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Report on:

GAPAD SDG2 2016 Webinar: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

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Revised internally at Crops for the Future, CABI and AIRCA Secretariat.

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GAPAD SDG2 WEBINAR

End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

WEBINAR EXECUTIVE SUMMARY

Context

- The “GAPAD SDG2 2016 Webinar” was held on 20th September 2016 at 1600 Malaysian time (+8GMT). The outcome of the webinar to be brought to the Roundtable Forum on the same topic to be hosted in Nairobi (Kenya) on 25 and 26 October, 2016.
- Speakers and talk titles:
 - **Dr Simon Anderson**, Director, IIED, UK: *“Diversification in support of sustainable agriculture in a changing climate: constraints and opportunities”*.
 - **Dr Walter de Boef**, Senior Program Officer, BMGF, USA: *“Keeping hunger at bay – agricultural diversification as a global driver of food security and economic growth”*.
 - **Dr Namukolo Covic**, Research Coordinator, IFPRI, Ethiopia: *“Enhancing nutrition security and livelihoods – role of agricultural diversification”*.
- Moderator: **Ms Natalie Heng**, freelance journalist and copywriter.

Webinar key points

1. **Agriculture diversification** as a driver to **improve nutrition, needs to be consolidated** in a way that enables policy makers to prioritize developmental outcomes of investment in sustainable agriculture.
2. The hypothesis that agricultural diversification can improve the livelihood and nutrition of people can thus be agreed. However, there is the need to **generate evidences of this** especially at level of small holder farmers.
3. **Evidence** can be used to convince policy makers support agricultural diversification.
4. There is the **need to invest on women as process of collective action**. This is a very important element to appropriately approach climate adaptation, including nutritional aspects.
5. **Agricultural diversification is critical to meeting long-term nutritional outcomes**. One of the limiting factors at the moment is that **we are not necessarily generating any useful information on nutrition** within existing agricultural development programs. **Research programs should thus have nutrition objectives clearly addressed** at early planning stage in order to move much further from what researchers are already doing.
6. **Multi sectoral approach** is also critical in achieving development outcomes of agricultural diversification initiatives. Looking at (**integrated**) climate change mitigation, agricultural diversification and nutrition **at the same time** would be extremely positive.
7. **Fruit and vegetable** (i.e. leafy vegetables) are promising diversification crops as they are nutrient dense. Other crops include **sorghum, millets, various legumes, root and tubers**. At household level it is easier to deal with fruits and vegetable than other crops (a market driven choice).
8. There is a huge gap between knowledge on climate regime and sustainable development goals. It is therefore crucial **to understand how increase in climate variability will impact upon any of the achievement of any SDG targets**. Moreover there is no uniform scale for measuring and reporting on agricultural biodiversity. Working in this direction can be useful in Africa, especially on climate variability. For this reason, having a database with **evidences of climate variability and its impact** is very useful. SDG2 is a good place to start.

QUESTIONNAIRE RESULTS (see Appendix 1 for details)

The following results do not have statistical validity but are aimed at collecting different points of view of the participants at the webinar.

Question 1: *Are there national policies that recognise the need for diversifying agriculture (crops/livestock/fisheries), including a climate change strategy or preventing trade restrictions and distortions?*

Answer	No.	%
yes	4	40%
no	5	50%
no answer	1	10%
Total	10	100%

Question 2: *To what extent do women and other vulnerable groups influence or are involved in agricultural diversification initiatives?*

The majority of the answers indicated that women and other vulnerable groups are not engaged as much as they should. Answers included the following;

1. *"I have seen no evidence that women or other vulnerable groups play a significant role in this regard".*
2. *"Women are KEY in the diversification. They are the nexus between crop diversity and food/nutrition security of households. They collect, cultivate, harvest, process, sell, cook, conserve seed and knowledge, educate children on healthy food and diets...; their role should be recognized, promoted, celebrated and supported. Words should be followed by concrete commitments in this sense".*
3. *"These groups have the least influence on government policies so their initiatives have to be self-generated".*

The following summarizes the concepts reported above and is in line with the outcomes of the whole webinar.

