

# WFEO MEETING REPORT

## UNITED NATIONS CSD-17

### A. INTRODUCTION

The Commission on Sustainable Development (CSD) of the United Nations met in New York from 4<sup>th</sup> to 15<sup>th</sup> May 2009 to conclude its 2008-09 implementation cycle. This cycle, CSD-16 and 17, focused on progress in the following areas: agriculture, rural development, land, drought, desertification and Africa.

### B. SCIENTIFIC AND TECHNOLOGICAL COMMUNITY

The scientific and technological community is represented by WFEO and ICSU (International Council for Science). Agreements with ICSU delegates, reached at CSD-14, allowed to voice the whole group's position through joint statements on the different issues of the Agenda, and to share in equal terms the time for interventions and the facilities assigned by the U.N. to the group.

### C. PARTICIPATION OF THE WFEO DELEGATION

Appointed by the WFEO Executive Council, Messrs. Barry J. Grear (WFEO President), Daniel Clinton (CCB Chair), Darrel Danyluk (CEE Chair) and Jorge Spitalnik (CE Chair) represented WFEO in this Session. Also, from the Urban Alliance and representing Engineers Canada, Randall Gordon Martin and Sherry West, and from AAES, Noha El-Ghobashy, Craig Farkos, Michael Burke Michaud, Mike Sanio and Christopher Scarpino attended as members of the WFEO delegation.

The position sustained by the WFEO delegation was to stress the technical nature of the issues discussed that required a serious observance of scientific principles and engineering criteria when searching for solutions of sustainability and development. This position was agreed and followed by our ICSU colleagues. In Annex 1, the interventions of the Science & Technology Group's representatives are included.

### D. INTERGOVERNMENTAL PREPARATORY MEETING FOR CSD-17

A summary report on the Preparatory Meeting held from 23<sup>rd</sup> to 27<sup>th</sup> February 2009 is attached (Annex 2). This meeting was attended by Mr. Darrel Danyluk, CEE Chair.

### E. CSD-17 CONCLUSIONS AND RECOMMENDATIONS

The 17<sup>th</sup> Session of CSD recommended a series of policy options and practical measures for solving issues in agriculture, rural development, land, drought, desertification and Africa. Main conclusions and recommendations to deal with such issues and specifically related to Science, Engineering and Technology follow.

#### a.1) **Conclusions on Agriculture**

- Boosting agricultural productivity, improving soil quality ensuring the safety of food and, as appropriate, enhancing the nutritional quality of food is essential.
- A comprehensive approach integrating post-harvest storage and processing to reduce losses and add value and capacity building at all stages -particularly in developing countries- is needed.
- Farm enterprises of all scales should be adapted to site specific agro-ecosystems and climate, based on local knowledge and experience, and the best available science, technology and know-how.
- Sustainable agricultural practices as well as sustainable forest management can contribute to meeting climate change concerns. Sustainable soil, land, livestock, forest, biodiversity and water management practices, and resilient crops are essential. To this end, international, regional and national efforts to strengthen capacity of developing countries to enhance agricultural productivity and to promote sustainable practices in pre-harvest and postharvest agricultural activities are urgently needed.

#### a.2) **Recommendations on Agriculture**

- Employ science-based agricultural approaches, and local and indigenous knowledge, while undertaking research and development, to improve plant varieties, livestock, and soil. Encourage the production and use of sustainable bio-based products in agriculture.
- Promote the use of soil conservation and improvement techniques, including integrated nutrient management and nutrient use efficiency, especially to prevent degradation of vulnerable land and restore degraded land.
- Promote sound water management and saving in agriculture through efficient irrigation, water harvesting and storage, treatment and reuse.
- Enhance international knowledge-sharing, cooperation, capacity-building and support on sustainable agriculture, including the exchange of good agricultural practices.
- Implement actions to assist developing countries, especially those affected by natural disasters, in the development and design of risk management systems for agriculture.

#### **b.1) Conclusions on Rural Development**

- The success of sustainable rural development depends on, inter alia, developing and implementing comprehensive strategies for dealing with climate change, drought, desertification and natural disaster.
- Harmonization of modern technologies with traditional and indigenous knowledge for sustainable rural development has to be supported and promoted
- The use of traditional knowledge, including indigenous knowledge for the management of natural resources to address the challenges of sustainable development should be protected and applied.

