study.

As this is a prerequisite for finalising the plans for the African Chapter, and as we want to do it sooner than later, it may be necessary to be slightly opportunistic in nature to take advantage of available resources. This means it will have be small enough to be feasible with limited resources but it must nevertheless correspond to a real need and make a useful contribution to its "USERS".

Based on the discussions of the last day of the Expert Meeting, the **STRATEGY** that has emerged can be summarized as follows:

- Use the resources of FARA to get the African Chapter off the ground and make it visible
- Obtain support from the "owners" of the African Chapter by demonstrating real progress
- Start the work of the African Chapter right now on the basis of a concrete test learningby-doing project
- Use the test study to learn the details about the African Chapter and how to run it .

This "test" study will be a genuine foresight study with important practical findings and outcomes which will also advance understanding of feasibility of foresight studies and the options and scope for foresight capacity development. Thus it will contribute to refining the proposed framework of operation of the African Chapter (especially O1.5). It is noted that the process through which this test is defined is an exception and should not be regarded as the way the African Chapter will function in the future, which will follow the participatory principles set out above.

Our discussion on what case would best serve this purposes ultimately zoomed in on a proposal in relation to Djibouti which despite being one of the smallest African states exemplifies the rapid changes occulting across the continent. Djibouti also hosts the headquarters of the regional Inter Governmental Agency for Development (IGAD).

This proposal built upon the experience and contacts of people in the room, most notably those of Prof. Keto Mishigeni, who has achieved very impressive high-impact results in the area of seaweed farming and mushroom production both of which have the characteristic of being drought free which has important implications for the drought-prone Horn of Africa. The Government of Djibouti has prior to the meeting expressed an interest in this approach

and considers that it would be of benefit to Djibouti to adopt some of the job-creating practices that Prof. Mishigeni has pioneered in Tanzania.

In the course of discussions however, a general view emerged that the future of seaweed farming in Djibouti alone would be too narrow in the sense that it might not correspond closely enough to the priorities of organizations such the government of Djibouti, IGAD or Irish Aid, which we intend to approach for financing. It was determine that it would be more appropriate to undertake a wider case of the future of agriculture in sustainable development of African coastal areas with Djibouti as a case study.

The merit of such a proposal is that it corresponds to a real and urgent need, is small enough to be carried out with a modest budget, and touches upon highly relevant regional as well as national issues such as:

- The diversification of farming practices
- The introduction of a model for drought free farming
- The creation of new agri-businesses
- The creation of new sources of employment for women
- The elimination of highly prevalent diseases due to poor nutrition such as goitre.

Such a broader approach would allow us to demonstrate the power of the foresight approach by bringing out issues such as:

- The interconnections (conflict, competition, synergies...) between different economic activities including marine farming, land based farming, port logistics, transport, tourism.
- Their effect on coastal areas and the need for coordination
- The impact of all of these activities on the environment and on each other in particular on enabling local populations to live decent lives in coastal areas, on immigration and population change,
- The options offered to policy makers in deciding the future of coastal areas.

For the moment, the issue of the test study remains open. One of the tasks for the immediate future is the development of a concept note for discussion.

In keeping with the vision, goals and objectives of the African Chapter, we hope to build into such a study activities that would enable the team to:

- Involve young professionals in the study
- Secure resources for foresight -related training
- Raise awareness of the role of foresight via a well run dissemination campaign

Irish participants suggested that broader dissemination could also be achieved by developing a **BLUEPRINT** on the use of "foresight for the sustainable development of coastal areas in Africa", analogous to a series of publications developed by the European Commission as part of a program to encourage the adoption of foresight by regional governments in Europe.

# Action Plan for the Foresight African Chapter

In terms of a concrete **ACTION PLAN**, the next steps are as follows:

- Circulate this meeting report to those who have participated in the workshop and those invitees who could not attend
- Finalize the report based on feedback
- Brief the Executive Director of FARA
- Develop a concept note for the pilot project
- Obtain feedback from the workshop invitees
- Approach a possible financing organization to check that it is within the scope of actions that they could finance. Right now we specifically want to target Irish Aid
- Adjust the idea until it is both fit for the purposes of the African Chapter and within scope for the donor

- Confirm the interest of the Djibouti Government in such a foresight study
- Solicit letters of support for the African Chapter and for the pilot study from the Djibouti Government destined for the GFAR, the FAO, IFAD and the WHO,
- Develop a full request for funding based on the suitable foresight study concept
- The Executive Director of FARA should present the African Chapter at the October-November GCARD meeting and brief the GCARD members on the pilot study, its rationale and progress with funding

This list corresponds to those tasks that require immediate follow-up. Eventually, other tasks remain to be tackled, but once the meeting report has been finalized and work on the learning-by-doing test study has moved forward.

These tasks are an extension or second phase of the action plan and include the following:

- Confirm the capacity of FARA to host the African Chapter
- Formalize the hosting arrangement
- Select and appoint personnel for the support unit
- Ask the head of the support unit of the African Chapter to develop a detailed plan for launching the activities of the African Chapter, while ensuring adequate support for the execution of the pilot study
- Develop a dedicated website for the African Chapter
- Develop a visual identity for the African Chapter including logo, contact points and addresses for further information
- Develop basic dissemination material such as flyers, brochures and a basic presentation
- Appoint the technical advisory group.

Tables 4, 5 and 6 summarise the actions that will need to be taken once the African Chapter is established.

Table 4 Operationalize African foresight on agriculture

Activity topic	What and for whom	By whom
Priority theme for foresight	to use foresight on key issues related to agriculture and determine with them priority topics  Foresight Identify and set the operational team and process	
Foresight Study "team"		
Foresight action plan	Scoping the study  Define the process and activities  Define the standards  Plan effective results dissemination for impact with the right people	SU+TAG
Resources	Raise the money (from African and other sources)	ED + Champions (supported by the SU and foresight outcomes)

Foresight	"Foresight Team"	
Study		
Advocating for foresight	Presenting the case for an African foresight capacity in policy and opinion forming forums	ED + Champions
Monitoring delivery and	Ensure that the demand is met, quality standards and being accountable for the results	ED+SU+TAG
quality assurance	Evidence of impact on policy decisions and actions taken by stakeholders	

Table 5 Provide a platform for recognition of African professionals

Activity	What and for whom	By whom
Promote young professionals engaged in the work	young professional (publication, international exposure to high level fora)	
Community of practice		
Data base of existing competences	existing competences linked with agriculture and rural	
On line resource for accessing foresight information	Develop a portal for African foresight scientists and users	FARA + EGFAR+ SU

Table 6 Develop capacities of African professionals in foresight for Africa

Activity theme	What and for whom	By whom
Mentoring and coaching	Do it through operationalisation of foresight	"Foresight Team" + experts
		SU mobilize Ruforum, ANAFE, internal FARA capacities

	<ul> <li>possible "Foresight team" + Universities</li> <li>Foresight Management capacity (project, communication, communities, tools)</li> </ul>	
Institutional support	Secondment of experts/bright young professionals for national organization to foresight academy supported studies  Encouraging the development of foresight in-house capacities and foresight works in African AR&D organisations	National organizations + ED + Champions + SU backstopping
ICT infrastructure	Utilise FARA's Regional Agricultural Information and Learning System (RAILS)	FARA
Communication and knowledge management	Information Hub	SU + FARA

# Conclusion

The participants agreed unanimously that Africa needs is own agricultural foresight capacity so that it can be proactive in response to emerging trends and opportunities in its greatest industry. This would provide a more rational basis for planning and in particular setting the agricultural research agenda which has been beset by periodic traumatic regenerations that have occurred in cycles that have been much shorter than it takes for research to develop and validate new technologies.

