The global temperatures are predicted to increase by +2°C and this will have negative implications on agricultural production due to unpredictable rainfall patterns with increased risk of droughts and flooding. In addition, the world population is expected to reach 9 billion people by the year 2050 hence, the need to double food production from the current. By 2030, the world will need 50% more food and energy and 30% more fresh water to sustain the human population.

There is need for more scientific research to breed crops and devise cropping systems resilient to the future hotter climate besides paying attention to underutilized crops. There has been no plan yet as to how Agricultural Diversification can contribute to the United Nations SDA 2030. It is against this backdrop that Crops For the Future (CFF) recognized the need for a Global Action Plan for Agricultural Diversification initiative to meet the needs for a hotter world. The December 7, 2015 declaration on Agricultural Diversification in Paris was the first step in delivering GAPAD.

**The Roundtable Forum on GAPAD SDG2**

The Global Action Plan for Agricultural Diversification (GAPAD) Roundtable Forum was held in Nairobi, Kenya at the Safari Park Hotel 25th - 26th October 2016. The theme of the forum was “How to promote the contribution of Agricultural Diversification to SDG2 (Zero hunger) of the United Nations (UN) Sustainable Development Agenda (SDA) 2030”.

The event was organized by CABI, CFF and AVRDC. Organizations represented at the event included CABI, World Vegetable Centre (AVRDC), AIRCA, Crops For the Future (CFF), Africa Union (AU) Commission, International Food Policy Research Institute.
(IFPRI) and a former Senior Food security and Climate Change Advisor to the Presidency, Government of Kenya.

I had the privilege to attend this forum by courtesy and mentorship of Prof. Ruth Oniang’o, a board member at CABI and founder of the Rural Outreach Program (ROP) - Africa. The sessions comprised highly interactive presentations and breakout discussions as summarized below.

1. **WELCOME ADDRESS** by Director General, Development, CABI – Dr. Dennis Rangi
   - GAPAD aims at transforming Agriculture for good.
   - Only four major crops (wheat, rice, maize and soybean) supply more than three-quarters of the world’s food supply and these crops are grown in limited number of exporting countries mainly as monocultures. These crops are highly dependent on inputs such as fertilizers and irrigation.
   - There is need for a wider range of crops and agricultural systems (diversification) that will provide new opportunities for more environmentally sustainable agricultural systems, livelihood options for farmers and integration of community knowledge with scientific evidence and novel technologies.
   - All GAPAD actions are intended to contribute to the eradication of poverty (SDG 1).
   - GAPAD focuses on five specific SDG’s (2,7,12,13 and 15) identified in sustainable development agenda (SDA) 2030 that directly relate to the diversification of agriculture and SDG 17 for supporting global partnerships to achieve these goals.

2. **OFFICIAL OPENING ADDRESS** by H.E. Peace Rhoda Tumusiime, AU Commissioner for Rural Economy and Agriculture
   - Many policy makers make decisions without reference to research information. For example there continues to be a lot of research on orange fleshed sweetpotatoes yet the findings have not caught the eyes of policy makers.
   - African research in agriculture, food and nutrition should respond to CAADP (Comprehensive Africa Agriculture Development Programme) requirements.
African heads of state have made commitments to end hunger by 2025 through the CAADP strategic implementation framework by

- Working with strategic partners
- Increase and reprioritization of investment in agricultural development
- Complement measures for increased food and agricultural productivity with social protection with special attention to nutrition while ensuring environmental sustainability

3. THE ROLE OF AGRICULTURAL DIVERSIFICATION IN A CHANGING CLIMATE by Dr. Dyno Keatinge (AIRCA)

Association of International Research and Development Centers for Agriculture (AIRCA) enjoys worldwide partnerships with the following organizations headquartered in various countries.

