OVERVIEW OF THE INTERNATIONAL CONFERENCE « Dialogue between Europe and its Southern partners on agricultural research and climate change » - Brussels, 16-17 December 2009

ERA-ARD, SCAR and EIARD, with a special support of CIRAD, the French agricultural research centre for international development, the ERA-ARD Coordinator, co-organised an International Conference entitled: « Dialogue between Europe and its Southern partners on agricultural research and climate change » on December 2009.

This conference aimed at facilitating the identification and initiating coordination of European agricultural research programmes for mitigation and adaptation actions to climate change for mutual benefit of Europe and its Southern partners. It is why it has been registered as a major contribution to the COP15, the United Nations Climate Change Conference.

140 key policy-makers and research experts in the fields of agriculture, research and international cooperation, members of ERA-ARD, SCAR, EIARD and partners from Southern countries elaborated together guidelines of agriculture research programmes for the coming years taking into account climate change consequences

Context

This International Conference on "Dialogue between Europe and its Southern Partners on Agricultural Research and Climate Change" was one of the positive events of the Copenhagen Summit Agenda. The European agricultural research networks have made concrete progress towards defining Europe's contribution to climate change for the mutual benefit of Europe and its Southern partners.

- **A unified agricultural research community to address climate change**

This conference was organized, for the first time, as a joint event by the three major coordinating networks of national agricultural research programmes under the aegis of the European Commission:

- ✓ SCAR (Standing Committee on Agricultural Research)
- ✓ EIARD (European Initiative for Agricultural Research for Development)
- ✓ ERA-ARD (The Agricultural Research for Development dimension of the European Research Area)
- ✓ CIRAD (the French Agricultural Research Centre for International Cooperation), the coordinating body for ERA-ARD, was also heavily involved in the organization of this event.

The 140 participants (40 of whom were representatives of Southern research centres and political organizations) discussed the current situation and defined priorities in terms of research, partnership and policies in order to address the consequences of climate change on agriculture. In addition, they unanimously recognized that this should have the main priority in agricultural research for the near future. The conference allowed participants to identify the partners' priorities to be taken into account in the formulation of the scientific content of the European Joint Programming Initiative on "*Agriculture, Food Security and Climate Change",* approved by the European Union on 3 December 2009. Participants also stressed the importance of mobilizing national, regional and international scientific partners, in particular the Alliance of the CGIAR (Consultative Group on International Agricultural Research) Centres for the establishment of this programme.

❖ Coordinating the initiatives

The workshops for each major region demonstrated not only the diversity of expectations from the South, but also the research potential for managing this diversity, on condition that such research is multi-disciplinary and inclusive and that it has strong political support.

The necessity of coordinating these initiatives and encouraging synergies, notably through agricultural research consortiums, is of prime importance to address concretely the challenge of climate change and influence the political decisions. The tasks that must now be tackled are the definition of a mode of governance which strengthens the dialogue between the scientific and the decision-makers communities and the mobilization of political and financial support which are indispensable.

Conference papers, recommendations, photos and descriptions of the contribution of European countries to agricultural research for development by country and the organization of agricultural research in the major regions of the world are available on the Conference's web site http://conference.era-ard.org/.

For more information: *www.era-ard.org*
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Regional agricultural research priorities and expectations of a partnership between the South and Europe

All regions are already affected by climate change and the priority of their agricultural research is to adapt to it and to counter its effects. Despite having contributed least to climate change, developing countries will be the most affected.

The strategies recommended for determining priority research topics are multi-sector and multi-stakeholder for all regions and are geared towards poverty alleviation and towards local and regional needs, notably those of producers, whilst respecting consultation and coordination between the bodies involved, on a national and regional level, and between Europe and the regions of the South, with the proviso that the partnerships established are collaborative, participatory, take into account local knowledge and enable local and regional capacity building (policies, funding, technology transfers, training, etc.).

❖ Africa

Workshop chaired by **Dr Daan du Toit**, Minister-Counsellor on Science and Technology for the South African mission to the European Commission, and introduced by **Dr Hubert N'Djafa Ouaga**, general coordinator of the CILSS/ACDI climate change programme at the Agrhymet Regional Centre (Niger).