The African Chapter of the Foresight Academy is proposed to rely on four core values: Responsibility, Openness, Impact and Action, and Independence.

It would provide a different value proposition for each of its major categories of stakeholders as follows:

- Help donors and investors make better decisions and have greater impact by providing knowledge and perspectives and developed by Africans on African issues.
- Enable users (African decision makers at every level of governance international, regional and national) to make better and timelier decisions in relation to policy, research and investment based on the intelligence provided in African foresight studies.
- Provide actors with resources and guidance they need to get their work done and visibility for their efforts and makes sure that the results are communicated at the highest possible levels of governance.
- Provide direct beneficiaries (Young African Professionals) with opportunities to develop their careers by gaining in-depth and wide knowledge of the foresight topics in which they are involved, having the exposure required to be recognised by their peers and enabling them to contribute to decision making at the highest level in African policy arenas, and emphasise the involvement of stakeholders groups (indirect beneficiaries) and bottom-up approaches to gathering intelligence about the future.
- Provide its champions with an agenda on subjects they consider important for the development of Africa, examples of activities to which they can point and sound bites they can use to press for progress.

In its vision African people and organizations employ their own strategic capabilities to take informed decisions about the future, in which they pro-actively anticipate the future and respond to emerging issues and opportunities, in which they choose their own preferred futures and in which they plot their own paths ahead.

The goal of the African Chapter is to enable and encourage African decision makers, organizations and experts to systematically use foresight as a strategic tool that will help them make better decisions concerning research, policies and investments in relation to agriculture for development. Its objectives are to;

- Operationalize "African foresight" by stimulating, catalyzing, encouraging and enabling foresight studies on issues of importance for Africa, that are led and executed by African teams.
- Provide a platform for young African professionals that acknowledges their abilities as subject matter experts and allows them to participate in policy making processes at the highest level.
- Support the development of African foresight capabilities at individual and organizational level in all countries and regions of the African continent.

The African Chapter exists through its mission and activities: it will have a very flat organization that supports but does not displace existing structures or organizations in Africa. It is a virtual African Chapter in the sense that it is not formally incorporated. It does not have buildings, personnel or other permanent resources. It is not a "place" where people can go and have careers. It does not grant degrees or issue certificates. It draws upon resources available in Africa. It is run by and for Africans.

The proposed organisation of the African chapter will be headed by the Executive Director (ED) or Deputy Executive Director (DED) who will oversee the Support Unit (SU) which will provide logistic support to the implementation of the three objectives of the African Chapter. There will be a Technical Advisory Group (TAG) comprised of African experts in foresight and the topics being studied.

Its strategy can be summarized as follows:

- Use the resources of FARA to get the African Chapter off the ground and make it visible
- Obtain support from the "owners" of the African Chapter by demonstrating real progress
- Start the work of the African Chapter right now on the basis of a concrete test learningby-doing project
- Use the test study to learn the details about the African Chapter and how to run it.

An Action Plan related to the strategy was also drafted with immediate and longer-term tasks. Immediate tasks include confirmation by FARA of its capacity to host the African Chapter and formalization of the hosting arrangement and selection and appointment of the personnel for the support unit as well as the development by the head of the support unit of the African Chapter of a detailed plan for launching the activities of the African Chapter, while ensuring adequate support for the execution of the test study

It was also proposed that a small test learning-by-doing study should be conducted to both demonstrate the utility of applying foresight to African agriculture and to produce experience-based knowledge for applying to establishing the African Chapter. This participation of representatives from other developing regions indicated that the experience that will be gained through the test study will have benefits well beyond Africa.

The future of Agriculture in Sustainable Development of African Coastal Areas was deemed to be an important topic especially in the drought prone Horn of Africa and Djibouti offers the opportunity for a project on a do able scale that would have important implications not just for Djibouti but for the whole coastline of the Horn and the hinterland countries of the IGAD economic community.

# Annex 1. Draft agenda

Expert workshop to review the proposal for establishing the GFAR Global Agricultural Foresight Academy:

African chapter

**Enabling Africa to think about its future** and develop its own perspective and capacities

### Annotated agenda

Day 0: Arrival of participants

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### **Day 1:**

**Introduction** – Chair: Lance O'Brien

08:30:10:00 Welcome and introduction from Teagasc

Self introductions and expectations from the meeting by the participants (facilitated)

Background 1: Introduction to Foresight, the Global Agricultural Foresight

Hub and Outputs of the GCARD (GFAR Secretariat)

Background 2: The African chapter: rationale and expectations (FARA)

10:00-10:30 Health break

Session 1: The merit of establishing the African Chapter (Patrick Crehan will facilitate all sessions)

10:30:12:30 Core Values of the participants towards the Foresight Academy

Note: The core values are those values which form the foundation on which we believe the African Chapter should work. There is an entire universe of values, but some of them so fundamental that throughout the changes around the African Chapter they still will be the values it will abide by. These core values remain constant even if the world changes. Practically, core values are not descriptions of activities or strategies. They underlie these. So the purpose of this session will be to identify no more than three or four core values through brainstorming and consensus. The identified core values will help define the value proposition of the African Chapter. The identified core values will also be used to "test/screen" the activities that will be proposed to ensure their relevance and good fit with the "spirit" of the African Chapter.

12:30-13:30 Lunch break

13:30-16:30: Goal, Vision and objectives for African agricultural foresight (the transformation process expected from the proposed foresight African Chapter)

Note: The GFAR Virtual Academy for Global Food, Agriculture and Environment Foresight: African chapter will have the following proposed goal, vision and objectives, which will be reviewed and revised by the workshop:

Goal: Enabling Africa to think about its future and develop its own perspective and capacities for anticipating and responding to emerging issues and opportunities

Vision: Africa determining without the prejudice of pre-existing institutional policies for itself how to respond to emerging issues and opportunities and nurturing young African experts who will be recognised by their global peers as authorities in those matters

Objectives: To support independent time-bound teams of mixed disciplines, ages and genders with the skills and capacities to conduct foresight studies on issues identified by GFAR/FARA African stakeholders which are of highest priority continental importance to the future development and sustainability of African agriculture. And providing them access to the best globally available expertise and tools for conducting foresight in all relevant subject areas and disciplines.