1. *"This question needs answered at different levels. What we see is a reduction of women's involvement as we increase the scale and move up in social hierarchies".*

Question 3: *If you were developing a sustainable agricultural investment program, which are the 3 main factors you'd consider to maximize its impact on food and nutrition security?*

The answer were diverse, and can be synthesised and grouped as follows:

Factor1	Factor 2	Factor 3
Optimal growing conditions	Cultural diversity	Post harvest
Increase yield/productivity	Crop diversification	Woman empowerment
Building reliable and usable metrics for policy makers	Climate change resilience	Livelihoods, impact across societies & Woman and

		marginalized group empowerment
Optimal growing conditions for nutritious crops	Crop selection	Education: local dissemination of scientific knowledge (awareness)
Crop selection	Development of value chains	Education: local dissemination of scientific knowledge (education & marketability)
Nutrition (as centre of national food policies)	Incentives	Education: national and local dissemination of scientific knowledge (awareness)
Incentives	Crop selection	Woman empowerment
Crop diversification	Use of marginal lands	Woman and marginalised group empowerment
Optimal growing conditions	Operational feasibility (farmers capacity and cultural diversity)	Nutrition

From the answers the three main factors to be taken into account are:

1. **Crop selection and diversification**
2. **Optimal growing conditions**
3. **Woman and marginalised group empowerment**

The first two are mainly technological and the third has more social focus.

Other recursive factors are

4. **Nutrition**, which appeared explicitly but most of the time implicitly within the full answers of the respondents.
5. **Education**, as national and local dissemination of scientific knowledge (awareness, marketability and governmental capacity building and awareness raising)

Question 4: How can regional, international bodies (e.g. AU, EU), donors and other partnerships (especially PPP) contribute to elimination or reducing hunger through agricultural diversification and nutrition-promoting interventions?

This question is highly open ended.

The answers provided included those in the following areas;

- The bodies, donors and partnerships should have a shared vision or common policy towards prioritizing agricultural diversification as a tool to manage hunger
- They should also offer grants that focus on agricultural diversification, which are informed by detailed situation analyses that also identify market factors that may discourage diversification
- Recognize and appreciate local or indigenous knowledge including value of neglected and undervalued species and how these species can be used more

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GAPAD SDG2 WEBINAR (Full report)

End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

INTRODUCTION

Global Action Plan for Agricultural Diversification (GAPAD) is an initiative to support the United Nation Sustainability Development Agenda 2030. Agricultural diversification will expand the current food systems through increasing species diversity and a more resilient agriculture ecosystem that include new crops for food and non-food uses.

The “GAPAD SDG2 2016 Webinar: *“End hunger, achieve food security and improved nutrition, and promote sustainable agriculture”*” was held on 20th September 2016 at 1600 Malaysian time (+8GMT). The webinar was the second of a series to be held on specific SDGs that address the role that agricultural diversification, through GAPAD, will play in meeting the UN Sustainable Development Agenda 2030 (SDA2030). The last Webinar in these series focused on SDG7 (Energy) and was hosted by CFF in March 2016

The objective of the SDG2 Webinar was to stimulate the discussion on ending hunger and achieving food security in advance of the Roundtable Forum on the same topic to be hosted in Nairobi (Kenya) on 25 and 26 October, 2016.

The webinar consisted of three 15-minute specialist presentations to provide a background for the related Roundtable Forum. The presenters were:

Dr Simon Anderson, Director, Climate Change from International Institute for Environment and Development (IIED, UK) who made a presentation titled: “Diversification in support of sustainable agriculture in a changing climate: constraints and opportunities”.

Dr Walter de Boef, Senior Program Officer, Bill & Melinda Gates Foundation (BMGF, USA), whose presentation was titled: “Keeping hunger at bay – agricultural diversification as a global driver of food security and economic growth”.

Dr Namukolo Covic, Research Coordinator, International Food Policy Research Institute (IFPRI, Ethiopia), whose talk was on: “Enhancing nutrition security and livelihoods – role of agricultural diversification”.

The webinar was moderated by Ms. Natalie Heng, a freelance journalist and copywriter, who is currently a contributor to the online science and development portal, SciDev.net. Fig. 1 shows details of the webinar which was attended by 57 participants

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Average time in session	Average attentiveness	Average interest rating	Average poll response
79 min	57.75%	69.16	0.00%

