

# Concept Paper Tropical Agriculture Platform

Discussion Draft  
prepared for the

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## **BACKGROUND:**

**General Context:** The tropics, a belt that stretches around the earth between 23.5° North latitude and 23.5° South latitude, comprise of highly diverse climatic regimes from persistently warm and wet equatorial regions to higher altitudes deserts where solar radiation, temperatures and precipitation varies greatly throughout the year. The region is characterized by pervasive poverty. All but three of the world's least developed countries are located within the tropics. Despite the tropics account for approximately 33 percent of the world's crop land, and 40 percent human population, tropical agriculture currently only produces approximately 25 percent of the world's cereal, 25 percent of fruits and vegetables, and 20 percent of meat.

Agriculture in the tropics is not only a means for food security, but also known to be a critical driver of economic growth, especially in the early stages of economic development. Agriculture's contribution to economic growth in the tropics is greatest in Africa, where the sector generates approximately 30 percent of gross domestic product (GDP) and an equal proportion of GDP growth. While the magnitude of agriculture's role in stimulating economic growth varies from country to country, its comparative advantage in reducing poverty is much more pervasive. On average, GDP growth originating in the agricultural sector is considered at least twice as effective in reducing poverty as GDP growth originating from other sectors. Throughout most of the tropics, poverty is heavily concentrated in rural areas where the vast majority of populations rely on agriculture for their livelihoods.

**Specific Context:** Access to new and traditional technologies is among the key factors for growth in tropical agriculture as well as for alleviating poverty and hunger. Investments in agricultural research and technology development have had high rates of return, generally exceeding 30 percent per year, and their impact on poverty reduction has been impressive.

The G20 Conference on Agricultural Research for Development to be held in September 2011 in Montpellier, France, has set as an **objective** "*to strengthen capacities in agriculture technologies and productive systems for developing countries optimising complementarities and synergies between the G20 agricultural research systems*", with the **expected outcome of** "*Improved effectiveness and efficiency in capacity-building programmes to generate, share and make use of agricultural knowledge for developing countries through new and existing tools*". In the context of this objective, the Declaration of the G20 Agriculture Ministers Meeting held in Paris, France in June 2011 stated "*We welcome the ongoing work by FAO and interested G20 members to develop a platform for capacity building in tropical agriculture in developing countries*". This concept paper summarizes the possible nature and scope of the Platform, for review and discussion by G20 members and partners.

## **RATIONALE:**

**Problems/Issues to be addressed:** With the background of global growth of human population, in combination with increasing per capita food consumption, shift to animal-based diets in emerging economies, and negative impact of climate change on food security, the sustainable increase of tropical food production will be critical for meeting the global demand. It is estimated that by 2050,

the global food demand will increase by at least 50 percent, and that the majority of that increase in demand will be in the tropical region.

Improving agriculture can have an important role on reducing poverty in the tropics, as illustrated by the fact that the more than 80 percent of worldwide rural poverty reduction from 1993 to 2002 was driven by improving conditions in rural areas. Nowhere is economic growth, poverty reduction and food security more reliant on agriculture than in the tropics of Africa with a stagnating agricultural sector compared to other tropical regions.

While cereal yields at least doubled in every region of the world over the last 50 years, Africa experienced no increase in yields. Unfortunately, tropical Africa is expected to be one of the regions hardest hit by climate change, largely due to its reliance on rain-fed agriculture and its susceptibility to drought. Drought has become more frequent and more severe in recent years and ranks as the single most common cause of severe food shortages, particularly in developing countries of the seasonally dry and the semi-arid tropics. It represents one of the most important natural triggers of malnutrition and famine as currently observed with the food security emergency in the Horn of Africa.

**Stakeholders and target beneficiaries:** Institutional and individual capacities in tropical agriculture in most of the smaller and poorer Least Developed Countries (LDC) which comprise the first group of stakeholders are low. For example, many countries of Sub-Saharan Africa and Central America have only one or few understaffed and highly under-resourced agricultural research institutions and their agricultural education institutions are weak. Furthermore, there is a serious lack of well qualified researchers and professionals in the wider agricultural sector in many LDCs. The second group of stakeholders comprises the larger emerging countries in the tropics such as Brazil, China, India, Mexico, and South Africa which have developed advanced, internationally highly recognized institutions that have been effective in bringing about real changes to the agricultural sectors of their respective countries. There are still some capacity gaps which national institutions in the second group are trying to address. The third key group of stakeholders are the institutions and individuals from developed G20 countries and advanced international and regional organizations that work on and support agricultural research and education in tropical agriculture. This group will continue to have a major contribution to the development of capacities in the first two groups. The direct beneficiaries of the Platform are the staff working in rural institutions in the first two groups of stakeholder countries.

