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ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC  
in collaboration with  
FAO Regional Office for Asia and the Pacific  
UNCAPSA  
UNCCD Asia Regional Coordinating Unit  
UNEP Regional Office for Asia and the Pacific

**REPORT OF THE REGIONAL IMPLEMENTATION MEETING FOR ASIA AND  
THE PACIFIC FOR THE SIXTEENTH SESSION OF THE COMMISSION ON  
SUSTAINABLE DEVELOPMENT**

**Jakarta, Indonesia, 26-27 November 2007**

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## **I. MAJOR CONCLUSIONS AND RECOMMENDATIONS OF THE ASIA-PACIFIC REGIONAL IMPLEMENTATION MEETING**

1. The Asia-Pacific Regional Implementation Meeting reviewed the regional progress in the implementation of the outcomes of the World Summit on Sustainable Development and partnerships for further implementation of the Johannesburg Plan of Implementation in the thematic areas of agriculture, land, rural development, drought and desertification.
2. The Meeting expressed appreciation for the documents produced by the meeting secretariat, which included thematic reports on agriculture and land, rural development, desertification and drought, developed jointly by UNESCAP, the Regional Office for Asia and the Pacific of the Food and Agriculture Organization of the United Nations (FAO), the Asia Regional Coordinating Unit of the United Nations Convention to Combat Desertification (UNCCD) secretariat and the International Centre for Drought Risk Reduction. A special report on climate change has been prepared by the Institute for Global Environmental Strategies, and one synthesis paper providing a consolidated assessment of Asian and Pacific progress across the thematic cluster prepared by UNESCAP.
3. On the basis of the documentation mentioned above, the Meeting successfully reviewed the Asian and Pacific regional concerns in the thematic cluster for the 16<sup>th</sup> and 17<sup>th</sup> sessions of the Commission for Sustainable Development (CSD). The highlights of the discussion were captured in the Chairperson's summary, attached as an annex to the present report. The Meeting requested the secretariat to transmit the contents of present report to the CSD at its 16<sup>th</sup> session, in the appropriate form.

## **II. ORGANIZATION OF THE SESSION**

### **A. Opening, duration and organization**

4. The Asia-Pacific Regional Implementation Meeting was held in Jakarta, Indonesia, on 26 and 27 November 2007 in collaboration with the UNESCAP Center for Alleviation of Poverty through Secondary Crop's Development in Asia and Pacific (UNESCAP-CAPSA), the Regional Office for Asia and the Pacific of FAO, the UNCCD secretariat, and the Regional Office for Asia and the Pacific of the United Nations Environment Programme (UNEP). The objective of the Meeting was to prepare inputs from an Asian and Pacific perspective for the CSD at its sixteenth session in the relevant thematic cluster of issues, namely, agriculture, land, rural development, drought and desertification.
5. In his welcoming address, H.E. Mr. Rezlan Ishar Jenie, Director General for Multilateral Affairs, Department of Foreign Affairs, Government of Indonesia noted the achievements of the Asian and Pacific region in economic growth, dramatic poverty reduction and challenges to

environmentally sustainable economic growth. He also noted the importance and significance of the Meeting in assessing the implementation in the region of the outcomes of the World Summit on Sustainable Development in the previously mentioned areas. He expressed confidence that the Meeting, with the joint efforts of all the delegates and co-organizers, would make a great contribution to the preparations for the sixteenth session of the CSD and show the commitment of the Asian and Pacific region to playing a key role in achieving sustainable development.

6. In his opening statement, H.E. Mr. Francis Nhema, Minister of Environment and Tourism, Government of Zimbabwe, and the Chair of the Bureau of the sixteenth session of the CSD, expressed his support for regional implementation meetings as integral components that gives depth and breadth to the deliberations of the CSD. He acknowledged the strong interest of the member States in participating in this important regional process, and expressed his satisfaction with the enthusiastic participation of the major group representatives. He expressed the hope that the Meeting would be fruitful.