#### **b.2) Recommendations on Rural Development**

- Support training and capacity building of rural communities to effectively implement adaptation programs to climate change at the local level.
- Invest resources to enhance research aimed at adapting to the challenges of climate change.
- Improve access by rural people and communities to information, education, extension services and learning resources, knowledge and training, to support sustainable development planning and decision making, and to cell phone technology.
- Increase public and private investments in infrastructure in rural areas, including roads, waterways and transport systems, storage and market facilities, livestock facilities, irrigation systems, affordable housing, water supply and sanitation services, electrification facilities, and information and communications networks.
- Improve access to reliable and affordable energy services, including renewable and alternative sources of energy for sustainable rural development, as well as access of rural populations to safe drinking water and adequate sanitation.
- Support development, transfer and use of safe and environmentally sound construction technologies and practices, in particular for housing.

#### **c.1) Conclusions on Land**

- Provision of science-based, targeted incentives, including financial resources, for public and private investment in infrastructure and research for sustainable land management and reducing land degradation is required.
- Conservation and sustainable use of biological diversity as well as sustainable forest management as an integral part of sustainable land management and combating deforestation and forest degradation should be promoted.

#### **c.2) Recommendations on Land**

- Utilize the best available, useful and cost-effective technologies for the implementation of sustainable land management, including Geographic Information Systems for land administration and municipal planning and satellite imagery for land use mapping.
- Apply measures such as sustainable agricultural practices, establishment of perennial vegetation land cover, agro-forestry, eco-agriculture and diversification and reduced tillage, and capacity building need to conserve and protect land and soil resources.
- Promote the improvement of existing and establishment of new centers of excellence in developing countries in land policy, tenure and management to enhance the knowledge and expertise necessary for the implementation of sustainable land planning, administration and management.
- Develop existing and new risk management tools that build landscape resilience including resilience of land to natural disasters, and the impacts of climate change.
- Promote exchange and transfer of information on new and improved technologies and best practices.

- Strengthen capacities, especially in developing countries, for applying new and existing tools and technologies for monitoring soil quality and land degradation, and for evaluating biophysical and socio-economic information.
- Promote integrated land and water resource management in addressing land degradation, water scarcity and adapting to impacts of climate change;
- Promote efficient, effective and sustainable use of water resources including water diversification by exploring the sustainable use of groundwater and effluent waste, sustainable desalination, rainwater harvesting and support water conservation and demand management initiatives, balancing among different water uses in all ecosystems;
- Improve the efficiency of irrigation and water management practices, such as the use of rainfall harvesting, so as to help address water shortages.
- Promote and scale up the development, transfer, as mutually agreed, dissemination and adoption, as appropriate, of safe and science-based practices, products and technologies, including advanced technologies and corresponding know-how, that enhance the sustainable use of land resources, particularly for developing countries taking into account local conditions.
- Support countries' efforts, particularly in developing countries, to enhance the scientific understanding of land resources systems through strengthened technological capacity, including, as appropriate, support for testing research findings through pilot projects.

**d.1) Conclusions on Drought**

- Effects of climate change heighten the risk of droughts and drought severity and increase the need for effective drought management and disaster risk reduction.

**d.2) Recommendations on Drought**

- Support more proactive drought risk-management approaches.
- Integrate policies and strategies for climate change adaptation and disaster risk reduction.
- Promote and implement effective national, regional and global drought information, forecasting and early warning systems
- Promote cooperation and partnering for capacity building and improving effectiveness in planning, monitoring and implementation of drought management plans, including data gathering, information management, modeling, and forecasting.
- Invest in research-and-development, robust data collection, including through remote sensing, and information to assess and identify risk and to predict, plan for and manage droughts across time scales from seasonal to multi-year events, including short, medium and long-term events, taking into account traditional knowledge.
- Encourage, and where appropriate, establish scientifically based drought and desertification-related local, national, and where appropriate, regional indicators and benchmarks and related web-based information systems and support research and development on the underlying causes and effects of drought.
- Continue to mobilize funding for research on and development of drought-tolerant seed varieties targeted towards national specificities and facilitate access to such varieties, especially in drought prone countries in the developing world, while bearing in mind the use of improved irrigation techniques and enhancing water efficiency measures.
- Promote innovative technical solutions and practices, combining them with traditional knowledge, for drought forecasting, impact assessment and early warning information systems and sustainable integrated water management.
- Promote access to affordable, appropriate and necessary technology and provide corresponding capacity-building to enable drought forecasting and planning, development of user-based drought-related management triggers across time scales, and sustainable management, including efficient use of scarce resources and arable land.

**e.1) Conclusions on Desertification**

- Interrelationship between climate change, biodiversity loss and desertification and the need to combat desertification and sustainable land management has to be recognized and promoted.
- Land resources, based on scientific and indigenous knowledge need to be protected through community-based sustainable natural resources management.

