

REPORT OF THE CONSULTATION ON THE CROSS-CUTTING INITIATIVE ON BIODIVERSITY FOR FOOD AND NUTRITION

Brasilia, 12-13 March 2005

I. INTRODUCTION

The Consultation on the cross-cutting initiative on biodiversity for food and nutrition took place in Brasilia, Brazil on 12-13 March 2005. The consultation aimed to develop ideas on the purpose and scope of a cross-cutting initiative on biodiversity for food and nutrition within the programme of work on agricultural biodiversity of the Convention on Biological Diversity (CBD), and to explore ways to enhance synergies and integrate biodiversity concerns into existing food and nutrition initiatives. The initiative arises from decision VII/32 of the CBD Conference of the Parties, and is to be developed in collaboration with the Food and Agriculture Organization of the United Nations (FAO) and the International Plant Genetic Resources Institute (IPGRI). Key issues to be considered include the contribution of plant and animal genetic resources to dietary diversity, health and nutrition, and their particular value to vulnerable human populations. Objectives and potential elements of the initiative have been outlined by the CBD (Annex A).

The consultation was organized by the Secretariat of the Convention on Biological Diversity, the Food and Agriculture Organization of the United Nations, the International Plant Genetic Resources Institute and the Brazilian Ministry of Environment, and hosted by the latter. The Ministry of Agrarian Development provided the meeting venue. The consultation was held immediately prior to the thirty-second session of the United Nations Standing Committee on Nutrition (SCN). Experts participating in the SCN event were invited to attend the consultation, as were Brazilian experts selected by the Ministry of Environment and representatives chosen by the CBD from among those nominated by governments. Participants to the consultation were drawn from the fields of agricultural development, environment, food security, health and nutrition, and represented UN and other intergovernmental agencies, government, research and academic institutions, and indigenous, civil society and non-governmental organizations. The meeting was planned as the first step in a larger consultation process, and was kept small to facilitate discussion and brainstorming. A list of participants is included in Annex B.

This report of the consultation is divided into three main sections: an introduction (Section I); a synopsis of the meeting proceedings (Section II); and a summary of the discussions (Section III). The ideas outlined in Section III provide a basis for furthering the development of the cross-cutting initiative on biodiversity for food and nutrition.

II. SUMMARY OF PROCEEDINGS

This section provides a brief chronology of the meeting and summary of the key presentations.

Session I: Introduction

The meeting was opened by Paulo Kageyama (Brazilian Ministry of Environment), who welcomed participants to Brasilia. He emphasized that Brazil accorded priority to both the elimination of hunger and the conservation of biological diversity. He stressed that this initiative was important in linking these agendas. Implementation would require cooperation of all economic and social sectors and their respective governmental departments and ministries.

The opening was followed by introductory comments by the other organizers of the meeting. On behalf of Hamdallah Zedan, Executive Secretary of the CBD, David Cooper (CBD Secretariat) introduced the Convention on Biological Diversity and the cross-cutting initiative on biodiversity for food and nutrition. Bararba Burlingame (Nutrition Division, FAO) and Pablo Eyzaguirre (IPGRI) underlined the importance that their organizations gave to these issues.

Timothy Johns (McGill University/IPGRI) gave the keynote presentation, linking sustainable use of biodiversity to reduced hunger and malnutrition. After introducing the concept of biodiversity as underlying dietary diversity, he highlighted existing policy on food and nutrition (for example, as set out in the Millennium Development Goals, the Right to Food; see also Annex C) with links to biodiversity issues. A review of available evidence suggested that diverse diets do improve human health, although population-level studies are lacking. To conclude, he examined how supporting traditional food cultures can lead to positive outcomes for human health and biodiversity conservation. An abstract of Mr. Johns' presentation, and summaries of all consultation speakers' presentations, are presented in Annex D.