**Justification:** Access to new and traditional technologies is among the key factors for growth in tropical agriculture, for crisis prevention caused by severe drought and other natural disasters, as well as for alleviating poverty and hunger. However, the potential for increasing the contributions of tropical agriculture on food security, reducing poverty and driving economic growth, depends to a great extent on the capacities of institutions, researchers and professionals working in the agricultural sector of tropical countries. These capacities currently vary widely throughout the tropics, as stated in the previous section, and are significant constraints to enhancing the performance of national and regional agricultural institutions for sustainable growth and poverty reduction.

Many developing countries in the tropics will not be able to achieve sustainable development and food security unless they reduce the present individual and institutional capacity deficits in agriculture, innovation and natural resource management. Developing the skills to service the sector is vital to achieve robust and sustained growth in tropical agriculture and to and facilitate its adaptation to environmental, economic and social changes. A key to success in those challenges is to increase the number of people being trained in technical areas related to agriculture and food security with skills for networking and collaboration, and especially to improve the quality and relevance of the training they receive.

In many tropical developing countries, radical transformation of the tertiary agricultural education and research institutions is required to make them more relevant to small-scale farmers and other actors along the value chain and to the current global realities in today's increasingly complex and rapidly changing environment. These institutions must supply the knowledge and the skills demanded by growing private and civil society sectors to encourage rapidly evolving national agricultural

innovation systems while simultaneously responding to gaps in public agricultural education and research institutions.

There are various existing interventions that are addressing the above constraints, whether in the South-South context, or involving developed countries from the 'North' in bilateral or triangular relationships. However in the majority of cases these interventions are not coordinated with each other, and all parties would gain significantly from more coherent approaches avoiding duplication and making use of synergies and mutual strengths. The presently proposed Platform will document the array of capacity development 'offers' and relationships, enable greater efficiency and effectiveness of action and more strategic programmatic approaches, and ensure greater correspondence with local needs.

**Technical approach and modalities:** Over the course of the past two decades, the international community's understanding of the role of knowledge sharing and learning in developing sustainable capacity has evolved considerably. There is a common perception of a need for change to increase effectiveness of approaches to build capacity in line with international good practices emerging from the Paris and Accra Agreements. This perception has been reflected in FAO's corporate strategy on Capacity Development, with emphasis on longer-term interventions activities which are locally lead with mutual accountability, which address the three dimensions of capacity in the enabling environment, organizations and individuals.

Whereas, in the past, it was more common to view stand-alone training as sufficient to develop capacity, increasing evaluative evidence has suggested that such one-off interventions are rarely successful in building sustainable organizational or institutional capacity. Agricultural education, training and other learning methods need to be integrated into broader innovative capacity building programmes addressing organizational capacity gaps and problems in the enabling environment which can otherwise impede use of the new agricultural knowledge and skills by national actors, in order to develop sustainable individual and organizational capacity in tropical countries effectively. Experience gathered in the last two decades demonstrated that international collaboration can improve the quality and impact of scientific research and education programmes. In this context several initiatives have been undertaken to establish partnerships among and within countries, including south-south, north-south and regional alliances, in order to facilitate the development and use of advanced technologies and the incorporation of traditional knowledge, and to share experiences, information and technologies.

The Tropical Agriculture Platform would be aimed at consolidating good training practices and promoting modalities that address support to continuous learning and ownership by national actors, such as on-the-job learning, placements, action research and more flexible and tailored approaches such as coaching and mentoring, together with e-learning, organizational development, and support to collaboration and networks. Selecting multiple methods to achieve the 'best fit' would maximise the strengths and mitigating the challenges of the various modalities, thereby ensuring that these support knowledge sharing, learning and change in all three capacity dimensions.