**e.2) Recommendations on Desertification**

- Promote sustainable water management and efficient irrigation, water conservation and utilization of alternative water sources, including flood water and subsurface flows.
- Reduce soil erosion and promote soil water retention through sustainable forest management and sustainable agro-forestry practices.
- Prevent sand dune movement and reduce the frequency and severity of sandstorms, inter alia, by strengthening early warning systems and restoring vegetation.
- Promote scientific research and strengthen the scientific base on desertification and drought, which is essential for informed decision-making on sustainable land management and to measure the results and monitor the impact of programs combating desertification.
- Support the improvement of existing and the establishment of new centers of excellence and monitoring in developing countries to combat desertification and promote capacity building to adopt and implement inter alia integrated techniques for the conservation of natural resources and their sustainable use.
- Support the establishment of and strengthen existing disaster management capacities at all levels, including information and early warning systems that allow effective management of risks associated with drought, desertification, land degradation and adverse impacts of climate change and expand access to appropriate technologies to assess, analyze and quantify the nature, severity and impacts of land degradation and desertification and remedial actions.
- Support developing countries in the development, deployment and diffusion of technologies on mutually agreed terms, including the sharing and scaling up best practices and lessons learned in approaches undertaken at all levels to combat desertification such as sustainable agricultural practices, and conservation and rehabilitation of vegetation cover.

**f.1) Conclusions on Africa**

- National systems incorporating both public and private initiatives to reduce pre- and post- harvest losses especially through infrastructure and transport development, improvement of storage capacity and supply chains functioning and technology transfer where mutually agreed need to be built up.

**f.2) Recommendations on Africa**

- Foster agro-industries and generate local value added.
- Prioritize, where appropriate, national expenditures on and international aid flows to water and sanitation, as well as for capacity-building, promotion of integrated water resources management and public-private partnerships.

**F. WFEO SIDE EVENT**

On May 6, 2009 WFEO held a side event at the UN Headquarters entitled “Capacity Building: *Words into Action: Physical, Social & Economic Infrastructure*”. Round table discussions took place with moderators from the WFEO delegation and ICSU, and rapporteurs from other Major Groups, namely Farmers, and Business and Industry. Annex 3 shows the event invitation announcement and Annex 4 summarizes the results of this event. The definition of capacity building developed by the WFEO Committee on Capacity Building was shown on the back of the invitation (Annex 3) and, in general, it was adopted by those attending the event. This event was an excellent means to show the contribution of WFEO expertise on matters related to CSD issues and, in this particular case, it helped to enhance WFEO prestige among participants of other Major Groups and of the CSD Secretariat.

**G. FARMING FIRST**

The WFEO delegation joined ICSU to form a multidisciplinary team made up by the Major Groups of Farmers, Business & Industry, and Science and Technology Communities, calling for a new model for agriculture called “*Farming First*” based on knowledge and people. Annex 4 describes the principles, goals and actions advocated and endorsed by this model.

President Gear committed that WFEO would continue relationship with the Farming First initiative and asked the CEE Chair to follow up with the multidisciplinary team.

**H. NEXT CSD SESSIONS**

The next CSD cycle (CSD-18 and CSD-19, in 2010 and 2011) will focus on the following thematic issues: chemicals, transport, mining, waste management and sustainable consumption & production patterns. Because of the nature of

such issues, Engineering will have a leading role in preparing position statements within the Scientific & Technological Community Major Group. WFEO members' involvement is expected to be greatly significant in the next CSD two-year cycle. Members representing WFEO in the next round of meetings will be confirmed at the 2009 Executive Council meeting.

15th June 2009

*Jorge Spitalnik*  
*Chair, WFEO Energy Committee*  
*WFEO Liaison with UNCSD*

**Annex 1**  
**CSD-17 - STATEMENTS BY WFEO AND ICSU DELEGATES**

Monday, 4<sup>th</sup> May 2009

OPENING SESSION STATEMENT OF THE SCIENTIFIC AND TECHNOLOGICAL COMMUNITY  
by Gisbert Glaser (ICSU)

Thank you Madam Chair,

The advancement, sharing and application of knowledge, science, engineering and technology must be central to efforts of addressing the sustainable development challenges on the agenda of CSD-17. The long trend of declining investments in agricultural research, S&T, research, education, extension services and related capacity building, by many governments, notably in developing countries, and by international donors must be reversed. Knowledge and technology must be better targeted to the needs of small-scale farmers in developing countries, such as those in sub-Saharan Africa, who are among the poorest in the world.

In order to be able to address the real needs of these farmers, much enhanced farm level data collection and systems research, with full involvement of social scientists, are required.

Climate change has already major impacts on food systems. Critical gaps of knowledge in this area must be addressed through interdisciplinary research. Climate-informed early drought warning and response systems must be established.

We need to multiply efforts towards enhanced N-S and S-S knowledge sharing and technology transfer. Successful applications of currently available appropriate technologies and of existing knowledge must be widely communicated. As you said this morning, Madam Chair, realizing a sustainable green revolution calls for a new, creative and innovative thinking as how to combine best science with farmers' local knowledge.