The keynote presentation was followed by a series of short presentations on Brazilian initiatives on biodiversity for food and nutrition. Paulo Kageyama (Brazilian Ministry of Environment) presented the policy objectives and primary activities of the Ministry's Agrobiodiversity program, in particular the establishment of Centres of rescue and conservation of agrobiodiversity' (CIMAs). Charles R. Clement (Amazonian National Research Institute - INPA) spoke on the declining importance of fruits in Amazonian diets, and drew lessons on the difficulties of achieving food and nutritional security from examples of the use and commercialization of native fruit trees. Angela Cordeiro (Agronomist/Consultant, Seeds Campaign) reviewed the pressures contributing to reduced food diversity in rural areas of Brazil, proposed short- and medium-term actions for promoting diversity, and provided local examples of initiatives by civil society and government. Both Mr. Clement and Ms. Cordeiro emphasized the role of the popular media (particularly television) in influencing people's food choices, noting that native foods are often ignored in favour of fashionable imported products. Delia B. Rodriguez-Amaya (Universidade Estadual de Campinas) described the latest research on composition of Brazilian food items (many of them indigenous species), including the development of the first Brazilian Food Composition Table based on actual analyses and representative national sampling, and the Brazilian database on carotenoids.

A short discussion followed the morning's presentations.

Session II: Cross-sectoral discussions

The purpose of the afternoon session was to present and discuss biodiversity, food and nutrition from the nutrition/health perspective, and from the agriculture/rural development perspective, in order to identify opportunities for and obstacles to integrating biodiversity concerns into these sectors. Participants remained in plenary session format to facilitate cross-sectoral discussions.

David Cooper (CBD Secretariat) opened the session by giving a brief introduction to the objectives, structure and work of the Convention on Biological Diversity, stressing that the objectives of the Convention included not only conservation but also sustainable use and benefit sharing. He highlighted the programme of work on agricultural biodiversity of which the cross-cutting initiative on biodiversity for food and nutrition is a component. He presented the rationale,

objectives and potential elements of the initiative (Annex A), and explained the goals for the consultation.

Consultation participants then briefly introduced themselves and outlined their interest in and experience with biodiversity, food and/or nutrition issues.

Pablo Eyzaguirre (IPGRI) chaired the first discussion theme, on links between biodiversity and the nutrition/health sectors. Barbara Burlingame (FAO) gave a brief presentation on ‘Biodiversity for food and nutrition: the nutrition/health sector’ and the discussion was led by Delia B. Rodriguez-Amaya (Universidade Estadual de Campinas, Brazil).

The second discussion theme, on links between biodiversity and the agriculture/rural development sectors, was chaired by Barbara Burlingame (FAO). Pablo Eyzaguirre (IPGRI) briefly presented ideas on ‘Biodiversity for food and nutrition: the agriculture/rural development sector’ and Florence Egal (FAO) led the discussion.

The points arising from the resulting discussions are reflected in Section III of this report.

Session III: Synthesis

Following a brief presentation by Kraissid Tontisirin (FAO) on relevant work of FAO, participants began discussions to formalize ideas generated in session II, and to develop a statement on the scope and activities of the initiative. Braulio Ferreira de Souza Dias (Brazilian Ministry of the Environment) chaired the session. Section III of this report reproduces the final statement adopted by participants, and reflects the results of consultation discussions held in sessions II and III.

The meeting requested a shortened version of the conclusions to be prepared as a statement for presentation to the 32nd session of the UN Standing Committee on Nutrition (SCN). The statement (Annex E) was prepared by David Cooper, Florence Egal, Pablo Eyzaguirre, Tim Johns and Sean Kennedy (International Fund for Agriculture Development – IFAD)

Closing statements were made by the representatives of the sponsoring organizations (Paulo Kageyama, Brazilian Ministry of Environment; Pablo Eyzaguirre, IPGRI; Kraissid Tontisirin, FAO; and David Cooper, CBD Secretariat) who highlighted the positive and constructive spirit of the meeting and the willingness of participants, drawn from a wide range of sectors, to engage in the initiative and take the ideas discussed at the meeting forward. Thanks were expressed to the organizers of the meeting, and especially to the Brazilian hosts for their hospitality.

Follow-up in the UN Standing Committee on Nutrition, 32nd Session

The statement prepared by the consultation (Annex E) was widely distributed to the participants of the 32nd session of the UN Standing Committee on Nutrition.

Florence Egal, in her capacity as co-organizer of the consultation on biodiversity for food and nutrition and co-chair of the SCN’s Working Group on Household Food Security, facilitated a discussion on the consultation’s main conclusions, which were presented to the Working Group by Timothy Johns on March 17.

III. IDEAS FOR FURTHERING THE CROSS-CUTTING INITIATIVE ON BIODIVERSITY FOR FOOD AND NUTRITION

The conclusions of the consultation include a call for action on issues of biodiversity, food and nutrition, and explain the rationale for explicitly recognizing the linkages among these. The statement also outlines the proposals for action put forward by participants at the consultation, as well as guiding principles and challenges to be faced in the development and implementation of these activities. Finally, the conclusions identify organizations that should be invited to incorporate biodiversity concerns in their work, and the next steps participants have agreed to undertake in order to advance the initiative.

