Cordoba Declaration on Promising Crops for the XXI Century[1]

[1] This declaration is the result of the International Seminar "Crops for the XXI Century" co-organized by the Spanish government (Ministry of Agriculture, Food and Environment, Ministry of Economy and Competitiveness and Ministry of Foreign Affairs and Cooperation), United Nations Food and Agriculture Organization, International Treaty on Plant Genetic Resources for Food and Agriculture, International Fund for Agricultural Development, Bioversity International, Crops for the Future, Slow Food International, the Spanish Royal Academy of Gastronomy, Andalusian government, CeiA3, Diputación, University and Ayuntamiento de Córdoba, and Cátedra de Estudios sobre Hambre y Pobreza as host. The main goal of the Seminar was to fight world hunger and rural poverty by giving more attention to underutilized and promising crops. The Seminar was also the first international event to celebrate 2013 as the UN International Year of Quinoa. It included open debates with participants from developed and developing countries, as well as members of civil society, farmers' organizations, industry and consumers, at national and international level. The Seminar was opened by the Spanish Minister of Agriculture, Food and Environment and the Director General of FAO. The Declaration was developed by the co-organizing institutions.

Cordoba Declaration on Promising Crops for the XXI Century

In an increasingly globalized and interdependent world, eradicating hunger is a prerequisite for peace and world security. If we are to feed 9 billion people in 2050 in a sustainable way, protect the environment, provide healthy and nutritious food for all, and enhance the livelihoods of farmers, we need more diversity in agricultural and food systems. This is one of the key messages behind the designation of 2013 as the UN International Year of Quinoa, the sacred crop of the Incas, a symbol for the importance of thousands of promising crops.

An adaptive, diversified agriculture will need to make use of many hundreds of crops that have become neglected by modern agriculture; crops that have been used for millennia but which have been increasingly forgotten as a few crops have become commercially dominant in food production. The use of a wider range of crops and species can play a central role in combating hunger, malnutrition and poverty, in helping to secure sustainability and in building resilience, thus making a durable contribution to the Right to Food and the Right to Health embedded in the Universal Declaration of Human Rights. These crops will provide a key part of the diversity needed to ensure adaptability to change, particularly climate change. They will also be essential to achieve the post-2015 sustainable development goals.

Securing the full potential of these promising but underutilized crops and species in production and consumption systems will require actions on many fronts. These actions include:

- Improving education and awareness to ensure that the values of a much wider range of crops are recognized by all society;
- Increasing recognition and support for small scale and family farmers, women and men, in maintaining diversified and resilient agricultural systems;
- Facilitating the conservation, access, availability, use and exchange of seeds by farmers;
- Promoting formal and informal research and plant breeding to realize the full potential of these crops.
- Improving access to markets and stimulating demand for a wider range of crops, while ensuring that benefits are shared fairly;

Two concrete and far reaching actions proposed are:

- The launching of a new international dialogue on plant genetic resources for food and agriculture to help enhance policies and priorities to promote the use of a wider range of crops. This should explore ways in which the International Treaty on Plant Genetic Resources for Food and Agriculture can further support the conservation, exchange and sustainable use of neglected and underutilized crops.
- The establishment of an Ombudsman that would represent the rights of future generations in national and international decision making — national parliaments and within the UN system, since conservation of agricultural biodiversity and other natural resources are relevant both to present and future generations.

The attached global agenda for advancing the sustainable conservation and use of neglected and underutilized species (NUS)[2] includes and further develops these and additional issues.

[2] In this document of the 2012 Cordoba Declaration, the terms NUS and promising crops are being considered equivalent.

A Global Agenda for advancing the sustainable conservation and use of Neglected and Underutilized Species (NUS)

Need for a new agricultural paradigm

Biodiversity for food and agriculture is central in sustaining humankind on Earth, and most strategic to fight the formidable challenges of food and nutrition insecurity, poverty, and climate change. We believe that feeding a 9 billion world population by 2050 cannot be achieved with the current food system, which relies on 20 or so major staples and wastes almost 1/3 of the food produced.

According to FAO[3], approximately 30,000 edible plant species have been identified, of which more than 7,000 have been used in the history of humanity to meet basic human needs such as food, clothing, fiber, medicine, construction materials and fuel. At present 30 crops constitute 90% of the calories in the human diet, and only three species (rice, wheat, maize) account for more than half of the energy supply.