Tuesday, May 12<sup>th</sup> 2009

S&T COMMUNITIES MAJOR GROUP REMARKS  
by Barry Grear (WFEO)

Madam Chair,

The Scientific and Technological Major Group would like to emphasize two important considerations. These are: the cross cutting issue of Capacity Building and the importance of enhancing investments in research to address the challenges of this cycle's thematic issues.

The cross cutting issue of Capacity Building can be the thread that weaves together the economic, social, and physical infrastructures. The definition of Capacity Building that WFEO is using clearly sets the foundation for policy discussions and the output from this round.

“The building of human, institutional and infrastructure capacity to help societies develop secure, stable and sustainable economies, governments and other institutions through mentoring, training, education, physical projects, the infusion of financial and other resources, and most importantly, the motivation and inspiration of people to improve their lives.”

When the issues of this theme are considered with a focus on capacity building needs, major attention is required on: rural to urban migration, education levels amongst farmers, disproportionate resource allocation to urban issues at the

expense of rural issues, lack of metrics on infrastructure and infrastructure operations, better informed government workers would make better informed choices for farmers, and lastly the opportunity to involve women in capacity building.

Turning to the second cross cutting issue of research and knowledge sharing, much of the needed knowledge already exists within the scientific and engineering communities; however the knowledge often does not reach those that could benefit the mostly because of policy failures. Madame Chair, the Scientific and Technological Community has partnered with the farming, business and industry communities to push for a Farming First agenda which puts the farmer at the centre of the policy processes and calls for the promotion of interactions between the development processes, research, knowledge use and policy development. The Scientific and Technological Communities are calling for increased and consistent investment in farmer centered Research, Development and engineering applications.

For available knowledge to reach the remote indigenous communities, and benefit global agriculture, we need genuine partnerships, strengthened human and institutional arrangements for coordinated research, extension and policy development. We need to establish open and transparent two-way exchanges that capture the 'voice of the farmer' creating space for Africa's women farmers to actively participate policy formulation and implementation.

There is need to strengthen farm level data collection and national policy analysis capacity, enhance involvement of universities and research institutions in multi stakeholder public policy debates and the use research evidence to inform policies. There is need for technologies that enable farmers to receive information on weather, input and output markets and other early warning data that allows timely decision making.

Madame Chair, the CSD should make a case for a global policy environment that recognizes and rewards Agriculture, Forestry systems and sustainable land use systems to be part of the solutions to climate change mitigation and adaptation being negotiated. This can happen only if the science community is adequately resourced to generate the scientific evidence and the technological community has a conducive policy environment to develop low cost technologies.

Madame Chair, increased investments and partnerships between the farmers, other major groups and governments are critical for the development and implementation of sustainable solutions. The S&T communities are grateful for the visionary leadership of the CSD that embraces contributions of major groups; we would like to see similar efforts at national level, particularly in Africa.

Tuesday, May 12<sup>th</sup> 2009

DIALOGUE WITH MAJOR GROUPS

MULTI-DISCIPLINARY TEAM: FARMERS, SCIENCE AND TECHNOLOGY, AND BUSINESS - FARMING FIRST

by [Sarala Gopalan](#) (ICSU)

Madam Chair, Distinguished delegates, Ladies and Gentlemen,

I am Dr. Sarala Gopalan, a farmer from India. I am speaking on behalf of a multidisciplinary team: Farmers, Science and Technology, and Business who have joined together calling for a new model for agriculture based on knowledge and people - *Farming First*.

After too many years of neglect of agriculture in national policies, *Farming First* returns farmers to the centre of policy decisions. Governments, businesses, scientists, engineers, and civil society groups must focus their attention and prioritize the source of global food security in all development efforts.

*Farming First* is not just words; it is a real partnership to enhance complementarities to achieve sustainable agriculture and a better livelihood in rural areas.

The six pillars of Farming First are about the inter-linkages and continuous cycle of resources, knowledge and tools for farmers to use sustainable agricultural practices.

As CSD-17 discusses inter-linkages, we would like to stress that *Farming First* promotes an integrated approach which is more than agriculture. We truly believe that focusing on farming is a key mechanism to foster economic and social development for millions of individuals and food security for all.

1) Safeguarding natural resources is the first pillar of the *Farming First* concept. It emphasizes the importance of land and water management, which should be improved through the widespread adoption of sustainable practices of land use, including conservation tillage and other techniques. Our coalition agrees strongly with the need stated by the women's major group to ensure proper land tenure rights for women in particular.

2) The second pillar is Sharing knowledge. We need to put in place an improved mechanism for extension services - which are neither "top down" nor "bottom up" but truly collaborative. Demonstration projects can harmonize global research and best practices with existing local knowledge, including that of indigenous people.