16:00-16:30 Health break

16:30-18:00: Stakeholder identification

Note: There is a need to clarify who are the different stakeholders. By doing this we will be able to identify

their needs, priorities, interests and anticipate how they can affect the functioning of the African Chapter. It is suggested to pay particular attention to the following categories (this is only a tentative and indicative list):

- "Beneficiaries" are those whose skills and capacities will be developed through the activities of the African Chapter, in particular young African professionals making their mark in emerging issues but also professionals from various sectors including civil society, government, farmer organisation, who may gain insight on foresight from their links with the activities of the African Chapter
- "Users" are those who will use the outputs the African Chapter will deliver in the process of building skills and capacities of the beneficiaries through learning-by-doing. Users will include all sectors concerned with the future of agriculture and rural development in Africa
- "Actors" are those who will make the African Chapter work. These include those who will provide the sources of knowledge and knowhow for building the capacity of the beneficiaries and develop the with them the outputs delivered to the users. These actors will probably include formal provider of foresight training courses (see list attached of academic links) as well as ad hoc providers who are actually doing foresight in their regular activities.
- "Owners" are those who can start/promote/stop the African Chapter. This category is useful for identifying opportunities and constraints in the environment from a political economy standpoint. Among owners are not only the donors but also policy makers and groups of interests.

It is proposed during this session to use stakeholder mapping tools to clarify our understanding of the various stakeholders. See for example:  $\frac{1}{1000} \frac{1}{1000} \frac{1}{1000$ 

Day 2:

Session 2: Organisation, management and resources

08:30-10:30: The Global Agricultural Foresight Academy's African Chapter's Value Proposition (whose and what problem will it solve?)

Note: The foresight African Chapter's proposed Value Proposition, which will be revised by the workshop is:

In the context of fast growing demands and rapidly changing threats and opportunities, to provide Africa with the means to anticipate emerging issues and provide research-based evidence for the development of policies to be initiated in time for Africa to be prepared to respond and to develop and expose potential leaders for Africa in the international arenas that impact on Africa's agriculture and natural resources.

#### 10:30-11:00 Health break

11:00-13:00: The form of the proposed African Chapter and how it will operate to address priority issues (How to support it logistically without encumbering it with any institutional baggage?)

Note: The workshop will consider the form that the African Chapter should take in order to best deliver its value proposition which will require answering the questions about:

- what is the appropriate form of logistical support can be provided without obligations to the policies of the supporting institution(s)?
- ➤ how and by whom the foresight study topics will be selected?
- ➤ how to avoid the studies having time and budget overruns?
- ▶ how to maximize opportunities for young African professionals?
- ➤ how to ensure ownership of results?
- > what forms of leadership and team selection processes should be adopted?
- ➤ how work undertaken through the African Chapter will be linked with hosting institutions?

### 13:00-14:00 Lunch break

14:00-16:00: The form (continued) including how to achieve African ownership

16:00-16:30 Health break

16:30-18:00: Appropriate arrangements and resources such as for incentive, reward, accountability, reporting, networking

Note: The arrangements and resources proposed for review and validation by the workshop must provide for:

- Absolute freedom to think out of the box
- > Sufficient time to do thorough analyses
- Access to cutting edge methodologies and tools
- > Career enhancing prospects from transparent and rigorous selection processes
- Exposure for all team members through reporting at international forums, including FAR GA and GCARD, appropriate to their specializations where they can build their reputations and make contacts

# Session 3: Assessment of the feasibility of the African Chapter

19h30-22:00 "SWOT Night" Dinner Party

Weighting strengths against weaknesses of the proposed arrangement Weighting opportunities against threats

Note: The "SWOT Night Dinner Party" will provide an interactive, original opportunity to take a look at the

progress made during the meeting. This SWOT-based discussion is not a starting point but an internal assessment of our own proposal for the African Chapter. It will come at a point of the workshop where we will have made significant advances with

very concrete proposal, and will be quite well acquainted one to another. While eating we will be reflecting on our work.

- Before starters, the strengths of the proposed arrangement will be identified and listed. Strengths are those things that are likely to make it strong, any aspect that adds value to it and makes it stand out from other existing arrangements.
- Before the main course, the weakness of the proposed arrangement will be identified and listed. Weaknesses are those things in which the proposed arrangement is likely to perform poorly.
- Before dessert, opportunities will be identified and discussed. Opportunities relate
  to the environment in which the proposed arrangement will operate, and those
  external factors which have the potential to make it stronger, more enduring, and
  more useful.
- Before coffee, threats will be discussed. Threats are external factors with the potential to adversely affect the proposed arrangement.
- During coffee, we will comment together the global picture as represented in the SWOT diagram.

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Day 3
Session 4: A draft plan proposal of actions

08:30-10:30: Actions for reaching the objectives

Note: The design of the African Chapter and its business models will inform the development of Process Action Plan that will be comprised of a series of foresight studies some concurrent and other sequential depending on the available funds.

- 1. The workshop will have access to the Business Model Generation Toolbox for iPads which will facilitate group work based on a nine panel canvass, i.e.,
- 2. client for whom will the African Chapter's foresight studies be conducted
- 3. value proposition what unique problem solving solution will the African Chapter offer
- 4. channel how will the African Chapter's value proposition be conveyed to
- 5. Customer relationships how will the African Chapter keep the clients involved?
- 6. Activities what exactly will the African Chapter be doing to deliver its Value Proposition
- 7. Key Resources what will the African Chapter need to be able to carry out its activities?
- 8. Cost Structure what will it cost to carry out the activities?
- 9. Revenue Stream What benefits will the African Chapter deliver and what grants and other revenues will they generate

The activities will be screened/tested for compliance with the core values.

10:30-11:00 Health break

11:00-13:00: A strategy for resource mobilisation and implementing the actions (time frame, sequence, priorities and integration with GCARD)

Note: It is proposed that the resource mobilisation strategy should take modular study-by-study approach so that:

- Funding proposals can be submitted to donors that are interested in the particular topic to be studied. Even the same donor may have funding envelopes for different topics such as water, climate change, zoonotic pandemics etc
- The amounts being requested will be suited to smaller funding envelopes that can be more flexible and have shorter processing times
- The proposal for funding particular studies will have to be based on full-costrecovery including the administrative costs. However, if funding can be obtained to cover the administrative costs such as the topic selection process, logistics, presentation to GCARD etc that would be very helpful

13:00-14:00 Lunch break

14:00-16:00: Next steps for validating the workshops findings and recommendations and five minutes each for observations by the regional observers

Note: Since the workshop has no formal mandate the outcomes and recommendations will have to be validated by African stakeholders and authorities. An appropriate occasion for that may be the FARA General Assembly in 2013 but there will be need for earlier validation so that the momentum will not be lost. A proposal on the next steps will be developed during the workshop taking into account its outcomes.