Call for Action

Biodiversity is essential for food security and nutrition and offers key options for sustainable livelihoods. Environmental integrity is critical for maintaining and building positive options for human well-being. Existing knowledge warrants immediate action to promote the sustainable use of biodiversity in food security and nutrition programmes, as a contribution to the achievement of the Millennium Development Goals (MDGs). This would counteract the simplification of diets, agricultural systems and ecosystems, and the erosion of food cultures. Considering the difficulty in precisely identifying optimal diets, a diversity of foods from plants and animals remains the preferred choice for human health. Traditional food systems provide positive synergies between human and ecosystem health, and culture offers an essential context for mediating positive dietary choices.

An interdisciplinary initiative on biodiversity for food and nutrition, based on the ecosystem approach that makes the most of locally-available biodiversity and initiative to address nutrition problems, will assist countries and stakeholders in achieving the MDGs. Without urgent action that directly engages the environmental, agricultural, nutrition and health communities, biodiversity and the positive options offered by domesticated and wild biodiversity for addressing nutrient deficiencies and the emerging burden of non-communicable disease will be lost.

Rationale

There are multiple links between biodiversity, food and nutrition. Biodiversity at the genetic and species levels provides the basic components of nutrition, including energy, protein, fats, minerals and vitamins, as well as bioactive “non-nutrients” (e.g., antioxidant phytochemicals). The diversity of fruits, leafy vegetables and other plants is particularly important, but also of fish and other animal sources. While in the aggregate, only three crops provide some 50% of human energy intake, about 10,000 species are used, or have been used, for food at some time. Cultivated species are often complemented by wild species that can be of particular significance in nutritional terms. Wild sources of food in general remain particularly important for the poor and landless, and are especially important during times of famine and insecurity or conflict where normal food supply mechanisms are disrupted and local or displaced populations have limited access to other forms of food. Even at normal times wild foods are often important in complementing staple foods to provide a balanced diet.

In addition to its role in supporting and sustaining food production, biodiversity, by underpinning some important aspects of dietary diversity, has a role to play in addressing both under-nutrition associated with poverty, and obesity-related diseases associated with urbanization, in developed and developing countries. Nutritional status and child growth improve with consumption of greater food diversity. Considering the difficulty in precisely identifying optimal diets, a diverse and balanced diet, including legumes, fruits, vegetables, and animal-

source foods, provides an intrinsic buffer against the uncertainties of dependency on a less varied diet and remains the preferred choice for human health.

Proposals for action

The following actions were proposed for:

(a) substantiating and promoting awareness of the links between biodiversity, food and nutrition

- i. Compilation, review and analysis of existing scientific information, indigenous and traditional knowledge (in a manner consistent with the CBD, Article 8(j)), and case studies;
- ii. Development of a communication strategy, and associated publications and other materials to address: the general public (including the promotion of local varieties, crops and food products in the popular media); decision makers; local communities; and the nutrition, agriculture, health and environment communities;
- iii. Convening of regional advocacy and policy workshops.

(b) mainstreaming the conservation and sustainable use of biodiversity into agendas and programmes related to nutrition and agriculture, and poverty reduction. For example, integrate biodiversity into programmes and activities concerning:

- i. Food-based dietary guidelines;
- ii. Food composition analysis and dietary assessments;
- iii. Relevant regulatory frameworks and legislation at national and international levels;
- iv. National Plans of Action for Nutrition;
- v. National Poverty Reduction Strategy Papers;
- vi. The Right to Food;
- vii. Food security projects and programmes, including: household food security projects, school programmes, home gardens;
- viii. Emergency response and preparedness.

(c) promoting activities that contribute to improving food security and human nutrition through enhanced sustainable use of biodiversity:

- i. on-farm conservation of biodiversity;
- ii. development of new crops;
- iii. protection and promotion of biodiversity friendly markets;
- iv. action research.