3) Building local access to ensure that farmers have access to resources to manage their production more efficiently with emphasis on capacity building, with the support of appropriate infrastructure – particularly roads, ports, and existing technology - to make supplies available in rural communities and to allow access to markets as highlighted during the side event held by the engineers.

We also wish to join with our colleagues in the trade unions to stress the importance of decent work and training for farmers and agricultural workers.

4) Protecting harvests is the fourth pillar of Farming First. In many of the poorest countries, 20 to 40% of crop yields are lost because of inadequate pre- and postharvest support. One of the most important ways to improve productivity is to minimize losses through local storage capacities and transportation mechanisms as well as provision of risk management tools to protect farmers in the face of climate variations and market failures. We are eager to explore with the Youth Major Group, the opportunities to change unsustainable consumption patterns. Food spoilage in the developing world and food waste in the developed world are equally problems.

5) *Farming First* aims at helping subsistence farmers to become small-scale entrepreneurs. Linking farmers to markets is essential, should we want to make them become real entrepreneurs. Farmers need to be able to get their produce on to the market and receive equitable price treatments for it. Both NGOs and local authorities have outlined the importance of developing fair markets.

6) Once products have been sold, we need to continually improve the cycle. Prioritizing research imperatives is Farming First's sixth and last pillar. Achieving sustainable agriculture requires applied research and available, appropriate technology, prioritizing locally relevant crops and farmers' needs, stewardship techniques, and adaptation to climate change. This will ensure that farmers' needs are taken into account and that they benefit from continuously updated and improved tools and knowledge to enable them to successfully achieve all the other steps of the process.

Madam Chair, *Farming First* is about a process of continual improvement that applies to ALL forms of agricultural systems including organic, conventional and others. Every system must be made more sustainable, today, tomorrow, and for centuries to come. Please visit <[www.farmingfirst.org](http://www.farmingfirst.org)> to lend your voice to our effort. In just a few weeks since we launched the site, 1300 individuals have already said they concur with the principles of Farming First.

Finally, Madam Chair, at the eve of the High Level Segment, we do not want the CSD to miss the opportunity to create a realistic, action-oriented text on agricultural and rural development. With this in mind, we would like to ask the Ministers and Official country representatives what the prospects may be to achieve that goal, and what expectations you may have from *Farming First* partners for implementation following the negotiations?

Friday, May 15<sup>th</sup> 2009

#### CLOSING COMMENTS BY THE SCIENTIFIC AND TECHNOLOGICAL COMMUNITY

by Jorge Spitalnik (WFEO)

Madam Chair,

The Scientific and Technological Community acknowledges that measures agreed upon at this CSD meeting, aimed at increasing agricultural productivity while safeguarding natural resources and ecosystems, call for massive public and private sector investments to enable all actors, governments, donors, scientists, engineers and the other major groups to meet all arising challenges.

The advancement and application of agricultural knowledge, science, engineering and technology must be at the center when addressing these challenges.

We have identified some important issues that call for special attention:

1. Education of Farmers, who are often the least educated and of whom a majority are women -having farming techniques extremely rudimentary and minimally effective- needs to be thoroughly addressed by providing available farming technologies to boost food production and capacity building to apply such technologies; women must be consulted on capacity building programs in places where women are key implementers of familiar farming processes;
2. Government must introduce policies in support of farmers to cope with rural-urban migration by establishing jobs for farmers and their families for them to remain in rural communities;

3. Introducing biofuel agriculture requires specific scientific and engineering analysis of the conditions of feasibility that govern this type of operation in terms of suitability of existing arid or semi-arid lands, soil characteristics and crop efficiency;
4. The contribution of agriculture to fix carbon and thus mitigate effects of greenhouse gas emissions needs recognition.

The Scientific and Technological Community is able and willing to contribute its expertise and experience by providing capacity building services to farmers, particularly to small scale farmers, through the dissemination of existing knowledge and engineering techniques that in general do not require leading edge technologies.

## **Annex 2**

### **Report on CSD-17 IPM**

Feb. 23 to 27, 2009 – UN Headquarters New York, New York

*by Darrel Danyluk*

**Purpose:** To attend the preparatory meetings and contribute to the discussions and preparation of the Chair's working draft of a negotiation document that will be finalized in May. It is essential that the engineering voice and perspective be injected into the CSD process. CEE is one of 3 WFEO committees participating in the UN CSD initiative. The others are Energy (Brazil) and Capacity Building (USA). The themes being addressed in this round of CSD are Africa, Agriculture, Rural Development, Drought, and Desertification and lastly cross cutting issues. This is the 2<sup>nd</sup> of 3 meetings and information from the 1<sup>st</sup> meeting (May 2008) was the start point of this IPM.