7. In the joint statement on behalf of the RIM co-organizers, Mr. Rae Kwon Chung, Director of the Environment and Sustainable Development Division, UNESCAP, highlighted the increasing focus of partner agencies in addressing livelihood issues as well as environmental issues in a simultaneous manner. He emphasized the enormous challenges faced by the Asian and Pacific region, in relation to its rapid economic growth and associated significant impacts in achieving sustainable development. He, in particular, underlined the need to address CSD16/17 thematic issues from the broader sustainable development perspective, and readiness of partner agencies to assist the member countries in promoting such a holistic approach.

## **B. Attendance**

8. The session was attended by the following members and associate members of ESCAP: Australia; Bangladesh; Cambodia; China; the Democratic People's Republic of Korea, Fiji; India; Indonesia; the Islamic Republic of Iran; Japan; Malaysia; Pakistan; Philippines; Russian Federation; Thailand; Timor-Leste; Turkey; United States of America, and Uzbekistan. A representative of Zimbabwe participated in view of his responsibilities as the Chair of the Bureau of the sixteenth session of the CSD.

9. The following United Nations bodies and specialized agencies were represented: FAO, UNESCAP-CAPSA, UNCCD, and UNEP. The UN Department of Economic and Social Affairs was also represented.

10. The following intergovernmental organizations, non-governmental organizations and other entities also attended: Academy of Disaster Reduction and Emergency Management (ADREM),

Asian Farmers' Association for Sustainable Rural Development (AFA), Associated Labor Unions-Trade Union Congress of the Philippines (ALU-TUCP), Asian Non-Governmental Organizations Coalition for Agrarian Reform and Rural Development (ANGOC), Asian Partnership for the Development of Human Resources in Rural Areas (AsiaDHRRA), Association of Southeast Asian Nations (ASEAN Secretariat), Centre for Environment and Sustainable Development India (CESDI), Institute for Global Environmental Strategies (IGES), International Centre for Drought Risk Reduction (ICDRR), International Commission and Irrigation and Drainage (ICID), International Council for Science (ICSU), International Council of Women-Conseil International des Femmes (ICW-CIF), International Federation of Agricultural Producers (IFAP), International Federation of Organic Agriculture Movements (IFOAM), Philippine Women's University (PWU), Sino-Italian Cooperation Program for Environmental Protection (SICPPMO), Society for Conservation and Protection of Environment (SCOPE), Sub Regional Office of the Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP) in Southeast Asia (SOCSEA), Third World Network (TWN), Women Organizing for Change in Agriculture and Natural Resource Management (WOCAN) and the CSD Youth Caucus.

### **C. Election of officers**

11. The Meeting elected the following as members of the Bureau: Chairperson, Mr. Tri Tharyat, First Secretary, Permanent Mission of the Republic of Indonesia to the United Nations; Vice-Chairpersons, with one representative per subregion: Mr. Chunglin Zang, Deputy Director General National Bureau to Combat Desertification, State Forestry Administration, China; Mr. Krishna D. Prasad, Chief Economic Planning Officer, Ministry of Finance and National Planning, Fiji; Mr. Jawed Ali Khan, Director General (Environment), Ministry of Environment, Pakistan; Dr. Raisa Taryannikova, Centre of Hydro-meteorological Services, Uzbekistan; and Rapporteur, Dr. Gina Nilo, Chief Agriculturist and Chief, Soil and Water Resources Research Division, Department of Agriculture, Bureau of Soils and Water Management, Philippines.

### **D. Agenda**

12. The Meeting adopted the following agenda, as contained in document ESD/RIM/2007/L.1:

1. Opening of the Meeting.
2. Election of officers and adoption of the agenda.
3. Assessment of progress on international commitments to sustainable agriculture and rural development, land, desertification and drought:

*Presentation of thematic reports on Agriculture and Land; Rural Development; Desertification and Drought, and discussion.*

4. Formal statements/comments.
  5. Presentation of draft Chairperson's summary.
  6. Adoption of the report.
  7. Closing of the meeting.
13. The Meeting was also associated with the following side events:
- Side Event on Women Major Group Strategy Leading to CSD-16, organized by Women Organizing for Change in Agricultural and Natural Resources Management (WOCAN);
  - Presentation of Special Report on Climate Change;
  - Side Events on Enhancing the Participation of Asian and Pacific Major Groups in the CSD 16/17 Implementation Cycle, organized on 27 November 2007 by UN-DESA Division for Sustainable Development, UNESCAP, Third World Network (TWN) and Women Organizing for Change in Agricultural and Natural Resources Management (WOCAN).