Principles

In developing and implementing these activities the following points are relevant:

- i. The Millennium Development Goals provide an overall focus for this initiative which can contribute to addressing both under-nutrition/poverty and the double burden of disease.
- ii. The Ecosystem Approach is a fundamental organizing principle.
- iii. The biodiversity resources of local ecosystems should be examined for their potential to provide locally-appropriate solutions to nutrient problems. (Within ecosystems, the causes of malnutrition within vulnerable groups should be analysed, and local opportunities to overcome these causes examined).
- iv. The dominant political-economic system must be made more responsive to social and environmental demands, and its current role in marginalizing biodiversity clearly recognized.

- v. The existing diversity within species should be explored before proposing to resort to transgenic approaches.
- vi. A commitment to sustainability is essential, including in nutrition programmes. The Addis Ababa principles and guidelines for sustainable use should be applied.
- vii. The social and cultural importance of food as an inherent aspect of human existence and community organization should be recognized as a positive motivating force for healthy diets and environment.
- viii. Activities should be responsive to community needs and developed with full community participation and engagement.
- ix. An interdisciplinary and inter-sectoral approach is required integrating health, education, agriculture and environmental objectives.
- x. Activities should be implemented consistent with the Right to Food guidelines.
- xi. Activities should contribute to learning by doing and adaptive management.
- xii. Activities should build upon and strengthen relevant existing relevant initiatives.

Challenges

The following challenges need to be addressed:

- i. The limited evidence base [It was noted however, that while more information is needed, the information already available is not been fully used, and other, more reductionist, approaches are being pursued on the basis of much less evidence];
- ii. Difficulties associated with scaling up of activities, while at the same time ensuring local and cultural specificities;
- iii. Lack of coordination among sectors and disciplines and between levels of government and communities;
- iv. Constraints from Regulatory frameworks;
- v. Changes in markets, including the decline of user-friendly local markets, leading to limited access to markets for local food products;
- vi. The dominance of approaches to economic development and approaches to development that are top down in approach and do not take into account the potential of existing biodiversity and associated knowledge;
- vii. limited participation of indigenous and local communities in national and international institutions and programmes;

Invitation to other organizations to contribute to the initiative

FAO, WHO, IFAD, WFP, UNICEF, UNU and other intergovernmental organizations are encouraged to include biodiversity-related considerations in their programmes and strategies including but not limited to:

- The Global Plan of Action to Achieve the Millennium Development Goals (prepared through the Secretary-General's Millennium Project) and in particular its action plan on hunger;
- the FAO World Food Summit Plan of Action;
- the WHO Global Strategy on Diet, Physical Activity and Health;
- the International Assessment of Agricultural Science and Technology for Development;
- other initiatives, as listed in Annex C.

Similarly governments and other international and national institutions, IUNS, ICSU and other research and academic associations, civil society organizations and movements, including the Slow Food Movement, local community and indigenous peoples organizations, and the private sector are encouraged to contribute to the initiative.

Next steps

The participants in the consultation recognize the benefits of coming together under a common framework and commit themselves to continue to contribute to the development of the cross-cutting initiative and to undertake the following activities:

- i. Raising awareness in our organizations, networks and communities of practice, and at upcoming meetings and events;
- ii. Preparing an inventory of the existing knowledge base, including published scientific studies, indigenous and local knowledge (consistent with CBD Article 8(j)), case studies et cetera, and preparing a policy-relevant review for publication in a scientific journal;
- iii. Promoting and facilitating the development of pilot activities including an inter-sectoral project on biodiversity for food and nutrition in Brazil, with a view to further such pilot activities in other countries;
- iv. Preparing tools to aid implementation of the activities listed above.

ANNEX A.
**ELEMENTS FOR AN INTERNATIONAL INITIATIVE ON BIODIVERSITY FOR
FOOD AND NUTRITION**

At its tenth meeting (in Bangkok, February 2005), the Convention on Biological Diversity's Subsidiary Body on Scientific, Technical and Technological Advice issued recommendation X/9, 'Options for a cross-cutting initiative on biodiversity for food and nutrition'. The Annex to recommendation X/9 puts forward potential elements of the initiative, within the context of the programme of work on agricultural biodiversity. These elements are:

- (a) Describe and assess the links between biodiversity, food and nutrition, in particular clarifying the relationship between biodiversity and dietary diversity (and the relevant links between human health and ecosystem health);
- (b) Integrate the conservation and sustainable use of biodiversity into nutrition agendas and programmes, and agriculture agendas by promoting awareness of the links between biodiversity, food and nutrition, including by promoting public awareness of the links between biodiversity, food and nutrition (This activity would be linked to target 14 of the Global Strategy for Plant Conservation.);
- (c) Develop an indicator or indicators of biodiversity used in food, consistent with decision VII/30;
- (d) Within the context of the programme of work on agricultural biodiversity, and taking into account the ecosystem approach, promote activities that contribute to improving food security and human nutrition through enhanced sustainable use of biodiversity including, *inter alia*:
 - (i) Conservation and sustainable use of crop and livestock genetic diversity, including wild relatives of domesticated animals and plants;
 - (ii) Conservation and sustainable use of neglected and underutilized species;
 - (iii) Promotion of genetically diverse home gardens, agro-forests and other production systems that promote the *in situ* conservation of germplasm;
 - (iv) Conservation and sustainable use of wild resources, including those that support bushmeat and fisheries, including maintaining viable stocks of wild species for sustainable consumption by local and indigenous communities;
 - (v) Promotion, conservation and sustainable use of important biodiversity associated with agricultural, forestry and aquaculture systems at all levels;
 - (vi) Poverty alleviation through livelihood diversification, involving the conservation and sustainable use of biodiversity; and
 - (vii) Species currently underutilized or of potential value to human food and nutrition; and
- (e) Integrate food and nutrition issues into the programme of work on Article 8(j) and related provisions of the Convention.

ANNEX B.
PARTICIPANT LIST
Consultation on the cross-cutting initiative on biodiversity for food and nutrition,
Brasilia, 12-13 March 2005

United Nations

FAO - Food and Agriculture Organization

Barbara Burlingame

Florence Egal

Kraisid Tontisirin

*IFAD - International Fund for Agriculture
Development*

Sean Kennedy

*UNEP – Secretariat for the Convention on
Biological Diversity*

David Cooper

UNU - United Nations University

Cutberto Garza

Inter-governmental organizations

*IPGRI - International Plant Genetic
Resources Institute*

Margarita Baena

Pablo Eyzaguirre

Timothy Johns

Ifeyironwa Francisca Smith

Government

*Bolivia - Vice Ministry – Natural Resources
and Environment*

Ruth Pamela Cartagena Ticoma

Brazil - EMBRAPA

Roberto Fontes Vieira

Brazil - Ministry of Environment

Lídio Coradin

Braulio Ferreira de Souza Dias

Paulo Kageyama

Rubens Onofre Nodari

Francoy Thiago Reis

Sonja M. Righetti

Denmark - DANIDA

Jorgen G. Jensen

*Peru - CONAM – Consejo Nacional del
Ambiente*

Santiago Pastor Soplín

**Indigenous and non-governmental
organizations**

*ANDES – Quechua-Aymara Association for
Sustainable Livelihoods*

Mahia Maurial

*APAN – Alliance for Peoples Action on
Nutrition*

Geoffrey Cannon

Seeds Campaign

Angela Cordeiro

*COMEDDES – Mexican Council for
Sustainable Development*

Mindahi Cresciencio Bastida Muñoz

Slow Food Foundation for Biodiversity

Carlyle Vilarinho

Universities and Research Institutions

*INPA - Amazonian National Research
Institute*

Charles Roland Clement

*IUNS - International Union of Nutritional
Sciences*

Mark Walqvist

Universiti Putra Malaysia, Malaysia

Geok Lin Khor

University of Campinas, Brazil

Délia B. Rodriguez-Amaya

ANNEX C.
**LIST OF INITIATIVES, ORGANIZATIONS AND EVENTS RELEVANT TO THE
INITIATIVE ON BIODIVERSITY FOR FOOD AND NUTRITION**

Relevant initiatives and intergovernmental organizations

- Consultative Group on Agricultural Research
- The FAO World Summit Plan of Action
- The FAO Food Insecurity and Vulnerability Information and Mapping System (FIVIMS)
- FAO/UNU International Network of Food Data Systems (INFOODS)
- Food-based Dietary Guidelines
- The Global Plan of Action to Achieve the Millennium Development Goals
- The International Assessment of Agricultural Science and Technology for Development
- International Council for Science
- The International Fund for Agricultural Development (IFAD)
- International Union of Nutritional Sciences
- IPGRI Global Strategy
- Millennium Ecosystem Assessment
- The WHO Global Strategy on Diet, Physical Activity, and Health
- The World Food Programme (WFP)
- UN Children's Fund (UNICEF)
- UN Human Rights Commission's Permanent Forum on Indigenous Issues
- UN Standing Committee on Nutrition