**Background:** The UN Commission on Sustainable Development addresses numerous theme areas in 2 year cycles with the intent of developing statements and text that are approved by the member states for implementation at the national level. It consists of countries and regional groupings (EU, Group of 77 plus China, Arab States, Pacific Small Island developing States, other SIDS, led by a bureau, and supported by a secretariat. The Chair is selected by the regional groupings, with a one year term, and it rotates based on geography. The current Chair is from the Netherlands whose term will end May of this year at the conclusion of the May meetings. Next years' Chair will be from Latin America and in 2011 will be from Eastern Europe. CSD recognizes 9 major groups, who are allowed to participate in the development of the documents throughout the CSD process. These are: Women, Children and Youth, Indigenous Peoples, Local Government, NGO's, Workers and Trade Unions, Business and Industry, Scientific and Technological Community, and lastly Farmers. WFEO and ICSU are the representatives of the engineers and scientists respectively, and work closely together in the development of interventions into the process. Both depend on supplementary expertise for back-up to the interventions.

**Canada:** Canada is represented by DFAIT with support from other ministries depending on themes. At this IPM these other ministries included; CIDA, and Agriculture as well as a Youth delegate.

**Summary report and observations:** During the May 2008 meetings there were very few references to Science, Engineering and Technology in the interventions from the members. At this IPM and in the draft document going forward most interventions referenced science and technology. This can be considered a positive step in meeting our objectives.

The S&T major group intervened at all but one opportunity, and in this case, a written submission was supplied. The principle thrust of these interventions was to inject the recognition of the need for science, engineering and technology as a foundation for addressing the theme areas. This was supplemented by stressing the need to fill the data gaps required for sound science, sound engineering, and technology; to recognize the need for capacity building of women and youth with a focus on science, engineering and technology; and lastly to define Physical Infrastructure, Social Infrastructure, and Economic Infrastructure and obtain recognition that these are intertwined and that weakness or failure in one impacts the other. During the meeting period, there is an opportunity to attend/host side events that bring focus to specific topics related to the themes being addressed by CSD. At this IPM a joint side event entitled Farmers First was organized by 3 special groups, (Farmers, Business and Industry, and Science and Technology, ICSU). It was a focused working luncheon in the round table format. The recorded results on 6 relevant topics were beneficial and the subsequent report will be injected into the CSD process. It had a cost of US\$4500 and was attended by about 100 people. Preliminary discussions were held between the 3 major groups to duplicate the event in May of this year, and Canadian Government (DFAIT) support will be sought for both May 2009 and the next 2 year cycle.

The Theme areas for CSD-18/19 are: chemicals, transport, mining, waste management and in discussions with ICSU and the closer linkage/relevance to Engineering, it was determined the WFEO should take the lead role. This is to be addressed at the WFEO executive committee in March, 2009. At a Major Group meeting with the CSD Secretariat on the process for CSD-18/19, it was determined that the major groups will play a significant role in preparation of the initial documentation and vision for CSD-18/19. This will be done by late fall of 2009. Copies of the secretariats work to date will be sent to Major Groups as a starting point. A point of concern raised at this meeting was that for CSD-18/19 the Bureau was appointing an advisory committee with 2 Major Groups on the committee these being Workers and Trade Unions and the NGO's. This was felt to give an access advantage to these 2 groups.

All CSD documents and interventions will be available on the UN CSD webs.

### Annex 3

**CAPACITY BUILDING – WORDS INTO ACTION**

**Infrastructure...Engineering....Quality of Life...how do they fit?**

*Participate in round table discussions on innovative solutions to Building Capacity in developing countries in the Physical, Social and Economic infrastructures.*

**Please join the Scientific and Technological Major Group on:**

**Wednesday May 6, 2009  
1:00 pm - 3:00pm  
4<sup>th</sup> Floor, Delegates Dining Room  
West Terrace  
Lunch included**

**WORLD FEDERATION OF ENGINEERING ORGANIZATIONS**

- Committee on Capacity Building
- Committee on Energy
- Committee on Engineering and Environment

**urbanalliance**

*Front side*

**Capacity building is defined as: “the building of human, institutional, and infrastructure capacity to help societies develop secure, stable, and sustainable economies, governments, and other institutions through mentoring, training, education, physical projects, the infusion of financial and other resources, and, most importantly, the motivation and inspiration of people to improve their lives.”**

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**Annex 4**  
**MAY 6, 2009 SIDE EVENT – SUMMARY REPORT**  
CSD 17 SCIENTIFIC & TECHNOLOGICAL MAJOR GROUP  
**CAPACITY BUILDING: WORDS INTO ACTION: Physical, Social & Economic Infrastructure**

The event engaged 71 delegates and members of major groups from more than 20 countries in defining their specific issues and to hear their perspectives on effective capacity building actions. The event format included a brief presentation providing context, followed by round table discussions (90 minutes). The discussion focused on three infrastructures (Social, Physical and Economic) as they relate to African (and other) rural sustainable development and the cross cutting issues of Capacity Building.