Ignoring and underestimating this enormous pool of food is a mistake that we cannot afford, especially when many of them continue to be essential in rural areas of developing countries. There are many reasons why underutilized crops deserve deference, for example, to fight hunger and rural poverty, to mitigate the effect of climatic changes and to reduce malnutrition and improve health via dietary diversification. Agricultural biodiversity is especially relevant in these areas where the 1.4 billion people live on less than $1.25 a day and they need more effective ways to move out of poverty through a better use of their natural resources. Furthermore, because of the rapid advance of climate change that will alter the agro-ecosystems and in consequence the productivity of currently important crops to become unviable in certain areas of the world, these crops may have to be replaced with more adapted ones to the new conditions.

More and consistent efforts are needed to harness the untapped potential of agricultural biodiversity, including neglected and underutilized species (NUS). These species[4] and their wealth of associated traditional knowledge are an strategic ally in sustainable and productive agro-ecosystems, contributing towards their resilience in addressing climatic changes and economic distress while supporting traditional and healthy food systems. The promotion and use enhancement of NUS through consistent Research and Development (R&D) investments is also a durable contribution to reaffirm the Right to Food embedded in the 1948 Universal Declaration of Human Rights[5] and the binding International Covenant of economic, social and cultural rights.

Safeguarding the resources to secure our future

These non-commodity crops have been appreciated for their nutritional value, hardiness, good adaptability to stresses, versatility in use and their rich associated food culture and traditions. Today they have fallen into neglect because of their poor economic competitiveness with major crops that have benefitted of consistent investments in R&D or of the direct support of their production and markets (e.g. use of subsidies and other forms of incentives). Major crops dominate national and

[3] First Report of the State of the World's Plant Genetic Resources for Food and Agriculture (1997). http://apps3.fao.org/wiews/docs/SWRFULL2.PDF
[4] For a more complete description of NUS visit Crops for the Future web site at http://bit.ly/RPIojV.
[5] http://bit.ly/YQ6Oib

international markets and government policies to the detriment of hundreds of other important life-saving crops that together have huge significance. Poor – or episodic and merely market oriented-research attention has deprived underutilized crops of improved varieties, enhanced cultivation practices, technologies to address drudgery in value addition, organized and efficient market chains. Not lastly, their marginalization is aggravated by the wrong perception that these traditional crops are "food of the poor".

In many cases, underutilized crops provide essential micronutrients and thus complement staple foods that provide the necessary energy. They provide unique flavoring in local cuisine, strengthen local gastronomic traditions as well as income opportunities for both rural and urban poor. NUS also contribute to diversified agricultural systems, buffering shocks from rising of food commodity prices and enriching agro-ecosystems making them healthier and more resilient and enhancing their adaptation to marginal areas and low input agriculture. Many NUS thrive in marginal areas where few other crops grow and where poor rural live, so they are particularly relevant with regard to poverty reduction and food security. Diversified agro-ecosystems employing these crops can contribute to the empowerment of vulnerable groups and communities and strengthen countries' self reliance in agricultural production, contribute to harness and safeguard centuries-old traditions and are a powerful instrument to keep alive the cultural identity of farmers and indigenous communities. Thus they are a pillar to achieve the Right to Food and Food Security at all levels.

Supporting the International Year of Quinoa

The United Nations has designated 2013 as the International Year of Quinoa. Such designation is also a symbol to highlight the importance of thousands of many other underutilized and promising crops. The international community needs to recognize the importance that South-South cooperation has played in the recent scientific and agronomic successes related to the cultivation and consumption of Quinoa, and the importance of such cooperation for other underutilized crops especially among regions and countries with similar agro-ecological conditions. The further development of sustainable production and consumption systems for Quinoa needs international support. The international community should emphasize the need to respect relevant laws related to access to genetic resources of quinoa and the benefit-sharing arising from their use, while ensuring that the legal frameworks provide an enabling and inclusive environment for future research and development related to Quinoa.

The Way Forward: Key Priorities

Raising awareness of NUS strategic roles

1. ***Recognize*** *that NUS represent a wealth of diversity that can be harnessed to contribute more effectively to implement the United Nations multilateral goals and instruments such as the post-2015 Sustainable Development Goals, the MDG (esp. Targets 1.A and 1.C of MDG1[6]), Agenda 21 (esp. Chapter 3[7]), the CBD (esp. Art.1[8]), the Aichi Targets (esp. Target 14[9]), the Second GPA of FAO (esp. Activity 11[10]), the International Treaty on PGRFA (esp. Art 6.2e[11]) and the WHO Global Strategy on Diet, Physical Activity and Health[12], as well as other globally and regionally relevant Agendas and frameworks such as the Diversity for Development initiative bringing together a wide range of research and development partners in this arena[13] and regional and thematic frameworks such as the 2009 Agricultural Biodiversity Initiative for Africa[14], the 2010 Suwon Framework for Asia-Pacific[15] and the 2011 Near East/North Africa* PGR *Network[16]the 2005 Chennai Platform for Action[17] and the 2010 Suwon Framework[18].*

