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Capacity building in food composition for Africa

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ABSTRACT

Capacity building in food and nutrition involves more than formal training and individual development. Such a process is long term and continues, requiring lasting mentorship, coaching and leadership development, including individual commitment to continued self-development. It expands to include the development of knowledge and skills of an individual within his/her organizational or institutional arrangements, and requires buy-in and support from his/her institution or organization, as well as other funding bodies involved in agriculture and health. It needs to be supported by government and be part of the regional and international agenda for agriculture and health.

Under the auspices of International Network of Food Data Systems (INFOODS), an African Network of Food Data Systems (AFROFOODS) was established in September 1994, and a number of training courses, educational and scientific publications, posters, presentations and visits were hosted, organized and delivered with the aim to build enthusiasm, long term commitment and capacity in food composition within the AFROFOODS region. Formal training and human resource development were the major focus to take food composition forward in Africa. Significant progress was made in food composition activities, but constraints including lack of organizational and institutional commitment and financial support are straining the pace of progress.

1. The importance of food composition for Africa

Millennium Development Goal One set the target to 'halve, between 1990 and 2015, the proportion of people who suffer from hunger' (United Nations, 2010). Currently, 820 million people are affected by hunger in developing countries, and particularly in Africa, these numbers are increasing, moving further away from this goal. Improving food security is important for global reduction of hunger and poverty, and for economic development (Postnote, 2006). Food security and insecurity are terms used to describe whether or not people have access to sufficient quantities and quality of foods. Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life (FAO, 2003).

Albert Einstein (1879–1955) said: "We can't solve problems by using the same kind of thinking we used when we created them".

To increase knowledge on food quality in the aim to combat food insecurity, data on the composition of the foods are required. This need has not been significantly prioritized in most developing countries, and is overshadowed by many other areas including public health nutrition and agricultural economics. Food quality inherently includes the nutritional quality of the food, i.e. the type and amount of nutrients present in the food source (nutritional composition). The International Network of Food Data Systems INFOODS is a joint Food and Agricultural Organizations (FAO) and United Nations University (UNU) project, launched in 1984 to promote international cooperation in the acquisition and interchange of quality data on the composition of foods, in forms appropriate to meet the needs of government agencies, nutrition scientists, health and agriculture professionals, policy makers and planners, food producers, processors and retailers, and consumers (FAO, 2011). Expected outcomes of network activities include to maintain closer intercountry linkages, and increase interaction between member countries, and to establish and further develop international linkages with other regional centres. Furthermore it aims to develop regional databases which will help fulfill the data needs of member countries, in particular of those where food composition data are lacking or not completely accessible (FAO, 2011).

Under the auspices of FAO, the World Health Organization (WHO), UNU and the University of Ghana, an organizational meeting of AFROFOODS (the African regional food composition database network) was held in September 1994 in Ghana. This meeting was held to instate national networks for promoting, coordinating and improving food composition work and creating national food composition databases. To stimulate the production of new food

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composition data, the FAO and UNU joined efforts through activities such as providing much needed fellowships for training participants in the different regions. During a follow-up meeting of AFROFOODS in Dakar (June 2000) sub-regions were re-divided based on language, food culture, availability and distribution. These sub-regions include the Eastern, Central and Southern African Food Composition Data System (ECSAFOODS), the Western African Food Composition Data System (WAFOODS), Central African Food Composition Data System (CAFOODS), and the Northern African Food Composition Data System (NAFOODS) (FAO INFOODS, 2013). A plan of action at national, sub-regional and international level was established, and various working groups were appointed (Tables 1 and 2).

In the past, FAO has contributed to a series of historical food composition tables between the 1950's and the 1980's, including the Food composition tables for international use (1949), Food composition table for use in Africa (1968), Food composition table for use in East Asia (1972), Table de composition des aliments & l'usage (1976) and Food composition tables for the near east (1982). A more recent accomplishment for food composition in Africa, was the publication entitled Food Composition of selected foods from West Africa (Stadlmayer et al., 2010) containing nearly 200 foods, and its update West African Food Composition Table (Stadlmayr et al., 2012) containing 472 foods and 28 components. The various other food composition tables currently available for African countries are listed in Table 3. Many of these are only available at a single institution in out-dated, faded, paperback formats, and most contain limited traditional foods or own data, as most data values are borrowed from developed country-databases, e.g. the USDA Food Composition Database (USDA, 2013).

Table 1
Plan of action for food composition at different levels.

Level	Activities
National level (country)	• Establishing a national network • National coordination of existing data • Sensitisation meeting • Generation and compilation of data • Validation of existing data • Communication • Human resources training needs
Sub-regional level (ECSAFOODS, WAFOODS, CAFOODS, NAFOODS)	• Establish new regional groupings • Establish new sub-regional data centres • Establish steering committees in each sub-region • Establish working groups • Regular meetings for sub-regional centres
International level (AFROFOODS)	• Establish linkages with INFOODS • Encourage publication of findings of working groups in Journal of Food Composition and Analysis • Encourage and support attendance in international training courses by national and sub-regional members

Table 2
Working groups within AFROFOODS.

Working group	Functions	Chair	Member countries
Working group on training	• Identify training needs and institutions for training • Arrange training workshops and courses • Cooperate in seeking funding for these purposes	Zimbabwe	Ethiopia, Ghana, Nigeria, Senegal, South Africa, Tunisia
Working group on analytical procedures	• Make recommendations for standardized methods • Promote, identify and establish comparability of results • Arrange participation in regional and international exchange of certified reference materials and standard local food samples • Cooperate in seeking funding for these purposes	Kenya	Benin, Cameroon, Ethiopia, Ghana, Madagascar, Senegal, South Africa, Tanzania, Zambia
Working group on communication and dissemination	• Preparation of a newsletter • Dissemination of information • Advocacy for improving national communication capabilities	Nigeria	Cameroon, Ethiopia, Senegal, South Africa, Tunisia, Zimbabwe
Working group on the use of food composition databases	• Increase awareness of the uses of food composition data • Facilitate understanding of the uses of sub regional and national food composition data bases • Explore of innovative uses of food composition data • Promote the sustainability of national food databases	Ghana	Benin, Kenya, Lesotho, Madagascar, Mali, South Africa, Tanzania, Uganda, Zambia
Working group on food legislation, standards and regulations	• Encourage national standards, regulations and specifications that will safeguard and improve the quality of the food supply • Secure legal backing through appropriate legislation • Encourage the adoption of standardized nutritional labelling of foods	Uganda	Benin, Ethiopia, Ghana, Kenya, Mali, Morocco, Tanzania, Zambia, Zimbabwe
Working group on data compilation	• Providing advice relating to recommendations and resolutions of expert committees • Standardization of source codes and analytical codes specific to the region • Establish system linkages and interchange of data among INFOODS regions	South Africa	Cameroon, Ethiopia, Gambia, Kenya, Madagascar, Mali, Nigeria, Senegal