Capacity Building can be defined as:

“The building of human, institutional and infrastructure capacity to help societies develop secure, stable and sustainable economies, governments and other institutions through mentoring, training, education, physical projects, the infusion of financial and other resources, and most importantly, the motivation and inspiration of people to improve their lives.”

**Results and Recommended Actions**

A brief summary of participant contributions are noted below.

Common Rural Issues & Recommended Capacity Building Actions:

- Rural migration to cities is eroding food development capacity for many countries, which results in the need to import food. Solutions are needed to establish jobs for farmers and their families to remain in rural communities.
- Farmers are often the least educated. 90% are women; their farming techniques are extremely rudimentary and minimally effective. Education and systematic farming technologies are needed to boost food production and to keep youth on the farms.
- Governments do not provide sufficient support to farmers, but focus their attention on the cities. An organization of farmers & government relations is needed to boost food production and address farmer capacity shortfalls.
- There is no “check list” to confirm the existence of new infrastructure or to measure & guide progress. Farmers should be given the means to define what they “need” in terms of capacity building.
- Donor fund governance is extremely weak; corruption is a drawback. Effective governance and internal control practices are needed and must be transparent, accountable and participatory.
- Uninformed government workers make poor choices for farmers. Government training is needed in all capacity building aspects (social, physical and economic infrastructures).
- Diverse developed countries help, but there is no coordination to optimize the collective impact and outcome in the recipient country.
- A huge capacity building void is created when women are not consulted on capacity development initiatives. Initiatives are often failures because women as the key element of familiar farming structures are not consulted. Effective facilitated engagement processes are required.

A sampling of specific recommendations for actions that were discussed is given below:

- In a given location, 40,000 chickens are grown, but there are no storage & production facilities for chicken harvesting and marketing. Food is wasted & economic opportunities lost. Action needed: Create infrastructure to manage loss reduction such as abattoir and meat storage facilities, and develop chicken markets.

- Climate has changed and temperatures rising, existing seeds are no longer appropriate for climate conditions. Action needed: Provide seeds that grow effectively in changed climate.
- Government/Farmer relationship management processes do not exist. Action needed: Implement stakeholder management and strategy development processes.
- Supply system technologies do exist but are not applied, i.e. In a given location, farmers know how to maximize the growing of oranges and mangos but lack the knowledge on how to produce and store juice. Action needed: Provide training for the application of these technologies is required.
- Multiple government and stakeholder roles are unclear; they cannot work together effectively. Action needed: Implement stakeholder management processes are needed.
- Lack of resources to access proprietary technologies limits the farmer's ability to learn and develop capacity. Action needed: Provide access to open source technologies or fund proprietary technologies.
- In a given place, electrical power infrastructure reliability is very poor; power outages that last for 3 to 4 days are common. Action needed: Upgrade infrastructure, provide reliable power supply, and implement training in system operation & maintenance. Include women in the training programs.
- Ecosystems are degrading. Action needed: Implement ecosystem safeguard strategies.
- Capacity building needs to involve service training. Action needed: Identify roles to involve local people in projects, assure gender balance and consider characteristics of local culture.

## **Annex 5 Farming First Enhancing Sustainable Development through Agriculture**

Addressing the common need for food, feed, fibre and fuel requires **a global action plan to increase agricultural output in an environmentally-sustainable, economically-feasible, socially-responsible manner.**

At the heart of the solution are farmers - they are the ones who grow our crops, manage the land, and safeguard biodiversity. The global population has almost tripled since 1950. By 2030, there will be an additional 1.7 billion mouths to feed, most of whom from developing countries. To cope with this reality, the world's farmers need to double or even triple food production by 2050.

However, farming policies have neglected the critical role which farmers, especially smallholder farmers, must play in making sustainable development a reality. The development pressures are acute. The ratio of arable land to population is expected to decline by up to 55% by 2030. By 2025, 1.8 billion people will be living with acute water scarcity. Simultaneously, climate change will put regional and global food supplies at risk. The basic livelihoods of hundreds of millions of people in developing countries will be threatened.

### ***The Principles***

**Returning farmers to the centre of policy decisions is fundamental to sustainable development.** Governments, businesses, scientists and civil society groups must focus attention on the source of our food security. All these groups must work together to enable the many millions of farm families, especially smallholders, to grow more crops sustainably through effective markets, more collaborative research and committed knowledge sharing.