The Platform would have a primary focus on capacity building in the least developed countries in the tropical region, and would give priority to countries/areas where food security challenges are most severe. A twin-track approach would be developed, combining (a) quick-response mechanism focusing on capacity building in topics/areas undergoing agricultural and food security crises, with (b) longer-term programmatic approaches in priority areas in tropical agriculture identified in Component 1 (Capacity and Needs Assessments). The two tracks would be mutually reinforcing, since programmatic approaches to enhance capacities in the longer term can be used or adapted to respond to short-term needs.

#### **DEVELOPMENT OUTCOME:**

Improved effectiveness and efficiency in capacity building programmes to foster the generation, sharing and utilization of agricultural technologies and practices for developing countries in the tropics through new and existing mechanisms.

## PLATFORM COMPONENTS:

The platform would consist of four principal components, which are inter-related:

1. Capacity and Needs Assessments: Assessments would be made of the institutional and individual capacities and needs in key aspects of tropical agriculture in priority countries, to identify capacity gaps and define areas of priority action in the context of national development plans. These would be based in part on desk studies drawing on existing assessments, reports etc., supplemented through targeted electronic multi-stakeholder consultations involving key parties. Assessments would also be made of existing activities in relation to the three other components of the Platform, to map stakeholders and partnerships in capacity building in tropical agriculture involving G20 members, as well as regional and international institutions. The assessments would document geographic and subject areas of interest, nature of activities, availability of resources (e.g. skills, learning materials, sharing tools, research and training infrastructure), levels of investment, and plans for expansion and/or contraction of activities.
2. Development of Individuals' Capacities: An integrated programmatic approach to develop knowledge and skills of key individuals and teams would be developed and implemented in the priority areas identified under component 1. Activities would be developed in close collaboration with existing bilateral and multilateral initiatives, facilitated where appropriate by regional bodies, aiming to achieve greater effectiveness through enhanced coordination. A range of modalities would be used to complement and reinforce learning including:
  - Exchange of experts and technicians: South-South Cooperation programmes would deliver technical assistance, know-how, technology and policy support from more advanced tropical countries such as Brazil, China, India, and South Africa, to less advanced countries, with experts and technicians including extension agents positioned at the national and decentralized levels in the recipient countries. The skills and competences of South-South experts and technicians would increasingly include those relevant to support development of host countries across all three capacity dimensions of enabling environment, organizations, as well as individuals.
  - Fellowships, Internships, and Short-term Placements: Governmental and international institutions would provide tailored and coordinated programmes of short-term training and internships for mid-career agricultural scientists, extension agents, and technicians in agricultural domains. Advanced agricultural research, extension, and education organizations in G20 countries would play leading roles in this component of the platform, together with major international institutions particularly such as the CGIAR.
  - Group training: The platform would also provide an opportunity for stakeholders to aggregate and promote their existing offer of training opportunities for the identified priority topics on the virtual platform space. This will allow scaling up existing training efforts throughout the tropical region and foster knowledge sharing among countries and organizations.
  - Development of learning resource materials: New learning resources will be collaboratively designed and offered on key subject areas where gaps have been identified (Component 1 and curricula reviews in Component 2). E-learning: E-learning would be used to complement and supplement the face-to-face mechanisms. A variety of educational institutions especially in tropical countries will be supported in terms of increasing the provision of short tailored e-learning courses, wherever possible in combination with face-to-face methodologies in the context of blended learning approaches.

The programme will ensure that the following standards are met (a) the training corresponds to target groups' needs; (b) the training is interactive and learning orientated (action learning, field trips, fairs, workshops, seminars, conferences); and (c) the content of the training can be more efficiently and effectively applied through mentoring and post-training support as well through networks of professionals involved in agricultural innovation.