Previous and upcoming relevant events

- Role of plant biodiversity in achieving the Millennium Development Goals on Hunger and Poverty (Chennai, India, April 18-19 2005).
- COHAB 2005 – the First International Conference on the Importance of Biodiversity to Human Health (Galway, Ireland, August 23-25, 2005) *In particular, Session II: Biodiversity, Food and Agriculture*
- COHAB 2005 - Workshop on CBD Indicators for Health and Biodiversity (Galway, Ireland, August 26, 2005)
- Special Forum of the FAO Committee on Food Security (October 2005, tentative)

Additional information is available at the CBD website on Biodiversity for Food and Nutrition:
<http://www.biodiv.org/food>

ANNEX D.
SUMMARIES OF SPEAKERS' PRESENTATIONS TO THE CONSULTATION ON
BIODIVERSITY FOR FOOD AND NUTRITION

The full text or abstract for certain of the presentations summarized below are available at the following website: <http://www.biodiv.org/doc/meeting.aspx?mtg=IBFN-01>

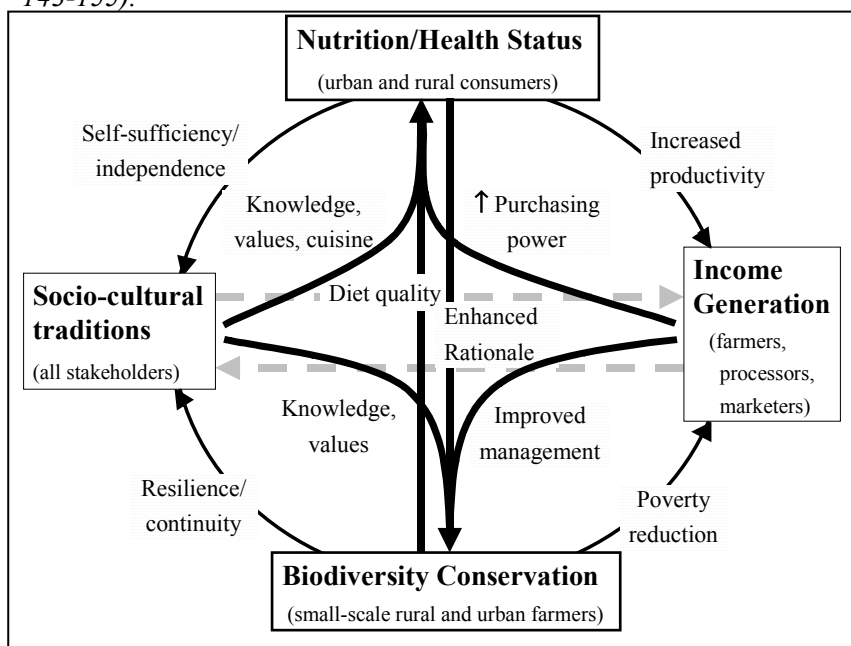
Keynote Presentation

'Biodiversity for food and nutrition: linking sustainable use to reduced hunger and malnutrition'

Timothy Johns (McGill University/International Plant Genetic Resources Institute)

Linking the sustainable use of biodiversity with nutrition initiatives has importance for both achieving the Millennium Development Goals and addressing global problems of malnutrition related to the simplification of diets from poverty and/or changes in global food systems. Focus on the nutrition transition and chronic disease, in developed economies and within the framework of the double burden of infectious and non-communicable diseases in developing countries, presents a clear opportunity to use biodiversity as an element in the solution. Empirical evidence on intravarietal differences in nutrient composition, on functional properties of diverse plants and animal species and on the role of food biodiversity in traditional food systems underlines possible directions forward. Recognition of the socio-cultural and physiological relevance of diversity within considerations of the right to food reinforces these linkages.

Population-level synergies linking biodiversity conservation and human nutrition in developing countries (Figure taken from Johns, T. and B.R. Shapit. 2004. Food and Nutrition Bulletin 25(2): 143-155).