**A broad-based, knowledge-centred approach to agricultural development is needed.** The approach starts with focusing on farmers and the tools and information they need to steward land, grow crops, bring in their harvest and then get it to market. While modern agricultural technologies and management approaches have doubled the production of world food calories over the past half-century, many smallholder farmers struggle to achieve even the most basic level of subsistence.

New investments, incentives and innovations are needed to achieve greater sustainability, while delivering increased agricultural production. These benefits must be made available to all farmers, recognising their role as guardians of our shared environment,

biodiversity, and ecosystems. There is a need for a radical shift in thinking which places the farmer at the centre of sound and sustainable agricultural practices.

This approach – delivering productivity and sustainability - must lead to more equitable and efficient production and distribution systems. Combining better functioning markets with sustainable local and regional infrastructures such as transport, an enhanced farming system will contribute to improved economic development, providing food security, fair prices and improved land management.

To succeed, any new approach must be based on a stable policy environment within which farmers can work and invest. This, in turn, requires us to establish stable, long-term policy and regulatory frameworks for the development of agriculture; to enhance national financial allocations; to direct international development assistance towards the agricultural sector in developing countries; and to undertake comprehensive stakeholder consultation processes in the design and implementation of agricultural programs. In addition, sustainable infrastructure programs in support of rural and agricultural development are needed. Capacity building through training in infrastructure management, maintenance and operations at local and regional levels are required.

### *A Call for Action*

Farming First provides a call-to-action for policy-makers and practitioners to develop a locally sustainable value chain for global agriculture. It emphasises the need for knowledge networks and policies centred on helping subsistence farmers to become small-scale entrepreneurs. The framework highlights six interlinked imperatives for sustainable development.

1. **Safeguard natural resources.** Land management should be improved through the widespread adoption of sustainable practices of land use.
  - Conservation agriculture can be used to prevent soil erosion and land degradation.
  - Manage watersheds and water use more efficiently
  - Protect wildlife habitat and biodiversity through an integrated ecosystems approach
  - Provide incentives for improving ecosystem services
2. **Share knowledge.** While much of the knowledge needed to improve global agriculture already exists, including within remote indigenous communities, it often does not reach those farmers that could benefit most.
  - Increase the level of education on crop and natural resource management for farmers
  - Promote the development of village-based knowledge centres
  - Provide access to scalable information technologies for farmers to receive weather, crop, and market alerts, as well as other early warning systems to help them make the right decisions for sustainability and productivity.
    - Establish open and transparent two-way exchanges that capture the ‘voice of the farmer’ in the process of policy formulation and implementation.
3. **Build local access and capacity.** Fundamental resources should be available to farmers to help them manage their production process more reliably and at less cost.
  - Secure access to land and water resources, especially for women farmers
  - Provide rural access to microfinance services, especially to microcredit
  - Build infrastructure – particularly roads and ports - to make supplies available to farmers.
  - Establish training programs in infrastructure management, operations and maintenance for local and regional settings.
  - Improve access to agricultural inputs and services, including mechanical tools, seeds, fertilizers, and crop protection materials
  - Encourage and co-ordinate multiple local actors to ensure information and supplies get into farmers hands
  - Invest in bioenergy to achieve energy security and rural development through sustainable, local production.
4. **Protect harvests.** In many of the poorest countries, 20-40% of crop yields are lost because of inadequate pre- and post-harvest support. Likewise, vast quantities of food are squandered during the production and consumption phases of the food chain.
  - Build local storage facilities and transportation mechanisms, including cold chain storage for food preservation
  - Localise the application of agronomic knowledge, pest-identification and meteorological information

- Educate the public on sustainable consumption and production needs and behaviours
- Provide risk management tools to support farmers in managing weather and market variations.

**5. Enable access to markets.** Farmers need to be able to get their products to market and receive equitable price treatment when they do.

- Provide remote access to up-to-date market pricing information
- Develop well functioning markets through transparent information, fair prices, sound infrastructure and reduced speculation.
- Encourage co-operative approaches to marketing for smallholders
- Improve smallholder farmers' marketing skills through entrepreneurship training
- Reduce market distortions to improve opportunities for all strata of agriculture worldwide

**6. Prioritise research imperatives.** Achieving sustainable agriculture requires intensified, continuous research, prioritising locally relevant crops, stewardship techniques, and adaptation to climate change.

- Conduct agronomic research related to water availability, soil fertility and post-harvest losses, as well as climate change challenges
- Conduct research into crop varieties needed by the poorest and most vulnerable regions
- Promote farmer-centred research in accordance with their needs
- Improve productivity through the responsible use of science and technology
- Establish public-private research collaboration around integrated solutions
- Increase investments from governments and business towards relevant R&D
- Investigate alternative uses for products spoiled along the value chain.