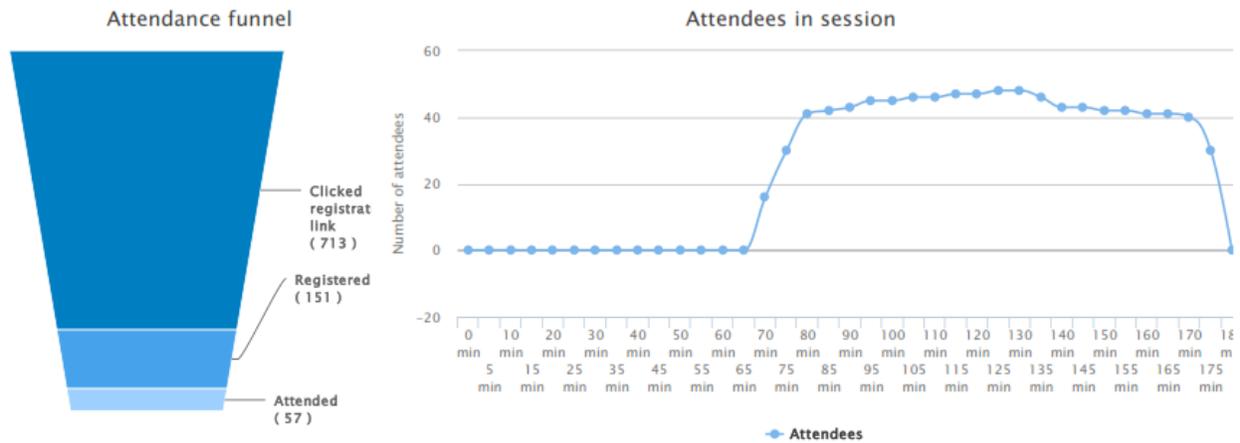


Figure 1. Analytics for GAPAD SDG2 2016 Webinar: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

Talks synthesis

Talk 1 - Diversification in support of sustainable agriculture in a changing climate: constraints and opportunities

Dr Anderson started his presentation stating the problems: i) More than 150 million children under five years old are so malnourished that they die or grow up stunted, both physically and mentally; ii) we need to double food production in developing countries by 2050 and greatly increase the access to food by the poor.

He stressed that we can't focus on climate without understanding how climate change is acting as multiplier of other stresses (i.e. like population increase; environmental degradation; regionalized and globalized markets, and regulatory regimes; market failures in product marketing and input supply; protectionist agricultural policies in developed countries, declines and unpredictability in the world prices of many major agricultural commodities, macro-economic shocks; HIV/AIDS pandemic; zoonotics (e.g., avian influenza); state fragility and armed conflict in some regions).

He posed the question on how to support smallholder farming to understand and anticipate climate variability? Climate models are not converging: we are not confident in our climate projections on rainfall but we are quite confident that min and max temperature are going to increase.

Before assessing how climate change can constrain smallholder farming the following issues should be recognised:

- smallholder farming production systems have high complexity and have highly location-specific nature
- non-climate stressors on smallholder farming livelihoods must be incorporated as well as their effects on exposure, sensitivity and adaptive capacity
- three different categories of climate change impact upon smallholder farmer (SHF) livelihoods must be assessed: biological processes affecting crops and animals at different levels; environmental and physical processes affecting production at a landscape, watershed or community level; and impacts of climate change on human health and on non-agricultural livelihoods.
- climate change impacts should be mediated through households and local food security, local and wider economies and the policy framework.

One way how this could be done is by supporting diversity in agriculture.

Opportunities to support diversity as an adaptive strategy. Diversity is a rational response to variability e.g. crop and livestock involves maintaining diversity across seasons, between years and through generations. But maintaining and investing in diversity requires access to resources, collective action and in some cases exogenous support.

Dr Anderson illustrated some types of adaptations:

- adaptation can involve radical changes to local households (stepping out, e.g. through migration), changes in production and income generation. It might involve investing in children's education.
- adaptation can involve changes within local households (stepping up, e.g. changes in livestock species, crop varieties, etc.)
- adaptation by maintaining what they are doing (hanging in)
- no adaptation and hence poverty

A possible solution in supporting household resilience is to support farmers to use assets not only to increase productivity of assets but also their convertibility.

Conventional technological response to declining productivity (i.e. better use inputs such as pesticides and fertilisers; adaptation to climate change; reduce the greenhouse gases from agriculture; investment in natural capitals including soil quality and water holding capacity) are good but they certainly do not represent the whole picture of the problem.

Other approaches to supporting smallholder farmers from increasing climatic risks include: (i) Genetic resource management; (ii) Facilitating mobility and transhumance; (iii) Supporting farmer-led innovation for climate risk management.

Finally, it has been shown (Ostrom 2011) that, contrary to conventional theory of collective action, cooperation will occur to solve social dilemmas when: (i) many agree on the need for changes in behavior and share responsibility for future outcomes; (ii) there is reliable and frequent information about the phenomena of concern; (iii) people know who else has agreed to change behavior and that their conformance is monitored.