Note: Facilitator assisted by FARA and GFAR 16:00-16:30 Health break

16:30-17:30 Feedback of the participants and Conclusions

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Day 4
Departure of the participants

Additional notes:

- This agenda provides for three days of work however the actual time taken will depend on the time taken by to conclude the set tasks and it may be possible to close the workshop earlier if speed and relevance allow it
- ➤ The organisers hope to engage a skilled facilitator who is experienced in foresight and development issues
- > Teagasc will provide rapporteurs (2) and regional observers report will be also be asked to contribute
- > Teagasc will provide two assistants for handling administrative and logistic issues
- > Teagasc will provide a brief "traveller guide" for participants
- FARA will cover the cost of the food (not drinks) at the SWOT dinner

# **Annex 2 List of participants**

	Name	E-mail address	Contact
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# **Annex 3 GFAR presentation by Robin Bourgeois**



# Annex 4 FARA presentation by Ralph von Kaufmann





# **Annex 5: Stakeholder analysis**

The purpose is to identify and clarify the future stakeholders of the Foresight African Chapter and their interest and power which may affect the operation and the performance of the African Chapter. This will be also used further on to identify partners and conflicts of interest.

### **Process 1: Stakeholder MAPPING (Identification)**

**Main Process method**: Nominal Methods (1-1.5 hours)

# Step 1: Answer the focus question: "Who are the main stakeholders in relation to the African Chapter of the Global Agricultural Foresight Academy"? Brain-Storming / Idea Listing and clustering. Process duration: 30 minutes. Final

product: agreement on a clustered list of stakeholders.

# Step 2: Answer the question: "What are the main interests of each type of stakeholder in each cluster"?

Each group of two must write the main interests in relation to the African Chapter (+ or -). No discussion will take place at this stage. Process duration: 15 minutes.

# Step 3: Answer the question: "What kind of power do they have with regards to the operation of the African Chapter"?

Each group of two must write the type of power of the stakeholder (+ or ) in relation to the African Chapter. No discussion will take place at this stage. Process duration: 15 minutes.

# Step 4: Presentation of Stakeholders and their interests using a Interest x Power Matrix

Procedure: Plenum and open discussion, posting cards in the graph

Figure 2 Results of the stakeholder analysis

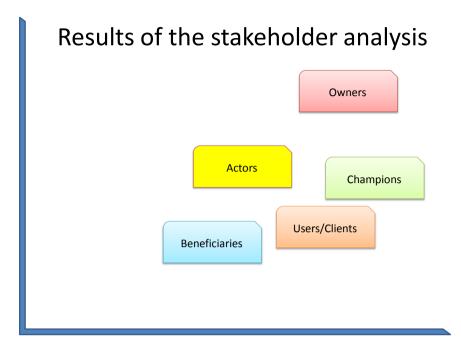


Figure 3 The beneficiaries of foresight studies

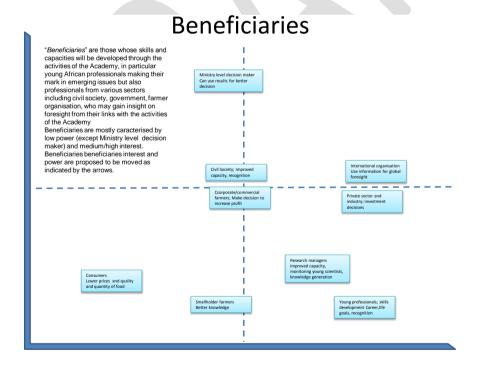


Figure 4 The actors in foresight studies

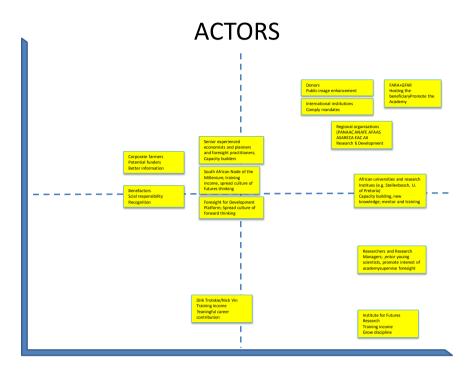


Figure 5 The users and clients of foresight studies

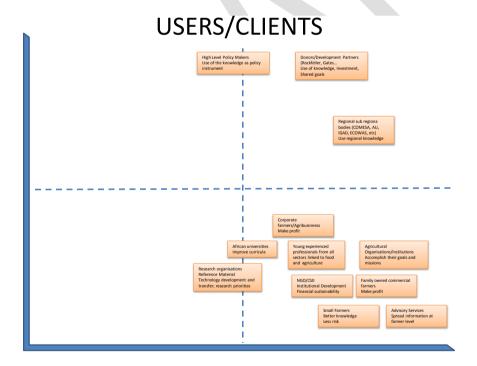


Figure 6The owners of foresight study products and outcomes

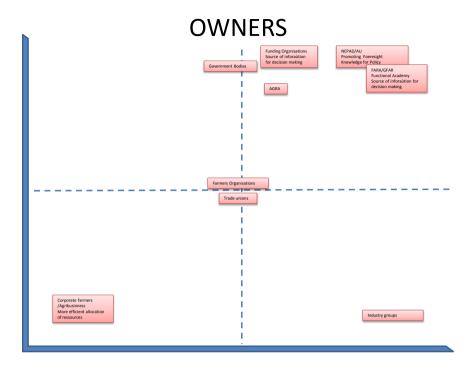
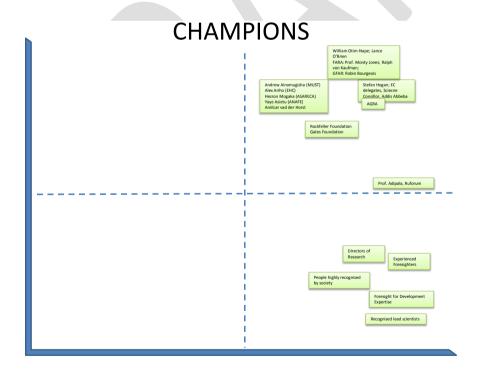


Figure 7 The African champions for foresight studies



# **Annex 6:** The Future of Agriculture in Sustainable Development of African Coastal Areas: The Case of Djibouti

African coastal areas have the potential to support diversified, value added forms of agricultural production, providing security against the effects of drought, new sources of income especially for women, healthier diets and lower levels of diet-related health problems, as well as the development of robust agro-business clusters capable of earning local profits from the export of goods created from the processing of agricultural produce. For a variety of reasons however, most of this potential remains untapped.

Recent research by Keto Mshigeni, Prof of Botany and Vice Chancellor of the Hubert Kairuki Memorial University in Tanzania, has demonstrated the feasibility of creating new employment opportunities for women in coastal areas, based on seaweed farming. His approach is highly scalable and provides all of the advantages described above. The government of Djibouti has recently expressed interest in adopting the approach. There is no doubt this would bring almost immediate benefits to Djibouti, but something more is needed if these benefits are to be sustained.