Conserving genetic and cultural diversity of NUS

2. ***Aware*** *that there are diversity of crops and complementarities of technologies and agricultural systems in line with the diversity of ecologies of each country,* ***Recognize*** *the increasing importance that society gives to organic farming and to urban agriculture and the role that promising crops play in this context.* ***Aware*** *that crop diversity is neglected and being lost together with a wealth of indigenous knowledge associated to it,* ***Recognize*** *that the integration of these species makes farming, social and economic systems more resilient to the effects of climate change. Therefore* ***Recommend*** *that these resources vital to the wellbeing of Humankind be better conserved, studied, distributed and promoted.* ***Recommend*** *that both ex situ and in situ conservation methods be used to protect these dwindling resources in order to facilitate their use by farmers and researchers, and at the same time allow their dynamic evolution and adaptation to change.* ***Recommend*** *the establishment of on farm conservation programmes for their valorization and use enhancement in harmony with traditional rights, cultural identity, ecosystem integrity and gender equity principles. Therefore* ***Call*** *on Donors to support NUS conservation and use activities leveraging existing mechanisms and programmes available at national and international level, given special attention to young and small-scale farmers.*

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[6] http://www.un.org/millenniumgoals/poverty.shtml
[7] http://www.un.org/esa/dsd/agenda21/res_agenda21_03.shtml
[8] http://www.cbd.int/doc/legal/cbd-en.pdf
[9] http://www.cbd.int/sp/targets/
[10] Promoting development and commercialization of all varieties, primarily farmers' varieties/landraces and underutilized species (http://bit.ly/SQRbGp)
[11] ftp://ftp.fao.org/docrep/fao/011/i0510e/i0510e.pdf
[12] http://www.who.int/dietphysicalactivity/strategy/eb11344/strategy_english_web.pdf
[13] http://www.egfar.org/content/agrobiodiversity
[14] http://farastaff.blogspot.it/2009/06/agricultural-biodiversity-initiative.html
[15] http://www.apaari.org/wp-content/uploads/downloads/2011/03/suwon-framework.pdf
[16] http://www.ecpgr.cgiar.org and http://aarinena.org
[17] http://www.underutilized-species.org/documents/publications/chennai_declaration_en.pdf
[18] http://www.apaari.org/wp-content/uploads/downloads/2011/03/suwon-framework.pdf

Promoting NUS in small-scale family farming and to improve rural livelihoods

3. ***Recognize*** *that these species make farming, social and economic systems more resilient to the effects of climate change and that NUS are particularly important livelihood asset for the rural poor.* ***Acknowledge*** *the unique contribution to humankind that farmers and local communities have made and will continue to make in safeguarding NUS and associated culture and* ***highlight*** *in particular the role played by women farmers in the conservation and sustainable management of NUS.* ***Recommend*** *facilitating conservation, access, availability, use and exchange of NUS seeds by farmers.* ***Call*** *on the international community for actions aimed at the recognition, encouragement and support of farmer and indigenous communities.* ***Promote*** *informal seed exchanges —including genebank materials—among farmers, in particular between those in similar agro-ecological zones of the world.* ***Call*** *on international and national institutions, including gene banks and research systems, to further support farmers and their communities and organizations in conserving and managing these crops for food security and agricultural diversification.*

Developing NUS Value chains from Production to Consumption and to Gastronomy

4. ***Recognize*** *that in most countries there is a disconnect between agriculture and farmers with consumers, and that food is consumed to meet not only nutritional requirements but that it also has a social and cultural value for people. In promoting the use of NUS,* ***Recommend*** *strengthening the links between farmers, researchers and consumers.* ***Highlight*** *the growing importance of NUS for the development of gastronomy and the important role that cooks, restaurants and food industry and food retailers can play in promoting the use and adding value to their products.* ***Recognizing*** *the important role of markets in fostering the use enhancement of NUS,* ***Advocate*** *public and private sector actions to support the development and/or improvement of the value chains of these traditional resources and their products along with interventions in support of local markets. Also* ***Recommend*** *better access of these resources to international markets, ensuring equity and fairness amongst all participants, recognizing that important challenges are to expand the demand of NUS consumption in developing countries, increase the share of value added for NUS products in developing countries and remove trade barriers for their products, particularly in developed countries.*