Dr Anderson concluded his talk by summarizing the following:

- The impacts of climate change on SHF will be locally specific and hard to predict.
- Small farm sizes, low technology, low capitalization, and diverse non-climate stressors will tend to increase exposure and sensitivity to climate risks.
- Diversity of crops and livestock of SHF, their interactions, and the importance of non-market relations in production and marketing, will increase the complexity both of the impacts and of subsequent adaptations.
- But, households labour use, patterns of diversification within and away from agriculture, and assets such as genetic resources, local knowledge, and customary institutions merit exogenous (state) support

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Talk 2 - Keeping hunger at bay – agricultural diversification as a global driver of food security and economic growth

The BMGF is more focused on “agricultural transformation led by countries to support smallholder farmers”. BMGF wants farmers to be empowered with the knowledge, tools and technologies to improve their livelihoods and lift themselves and their families out of poverty.

BMGF is concentrating its activity on three main challenges: i) low yields and productivity, ii) systems and policies that fail to meet the needs of farmers, iii) lack of opportunity and resources for women. All of them within the common frame of changing climate.

Transformation, as envisaged by BMGF, is not properly happening because many smallholder farmers suffer due to systems and policies that make it difficult for them to grow enough food. These systems and policies often fail to provide access to basic infrastructure, markets and inputs such as seeds and fertilizers.

For BMGF women are vital drivers of food systems for their families and communities in Africa and South Asia. But they often lack equal access to agricultural information, technologies, innovations and services. There are limited in their control over the production. This results in a huge productivity gap in many countries.

Main objectives of the BMGF activities are thus:

- Boost the productivity of staple crops and livestock, on which millions of smallholder farmers rely to feed their families and earn an income.
- Increase safe and affordable access to nutrient-rich foods for the poorest people in sub-Saharan Africa and South Asia.
- Empower women farmers to have greater access to resources and opportunities, as well as more control over decisions affecting their farms and families

Some examples of BMGF approaches are on: i) crop varieties development (I.e. legumes, sorghum and millets); ii) investment in seed systems and iii) improving access to nutritional crops and livestock.

Advancing agricultural transformation, BMGF believes, is improving rural economies and reducing poverty. BMGF partners make crops and livestock more productive, improve nutrition, and help empower women farmers.

Dr de Boef concluded with the following points:

- The challenges are: (i) low yields and productivity, (ii) changing climate, (iii) systems and policies that fail to meet the needs of farmers, (iv) lack of opportunity and resources for women
- Possible approaches to adopt: (i) developing crop varieties, (ii) investment in seed systems, (iii) improving access to nutritional crops and livestock.

Talk 3 - Enhancing nutrition security and livelihoods – role of agricultural diversification:

Dr Covic stated the expectations from agriculture for Africa's nutrition security and livelihoods, namely: i) provision for more diverse diets through the life cycle for both the urban and rural poor; ii) support and provision of improved livelihoods to complement access to improved diet diversity for the rural and urban poor. She then suggested possible pathways from agriculture to nutrition.

By observing the Africa's agricultural development, diets and nutrition, Dr Covic stated

- There is a mismatch between production and productivity improvements compared to that of the nutrition situation
- Undernourishment has significantly reduced with some countries recording well over 60% reductions over the last 2 decades
- Reductions in undernutrition and micronutrient deficiencies have not kept pace.
- More effort is needed linking agriculture to more diverse diets and better nutrition.
- Recent developments on biofortified foods suggest that more is possible

Dr Covic presents some examples from IFPRI focusing on:

- Trend in undernourishment and under 5 chronic malnutrition (stunting) for selected African countries (i.e. Ethiopia, Kenya, Nigeria, Rwanda and Zambia).
- Minimum diet diversity and minimum acceptable diet, children 6-23 month for selected African countries (i.e. Ethiopia, Ghana, Kenya, Malawi, Nigeria, Rwanda, Zambia and Zimbabwe).

By showing a slide reporting FAO-based statistics on share of food groups (cereals, pulses, animal source food, sugars, roots & tubers, fruits & vegie, fats & oil, others) in total dietary energy supply, instead of observing an increase of "other" groups intake, an increase of fats & oil and sugar has been observed in sub-Saharan Africa.

Dr Covic affirms that agriculture diversification should target nutrition issues and nutrition diversity.

Projects which involve stand-alone production strategies are less effective than integrated projects including gender, nutrition education, maternal education, improving income and overall dietary quality, social and other types of capital.

Behavior Change Communication (BCC) & Gender are important: Well-designed interventions with BCC and other targeted nutrition components, had better nutrition impact. Possible trade-offs to be taken into account are: Gains in one area should not be accompanied by losses elsewhere. e.g., ensuring that i) Animal husbandry interventions do not increase prevalence of zoonotic diseases; ii) Involvement of women does not negatively impact care practices.

