OVERVIEW OF FOOD AND NUTRITION PRIORITIES FOR AFROFOODS

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WHAT IS AFROFOODS?

• African Network of Food Data Systems (AFROFOODS)
• Established in September, 1994 under the FAO/UNU project
• Aim: to coordinate at the regional level (AFRICA) the activities of the International Network of Food Data Systems (INFOODS),

• INFOODS promotes food composition activities globally.

• AFROFOODS is made up of four (4) Sub-regional Data Centres, namely:

  ➢ CAFOODS.....Central African Food Data Systems
  ➢ ECSAFOODS...East Central and South African Food Data Systems
  ➢ NAFOODS......North African Food Data Systems
  ➢ WAFOODS.....West African Food Data Systems
Objectives of AFROFOODS....1

• 1. Establish, maintain and develop regional food composition database network and regional steering committee;

• 2. Work with countries in the region to improve the quality and availability of food composition data in their countries;

• 3. Organize training on food composition to improve the national capacities of the different countries;

• 4. Assist countries raise their profile on food composition and biodiversity so that government will support and fund these activities as part of their regular programme activity;
Objectives of AFROFOODS....2

• 5. Carry out advocacy and workshops on the importance of food composition in ensuring food and nutrition security, preventing non communicable diseases and promoting well-being;

• 6. Participate, support and network with local, and international organizations, agencies and non-governmental organizations (NGOs) who have projects and programmes that would improve food and nutrition security and promote health.

• 7. Write funding proposals and submit them together with national INFOODS focal points to donor agencies;

• 8. Present report of regional data centres in national, regional and international conferences and propose food composition sessions to conference organizers.
Food and Nutrition Challenges of Africa...1

African has been referred to as: “a land of promise with great nutrition challenges” and “as the home of most nutritionally insecure people in the world” (UNDP working paper, 2012)......a paradox.

According to Johns (2002), Africa has rich biodiversity with over 150 food crops of which 115 are indigenous.

Despite the rich biodiversity of the African continent and the tremendous strides in food production, Africa is plagued with the problem of food insecurity, hunger, malnutrition and disease, all contributing to the total disease burden and Disability Adjusted Life Years (DALYs).
• Food insecurity and malnutrition have remained serious public health issues in Africa.

• Food security is determined by the availability, accessibility and utilization of food resources.

• Food insecurity as measured by the Food Insecurity Experience Scale (FIES) shows that 7.5% (406m people) of the world population, 26% (153m people) of sub-Saharan Africans (SSA) aged 15 years and above suffered from severe food insecurity in 2014/2015; the lowest rate being in Southern Africa (20%) (FAO, 2017).
Fig. 1: Prevalence of severe food insecurity across sub-region in sub-Saharan Africa (SSA) (FAO, 2016; Voices of Hunger Project. 2016)
Food and Nutrition Challenges of Africa_3

• In terms of food accessibility, the capacity to have sufficient resources to obtain appropriate food for a nutritious diet, the average per capita income in SSA (US$3,400 in 2014) is far below the world average (US$14,500).

• African countries have also been known to be relying on import to fill 15-20% of cereal availability, thus diverting money from other development agenda (FAO, 2017).
Fig. 2: GDP per capita (in thousands US$) (FAO, 2016)
Food and Nutrition Challenges of Africa_4

• Food utilization is the ability of the human body to ingest and metabolize food (Gross et al., 2000), so that the body can make optimal use of the nutrients for its different functions.

• However, “sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, diversity of the diet and intra-household distribution of food.

• Combined with good biological utilization of food consumed, this determines the nutritional status of individuals” (Ruel, 2013).
Fig. 3: Triple Burden of Malnutrition
Food and Nutrition Challenges of Africa_5

• **Triple burden of malnutrition**: Under nutrition, micro nutrient deficiencies and the emerging diet-related non communicable diseases (cardiovascular diseases, hypertension, diabetes, cancers, etc) continue to pose serious health challenges on the continent.