#### **E. Acknowledgements**

14. The Meeting noted with appreciation the collaboration of the United Nations bodies and agencies in organizing the Meeting, in particular with regard to the preparation of the thematic reports. The Meeting also expressed appreciation for the roles of UNESCAP, the UNCCD secretariat and United Nations Department of Economic and Social Affairs, in mobilizing financial resources to enable government representatives and delegates from major groups to participate in the Meeting. The collaboration and contributions of UNESCAP-CAPSA, FAO Regional Office for Asia, UNCCD Asia Regional Coordinating Unit, the International Center for Drought Risk Reduction, the Institute for Global Environmental Strategies and UNEP Regional Office for Asia and the Pacific, in the preparations for the Meeting, including the preparation of background and synthesis papers were also acknowledged.

#### **F. Adoption of the report of the Meeting**

15. The Meeting adopted the present report on 27 November 2007.

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## ANNEX

### CHAIRPERSON'S SUMMARY

#### THE ASIAN AND PACIFIC DEVELOPMENT CONTEXT

1. Asian and Pacific economies have been enjoying rapid economic growth. The region has become both the manufacturing and agricultural production centre of the world; more than 50 per cent of the world's agricultural crops are produced in the region. As a result, member countries in Asia and the Pacific have made some progress in reducing poverty and improving food security and socio-economic development. However, absolute income gaps between the richest and poorest quintiles, as well as gaps between rural and urban areas in terms of quality of life and livelihood opportunities, are widening across the region, and are viewed with alarm. Poverty-reducing economic growth is still elusive in many countries. At the same time, in many countries, public investment in the agriculture sector is declining.

2. The convergence of the agricultural and other economic sectors which use agro-industrial products, signals increasing competition for agricultural/natural resources. However, the region has the lowest access to these resources, per capita, of any global region and accounts for 75 per cent of the world's rural populations. Hunger and under-nutrition are still critical issues for this region, despite its economic progress. Even after the successes of the green revolution in increasing the yield of crops, food security is again rising on regional agendas, in a context of climate change and increasingly frequent natural disasters. As of 2000-2002, there were still 548 million undernourished people in the region and almost one in three children under five is underweight. The still significant unmet needs in relation to hunger, under-nutrition and poverty, hold profound implications for the demand for land, water and energy.

3. Asian and Pacific countries therefore face great challenges in achieving poverty-reducing agricultural and rural economic growth and, at the same time, ensuring the sustainable natural resource use needed to sustain such growth. Fiscal policy often encourages intensive resource use, and does not provide adequate support for sustainable agricultural practices, including more eco-efficient production. Water and wind erosion, salinization and water-logging have severely affected productivity in large parts of Central, South-Asia, South-East Asia and China. In terms of the number of people affected by desertification and drought, Asia is the most severely affected continent. In many countries, extreme weather events cause landslides and floods. Water availability per capita in Asia is the lowest of all global regions, two thirds that of Africa. Desertification is manifested in many forms across the region. Degraded areas are found in most countries, with prominent examples including China, India, the Islamic Republic of Iran, Mongolia and Pakistan, the steeply eroded mountain slopes of Nepal and deforested and overgrazed highlands of Lao PDR.



4. Emerging issues facing the agricultural sector and rural development include:
- Changing food consumption, processing and retailing patterns and their impacts on production (farm sector restructuring), markets, trade, diets and public policy;
  - Declining relative share of GDP, with implications for regional and global food security;
  - Declining participation in the farm sector;
  - Feminization of poverty;
  - Declining return on investment in agriculture;
  - High cost of land and land use for non-agricultural purposes;
  - Bio-security risks;
  - Heightened awareness of food safety issues and trade implications;
  - Aging rural populations;
  - Depleting natural capital & increased competition for resources from other sectors, leading to land use change (e.g. for energy crops);
  - Hidden hunger;
  - More open economies, and thereby vulnerability to price fluctuations;
  - Lack of participation of major groups;
  - Increased connectivity – knowledge, information, communication and transport;
  - Decline in resources for sustainable development and diversion of resources to security issues;
  - Climate change adaptation and mitigation.