Dr Covic affirms that the Comprehensive Africa Agriculture Development Programme (CAADP) represent an opportunity for agriculture, livelihoods and nutrition. She shows how agriculture is a key strategy to address economic development, poverty, livelihoods and nutrition.

CAADP is an opportunity for improved agriculture, livelihoods and nutrition sensitivity because:

- Strong focus on resilience and climate smart agriculture
- Strong focus on employment creation inclusive of women and youth
- Strong focus on market development at national and regional levels
- Strong focus on intra-Africa trade

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- Focus on few target commodities however not supportive of more diversified diets
- Need focus on diversifying agriculture to diversify diets
- Deliberate targeting must be part of the process for the desired progress

Dr Covic brings some lessons learnt from Africa's biofortification experience from HarvestPlus

Released biofortified crops by 2015

- Iron beans: Rwanda, DR Congo
- Vitamin A maize: Zambia
- Vitamin A Cassava: DR Congo, Nigeria
- Orange sweet potato: Uganda, Malawi

Lesson from biofortification

- Focused on agriculture, nutrition and livelihoods
- Work started amid much scepticism but adoption rates are increasing
- Lesson: Africa has so much food diversity. We can do more!

Conclusion from Dr Covic: What might be the way forward?

- The diversity of diets must increase to impact nutrition as desired.
- Agriculture must diversify in such a way that this will be possible in terms of long term sustainability.
- Diversification must also be directed to improving livelihoods of the poor.
- Efforts must be made to maintain and introduce more resilient and nutritious African crops as part of agricultural development.
- There must be deliberate and specific development objectives targeting diet quality for this to happen.

Q&A

Q1 - From Mr Musa to Dr de Boef: Does Bill & Melinda Gates Foundation have South Sudan as one of their target countries?

BMGF is primarily working in Nigeria, Tanzania and Ethiopia.

Q2 - From Dr Dannie Romney to Dr de Boef: You mentioned the BMGF approach of improving access to nutritional crops. Do you think that this will lead to a shift in focus within BMGF to include non-staple crops such as vegetables, including indigenous/traditional vegetables in the focus countries?

BMGF has very specific activities in the space of nutrition on legumes and livestock.

Q3 - From Miss Suraya to everyone: Is there an existing reliable global knowledge system/data architecture to measure accurately and reliably the dimensions of SDG2 (hunger-food security-nutrition-agricultural sustainability) in relation to climate change? Is this considered a crucial gap to be addressed?

Dr Civic : There is no particular measurement system or matrix available at the moment. Working in this direction can be useful in Africa, especially on climate variability.

Dr Anderson: there is a huge gap between climate regime and sustainable development goals. SDG13 recognizes that progress on mitigation and adaptation measures are among the most important measures. What we don't have is a monitoring and evaluation component. It is indeed crucial to understand the how the increase of variability will impact upon any of the achievement of any SDG targets.

If we do not strive to understand how the climate variability will be during the next 15 years, this will represent a serious problem. For this reason, having a database with evidences of climate variability and its impact is very useful. SDG2 is a good place to start.

Q4 - From Dr Dennis Rangji to everyone: Other than sorghum, millet and livestock and the four staple crops what other crops should we be considering?

Dr Civic: Sorghum and Millet for sure, root crops. We can find some climate resilience on Sorghum and Millet. Maize, rice and wheat are impacting negatively on the diversity of diets.

Moreover, we cannot provide an answer or crop valid for all countries, but the answer or crop is country- or intra-country specific. Pick the crop which is already in place that has more potential.

Dr de Boef: BMGF has very strong focus on staples (i.e. sorghum, millets and various legumes, root and tubers) and livestock.

Dr Anderson: support SHF to make rational but effective choices and diversity is the key to that. Predicting where global markets and commodities are going to go is the job of policy makers. There is a development

outcome to look at. Research can play a role not only in maintaining the diversity but also increase the choices for the farmer to be able to react to the multiple environmental changes that face.

Q5 - From Mr Max Herriman to Dr Covic: You mentioned that we lack data on crop diversity in Africa, and I suspect this is the case globally. Is there any uniform scale for measuring and reporting agricultural biodiversity that would facilitate comparison across geographic regions and/or temporal periods?

Dr Covic : I am not aware of particular one that is there. Bioversity is working on this.

Q6 - From Niel Raes to everyone: Should there be a stronger focus on vegetables and fruits as these have the highest content of micronutrients and vitamins? There are many reported neglected and underutilised species (NUS).

Dr Covic : Fruit and vegetable (i.e. leafy vegetables) have promising nutrient density. At household level it is easier to deal with fruits and vegetable than other crops.

We should work on nutrition education and on the awareness and value of such crops.