Assets and constraints of the region
African agriculture benefits from substantial ecosystem diversity (potential for diversifying production), from the availability of virtually unexploited arable agricultural areas, and from developing national and regional markets. However, it lacks efficiency and competitiveness (low yields and productivity, low added value, inability to feed its ever-growing population, importing of 50% of food products, hence the recent food crises in 2008, the so-called hunger riots).
National agricultural policies are sometimes hindered by multilateral and bilateral policies (compartmentalization of national agricultural policies and those launched on a regional level, agricultural policy geared towards the economic return on production, definition of agricultural policies

without the involvement of stakeholders at the outset, funding largely dependent on outside capital). The multiplicity of regional consultation and action systems does not make for efficiency in the agricultural sector.

Expected impacts of climate change in West Africa (IPCC, 2007)
• In the Sahel: aggravation of droughts, floods (2009), soil degradation, drop in agricultural and pastoral production, food crisis, population migrations, political instability, emerging diseases.
• In humid zones: intensity of storms, flooding, gulley erosion, coastal erosion, salinification of agricultural lands and fresh water due to rising sea levels, etc.

Priorities for agricultural research
- Improvement of predictions, alert systems and modelling
- Further improvement of seeds or varieties
- Greater food security
- Optimum use of local knowledge
- Emerging topics: biofuels, carbon market, forest management to stem climate change.

Need to coordinate priorities with existing programmes:
- Comprehensive Africa Agriculture Development Programme (CAADP) of the African Union and NEPAD adopted by African Heads of State in Maputo, Mozambique, in 2003 with its four main pillars:
1 – Extend the areas under sustainable land management and water control systems (led by CILSS with other partners).
2 – Increase market access through improved rural infrastructure and other trade-related interventions.
3 – Increase food supply and reduce hunger across the region by raising smallholder productivity and improving responses to food emergencies.
4 – Improve agricultural research and systems in order to disseminate appropriate new technologies.

- The ECOWAS agricultural policy (ECOWAP)
ECOWAP defines four fundamental sectors for priority investments in agriculture:
1 - Land and water management
2 - Rural infrastructures and trading capacities
3 - Improved food supplies and hunger alleviation
4 - Agricultural research, dissemination and adoption of technologies.

- SRAP-RV-WA, under way
Overall vision: The population, economies and governments of the region are in the process of constantly and effectively adapting to climate change. Three aims:
1 - Regional institutions provide states and economies with political, technical and financial support in their climate change adaptation processes.
2 - The national stakeholders in each country are in the process of adopting harmonized and coordinated approaches to adapt to climate change.
3 - Climate change is integrated into investments and into regional and international priority programmes and projects.

Partnership
Scientific
Regional forums: FARA, CARDESSA, RUFORUM, AFAAS, IGAD
Regional instruments: CAADP
Regional projects: SCARDA, UBRAIN
Role of parliamentarians: AWEPA
Stronger voices from the South within CGIAR
Collaboration with the private sector

Political
There exist reference political frameworks for dealing with the issue of agricultural development and adaptation to climate change. A prime place is reserved for research in these policies (pillar No. 4 of the CAADP and fundamental sector No. 4). Development partners are ready to provide major support in implementing these policies. The priorities of regional agricultural research partnerships between

the South and Europe will have to be based on those of the agricultural policies defined. They will necessarily involve establishing a win-win partnership with the transfer of know-how.

Collaboration instruments: FP7 (The EU framework programme for research) may not be adapted to capacity building and needs to be completed by other instruments such as FSTP, EIARD/2010/*Capacity building programme.* Recommendations to set up an African research centre on climate change, update the inventory of research on climate change, and have joint programming initiatives between Europe and Africa.

❖ Asia

Workshop chaired by **Dr Herminia A. Francisco**, Head of the Economy and Environment Program for Southeast Asia (EEPSEA) in Singapore, and introduced by **Prof. Sudip K. Rakshit**, Vice-President for Research at the Asian Institute of Technology (AIT) in Thailand.

Assets and constraints of the region
This is a region that has benefited from the green revolution, which has led to a reduction in poverty and the emergence of a rural middle class. The planned investment to cope with climate change is around 6.7%. Regional cooperation has the capacities to manage numerous common concerns (such as the management of water resources, forest fires, natural disasters and the emergence of diseases) and to encourage "green stimulus" programmes which would take part in the economic development of the region, in order to alleviate poverty whilst preparing for the most harmful effects of climate change.

Priority research topics:
- Management of climate risks
- Agricultural resilience programme
- Management of coastal zones
- Development of platforms for knowledge and exchanges of good practices.

Partnerships
Scientific
Partnerships must include joint programmes, experimental and socio-economic research, exchanges of good practices, exchanges of experts and training.