• These have affected both economic and human development in Africa. The causes of these problems are complex even as their solutions are.
Fig. 4: Share of stunted children by sub-region, 2015-2016

Fig. 5: Share of wasted children by sub-region, 2015-2016
Fig. 6: Prevalence of vitamin A deficiency in pre-school children

Fig. 7: Prevalence of anaemia in WRA in the world

Fig. 8: Prevalence of anaemia across the subregions
Fig. 9: Prevalence of overweight (OW) and obesity (OB) among adolescents and adults by sub-region (WHO Global Nutrition Report, 2-15; IFPR, 2015)
The priorities of AFROFOODS should be in line with the immediate and long-term food and nutrition challenges of Africa.

It should also be in line with the various developmental goals, especially, the Sustainable Development Goals (SDGs) for 2030 and the Zero hunger target set in the African Union (AU) Malabo Declaration for 2025.

The 2008 Lancet series identified the first 1000 days of life as a critical window for intervention to prevent malnutrition in infants and young children (IYC).
The Global Targets

**Stunting**
TARGET: 40% reduction in the number of children under-5 who are stunted

**Anaemia**
TARGET: 50% reduction of anaemia in women of reproductive age

**Low birth weight**
TARGET: 30% reduction in low birth weight

**Childhood overweight**
TARGET: No increase in childhood overweight

**Breastfeeding**
TARGET: Increase the rate of exclusive breastfeeding in the first 6 months up to at least 50%

**Wasting**
TARGET: Reduce and maintain childhood wasting to less than 5%
Linking food composition data with achieving these goals and targets?....1

It has been generally established that improving nutrition is a catalyst for achieving goals throughout the SDGs and five core areas in the SDGs have been identified as where nutrition can make contribution to and also benefit from (Development Initiatives, 2017). These include:

1. **Sustainable food production**: eating healthy is necessary to ensure that food production systems are more sustainable. At the same time, nutrition outcome depends on **sustainable food production**.

2. **Strong systems of infrastructure**: **Good nutrition** is infrastructure for economic development. Stunting disrupts brain development and negatively affects GPD growth.
Linking food composition data with achieving these goals and targets?......2

3. **Health System**: Good nutrition reduces the occurrence, frequency, and severity of illness and thus lessen the burden on the health system. An effective health system will improve nutrition outcomes by promote appropriate IYCF, supplementation, therapeutic feeding, nutrition counseling to manage overweight, underweight and screen for diet-related NCDs.

4. **Equity & inclusion**: Well nourished children are 33% more likely to escape poverty as adults. Lack of equity and inclusion in the distribution of wealth, education and gender will make it difficult, if not impossible to solve the problem of malnutrition. Women empowerment is needed to ensure they can take care of themselves and their children.
Linking food composition data with achieving these goals and targets?......3

5. **Peace & stability**: investing in food and nutrition resilience promotes less unrest and more stability. Conflict and protracted crisis, on the other hand, will lead to famine and exacerbate food insecurity.
The way forward

Solution to the nutritional problems of Africa, requires integrated, and multi-sectoral approaches. Several approaches are in place, however, recently Global Nutrition Reports have recognized that data gaps have hindered accountability and progress.

One of the data gaps identified is the lack of knowledge of what people are eating, which makes it difficult to design effective interventions to improve diets/nutrition (Development Initiatives, 2017).

This is where food composition data becomes very relevant. Good quality food composition data are needed to build the dialogues, partnership and actions needed to end malnutrition in all its form.
Uses of Food Composition Databases

• Relevant, reliable and up-to-date food composition data are of fundamental importance in nutrition, dietetics and health, but also for other disciplines such as food science, biodiversity, plant breeding, food industry, trade, and food regulation” Barbara Burlingame (on time FAO official).

• It is fundamental for the following nutrition activities: nutritional epidemiology, normal/therapeutic diet formulations, nutrient intake assessment, nutrition counseling/consumer education and food-based dietary guidelines.

• It is use to inform policy in nutrition, health and agriculture
Priority food composition data for AFROFOODS

**Data on biodiversity:**

- High food and nutrition insecurity is attributed to lack of crop diversification (Bekunda et al., 2010)

- People in developing countries obtain energy & nutrients from starchy staples, with less access to nutrient-rich sources of food such as animal proteins, fruits and vegetables.