Dr de Boef: Agrees, change in consumption behaviour is a critical message to convey, and need an integrated approach (i.e. health).

Q7 - Question to Dr de Boef: What is the position of BMGF on GMO?

Dr de Boef: BMGF is favorable to this technology especially on the biofortification side. It represents an opportunity.

Q8 - In the last decades most funding concentrated into 4 main crops (maize, wheat, rice and soya). How do we start encouraging more funding and more people to invest their time in looking at how to diversify cropping systems in term of research?

Dr Covic: There was both a research and policy bias towards the few crops (namely maize, wheat, rice and soya). Even the African Union is looking at only 5 key commodities. This program is running across the continent and the implication is that governments look only at few. Zambia is a good example for it: it is a very maize-centered country. Politicians say that if you touch maize you don't win the elections. In Zambia, the entire agricultural policy is driven by one crop. Subsidies for fertilizers for instance are maize-based: if farmers don't grow maize they don't have access to fertilizers.

Those kind of policies do shrink the food basket, and hence the diet. Of course the market follows this approach and policy makers look for a particular crop: that's why the farmer grow that crop and bring it to market. Diversification should thus comply the creation of avenues for market development. For this reason, governments can do more to encourage diversification.

Q9 - Are there any example of “progressing policies” toward a different approach, toward diversification?

Dr Covic: Kenya can be a good example. In Kenya there are smallholder farmers that are diversifying into fruits and vegetable and oriented to export for instance, to European Union markets. There are some policy frameworks that are promoting that. However, the intensity that is needed to sustain export market can be quite an import burden for smallholders.

For this reason, the policies that are needed should be specifically directed to the millions of SH farmers! That’s where the progress will come from. Already developed commercial farmers (large scale) maybe do not really need the support from government and work according to market forces.

Dr Anderson: This move towards agriculture diversity as a driver to improve nutrition needs to be consolidated. Researchers must consolidate it in a way that enables policy makers to prioritize developmental outcomes of investment in agriculture through diversification. Doing that alongside their interest in increasing agricultural productivity for GDP reasons, we might start to see some changes.

So far, across the world, policy makers have been supporting agricultural productivity in the market preferred high productive sectors. But there are developmental outcomes like improved nutrition, in particular nutrition of children, that should be higher up in the policy agenda. Then we can see some positive changes.

The question is how do we achieve that? Is there enough evidence out there? Evidence can play a role on this. They can help policy makers in addressing their agenda.

However, we need more evidence rather than more studies which shows that agricultural diversification could lead to development outcomes including improved diets. We should be aware that a lot of studies does not generate evidence any good!

Dr Covic: One of the limiting factors at the moment is that we are not necessarily generating any useful information for nutrition within existing agricultural development programs. The programs were not designed to see anything on nutrition: Research programs should thus have nutrition objectives clearly addressed in order to move much further from what we are already doing.

Q8 - Email from Nanema Romaric: How could Neglected and Underutilised Species contribute to food security in Africa? What could be the first steps for that?

Dr. Covic: The first step is creating demand for that. SHFs want something they can get to markets.

Q9 - Competition between food and non-food crops.

In developing countries there is resistance toward agriculture for energy production. This is debatable as benefits vary depending on the context of the country.

Q&A conclusive remarks:

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Dr Simon Anderson

The hypothesis that agricultural diversification can improve the livelihood and nutrition of people is acceptable. However, there is the need for generation of evidence to support the idea and encourage investment in agricultural diversification, especially at level of SHFs.

There is the also need to invest on women as process of collective action. This is a very important element to appropriately approach climate adaptation, including nutritional aspects.

Dr de Boef

Even though for BMGF agricultural diversification is not the main focus, it is targeting woman empowerment and climate resilience along with increase of agricultural productivity. This is in part in line with the concept of agricultural diversification.

Dr Covic

Agricultural diversification is critical to meeting long-term nutritional outcomes. If we do not do so, needed nutritional outcomes cannot be achieved.

Multi sectoral approaches to achieve these nutrition development outcomes are also critical.

Looking at climate change mitigation and diversification and nutrition at the same time would be extremely good for positive nutrition outcomes.