1. International Network for Bamboo and Rattan (INBAR) – Beijing, China
2. World Vegetable Centre (AVRDC) – Taiwan
3. International Center for Integrated Mountain Development (ICIMOD) – Kathmandu, Nepal
4. Crops For the Future (CFF) – Kuala Lumpur, Malaysia
5. International Centre for Biosaline Agriculture (ICBA) – Dubai, United Arab Emirates
6. International Centre for Insect Physiology and Ecology (ICIPE) – Nairobi, Kenya
7. International Fertilizer Development Centers (IFDC) - Muscle shoals, Alabama
8. Centre for agriculture and Bioscience International (CABI) - Wellington, United Kingdom
9. Tropical Agricultural Research and higher Education Center (CATIE) – Cartago, Costa Rica

AIRCA’s 9 member organizations are committed to helping partner countries in achieving the sustainable development goals (SDG’s) through research and knowledge to strengthen capacities for sustainable improvements to incomes, food and nutrition security.

Focus is on supporting smallholder agriculture within healthy sustainable and climate-smart landscapes.

AIRCA aims to contribute to SDG2 through worldwide partnerships in addressing the strategic areas below:

- Shifting towards healthier diets
✓ Ensuring supply of safe and nutritious food
✓ Zero hidden hunger
✓ Double productivity and incomes
✓ Women empowerment
✓ Strengthening capacity for climate change adaptation
✓ Maintaining genetic diversity of seeds and genetic resources

4. GAPAD ROADMAP—by Prof. Sayed (CFF)

GAPAD aims at transforming agriculture for good. This will be achieved addressing 6SDGs through the following scheduled activities:

<table>
<thead>
<tr>
<th>SDG</th>
<th>ACTIVITY DATES</th>
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</thead>
<tbody>
<tr>
<td>SDG 2: Zero hunger</td>
<td>Agricultural diversification can improve nutrition, enhance food security and help alleviate poverty.</td>
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<tr>
<td></td>
<td>Webinar 20th September 2016</td>
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<td>Roundtable Forum NAIROBI, KENYA 25-26 October 2016</td>
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<tr>
<td>SDG 7: Affordable &amp; clean energy</td>
<td>A wide range of non-food crops can provide raw materials for renewable energy.</td>
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<td>Webinar 16th March 2016</td>
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<td>Roundtable Forum KUALA LUMPUR, MALAYSIA 21-22 March 2016</td>
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<tr>
<td>SDG 12: Responsible consumption and production</td>
<td>Diversified agricultural practices optimize the use of natural resources and reduce the need for costly inputs</td>
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<td>Webinar Quarter 1 2017</td>
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<td>Roundtable Forum Venue to be determined 2017</td>
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<tr>
<td>SDG 13: Climate Action</td>
<td>Agricultural diversification can help meet the UNFCCC target for global warming</td>
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<td>Planning Meeting MARAKKESH, MOROCCO 7-18 November 2016</td>
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<tr>
<td>SDG 15: Life on Land</td>
<td>More diverse agricultural systems can help withstand the impacts of climate change</td>
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<td>Webinar Quarter 2 2017</td>
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<tr>
<td></td>
<td>Roundtable Forum Venue to be determined 2017</td>
</tr>
<tr>
<td>SDG 17: Partnerships for the goals</td>
<td>A partnership to achieve the global plan for agricultural diversification</td>
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<tr>
<td></td>
<td>Planning Meeting DUBAI, UNITED ARAB EMIRATES December 2016</td>
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Global launch of GAPAD expected to take place in July 2017 in Malaysia.
5. WEBINAR ON SDG 2 FEEDBACK by Dr. Oduor

- The webinar was held on 20th September 2016. The purpose of the webinar was to stimulate discussion on ending hunger and achieving food security.
- Some of the feedback included
  - Gathering sufficient evidence to show benefits of diversification (crops and livestock) in terms of health, nutrition, income etc.
  - Formulating / strengthening of systems and policies that provide better access to basic infrastructure, markets and inputs such as seeds and fertilizers.
  - A healthy debate on production of food vs cash crops; food crops for food vs food crops for non-food uses (e.g. biofuels).
  - Empowering and investing in women farmers to have greater access to resources and opportunities, as well as more control over decisions affecting their farms and families.
- Realizing that small farm sizes, low technology, low capitalization, and non-climate stressors will tend to increase, exposure and sensitization are required