Many other examples of highly successful research projects like this exist all over Africa. The introduction of new farming practices however addresses only part of a bigger issue, the sustainable development of the coastal economy. Progress in one domain of agricultural production is unlikely to be sustained if it is not positioned as part of a broader vision for development. A more comprehensive approach is required that positions these new agricultural practices in the broader coastal economy taking account of issues such as:

- Demographics, immigration and population growth, the need for employment creation, pressure on the environment for water, food, the impact of increased economic activity and waste production, urbanization and demand for resources such as land, sea and waterways
- Agricultural production based on small vegetable and livestock production, seaweed, fish farming and shell-fish production, mushrooms, forests and fruit trees
- Related agro-businesses, systems of innovation financing, training, incubation and business development needed to support it, infrastructure and the development of coastal eco-systems.
- Planning, balancing competition between different sectors to maintain sufficiently high level of employment creation, balancing the short term and long term issues, anticipating long term needs and developing the strategic capabilities required to make them happen.

The goal of this project is to demonstrate how agricultural foresight applies to the sustainable development of coastal regions in Africa, using the case of Djibouti. It will be of immediate benefit to Djibouti. It will provide a template for other countries to start their own initiatives directly addressed to their own specific needs. The project will involve experts from other countries as observers to learn about foresight and acquire the skills needed to get one off the ground in their own country. It will include a dissemination action that will reach out to people at the appropriate level in ministries and national agricultural research and innovation systems via a series of awareness seminars and workshops.

The study approaches and methodologies, team leadership and composition and logistical support requirements will be document to inform the fine tuning of the plans for the African and other chapters for the Global Agricultural Foresight Academy.

The total cost of the study is estimated at € 200,000 not including in-kind contributions from GFAR, FARA and the host institutions of the Team Leader and the researchers.

Table 1 Tentative budget for test 'learning-by-doing' foresight study

	1st Quarter <sup>1</sup>	2nd to 5th quarter	Total
	€ ,000	€ ,000	€ ,000
Team leader's stipend <sup>2</sup>	8,750	35,000	43,750
research grants for postdoctoral associates <sup>3</sup>	0	60,000	60,000
Office expenses <sup>4</sup>	6,250	25,000	31,250
Travel and accommodation <sup>5</sup>	7,000	35,000	42,000
Contingencies <sup>6</sup>	1,100	7,750	8,850
Overheads <sup>7</sup>	1540	10850	12,390
Total			198,240

#### Notes:

- 1 The study will be for 15 months (five quarters) with the first quarter allowed for the Team Leader to prepare the logistics and form the team
- 2 €350/day for 10 working days per month
- 3 € 15,000 per researcher for 4 researchers, e.g., environmental economist, marine biologist, civil engineer, agriculturalist
- 4 Secretarial, rental, printing, communications, local travel and consultancies
- 5 Travel into and out of Djibouti
- 6 Contingencies@ 0.05%
- 7 Overheads @ 0.07%

# Annex 8: Brief curriculum vitae of the participants

# 1. Professor Keto Mshigeni

Professor Keto Mshigeni earned his PhD in Botanical Sciences at the University of Hawaii, Honolulu (USA), in 1974; and his BSc. (with a major in Botany and Geography) at the University of East Africa (Dar es Salaam University College campus) in 1969.

Currently, he is the Vice Chancellor of Hubert Kairuki Memorial University in Dar es Salaam, Tanzania. He is also the Secretary General of the Tanzania Academy of Sciences (TAAS), Editor- in-Chief of *Discovery and Innovation*, a journal of the African Academy of Sciences (AAS), Vice President representing Africa, the Academy of Sciences for the Developing World (TWAS); and Elected Fellow of the World Technology Network (WTN).

Professor Mshigeni previously also served as Professor of Botany and Director of Postgraduate Studies at the University of Dar es Salaam; Pro- Vice Chancellor for Academic Affairs and Research at the University of Namibia; UNESCO and UNU Chair for promoting UNU's zero emissions research initiative (ZERI) in Africa; Director of a UNDP Regional Project on promoting socioeconomic development from Africa's biodiversity; and also a member of a UN Scientific Expert Group on Climate Change and Sustainable Development, which produced a joint Report titled, "Confronting Climate Change: avoiding the unmanageable and managing the unavoidable".

Prof. Mshigeni has researched on Africa's seaweeds, mushrooms, and traditional medicine biota, and their sustainable management through farming.

Some of the accolades he has to his honour include; the Association of African Universities (AAU) Higher Education and Research Excellence Award (2009); a TWAS Medal, and delivered a medal lecture titled, "Thirsty fish in waters of abundance: a paradox in the context of Africa's development" (2008); the World Technology Network (WTN) Award for Environment (2002); the Boutros Boutros Ghali Prize for Africa (1994); the AAS/CIBA Prize for Agricultural Biosciences, in recognition of innovative contributions towards successfully pioneering the introduction seaweed farming in Africa's coastal marine waters (1993).

# 2. George William Otim-Nape

George started his career as a scientific officer (Plant Pathologist) in 1976 and was based at Serere Agricultural Research Institute, Soroti; Ministry of Agriculture and Forestry. He became Senior Research Officer, Principle Research Officer, Deputy Director General, Director General NARO in 1983, 1993, 1999 and 2003 respectively, most of this period (1976-1999), spent on cassava research and development. From 2003-2005 he was the Director General of NARO.

He later worked for COMESA as Agricultural Development Manager responsible for the Comprehensive Africa Agriculture Development Programme (CAADP), an AU/NEPAD Programme from 2006 to 2008, after which he retired to Uganda to start up the Africa Innovations Institute based in Kampala and currently the Founder and Chairman of the Africa Innovations Institute.

In 2004 he received to his credit a Professorship position from the University of Greenwich, UK. A summary of his Academic Qualifications is provided below;

- > 1994-5, Post Doctoral Research, Scotish Crop Research Institute, Dundee, Scotland, UK
- ➤ 1993, University of Reading, UK Ph. D (Plant Virology)
- ➤ 1991, Makerere University, Kampala Uganda, MSc Agric (Plant Pathology)
- > 1976; Makerere University, Kampala, Uganda, BSc Agric (Hons)

He has had the following recognitions and awards;

- Third World Fellowship Award- British Royal Society of London: 1995-1996.
- ➤ Rotary International Vocational Award for 1999-2000 "in recorgnition of the great intellect, diligence, and energy he dedicated, to the problem of cassava mosaic disease that nearly brought the crop to extinction".
- ➤ Special Recognition Award by The Uganda National Farmers Federation (UNFFE) for the exemplary leadership in fighting against Cassava Mosaic disease pandemic and contributions to food security in Uganda (July 2003)
- African Crop Science Society Award 2005 for "Outstanding Leadership in Research on Controlling Cassava Mosaic Epidemic in Uganda"
- National Agricultural Research Organization (NARO) 2006 Distinguished Service Award
- ➤ HE The President's Award for Science Excellence 2008
- ➤ African Prize for Leadership for the Sustainable End to Hunger 1997 (nominated)
- ➤ King Baudouin International Development Prize 2000 (nominated)

### 3. Amilcar van der Horst

Amilcar van der Horst is an entrepreneur & business consultant. He has lived in Uganda, Kenya, Burkina Faso, Mali, Ivory Coast, Togo and Ghana in the past but is currently based in Rotterdam. Amilcar has a strong knowledge and keen interest in Financial Mathematics, Statistics as well as Science which he decided to combine with a Bachelor in International Business Administration at the, Rotterdam School of Management, Erasmus University. In 2009 Amilcar co-founded Samora Meat & Trading Limited in Ghana to set up a food processing/agric&food development business. Amilcar's business plan was chosen as the 20 best plans in 2011 by G20 /Ernst & Young/ Rabobank endorsed BiD Network. Amilcar is further developing his efforts in Ghana by working closely with leading firms in The Netherlands, UK and Germany who possess innovative solutions that are appropriate for Africa in the meat/dairy/audio visual/fibre board & automated wood carving who have experience with projects in eastern and southern Africa and is developing these businesses in ECOWAS. However, as this is not paid until projects are realised he works as a free-lance business consultant for multinational companies who wish to operate in Africa on the side. Amilcar is an active member of Kairos Society, a group of the best young entrepreneurs from around the world who are endorsed by the likes of Bill Gates, Bill Clinton and Barack Obama.

