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BIODIVERSITY AND NUTRITION

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I. INTRODUCTION

1. At its Fourteenth Regular Session the Commission on Genetic Resources for Food and Agriculture (the Commission) highlighted the importance of biodiversity for food and nutrition and noted that its potential role in nutrition is underexplored and undervalued. It welcomed the progress FAO had made in awareness raising and requested FAO to continue its leading role in the Cross Cutting Initiative on Biodiversity for Food and Nutrition. The Commission appreciated that food biodiversity, in the context of the Initiative, regarded genetic resources as including neglected and underutilized species and varieties, and noted that improved information on the nutrient contents of such plants and animals could facilitate new market opportunities.
2. The Commission requested FAO to further develop its work on biodiversity and nutrition, recognizing the importance of linking food biodiversity and the environment sector to human nutrition and the health and agriculture sectors. The concept that nutrients in food and whole diets should be explicitly regarded as ecosystem services. It stressed the need to strengthen collaboration with relevant organizations and fora and to avoid duplication of work.
3. The Commission requested FAO to continue to incorporate biodiversity into relevant nutrition activities and to further mainstream nutrition within its work on biodiversity. It requested FAO, upon availability of funds, to develop *Draft Guidelines for Mainstreaming Biodiversity into Policies, Programmes and National and Regional Plans of Action on Nutrition* (Draft Guidelines). It requested its intergovernmental technical working groups to review the Draft Guidelines and to provide recommendations for the Commission's consideration at its Fifteenth Regular Session.
4. This document gives a brief overview of the Draft Guidelines and presents them in *Appendix I*.

II. RATIONALE

5. The importance of consuming diversified diets which can provide all the nutrients and non-nutrients needed to sustain healthy lives is well-understood but it is challenging for many to achieve this quality of diet. Increased dietary diversity contributes to healthy growth, development and maintenance and may help to prevent non-communicable diseases such as diabetes, heart diseases and some cancers.
6. FAO recognizes that improving nutrition requires a multi- sectoral approach and a range of interventions. Some nutrition interventions target the immediate causes of malnutrition and address their symptoms by supplementing nutrient intakes through various means, promoting breast-feeding and addressing the immediate causes of undernutrition (but not the root causes). Other interventions aim to improve diets and prevent malnutrition through policies and programmes that ensure safe, healthy, affordable, accessible, and sustainable food supply to all people and advocacy and public awareness for the promotion of production and consumption of foods to enhance dietary diversity. A variety of interventions are essential to achieve nutritional well-being in a sustainable manner. While efforts to treat malnutrition are commonly led by the health sector, ensuring access to nutritious foods and diversity in diets, the foundations for achieving well- nourished populations over time, must be carried out within the food and agriculture sector, often in collaboration with the health and other relevant sectors. The mainstreaming of biodiversity for improved food and nutrition security can be carried out within the context of a range of nutrition policies and programmes.
7. The Draft Guidelines have been developed following a review of nutrition policies, programmes and actions to improve nutrition, with a view to identifying opportunities and addressing the constraints for mainstreaming biodiversity into such endeavours. A desk review of country experiences with promoting biodiversity and improved nutrition in different regions of the world was also carried out in preparation of the Draft Guidelines.
8. The Draft Guidelines build on an analysis of existing experiences with integrating biodiversity into nutrition programmes throughout the world. Although the experiences are still limited, they encourage moving towards increased use of food biodiversity within local/traditional food systems in

national and regional programmes on nutrition. The strategies and actions employed in these programmes are based on the evidence of the benefits of using biodiverse food to address malnutrition issues. The following interventions are used: A) Implementation, aiming at implementing activities that integrate biodiversity in nutrition programmes; and B) Awareness, aiming at increasing the awareness of the general public and of the different stakeholders on the importance of biodiverse food in addressing malnutrition issues. However, it should be noted that there is still a need to further strengthen the evidence-basis of biodiversity for nutrition by generating, compiling, disseminating and analysing relevant data.

9. A number of nutrition programmes have successfully demonstrated that food biodiversity from local/ traditional food systems can be mobilized and used to engender food and nutrition security within communities. The acquisition policy of national school meal programmes, for example, may be used to increase the demand for fresh locally produced foods and for the diversification of food resources. Complementary feeding programmes may stress the importance of making use of the diversity of local/ traditional foods. Similarly, home garden programmes which play a vital role for food and nutrition security of households, may emphasize the need to use the full diversity of locally available resources. The improvement of traditional varieties or the improvement of related technologies or marketing mechanisms may help to increase the production of underutilized varieties. Finally, awareness-raising and information campaigns may help consumers to understand the nutritional value of these foods and thus help to increase the demand for and the production of foods with better nutrient profiles at larger scale. FAO is supporting projects in a number of countries that are putting these ideas into practice.