6. ENDING HUNGER AND MALNUTRITION: A case of Africa by Dr. James Nyoro

- Presentation made on current status, causes of hunger and malnutrition, further challenges for food and nutrition security.
- There have been positive developments in sub-Saharan Africa. For example, number of people living below $1.25 per day has reduced by 23%, number of people suffering from hunger has reduced by 31% (between 1992 – 2015).
- Failed and non-sustainable global efforts, lack of political will to support agricultural developments, underinvestment and poor coordination of research and development plus uncoordinated global and national efforts are some of the negating factors in the fight against hunger.
- Growing population, soil fertility, climate change, increasing imports of key food commodities pose further challenges to food and nutrition security.
- Improved governance, public-private partnerships for agri-food system strengthening, land tenure reforms, rural financing systems expansion and promotion of social protection are some of the drivers to achieving food and nutrition security in sub-Saharan Africa.
Delegates challenged to read the book “How Asia Works”. In this book, three critical things are worthwhile for adoption and emulation; land tenure system, rural financial systems and promotion of social protection.

7. **INTENSIFYING SUSTAINABLE AGRICULTURAL PRODUCTIVITY** by Dr. Timothy Sulser (IFPRI)

- Some of the positive milestones from 20+ years of gender research at IFPRI include:
  - Household decision making
  - Assets access, control and ownership
  - Closing gender gaps
  - Land rights
  - Legal institutions and governance
  - Social capital
  - Sustainability
  - Climate change and adaptation
  - Nutrition and health
  - Violence against women
  - Empowerment
  - DATA

8. **GENETIC DIVERSITY FOR SUSTAINING AGRICULTURAL DIVERSITY** by Dr. Thomas Dubois (WVC)

- Agricultural diversity will expand current food systems through increasing species diversity and creating a more resilient agriculture ecosystem that include new crops for food and non-food uses.

- World Vegetable Centre genebank contains the world’s largest public collection of vegetable germplasm mostly in the form of seed.

- There are over 61,952 accessions from 442 species of vegetables.

- The main challenge is that donors aren’t willing to fund the maintenance of gene bank.
9. INCREASING INVESTMENTS, FACILITATING TRADE AND STRENGTHENING COMMODITY MARKET SYSTEMS by Dr. Roger Day (CABI)

- Investments should be increased in rural financing, research and development and extension services

- Trade – export subsidies to boost trade
  - Intraregional trade is very low in Africa compared to outside Africa hence need to create a balance.

10. NUTRITION by Prof. Ruth Oniang’o

- Communication is not adequately funded

- There is need to move research from the laboratory to the field.

- African diet was the best and still the best. Maize and wheat are not indigenous to Africa. Many studies have found a lot of maize consumed to be highly susceptible and infested with aflatoxin.

- Gender input in feeding the world no longer a debatable issue.

- Resources should be put where knowledge is (Nutrition).

- Nutrition is currently a big issue globally. A lot of capacity building is required. For instance Kenya does not have enough trained nutritionists because nutrition as a course was initially never considered very important.

- There is need to move from sustenance to nourishment.

- Mono-cropping is a modern phenomenon. African families have always practiced mixed cropping for a long time.

- Consumption of three meals per day is also a modern phenomenon.

- The African continent has very many indigenous vegetables whose nutrition value cannot be underestimated.
11. BREAKOUT DISCUSSIONS ON DEFINITION AND CHALLENGES OF ACHIEVING TARGETS OF SDG2 - All delegates

- Breakout discussions were focused on the areas below;
  - Targets 2.1 and 2.2 - Hunger and malnutrition
  - Targets 2.3 and 2.4 - Agricultural productivity
  - Target 2.5 - Genetic resource and diversity
  - Targets 2a, 2b and 2c - Investment, Trade and markets

- Groups discussed proposed action plans (as regards the above targets) for GAPAD on SDG 2. Action plans entailed the activities, actors (responsible stakeholders), timelines, monitoring and evaluation indicators and possible risks and their mitigation measures.

- Prof. Ruth Oniang’o and I participated in the discussion group on Targets 2.1 and 2.2 – Hunger and Malnutrition.

- A final document will be compiled with all points of discussion as the Roundtable forum report on SDG2.

END