- Africa has a rich biodiversity with over 150 food crops, of which 115 are indigenous (Johns, 2002), neglected, underexploited and underutilized.

- It has been shown that these indigenous/traditional/underutilized plants can offer alternative source of micro-nutrients and health-promoting secondary plant metabolites (Baldermann et al., 2016), thus mainstreaming them into local food systems will help alleviate malnutrition.
Furthermore, data on the variations due to variety, cultivar or breed are lacking in Africans’ food composition databases. This leads to errors in nutrient intake estimation, and consequently wrong conclusion and policies.

**Data for Nutrition-Sensitive Agriculture:** Nutrition-sensitive agriculture is now on the spotlight. The nutrient content of food is one of the criteria agricultural policy makers and practitioners use to ensure that better and more nutritious crops varieties are available for consumption.

**Data for NCD prevention and control:** The consumption of saturated fats, trans-fatty acids, sugar, salt has been implicated in the continuous rise of NCDs in population groups. Data on these components are lacking in most food composition databases in Africa. Data on dietary fibre, which is beneficial for the control of metabolic syndromes are also lacking in African FCDB and need to the prioritized.
Data on bioactive compounds: these are also lacking in FCDBs found in Africa. It is now known that the foods we eat contain non-nutritive components, some of which have beneficial effects on man, while some like pesticides, contaminants, including aflatoxins, and by products of food processing (trans-fat and acrylamide) can be harmful and have also been implicated in the cause of some cancers.

Data on New/processed food: Due to globalization, urbanization and technological advancements, African markets are flooded with so many new, processed and fortified foods most of which are not in FCDBs. This leads to either over-estimation or under-estimation of nutrient intakes of population groups, especially when not captured in FCDBs.
**Development/upgrade of databases:** Many African countries do not have country-specific or regional FCT/DBs. In most countries where they exist, they are very old (see table). In view of their usefulness, there is an urgent need to develop new or update existing databases within Africa. This will eliminate errors of over- and under-estimation due to geographical variations in food composition.

New and updated composition databases should include recipes. Recipes vary a lot and there is need for their harmonization and standardization. There is need to include edible coefficients and yield and retention factors which are missing in most of the FCT/DBs.

Another priority area food description. This will help to harmonize the name of similar food with different names in different countries/regions.
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<td><strong>Table 1:</strong> AFRICAN COUNTRIES WITH FOOD COMPOSITION DATABASE WITH DATE OF PUBLICATION</td>
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<tr>
<td>1. CAMEROUN</td>
<td>1957</td>
<td>11 NIGERIA</td>
<td>2017</td>
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<td>2. CONGO DEM. REPUBLIC</td>
<td>1966</td>
<td>12. SENEGAL</td>
<td>1961</td>
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<td>5. GAMBIA</td>
<td>1996</td>
<td>15. TANZANIA</td>
<td>2008</td>
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<td>6. GHANA</td>
<td>1983</td>
<td>16. TOGO</td>
<td>19….*</td>
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<td>7. KENYA</td>
<td>1993??</td>
<td>17. TUNISIA</td>
<td>1952*</td>
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<td>8. LESOTHO</td>
<td>2006</td>
<td>18. UGANDA</td>
<td>2012</td>
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<td>10. MOZAMBIQUE</td>
<td>2011</td>
<td>20. ZIMBAWE</td>
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Conclusion

• One of the major functions of AFROFOODS is to facilitate the production of FCT/DBs in Africa.

• The place of a comprehensive FCT/DB in solving the enormous food and nutrition problems in Africa cannot be overemphasized.

• The food and nutrition priorities of AFROFOODS are based on the goals and targets set in the global and regional development agenda.

• In order to successfully address Africa’s food and nutrition challenges, AFROFOODS priorities are focused on filling the existing gaps in the FCT/DBs in Africa.
Conclusion...2

• Good quality data are needed for biodiversity, underutilized food resources, bioactive components, new, processed and fortified foods, dietary fibre, vitamins, fatty acids, contaminants, etc.

• The filling of these gaps will require capacity building, provision of certified laboratories, funds for operation and maintenance among others. These resources are also limited in Africa.

• It is hoped that with the assistance of funding agencies and partners, some or all of these priorities will be achieved.
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