Brazilian Initiatives on Biodiversity for Food and Nutrition

‘Public policy for the promotion of the sustainable use of agrobiodiversity’ Paulo Kageyama (Brazilian Ministry of Environment)

Agrobiodiversity has as its basic pre-requisites cultural diversity, genetic diversity, and family agriculture systems. Promoting on-farm conservation by agriculture families allows for conservation at the ecosystem, species and varietal level, and provides healthy ecosystem services and food security to local populations. Within the Ministry of Environment, the objectives of the Agrobiodiversity program include promoting the use and conservation of plant genetic diversity by farm families, legitimizing farmers’ traditional knowledge, and implementing public policy to increase rural food security and incomes. Specific activities include the creation of ‘Centres of rescue and conservation of agrobiodiversity’ (CIMAs) to promote the use and sustainable management of Crioules seeds (including establishing markets for seed exchange) and of native medicinal plants. Ten projects are underway in nine states, and phase two will see the establishment of 20 CIMAs in 18 states. The Ministry is also forming partnerships with other bodies to pursue biodiversity and nutrition initiatives, included a GEF project in development with FAO and IPGRI, and national partnerships with INCRA, SAF/MDA, CONAB, EMBRAPA and others.

‘Fruits of Amazonia’ Charles R. Clement (Amazonian National Research Institute - INPA)

Amazonians have learned to use 3-5000 plant species over history, and have domesticated perhaps 100 species, many of which produce fruits, nuts/seeds, or both. Nonetheless, fruits are becoming less important in Amazonian diets, especially in urban areas. Reasons for this loss include poverty, social pressure (i.e., none of these fruits are shown on television or radio, where exotic fruits dominate, leading to the perception that native foods are inferior and unfashionable) and deficient research and development support to agroentrepreneurs. Instructive examples discussed are the peach palm (*Bactris gasipaes*), Assai palm (*Euterpe oleracea*), Camu-camu (*Myrciaria dubia*), Cupuassu (*Theobroma grandiflorum*) and Tucumã palm (*Astrocaryum tucuma*). Based on current patterns of use and commercialization of these fruits, it appears that: historical Native American uses are not reflected in modern markets; well-supported entrepreneurs can drive markets for native fruits, but these markets are not targeted to poor consumers; and government agencies are relatively ineffectual in the face of market forces. In conclusion, Amazonian fruits are unlikely to contribute to food and nutritional security of Amazonia’s urban poor, although they do fulfill these roles in the rural interior.

‘Analysis and Composition of Brazilian Foods’ Delia B. Rodriguez-Amaya (Universidade Estadual de Campinas, UNICAMP)

In order to promote the use of biodiversity for food and nutrition, reliable compositional data of foods are necessary. The first version of the Brazilian Food Composition Table was launched only last year, financed by the Ministry of Health and executed by the Núcleo de Estudos e Pesquisa em Alimentos (NEPA) of the Universidade Estadual de Campinas. The Table consists of the 198 most consumed foods in Brazil and includes data on proximate composition, minerals, vitamins, fatty acids and cholesterol. The second version will include regional foods, prepared foods and traditional recipes. Another important food composition table is the updated Brazilian database on carotenoids, consisting of 259 food items, many of which are indigenous to Brazil. The atmosphere for promoting such indigenous crops has improved in recent years, with the private sector—in addition to government agencies—coming to recognize the importance of

nutrients and bioactive phytochemicals to human health. The UNICAMP laboratory is contributing to these efforts not only by obtaining compositional data on foods, but also by investigating the effects of influencing factors on composition (e.g. variety, stage of maturity, climate, production technique, post-harvest handling, processing and storage), and providing training to Brazilian and foreign researchers.

‘Food Diversity in Brazil: Constraints and Opportunities’

Angela Cordeiro (Consultant/Agronomist)

Food security is an issue in both rural and urban areas of Brazil. A participatory appraisal of farmers living in land reform settlement areas revealed problems of food quantity and quality, with farmers stressing that the loss of food diversity is a major challenge. Pressures on food diversity in Brazil include cultural erosion (e.g., loss of native roots and tubers from diets), globalization of the market system, existing food regulation (e.g., hindering the commercialization of honey produced by native bees) and agricultural policies that promote the expansion of industrial agriculture (particularly in the Cerrado and Amazon ‘frontier’ regions). To combat hunger and poverty, Brazilian policy makers will need to adopt a new paradigm of sustainable development. Actions undertaken in the short and medium-term could contribute to this paradigm shift, including: increasing awareness of food diversity through education and marketing campaigns; and supporting good practices such as regulations friendly to food diversity, promotion of local markets, nutritional research, and support to small producers. Examples of such efforts by civil society and NGOs already exist in Brazil, and have influenced some governmental programs and research agendas.

ANNEX E.