Appendix 1 – Questionnaire and responses

<p>Are there national policies that recognise the need for diversifying agriculture (crops/livestock/fisheries), including a climate change strategy or preventing trade restrictions and distortions?</p>	<p>To what extent do women and other vulnerable groups influence or are involved in agricultural diversification initiatives?</p>	<p>If you were developing a sustainable agricultural investment program, which are the 3 main factors you'd consider to maximize its impact on food and nutrition security?</p>	<p>How can regional, international bodies (e.g. AU, EU), donors and other partnerships (especially PPP) contribute to elimination or reducing hunger through agricultural diversification and nutrition-promoting interventions?</p>
<p>Yes, there are policies. Imposition of tax to plastic container/bags has been put in place. The manufacturers promote a reuse of waste plastics through recycling processes. Secondly, government and NGOs promote favorable agriculture. Through bodies such as KAPP who promote land management has been in dry areas of the country</p>	<p>Constitution has given the vulnerable members and women an upper hand in accessing services. They are given priorities since they represent the greater contributors of the economy. Nowadays, the vulnerable access loans, capital, jobs easier than the earlier times.</p>	<ol style="list-style-type: none"> 1. The adaptability of the produce to the ecologic conditions will be the first factor in determining the sustainability of the produce 2. cultural diversity 3. Storage period in preference to disease and pest attacks. This will also include post-harvest practices 	<ol style="list-style-type: none"> 1. Through intergovernmental relations that will foster good PPP policies that do not affect productivity of produces within the countries 2. international bodies are the major players/actors that need to help market organic produces that are produced locally so that they increase productivity that at long run help in food sustainability 3. AU can also help in input proficiency. Dumping of inorganic inputs to developing countries should be a major concern.

		<p>You need education, wedges for market driven land reforms and small scale technology services and platforms. Environmental education is essential so that farmers understand that the mass transfer of the biosphere is all atmospheric; once this is established it is possible to manage watersheds and soils for inter-generational prosperity and stability. The global roulette wheel of depletion and pollution must be replaced with critical Permaculture systems. As well, it must be established that desertification and land degradation have been the dark shadows of civilization for 10,000 years. While climate change is certainly real, it often acts as a red herring in contexts where brutal land use is clearly a locally driven process, and only exacerbated by atmospheric pollution on a global level. As a matter of fact, carbon fertilization can be used as a tool to rebuild the degraded and desertified extensive lands of the world.</p>	<p>We need direct investment and management of agriculture through PPPs; we do not need any more training and visit programs with fleets of vehicles and advisors driving around. T and V is an obsolete extension model.</p>
<p>Yes, of course</p>	<p>Program and policy at national, local levels to support for involvement of groups in accessing and using biological diversity for development</p>		<p>Support and grants potential and feasible proposal in field in developing countries or countries own biological diversity</p>
<p>NO</p>	<p>Less than 5%</p>	<p>increase yield and crop productivity, crop diversification and facilitating women for their work on farm</p>	<p>Time bound, Sustainable Cost efficient, Roles specific integrated Multi stakeholder program with maximum outreach and measurable indicators to assess the impact.</p>

Co-organised
By:



With
support
From:



<p>I assume you mean in my country? No.</p>	<p>I have seen no evidence that women or other vulnerable groups play a significant role in this regard.</p>	<p>I would want to have a reliable and accepted way to measure and report in a usable way to decision-makers on 'sustainability', nutritional production and agricultural biological diversity. Importantly, I would consider resilience to climate change. And finally for the list of three factors, I would consider livelihoods and impact across societies especially on vulnerable groups.</p>	<p>By developing and using a common language with consistent definitions and agreed metrics to facilitate measurement of progress across time and place. By investing in the collection, interpretation and dissemination of relevant data and knowledge in a manner that makes them useful to non-specialist decision-makers.</p>
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<p>Not to my knowledge.</p>	<p>They play an important role, but I am unfamiliar with mechanisms.</p>	<ol style="list-style-type: none"> 1. Focus on optimal growing conditions of vegetables and fruits as these crops have the highest nutritional content. (Leafy) vegetables need to be grown under local climatic conditions because their durability is short. This can be done in a agroforestry scheme combined with fruit trees. 2. The selection of crops should anticipate climate change impacts. Most crops are rain-fed which requires changes in the selection of crops in the future. This is especially important for the selection of fruit trees that are planted today. 3. Networks are needed to disseminate scientific findings so that small-scale farmers are <ol style="list-style-type: none"> a) educated on the effects of climate change on crop harvest, b) allow an objective and optimal selection of crops, and c) are educated on the nutritional values of crops irt health (hidden hunger). 	<p>A lot of knowledge on the traditional use of crops is available but highly scattered, in particular on Neglected and Underutilized Species (NUS) and their Crop Wild Relatives (CWR). This information should be brought together in spatially explicit databases that allow analyses of optimal growing conditions and forecast using predictions of Global Climate Models. These findings should then be disseminated using networks that can reach small-scale farmers.</p>
<p>Very few. More work is needed in this direction. Important to mention the move of the Indian Government who introduced in 2013 minor millets in its Food Security Bill and Public Distribution System; a long-sighted policy action that should be taken as example by other countries! Minor millets (and other so-called coarse cereals by this law amend) will contribute to make India a more resilient and food secure country.</p>	<p>Women are KEY in the diversification. They are the nexus between crop diversity and food/nutrition security of households. They collect, cultivate, harvest, process, sell, cook, conserve seed and knowledge, educate children on healthy food and diets..; their role should be recognized, promoted, celebrated and supported. Words should be followed by concrete commitments in this sense.</p>	<ol style="list-style-type: none"> 1. Map out crop diversity and select priority crops through multi-stakeholder processes aided by modelling tools; 2. Develop value chains of target crops; 3. Raise demand of diverse crops incl. underutilised species through robust education and promotional campaigns involving schools and national media.. 	<p>All to subscribe to a shared vision; build effective synergies among donors, networks, projects, treaties, agreements to support diversification in agriculture; cooperation across sectors also most needed;</p>