5. Where policies, institutions, other aspects of governance and infrastructure are not sufficiently supportive, livelihood opportunities are limited, and poverty and food insecurity are increasing. Small producers, women, organized trade union workers, and other vulnerable groups are disproportionately affected. Changing economic and ecological environments pose risks to women that require better analysis and identification. Human security in rural areas is therefore a growing concern.

6. In the above context, each country, and the region as a whole, must consider how policies, plans and institutions that impact both rural and urban sectors, can ensure that increasing and competing demand for land resources and water be sustainably met, while supporting the development of a vibrant and inclusive rural sector. Climate change adds a new dimension to this question; how can this challenge be met in a context of increasing risk of drought and desertification, and undetermined ecosystem change? Due to its mainly rural population and vast diversity of agro-climatic conditions and the threat of climate change, Asian and Pacific developing countries face the

most important challenges (in terms of both severity and numbers of persons affected) in ensuring sustainable rural livelihoods, despite several areas of successful reform.

### **GENERAL COMMENTS ON THE THEMATIC REPORTS**

7. The RIM noted some inconsistencies between the thematic reports. With respect to the background papers to the RIM which synthesized these reports, the relatively poor performance, when subjected to gender “audit” due to lack of analysis on feminization processes, targeted policies, gender-disaggregated data and gender responsive monitoring and evaluation processes, was highlighted.

8. Other omissions were also mentioned, including the increasing recognition and encouragement of regional integration processes, initiatives, and activities in the field of sustainable development, such as those undertaken by the Association of Southeast Asian Nations and the South Asian Association for Regional Cooperation.

9. However, the RIM agreed that the synthesis of the thematic reports presented a comprehensive, holistic and succinct assessment of progress and identification of key issues. The integrated approach taken represented a step forward towards more holistic treatment of the thematic cluster. Major groups suggested that opportunities be given for them to provide inputs to the preparation of the main background report, in future regional CSD preparatory processes.

### **PANEL AND PLENARY DISCUSSIONS ON AGRICULTURE AND LAND, AND RURAL DEVELOPMENT**

10. The RIM considered the assessment of implementation in the following priority areas for action for the thematic issues of agriculture and land, and rural development. These priority areas for action had been identified by the RIM secretariat based on the thematic reports:

- Improved food security and nutrition, reduced hunger;
- Improved planning and administration, including to ensure equitable participation;
- Balanced ecosystem approaches, including optimizing land use and preservation of genetic diversity;
- Eco-efficient water and energy use/production;
- Equitable trade and economic opportunity;
- Mobilization of financing.

11. A multi-stakeholder panel and plenary discussion on agriculture and land, and rural development commented on the findings of the synthesis report and the two relevant thematic reports. Participants noted the following lessons learned, emerging issues, constraints and broad areas for

policy and other action, which complemented and strengthened those identified in the thematic reports and their synthesis:

***(a) Initiatives that empower communities have shown success, and will be increasingly important to address the needs of small farmers who are considered as being increasingly vulnerable, and require specific support.***

Natural disaster: Drought and desertification are the natural disasters which are in focus in this thematic cluster, but the extreme and growing vulnerability to floods, and the need to plan for mitigation of, and rehabilitation from, catastrophic flood events, was noted. Community-based disaster risk management should be developed.

Land tenure: Land tenure insecurity is a continuing critical systemic issue in Asia and the Pacific, and is a cause of conflict and human insecurity, with women particularly affected. The implementation of the outcomes of the International Conference on Agrarian Reform and Rural Development, held in Porto Alegre, Brazil during 7-10 March 2006, should be supported.