STATEMENT ON BIODIVERSITY FOR FOOD AND NUTRITION:

Main conclusions of the consultation on the CBD cross-cutting initiative on biodiversity for food and nutrition, organized by the Convention on Biological Diversity in cooperation with the Food and Agriculture Organization of the United Nations and the International Plant Genetic Resources Institute, Brasilia, Brazil, 12 – 13 March, 2005.

Call for Action

Biodiversity is essential for food security and nutrition and offers key options for sustainable livelihoods. Environmental integrity is critical for maintaining and building positive options for human well-being. Existing knowledge warrants immediate action to promote the sustainable use of biodiversity in food security and nutrition programmes, as a contribution to the achievement of the Millennium Development Goals. This would counteract the simplification of diets, agricultural systems and ecosystems, and the erosion of food cultures. Considering the difficulty in precisely identifying optimal diets, a diversity of foods from plants and animals remains the preferred choice for human health. Traditional food systems provide positive synergies between human and ecosystem health, and culture offers an essential context for mediating positive dietary choices.

An interdisciplinary initiative on biodiversity for food and nutrition, based on the ecosystem approach that makes the most of locally-available biodiversity and initiative to address nutrition problems, will assist countries and stakeholders in achieving the MDGs. Without urgent action that directly engages the environmental, agricultural, nutrition and health communities, biodiversity and the positive options offered by domesticated and wild biodiversity for addressing nutrient deficiencies and the emerging burden of non-communicable disease will be lost.

Proposals for Action

(a) substantiating and promoting awareness of the links between biodiversity, food and nutrition:

- i. Compilation, review and analysis of existing scientific information, indigenous and traditional knowledge (in a manner consistent with the CBD, Article 8(j)), and case studies;
- ii. Development of a communication strategy, and associated publications and other materials to address: the general public; decision makers; local communities; and the nutrition, agriculture, health and environment communities;
- iii. Convening of regional advocacy and policy workshops.

(b) mainstreaming the conservation and sustainable use of biodiversity into agendas and programmes related to nutrition and agriculture, and poverty reduction. For example, integrate biodiversity into programmes and activities concerning:

- i. Food-based dietary guidelines;
- ii. Food composition analysis and dietary assessments;
- iii. Relevant regulatory frameworks and legislation at national and international levels;
- iv. National Plans of Action for Nutrition;
- v. National Poverty Reduction Strategy Papers;
- vi. The Right to Food;
- vii. Food security projects and programmes, including: household food security projects, school programmes, home gardens;
- viii. Emergency response and preparedness.

(c) promoting activities, that contribute to improving food security and human nutrition through enhanced sustainable use of biodiversity:

- i. on farm conservation of biodiversity;
- ii. development of new crops;
- iii. protection and promotion of biodiversity friendly markets;
- iv. action research.

Invitation to other organizations to contribute to the initiative.

FAO, WHO, IFAD, WFP, UNICEF, UNU and other intergovernmental organizations are encouraged to include biodiversity-related considerations in their programmes and strategies including but not limited to:

- The Global Plan of Action to Achieve the Millennium Development Goals (prepared through the Secretary-General's Millennium Project) and in particular its action plan on hunger;
- the FAO World Food Summit Plan of Action;
- the WHO Global Strategy on Diet, Physical Activity and Health; and
- the International Assessment of Agricultural Science and Technology for Development

Similarly governments and other international and national institutions, IUNS, ICSU and other research and academic associations, civil society organizations and movements, including the Slow Food Movement, local community and indigenous peoples organizations, and the private sector are encouraged to contribute to the initiative

Next steps

The participants in the consultation recognize the benefits of coming together under a common framework and commit themselves to continue to contribute to the development of the cross-cutting initiative and to undertake the following activities:

- i. Raising awareness in our organizations, networks and communities of practice and at upcoming meetings and events
- ii. Preparing an inventory of the existing knowledge base, including published scientific studies, indigenous and local knowledge (consistent with CBD Article 8(j)), case studies et cetera, and preparing a policy-relevant review for publication in a scientific journal
- iii. Promoting and facilitating the development of pilot activities including an inter-sectoral project on biodiversity for food and nutrition in Brazil, with a view to further such pilot activities in other countries
- iv. Preparing tools to aid implementation of the activities listed above

Follow up in the SCN

The Standing Committee on Nutrition and its participants are invited to contribute to the further development of this initiative within the Working Group on Household Food Security and other relevant working groups and activities.