10. The Draft Guidelines aim to stress the role of biodiversity of plants and animal resources (the diversity of species, sub-species, varieties, cultivars and breeds of plants and animals used as food) to addressing malnutrition in all its forms.

11. The Draft Guidelines include recommendations for research and analysis of the nutritional value of plants and animals that have been underutilized in food systems. The Draft Guidelines recognize that traditional diets may be resources to expand the use of a greater variety of plants and animals. In other instances, cultural perceptions may be obstacles to increased use of food biodiversity and education and awareness raising efforts may be needed to increase consumption of these foods. Increasing the contribution of biodiversity to nutrition programmes may focus on institutional settings such as schools where children and their families learn to appreciate these foods. Improved production and processing methods as well as better marketing practices will be required to scale up the use of food biodiversity and to allow these products to be competitive. The Draft Guidelines include policy recommendations to facilitate the production and consumption of food biodiversity.

12. The Draft Guidelines aim to provide a tool for the promotion of actions to facilitate the greater use of biodiversity to deal with various forms of malnutrition and improve the nutritional status of populations worldwide. The use of such foods will contribute to more diverse diets and could become a key element to stimulate more resilient food systems. The Draft Guidelines can assist FAO and its partners in planning nutrition strategies that make use of a wider range of plant and animal food.

13. The implementation of the Draft Guidelines at national level will however depend on the data available on the biodiverse foods consumed locally and on the possibilities to alter existing agricultural policies and programmes, e.g. seed availability, support, advocacy, consumer demand and marketing measures.

III. GUIDANCE SOUGHT

14. The Working Group may wish to review the *Draft Guidelines for Mainstreaming Biodiversity into Policies, Programmes and National and Regional Plans of Action on Nutrition* and recommend that the Commission endorse them.

15. The Working Group may further wish to recommend that the Commission:

- i. Request FAO to publish and widely distribute the *Guidelines for Mainstreaming Biodiversity into Policies, Programmes and National and Regional Plans of Action on Nutrition* and raise the awareness of the importance of implementing them among decision makers and relevant stakeholders;
- ii. Request FAO to support the development or strengthening of national and international policies and programmes to facilitate the incorporation of food biodiversity in nutrition and nutrition-related policies, programmes and interventions;
- iii. Stress the need for technical and awareness-raising material, and requests FAO to develop such material in order to facilitate the implementation of the *Guidelines for Mainstreaming Biodiversity into Policies, Programmes and National and Regional Plans of Action on Nutrition*:
 - a. continue updating the FAO/INFOODS Food Composition Database for Biodiversity on a regular basis;
 - b. undertake capacity development in INFOODS Regional Data Centres, to train responsible authorities in generating and compiling nutrient data for food biodiversity; and
 - c. Assist countries already undertaking food consumption surveys in order to generate food consumption data for biodiversity on a regular basis.
- iv. Appeal to funding organizations to support research and interventions in relevant key areas.
- v. Request FAO to develop new survey methods and guidelines for modifying existing methods of dietary consumption to better capture information on the role of food biodiversity in food security and nutrition, and to assist countries that are already undertaking food consumption surveys to generate food consumption data for biodiversity on a regular basis.

APPENDIX I**DRAFT GUIDELINES FOR MAINSTREAMING BIODIVERSITY INTO POLICIES, PROGRAMMES AND NATIONAL AND REGIONAL PLANS OF ACTION ON NUTRITION**

Objective

The objective of these guidelines is to strengthen the contribution of biodiversity (e.g. the several varieties and breeds of plants and animals used as food) to addressing malnutrition in all its forms.

Principles

The guidelines wish to assist countries integrating biodiversity into their nutrition and nutrition-related policies and programmes. In some cases, the activities identified by the guidelines could suggest alternative solutions to existing ones to more effectively address specific malnutrition issues both at local and at national level. The guidelines will also support countries increasing awareness and capacity to integrate biodiversity in their nutritional and nutrition-related policies and programmes as well as developing the partnerships needed for a successful implementation. Indications are also provided for the appropriate monitoring of effectiveness.

Implementation

The guidelines are directed to policy makers and programmers working on multi-sectoral strategies for food and nutrition security. The successful implementation of the guidelines also relies on the existence and strengthening of multi-stakeholder coordination platforms including ministries of health, agriculture, education, rural development and finance, UN organizations, Civil Society Organizations and the private sector.