3. Development of Institutional Capacities: The tropical agriculture platform would address the institutional dimension of capacity in relation to developing tertiary education and research projects in tropical agriculture.
- Curriculum reviews of courses in tropical agriculture offered by tertiary education institutions would be conducted with both public and private sector participation, with action taken to strengthen such curricula where necessary to ensure that courses meet the demands identified in component 1, and offer graduates better career prospects. This work would be undertaken in the context of existing regional and national initiatives where such exist. Training material on key subject areas developed under Component 2 will support the development of improved courses based on new curricula.
  - The Platform would facilitate contacts and collaboration between research institutions in different countries that require or can offer human and physical resources to undertake scientific research on key challenges in tropical agriculture. In this way, developing and G20 countries can combine their research capacities towards priority topics of mutual interest, complementing their resources where limitations exist and promoting synergistic partnerships.
  - Organizational Learning and change: As mentioned earlier, the international community's understanding of the role of knowledge sharing and learning in developing sustainable capacity has evolved considerably. Those findings to be effectively taken up and internalized, the platform will contribute to the changes that are required in the organizational knowledge, attitudes and skills through mentoring, and training in technology innovation, knowledge management and leadership.

Sharing of information and knowledge: Mechanisms that foster the sharing of knowledge regarding the development, adoption and adaptation of technologies for tropical agriculture in developing countries will be facilitated through the creation and/or strengthening of communities of practice and networks in key thematic areas, that offer opportunities for dialogue on key issues, access to information and databases on existing technologies including for practitioners at rural level, success stories and lessons learnt that could be used by other countries. This component would be based particularly on use of virtual collaboration tools and media, and would build on existing networking initiatives wherever possible. The knowledge sharing activities provide crucial linkages that connect components 1, 2 and 3 aimed at strengthening individuals' and organizational capacities respectively based on needs, and will enhance learning activities and programmes. The knowledge sharing activities should additionally contribute to identify niches and demands for new research.

#### **INSTITUTIONAL ARRANGEMENTS:**

The Tropical Agriculture Platform would bring together institutions and their staff from G20 countries and developing countries that are working on relevant fields in a virtual, agile and efficient structure that (a) contributes to sustainable changes in the agricultural capacities of tropical developing countries, and that (b) complements and adds value to existing initiatives. The Platform would be facilitated by a secretariat located in and managed by FAO. A management board comprising representation from national agencies in G20 and developing countries, and the key regional and international agencies, would guide development of the platform, with a smaller executive committee to oversee operations.

The Platform would provide a robust mechanism to facilitate establishment and maintenance of international partnerships without creating new institutional structures. Individual activities under the four components of the Platform would be lead by major national education and research organizations in G20 countries with direct experience in tropical agriculture, and as well as by advanced international and regional education and research organizations that can provide opportunities for learning and knowledge sharing.

The Platform would optimise complementarities and synergies between the efforts of G20 members to support development, and would encourage and foster the involvement of institutions from non-G20 countries. One important aspect of this would be to provide a clearinghouse function to document existing initiatives and foster the emergence of new initiatives. The founding partners would establish an open virtual infrastructure during inception of the Platform (see below), which could be opened up to wider participation in the medium term through its expansion.

The Platform would also establish close linkages with relevant existing multi-partner initiatives that promote coherent institutional approaches, such as those being implemented by regional bodies and international agencies.

Language requirements and capacities would guide the choice of institutional partners and establishment of knowledge networks.

#### **RESOURCES AND FUNDING:**

The Platform would link many different types of resources already employed in existing activities that relate to the proposed Components of the platform, such as bilateral or multilateral partnerships for South-South Cooperation and Fellowship programmes offered by certain countries and institutions.

The Platform would also need to harness new resources to support the programmatic mechanisms that will promote and sustain coherent and complementary approaches to capacity development, and support priority activities which are not currently fully resourced including the secretariat. Contributions of such resources could be both financial and in-kind through mechanisms such as staff secondments. The scale and scope of the Platform's components will be determined by the nature and size of new resources that become available.

#### **TIMELINE:**

A more detailed programme proposal will be developed, that takes into account the feedback and decisions emerging during the Montpellier Conference, through a participatory consultation that brings together representatives of the principal actors. This event would be held in the last quarter of 2011, with aim of launching the Platform in the first quarter of 2012.

As a preliminary outline of the approach to be taken, the first phase of work to establish the Platform would last for 3 years and comprise the following steps:

1. Inception (Year 1): Completion of Component 1, development of the virtual infrastructure and initial implementation for Component 4, and initiation of Components 2-3 in high priority topic areas.
2. Expansion (Year 2-3): Consolidation of Component 4 with inclusion of networks and knowledge content from additional providers to offer a wider scope of subject coverage, and expansion of Components 2 and 3 through major institutional and individual capacity building activities and additional partnerships.