Political
The European Union must work in consultation with ASEAN and other technological platforms.

❖ Latin America

Workshop chaired by **Mr Mario Allegri**, President of the Forum for the Americas on Agricultural Research and Technology Development (FORAGRO) in Guatemala and introduced by **Mr Bastian Louman,** Head of the "Climate Change" Programme at the Centre for Tropical Agricultural Research and Higher Education (CATIE) in Costa Rica.

Assets and constraints of the region
Latin America, a vast region of more than 30 countries with around 600 million inhabitants and comparative advantages in natural resources and the environment, has definite potential for contributing to world food security and sustainable development. Agriculture accounts for more than 10% of GDP and the agroindustry for 30%. The main crops (wheat, rice, maize) come from the "southern cone" of Latin America. The low value of agricultural exports (apart from Argentina, Brazil, Chile, Costa Rica, Ecuador and Mexico) and the growing threats to forest ecosystems should be noted.

Potential impact of climate change:
- Diseases and pests

- Adverse weather, intensification of natural disasters
- Water availability
- Extinction of mother plants of major crops
- Land changes favourable for certain crops (particularly in savannah zones and at high altitudes)

Priorities for agricultural research

- Reduce vulnerability to climate variability
- Management of natural and agricultural resources
- Clarification and securing of land tenure rights
- Spatial and temporal relations between land users
- Multi-stakeholder governance mechanisms on several scales, in order to identify research and development needs and implement them, including monitoring-evaluation mechanisms
- Low carbon emission supply chains
- Improve the potential of crops to adapt
- Potential and impacts of biofuels
- Modification of livestock systems (management of water, diseases, seasonal fires, organic agriculture, etc.)
- Development of novel systems, notably to reduce CO2 emissions in animal production, or rice production as carbon sequestration through the restoration of degraded pastures and minimum use of tillage techniques
- Improved prediction of climate change impacts (predictability of models, early warning systems, risk management)
- Breeding to cope with expected changes (diseases, drought, fires, floods, increasing carbon concentrations, etc.)

Partnerships

Scientific

CATIE, CGIAR, universities, INIA, Model, Forest Network, watershed management committees, biological corridors, CIFOR, IICA, IIED, ILRI, WAC, companies, Rain Forest Alliance, CIAT, GEF, CIRAD, industry, producers, CIMMYT, CPI, CATHALAC, CCCCC, INPE, TNC, ODI, Bioversity, CABI, IFPRI.

Political

Improvement of partnerships with the European Union under the 2010 Framework Programme and the joint programme initiative.

❖ Middle East and North Africa

Workshop facilitated by **Dr Mahmoud Solh**, Director General of ICARDA (International Center for Agricultural Research in the Dry Areas) in Syria and introduced by Dr Mahmoud Solh and **Mr Ibrahim Hamdan**, Executive Secretary of the Association of Agricultural Research Institutions in the Near East and North Africa (AARINENA) in Jordan.

Assets and constraints of the region

The Middle East and North Africa region is already characterized by a fragile ecosystem: it is located in an arid zone and already has to cope with water scarcity, soil degradation and spreading desertification, a demographic boom and poverty exacerbated by a fragile geopolitical environment, gender inequalities, and the weakness of human resources and institutional capacities. This is the region in the world most affected by food shortages and the prospects of climate change effects on agriculture will worsen that trend.

In the field of agricultural research, the region will have to take up several challenges, including a lack of awareness among politicians and decision-makers regarding the amplitude of climate change, a lack of research organizations working on climate change and exchanging information on the subject on national and regional levels, and a lack of funding.

Impact of climate change

- Adds to the constraints of an already fragile ecosystem with limited water resources
- It is urgent to strengthen scientific and technological transfers
- Decline in food security
- Rising sea levels (particularly in the Nile delta where 6 million people live)
- Increase in natural disasters with irreversible damage (e.g. on coral reefs due to higher levels of acidity in the oceans)

Priority research topics

- Adaptation to climate change and resilience of farming systems
- Sustainable development of lands and water resources
- Development of capacities to grasp institutional, political and socio-economic implications
- Monitoring and surveillance of plant and animal diseases

Existing partnerships

Scientific

AARINENA/NARSs, ICARDA and other CGIAR centres, FAO, ACSAD, CIHEAM, FI4IAR, ARIMNET, European institutions.

Political

Union for the Mediterranean, Barcelona process

More info on:

http://conference.era-ard.org/index.php?option=com_frontpage&Itemid=1