The guidelines are divided into three main elements:

- A. RESEARCH, aiming at building the evidence of the benefits of using biodiverse food to address malnutrition and at assessing specific country nutrition needs and how biodiversity presents the opportunity to address these;
- B. IMPLEMENTATION, aiming at putting activities into action that integrate biodiversity in nutritional and nutrition-related policies and programmes; and
- C. AWARENESS, aiming at increasing the awareness of the general public and of the different stakeholders on the importance of biodiverse food in addressing malnutrition.

A: Research

- i. Support research on nutrient contents of different breeds and varieties.
 - a. This will involve the development of partnerships at national and international level, the use of existing databases (e.g. FAO/INFOODS) and scientific literature, the generation of new data, and analysis of these data to demonstrate the impact of food biodiversity on malnutrition prevention and treatment.
 - b. The research should also support the identification of the main malnutrition issues, at local or country level, that could be addressed by biodiversity-relevant nutritional and nutrition-related policies and programmes as well as the species, breeds and/or varieties that most likely would be of use to address those issues.
- ii. Encourage and support investments for research into the nutrition and health attributes of food biodiversity by different sectors, including the private sector and food industries in order to generate more and new information.
- iii. Collaborate with regional and international bodies in the funding and organization of regional courses on the development of food composition databases for biodiversity and integration of food biodiversity into food consumption surveys.

- iv. Support local research to study the development of food biodiversity market systems in order to identify ways of promoting biodiverse food products to consumers.
- v. Devise mechanisms and regulations to support the presence of food biodiversity even in a highly competitive market.

B: Implementation

- i. Support and promote initiatives such as school gardens/farms as vehicles for educating young people about biodiversity foods including considering their institutionalization so as to ensure their viability and sustainability.
- ii. Support agricultural extension services to establish genetic resources systems and banks for food biodiversity (as per A. i. b. above), in collaboration with national researchers, small-scale farmers and local communities.
- iii. Support the establishment of market infrastructure for food biodiversity in order to enable market access for local food biodiversity thereby engendering their easy availability to the population.
- iv. Provide support to strengthen production capabilities of small-scale producers of local food biodiversity by making available to the farmers subsidized credits and technical support with production technologies.
- v. Identify and put in place mechanisms to re-introduce and promote backyard/homestead gardening of local/traditional fruits and vegetables, and where possible, integrated homestead gardening with fish farms and small animal management. Through the agriculture extension services, ensure the availability of seeds/saplings of varieties with high nutritional value (as per A. i. b. above).
- vi. Promote urban agriculture and the production of local/traditional vegetables in particular, and ensure easy availability of seeds to interested groups and individuals.
- vii. Promote the integration of food biodiversity in large-scale agriculture policies and programmes at national and international level, including the private sector such as seed producers.
- viii. Promote the incorporation of biodiversity into relevant nutrition activities (e.g. food composition, food-based dietary guidelines, nutrition education, dietary assessment and nutrition policy development), and to agriculture (e.g. research, breeding, seed selection and production, large-scale production).
- ix. Promote food-based approaches based on biodiversity to combat malnutrition.

C: Awareness

- i. Support the establishment of “know your foods” radio talk shows, and television programmes that present the nutrition and health attributes of using diverse food, including biodiverse foods, and their possible uses in everyday meals.
- ii. Support the organization, at regular intervals, of initiatives such as policy advocacy workshops, round table discussions and stakeholder meetings to increase awareness of the public sector and of decision makers of the importance of diverse food and of its role in ensuring food and nutrition security. Sectors related to agriculture, health, education, rural development and finance are also important targets of these awareness initiatives.
- iii. Organize, in collaboration with partners such as the FAO, universities and research institutes and small-scale farmers groups and associations national and regional workshops that target the promotion of food biodiversity.
- iv. Collaborate with the FAO to expand the existing FAO curriculum guide for nutrition education in primary schools to include curriculum for teaching food biodiversity from local/traditional food systems including aquatic and animal food resources, their uses in diets and their nutrition and health protecting and promoting attributes.
- v. As an educational tool for young children and the population at large, promote and encourage the display on the cover of school textbooks, workbooks and exercise books, pictures of

different local food biodiversity with short and easy to comprehend messages on their nutrition and health attributes , and arrange practical cooking and tasting sessions for children and their parents to promote their integration into people's food preparation and eating patterns.

- vi. Disseminate research results within the scientific communities of nutrition, agriculture, health and environment through, for example, conferences, websites, scientific articles, and guidance documents.