### 4. Christian Hoste

Christian Hoste is an Engineer in agriculture (Lille, France), holds a Ph.D. in Animal Genetics (Leuven, Belgium) and a French State Doctorate in Natural Sciences (Paris, France). His experience includes 17 years on livestock research and development in sub-Saharan Africa and 18 years in agricultural research organization and management.

Christian contributed for 3 years to the building-up of the Global Forum on Agricultural Research (GFAR) in FAO, Rome and then went back to France to work for CIRAD, the French Agricultural Research Centre for International Development. During that assignment,

he became Director of the European Consortium for Agricultural Research in the Tropics (ECART) and facilitated its evolution into AGRINATURA to become the main European operator in agricultural research and higher education for development. He also initiated and coordinated an EC-funded ERA-NET on agricultural research for development (ERA-ARD).

Since May 2010, Christian is Deputy Director and Director of International Relations of Agreenium, the new French consortium for Research and Education in Agriculture, Food, Animal Health, and the Environment.

# 5. Tanja Hichert

Tanja Hichert is a South African futurist with specialized skills in scenario planning, facilitating strategic conversations and scanning. She has 15 years of practical business experience, mostly in the field of strategic planning, and has worked for international corporations in the mining, oil and tobacco industries. In particular she served as the UK-based scenario planning manager for BAT plc and conducted futures work for them in countries like Russia, Italy, UAE and Africa.

Her consultancy now supplies strategy futures services to South African and international clients in a wide range of industries including FMCG, media, banking, insurance mining and utilities. She has developed particular techniques and expertise in applying scenario planning to risk management and also trains risk managers in this regard.

Her public sector work, in association with the SA Institute for International Affairs, includes projects on sub-Saharan trade agreement futures and Southern African agricultural futures. Tanja also conducts workshops for government institutions, amongst others on the future of transport, the future of migration and training the Joint Command of the SA National Defense Force on applying complexity theory to decision-making.

In addition to managing Hichert & Associates, Tanja is a senior research associate at the University of Stellenbosch's Institute for Futures Research (IFR). In this capacity she delivers environmental scanning/future trends presentations to public and private sector members of the institute. She authors chapters on human development, environmental futures and sustainable development for the annual 'Business Futures' publication, as well as produces a bi-monthly 'Sustainability Watch' scan. She also authors as series of 'Corporate Strategy' Insights' dealing with the greening of business, global systemic risks, and the future of management and innovations for a sustainable economy

Tanja is accredited by, and a full member of, the Association of Professional Futurists.

# 6. Ralph von Kaufmann

Ralph is currently the UniBRAIN Facility Coordinator for FARA's Danida-funded Universities, Business and Research in Agricultural Innovation (UniBRAIN) project which is supporting agribusiness innovation incubator consortia in Ghana, Kenya, Mali, Uganda and Zambia. He has had the following appointments:

- Research associated on alternative forms of rangeland development, Institute for Development Studies, University of Nairobi.
- Manager Ranch Division, Agricultural Finance Corporation in Nairobi, 1971 1975.
- ➤ World Bank (IBRD) staff, Leader Livestock Project Preparation Team, Ministry of Agriculture Botswana 1976 to 1977.

- ➤ ILCA Country Representative Botswana and founding manager, Agricultural Credit Division, Botswana National Development Bank, 1977 1978.
- ➤ Team Leader International Livestock Centre for Africa's (ILCA), Subhumid Zone Programme Kaduna, Nigeria, 1978 1991 and Coordinator of ILCA's Animal Traction Thrust, 1989 1991.
- Director of ILCA's Donor and Board Secretariat, 1991-1995
- Director for External Relations International Livestock Research Institute (ILRI), 1995-1996 first in Addis Ababa, Ethiopia and from 1997- January, 2003 in Nairobi, Kenya.
- ➤ Member, Programme Advisory Committee of the Global Livestock Research Support Programme (GL-CRSP).
- ➤ Forum of Agricultural Research in Africa (FARA) 2003 present as Senior Resource Person and Chair of the Sub-Saharan Africa Challenge Programme Task Force, then as Director for Capacity Strengthening
- Member of the Executive Committee of the African Livestock Project (ALive)
- > Contributes to the Secretariat of the Coalition for African Rice Development (CARD).
- ➤ Member of the Advisory Committee on Science and Technology for African, Caribbean and Pacific (ACP) Agricultural and Rural Development.

# 7. Alex Ariho

Alex Ariho is the Chief Executive Officer of Excel Hort Consult Ltd. This is an Agribusiness and Development Company based in Uganda but operates in Eastern and Sub Saharan Africa. He is one of the founding directors for Afri Banana Products Ltd - a Universities, Business and Research in Agricultural Innovation (UniBRAIN) - Forum for Agricultural Research in Africa (FARA) supported initiative in Uganda for the promotion of banana value chain development and agribusiness education. Alex is a representative of the Private Sector on African Union Programme for aflatoxin control called Partnership for Aflatoxin Control in Africa (PACA).

Alex doubles as a representative of the Private Sector on Africa Agriculture Advisory Services Forum (AFAAS) in Africa as well as a Private Sector focal person for Agribusiness Education Promotion in Africa supported by African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE). He is also a senior associate consultant in agribusiness value chain development, business/project planning and management with local and International Organizations. Alex is a founding chatter member of Pan Africa Agribusiness and Agro Industry Consortium (PanAAC) and is the Country Director of PanAAC Uganda. He is also one of the founder members of the Value Chain Development Network for Africa (VCDN) operating in 9 African countries and supported by International Institute of Rural Reconstruction (IIRR).

Alex has worked for International Center for Research in Agro Forestry (ICRAF), United Nations Development Programme, Africa 2000 Network Uganda (A2N), and World Wide Fund for Nature (WWF), Nature Uganda and Global Action Initiative in senior management and administration positions. He is a visiting lecturer in renowned public and private Universities in East Africa including Makerere University, Management Training and Advisory Center (MTAC) and Uganda Management Institute (UMI) specializing in agribusiness education and business planning and management.

Alex is a PhD Research Fellow in Development Management and is a holder of a Masters Degree in Development Studies, Bachelors Degree in Business Administration, Diplomas in Project Planning and Management, Business Administration and Finance among others.