Changing of wrong perceptions about NUS and developing the evidence base

5. ***Aware*** *of the wrong perception that often surround traditional crops,* ***Recognize*** *the essential need to consolidate the many data and reports presently held in diverse sources measuring and demonstrating the value of these crops by developing and using objective criteria, such as nutritive content and income returns.* ***Recognize*** *that the scientific basis to understand their contribution to human nutrition and health needs further strengthening and therefore* ***Recommend*** *generating, collecting and disseminating data on food composition and consumption.* ***Work*** *together in an open and inclusive way to bring about the more open sharing and common-benefit use of such knowledge.*

Enhancing research and capacities for promoting the use of NUS

6. ***Call*** *on institutions to support the strengthening of their capacities, including learning and research, in particular on crop improvement, and the establishment of research networks for generating and sharing knowledge on NUS on themes including conservation, genetics, agronomy, value chain, nutrition and policies.* ***Call*** *on these institutions to integrate and scale-up participatory approaches with the involvement of all actors from farmers to consumers. Finally,*

Call *on public and private institutions to reposition promising crops in the research and extension agenda.*

Building an inter-sector and interdisciplinary collaboration for NUS

7. ***Aware*** *that the future of many promising crops depends on the close interactions across different disciplines (such as agriculture, nutrition, health, education), sectors (public and private), and stakeholders (farmers, researchers, value chain actors, decision makers etc),* ***Advocate*** *mechanisms and processes able to facilitate strategic synergies in support of existing national, regional and international networks and collaborative platforms*[19]*.*

Creating a conducive policy environment for NUS

8. ***Recognizing*** *the strategic role of NUS in fulfilling the right to food in terms of nutrition security, healthy food systems and sustainable diets,* ***Recommend*** *a greater deployment of NUS in national nutritional policies and in crop diversification programmes;* ***Advocate*** *their deployment in nutrition safety net programmes, food assistance and school feeding programmes, school gardens and food reserves.* ***Advocate*** *the largest mobilization of promising crops for improving people livelihoods and to that end* ***Call*** *on Governments to develop policies that will allow to mainstream best practices, methods and tools into Government actions, including incentives for NUS cultivation and conservation on farm.*

9. ***Welcome*** *of the Rio Six-Point Action Plan for the International Treaty on Plant Genetic Resources for Food and Agriculture adopted by consensus at a High-level Roundtable at Rio+20,*[20] ***Noting with satisfaction*** *its calls upon the international community to raise awareness of the actual and potential value of underutilized species of local and regional importance for food security and sustainable development. In relation to the Rio Six-Point priority to facilitate a new Keystone-type dialogue to complete the governance of all plant genetic resources for food and agriculture under the Treaty,* ***Recommend*** *that such dialogue should,* inter alia*, enhance policies and priorities to promote the use of a wider range of crops, and focus in particular in NUS. Finally, in relation to the Río Six-Point of exploring the possible expansion of the list of the crops included in the Annex I to the Treaty,* ***Recommend*** *that such exploration takes into account criteria such as the role of crops to face climatic changes and to ensure a nutritious and diversified diet.*

Establishment of an Ombudsman for the future generations

10. ***Recognizing*** *that the conservation of agricultural agrobiodiversity and other natural resources is essential for the survival of future generations,* ***Noting*** *that concepts such as inter-generational justice and rights of future generations have become a recurring issue when discussing the future of our Planet,* ***Noting*** *that future generations do not vote nor consume, so their interest is not necessarily reflected in our institutional, political and market systems. Measures should be* ***taken*** *to reinforce democracy integrating the interest of generations to come. Thus,* ***Propose*** *the establishment of an Ombudsman for future generations that would represent their rights in national and international decision making — national parliaments and within the UN system, since conservation issues encompass natural resources of relevance both to present and future generations. The role of this Ombudsman will be to represent those not yet born and to ensure that current decisions do not jeopardize their interests and rights in the future.*

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[19] Including Diversity for Development, PAR (http://bit.ly/Xg51EH), Indigenous Partnership for Agrobiodiversity and Food Sovereignty (http://bit.ly/Wu4lN2), APAARI (http://www.apaari.org/), AARINENA (http://www.aarinena.org/) and REMERFI http://1.usa.gov/VxEqlY).

[20] http://www.planttreaty.org/content/hlrt2