<p>No</p>	<p>these groups have the least influence on government policies so their initiatives have to be self-generated</p>	<ol style="list-style-type: none"> 1. Put nutrition at the centre of national food policy 2. Incentivise nutritional agriculture production and markets 3. Educate the public and policy makers 	<p>Recognise the need to switch from one size fits all promotion of staple major crops and use a knowledge and evidence base for diversification</p>
<p>Probably too few. Recognising the need for diversification is only a first step. Following recognition there needs to policies and programmes that facilitate the participation of those who can bring about diversification and a redistribution of resources for investment in processes toward diversification. Local climate adaptation plans (e.g. Kenya, Mozambique) have identified actions related to SHF diversification as priorities.</p>	<p>This question needs answered at different levels. What we see is a reduction of women's involvement as we increase the scale and move up in social hierarchies.</p>	<p>(1) incentives to manage crop and livestock diversity; (2) investments in 'seed' systems that increase access to diverse ranges of crops and livestock; (3) voice and influence for women from the poorest sectors.</p>	<p>Identify and rectify market failures that act as disincentives to diversification. Investments in nutrition awareness. Subsidies for diversification not just productivity.</p>
<p>Not that I know of.</p>	<p>Their involvement is very important but currently not very extensive. There are traces of efforts by organisations that work with marginalised communities on agricultural diversification, such as in Africa.</p>	<ol style="list-style-type: none"> 1. Crop diversification 2. Utilisation or marginalised lands 3. Involvement of youth, women and marginalised communities 	<ol style="list-style-type: none"> 1. Policies and strategies on sustainable crop production intensification and diversification 2. Financing of diversification initiatives 3. To orchestrate integrated farming approach to support a robust agri-food value chain.

	<p>Women and other vulnerable groups are usually most prone to malnutrition - they are often involved in labour intensive and less lucrative works. Being voiceless actors in their families, women are easily being ignored. This is particularly the case in areas where gender inequality is deeply rooted in the culture. On the other hand, men in the family have much greater influence on the direction of the family income source (e.g. what to be grown in the farm). There is no denying that it is essential to reaching, supporting and empowering women in the long run, however it would be more effective to involve the powerful actors (i.e. men) in these projects to achieve more profound outcomes within a shorter timeframe.</p> <p>Farmers need to be educated to understand that agricultural diversification could improve their current agri-food system, which will result in better incomes, better nutrition and better livelihood.</p>	<p>1. Physical potential of area</p> <ul style="list-style-type: none"> • Physical potential in terms of climate, soil, geographical landscape and natural resources etc. for crops not native to the area <p>2. Operational feasibility</p> <ul style="list-style-type: none"> • Farmer's capacity - Manual labour or mechanisation? Will farmers be willing/ able to cope with extra laborious work and/ or extra costs for mechanisation? • Culture – is it culturally appropriate/ accepted when new crops are introduced? Will farmers be willing to grow these crops? Will there be a market for the crops? Will local communities consume the crops? <p>3. Nutrient density and performance of crops</p> <ul style="list-style-type: none"> • Carbohydrates & fats are the major source of energy intake for the poor in order to sustain their daily activities – it is essential to diversify their diets with other macronutrients (protein and healthy fats) & micronutrients (vitamins and minerals) • Crops need to be relatively high yielding and tolerant to extreme weathers to ensure sustainable food and nutritional security 	<p>Local bodies have better understandings of the local challenges that need to be addressed. This will ensure a more efficient implementation of policies.</p> <p>International bodies – freer market and trading (food crops); technology transfer, knowledge and information flows</p>
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