### 8. Lance O'Brien

Lance graduated from University College Dublin (UCD) in 1974 with First Class Honours BA and MA degrees. He subsequently completed PhD (1987) and MBA (1991) degrees, also in University College Dublin. He joined Teagasc (The Irish Agriculture and Food Development Authority) from the Irish Ministry of Finance in 1980, having previously worked as a researcher in the Irish Economic and Social Research Institute (ESRI).

Since joining Teagasc, Lance has worked in the areas corporate and strategic planning, programme and project planning, foresight development and research management. He was Project Manager for the major Teagasc Foresight exercise – *Teagasc 2030*- published in 2008. Lance has contributed widely to national research policy initiatives in Ireland and to the development of various Irish agricultural and food policy developments. He was a member of the Third EU SCAR (Standing Committee on Agricultural Research) Foresight Expert Group and has contributed foresight expertise to the preliminary work on the development of a Science Agenda for African Agriculture.

# 9. Rogier Schulte

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### 10. Seamus Crosse

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# 11. Liam Downey

On graduating from University College Cork, Dr. Downey spent the first ten years of his professional career in research on milk and dairy products. Having been awarded a Ph.D by Reading University, England, he returned to Ireland in 1965 to take up a senior research appointment at the National Research Institute. He published an extensive range of research papers and reviews in various international scientific journals.

In recognition of the international contribution of his research, the National University of Ireland awarded Dr. Downey a D.Sc. (Doctorate of Science) degree in 1979, for published research.

Dr. Downey was Director General of four national organizations

- ➤ Chief Executive of the National Institute for Physical Planning and Construction Research from 1979 to 1982
- ➤ Director General of the National Agricultural Advisory and Training Organization from 1983 to 1988
- National Director of the Bovine Disease Eradication Board from 1988 to 1992
- ➤ Director General of Teagasc (the Agriculture and Food Development Authority) from 1994 to 2001.

In 2000, he was conferred with a Doctorate of Law Degree by the National University of Ireland, in recognition of his major contribution in many fields of science and technology, both nationally and internationally.

In 2001, he was awarded an Honorary Professorship in Agriculture and Food Science at University College Dublin; and in 2002, he was awarded an Honorary Professorship of Science by the National University of Ireland, Maynooth.

In 2003, he was made a Fellow of the Department of Archaeology, UCD.

### **European Affairs**

- ➤ EU Foresight Chairman High Level Expert Group; European Regional Foresight (2003/2004)
- ➤ European Research Strategy Member of Expert Group on EU Key Technologies (2005)

### **Industry Development**

Chairman Scientific Advisory Board – Richard Keenan & Co. Ltd., Carlow, Ireland

### 12. Brendan Riordan

Brendan is an agricultural economist whose focus is the impact of policies on national economies and the agricultural sector. Much of his work has been in Ireland and has included development of projections of the impact of policy changes as well as foresight for the rural economy. Development of econometric projection models for the agri-food sector was done initially with the Food and Agriculture Policy Research Institute (FAPRI) in Columbia, Missouri and then extended to cover the entire EU as coordinator of the major Commission funded development of the pan-EU AGMEMOD model.

Brendan also has a deep and longstanding commitment to the development of Africa. Early in his career, at Makerere University, his contribution went beyond his lecturing duties to development of national policies and planning. Subsequently he returned to Kenya and Tanzania in a consultancy capacity and also filled this role in Zambia. His engagement then grew with visits to Ethiopia and South Africa. In addition, he worked for five years at a senior level in what is now FAO's Trade and Market Division.

Brendan's current work is in quantification of the relationship between agriculture and the rest of the economy as well as examining the performance of Irish Aid, all of this is published or in process.

Brendan graduated in Agriculture at the University of Reading and went on to achieve postgraduate qualifications in Agricultural Economics there and M.Sc. from the University of Manitoba.

### 13. Patrick Crehan

Patrick Crehan is a specialist in the management of research and innovation. He uses Foresight techniques to develop visions, strategies, roadmaps and action plans for public and private sector clients.

In the period 2002-2003 he introduced the practice of Foresight in Cyprus, working with the Agricultural Research Institute to use Foresight as a vehicle for developing dialogue between politically polarized farmers unions and to establish the idea that agriculture is a modern

knowledge-based industry. In 2003 he facilitated the work of a European Commission High Level Working Group on agricultural Foresight and edited "AGRIBLUE - a blueprint for the sustainable development of rural regions". In the period 2005 to 2008 he piloted advanced foresight techniques in Tunisia, Morocco, Jordan and Egypt. In Tunisia this focused on areas such as the application of biotechnology to the Olive oil sector. In Morocco it focused on the organization of small subsistence farming and export oriented industrial scale agricultural production. In the period 2008-2009 he provided assistance to Teagasc on the design and implementation of the Teagasc 2030 initiative. He has since been involved in many initiatives such as the Danish lead AG2030 project to explore agricultural markets of the future.

In 2009 Patrick provided assistance to the government of Iceland to help develop a post-crisis national innovation and nation branding strategy. With Jorn Bang Andersen, advisor to the Nordic Council of Ministers, he co-wrote a book entitled "The Next Big Thing – Trends Shaping Nordic Innovation". In 2011 he provided assistance to the government of Tunisia, by working with it to develop a vision, strategy and action plan for the ANPR - their new technology transfer agency. The action plan includes the development of an academy for research managers that will provide training in areas such as research management and Foresight. In 2012 he will provide assistance to a number of national research laboratories in Tunisia to help them develop their research strategies. In 2012 he will assist the European Commission in a review of the EU S+T agreement with South Korea.

Patrick applies "systems thinking" and a "total innovation" approach to his work. He coaches entrepreneurs and start-up companies based on the "lean start-up" philosophy. He is a member of KIN Global an invitation only C-level network of innovation, marketing and research managers run by the Kellogg School of Management. He is a Director of a futures think tank called The Club of Amsterdam. He is a scenarist and futures thinker. In 2010-2011 he has been working on future scenarios for assistive devices, big-data, new human computer interfaces, advanced exoskeletons and humanoid robotics. He recently spoke at TEDx on the subject of "moral machines". He is a member of AFRON, a global network of scientists and entrepreneurs who want to develop a \$10 pedagogical robot for Africa.

# 14. Hezron Mokaka

**Professional Experience:** Hezron (49 years) currently works for the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) as the head of Natural Resource Management and Biodiversity Programme. He has previously worked as a long-term consultant of the World Bank (Nairobi) in coordinating the preparation of the 2<sup>nd</sup> phase of Lake Victoria Environmental Management Programme – a programme being implemented in 5 countries (Burundi, Kenya, Rwanda, Tanzania, and Uganda). In addition, Hezron has worked with the European Union in Nairobi for 5 years as the Manager of the Biodiversity Conservation Programme. Hezron has also thought at Kenyatta University in Kenya i.e, (i) Economics of land and water resource management and (ii) Social participation in community development. In total, Hezron has 23 years of professional experience in natural resource management as a researcher, lecturer and manager.

Academic qualifications: Hezron has an undergraduate degree from Moi University (Kenya) in natural resource management with a bias in forestry. In an attempt to understand the role of forestry resources in rural development, Hezron proceeded to undertake a Master of Arts degree in Environment, Development and Policy at Sussex University (UK) and a PhD in environmental economics from Strathclyde University.

**Knowledge and information products**: Hezron has published in areas related to water resource management, use of economic instruments in the promoting sustainable natural resource management and community participation in watershed management.

**Family life:** Hezron is a Kenyan and has a wife (Mrs Sarah Rasugu) and two children (Ivy Mogaka and Ian Mogaka – who are 17 and 13 years respectively).

Hobby: Enjoys watching wildlife

#### SKILLS AND EXPERIENCE

- > Facilitating community planning initiatives;
- ➤ Identifying and fostering development opportunities;
- Economic analysis skills related to natural resources management;
- > Statistical analysis and writing skills;
- Conversant with participatory approaches as data collection tools as well as feed-back mechanisms with farmers;
- Adaptive fast learner and a multi-disciplinary team player with a strong regional experience.

### **CURRENT POSITION**

Masters student (University of Zimbabwe August 2009-July 2012)

#### PREVIOUS POSITIONS

Research fellow for African Climate Change Fellowship Program (ACCFP). Adaptation science fellow (October 2011-April 2012) hosted by IRA-University of Dar es salaam.

Trainer for EU/Government of Zimbabwe's Smallholder Micro-Irrigation Development Support Programme (SMIDSP) on Agribusiness and contract farming. Attended AuthorAid workshop (scientific writing skills, general report writing and presentation skills).

Maternity (January 2008-July 2009)

Project officer: MercyCorps (October-December 2007)

Registration and Verification Supervisor: *Joint Initiative Group (April-September 2007)*Data collection officer and data analysis: *Development data consultancy (March 2007)* 

Project officer: Foundations for farming (August 2006-February 2007)

### FORMAL EDUCATION

Masters in Agricultural and Applied Economics (University of Zimbabwe, *Pending*). BSc. Honours Agricultural Economics (University of Zimbabwe, August 2006)

### **PUBLICATIONS**

A comparative assessment of conservation and conventional farming practices in crop production: A case of Magunje and Kasimure areas in Zimbabwe. University of Zimbabwe, Working Paper.

Factors affecting smallholder farmers' perceptions and responsiveness to climate variability induced hazards. University of Zimbabwe, Working Paper.

### 16. Robin Bourgeois

Dr. Robin Bourgeois, an agricultural economist, works for the GFAR in Rome. He is in charge of developing the Global Foresight Hub, an open multi-stakeholder space for dialogue and action. He has:

- ➤ Worked on research-technology transfer linkages with ISNAR from 1988- 1992,
- ➤ worked on the competitiveness of agro-food systems, linking research with institution-building through a "dialogue for action" process, IICA, from 1992-1996,
- ➤ Worked on tools for policy decision, including a Participatory Prospective Analysis handbook; expertise for various organisations and training analysts and scientists on policy analysis and foresight; with CIRAD in Indonesia in 1996,
- ➤ taught MSc students in Development Economics and co-supervises PhD students
- assisted a territorial foresight on the future of agriculture and the rural world in Mayotte in 2009.

# 17. Joaquin Arias Segura

Joaquin Arias Segura (Ph.D.) is a citizen of Costa Rica. He is currently working as specialist for the Strategic Analysis Centre for Agriculture (CAESPA), based in the IICA Office in Lima, Peru. He holds a BS in Agricultural Economics from the University of Costa Rica, and a MSc and Ph.D. in agricultural economics from Oklahoma State University, USA. He has more than 20 years of experience supporting Latin American Countries and doing applied research in international trade, the economics of risk, food security and policy impact analysis.

He has authored and coauthored several books and scientific articles on topics related to his expertise. He has teaching experience in agricultural development, marketing and agribusiness at the graduate level in Costa Rica and Peru.

# 18. Mahfouz Abu-Zanat

I graduated from the University of Jordan in 1975 and completed MS from Washington State University in 1985 and PhD from the University of Arizona in 1989. I joined the University of Jordan in 1989. I participated (as project manager/focal expert/technical advisor) in many research and development projects at the national and regional levels such as: Communal Management and Optimization of Mechanized Mico-catchment Water Harvesting for Compacting Desertification in the East Mediterranean Region; Community-managed Optimization of the Management of scare Water Resources in Central and West Asia and North Africa Project (Water Benchmarks of CWANA); Water Reuse and Environmental Conservation Project (RIAL II); Sustainable Management of Marginal Drylands Project (SUMAMAD); Integrated ecosystem Management in the Jordan Rift Valley Project (JRVT); Conservation and Sustainable Use of Dryland Agrobiodiversity Project in West Asia; Improvement of Agricultural Productivity in Arid and Semi-arid Zones of Jordan (JAZPP); Conservation of Medicinal and Herbal plants Project (GEF);

Besides teaching and research activities, I performed several Environmental Impact Assessment studies in Jordan. Between 2008-2010, I worked for the United Nations Compensation Council (UNCC) as an Independent Reviewer and developed the Roadmap for Badia Restoration Program in Jordan. In 2010, I prepared the Strategy and National Workplan of Rangelands in the Kingdom of Saudi Arabia; Regional study for Assessment and Documentation of Promising Range plants in the Arab World (AOAD).

# 19. Oleg Shatberashvili

**Oleg Shatberashvili has** PhD in Laser Physics. He defended his thesis in 1973 at the P. Lebedev Institute of Physics under the supervision of the Nobel Prize Winner, Prof. N. Basov. He is the author of more than 90 works in physics, information management, scientometrics, information and research policies. He is a member of editorial boards of journals *STI Processing* (VINITI, Russia) and *Information and Innovations* (*International Center for Scientific and Technical Information, ICSTI*).

In 1976-2004 he headed the *Georgian Institute for Scientific and Technical Information (TECHINFORMI)*, which among other sectors is responsible for STI in agriculture. In particular, *TECHINFORMI* largely contributed into development of FAO initiated AgroWEB network of the Eastern European agricultural information centers.

Since 1999 he is the Chairman of Georgian Federation for Information and Documentation (GFID), which since 2004 closely cooperates with *Central Asia and Caucasus Association of Agricultural Research Institutions (CACAARI)*. Currently he is a member of the Board of *CACAARI and the coordinator of CAC Regional Agro Information System (RAIS)*.

Since 2009 **Oleg Shatberashvili is also the** Chairman of Association *European Studies for Innovative Development of Georgia (ESIDG)*. *ESIDG* is engaged in innovation policy studies worldwide and in Georgia, with particular interest to innovation in agriculture. It is the member of EU Eastern Partnership Programme Civil Society Forum.

In the past Oleg Shatberashvili had initiated a number of projects important for independent Georgia, e. g. developing concepts and formation of Georgian Patent Agency and Parliamentary Research Service.