Investment focus: The trend of private sector investment that has reportedly marginalized small producers, and mainly benefited large producers, requires a specific policy response. Microfinance continues to be one of the most promising forms of investment but more attention needs to be paid to the direction of investment – investments are increasingly drawn to what are perceived as less risky areas in the off-farm rural sector. While these are important for boosting economic growth, direct investment in agricultural production needs equal attention. Production of high-value crops, in addition to secondary crops, continues to hold poverty-reduction potential taking into primary consideration household food security and environmental sustainability.

Education: Education programmes must better address issues of agriculture and food security. Skill-based education offers quicker “returns” on investments in education, than more formal education paths, and can boost livelihoods. At the same time, formally-educated rural populations hold the key to successful and situation-specific adaptations of traditional knowledge, techniques and technologies to meet modern challenges. Equal access to education for women and girls is a continuing shortcoming.

“Leveling the playing field” – market environments: Inequity in terms of market access is a continuing concern - integration of small producers and poverty-reducing economic growth require specific support for more equitable market access. There is need to address trade policies (such as those which provide perverse incentives, and which are trade-distorting) that results in inequitable trade environments, and so marginalize small farmers.

Differentiated strategies: Effective poverty reduction strategies will require differentiated approaches targeted at the chronically poor and the transient poor. Positive experiences with respect to decentralization are found where local governments are supported and linked with stakeholders.

Changing risks for women: Changing economic and ecological environments pose risks to women that require better analysis and identification.

Dependence on fossil fuels and diversification of energy sources: Dependence on fossil fuel is an increasingly important economic burden. Small scale renewable hydropower development and the application of other renewable energy technologies have had good success.

***(b) The demand for biofuels and its implications.***

Energy, agriculture and environmental protection - biofuel demand and land use: Many delegations from both governments and major groups presented various perspectives on the issue of biofuel production, in particular its impacts on land use. In general, it was agreed that biofuel production held potential for poverty reduction and for meeting not only urban energy, but also rural energy needs. On the other hand, increased food prices, increased competition between food and energy crop production and unsustainable land use practices, were negative aspects of biofuel production that required a cautious approach by policymakers.

Implications for food security: It was noted that in Asia and the Pacific the per capita availability of land meant that such competition between food and energy crop production posed a relatively more significant dilemma for efforts to improve food security and sustainable land use, as compared with the Latin American region, for example. Mechanisms to ensure environmental sustainability in biofuel production, such as guidelines and voluntary certification based on scientific information are needed. Other renewable sources of energy should be considered.

Conditions for sustainability: The RIM noted that biofuel policy research had identified three key “conditions” for environmental sustainability and economic feasibility of biofuels production and use. The first was that the most eco-efficient energy crops were not input-intensive, taking into account all stages of production and use. The use of fossil fuel in transportation, for example, has been found to lower/eliminate net environmental and economic benefits. The second was that small-scale biofuel producing enterprises that were community-based, were the most eco-efficient, and the third was that the producing rural community should become a user of the biofuel it produces, to maximize eco-efficiency.

***(c) Interventions that achieve synergies between energy use, economic opportunity, environmental protection, and building social capital, are showing great promise.***

Biofuels and biomass: Both biofuels and energy produced from biomass can play a key role in the transition to renewable energy in rural and urban areas, helping to meet the critical need for energy. Technology for the use of agricultural residues is improving and can also be promoted.

Policy stocktaking: Fiscal policy should reflect a coherent and strategic approach that promotes synergies between agricultural production and poverty reduction. Policies that impede the growth of organic agriculture, for example, need to be further examined. Caution must be applied with respect to the application of economic instruments: water pricing and payments for ecosystem services can have negative impacts on poverty reduction efforts because of their impacts on access to resources and potential conflict; such schemes should be supported by scientific study.

Cooperatives and beyond: Cooperatives have shown good results and must be strengthened. There must, however, be greater recognition of other forms of intermediation that have been successful, taking into account lessons learned regarding elite capture, poor repayment rates, and mismanagement.

***(d) The need for balance between rural and urban development.***

Balancing “strategies”: Rural-urban migration and non-farm economic activity reduce pressure on the resource base, and can be strategically promoted where there are significant population, poverty and environmental pressures in the farm sector; conversely, where these pressures are low, agricultural and rural development are critical strategies for poverty reduction.

***(e) Mobilizing financing***

Public-private partnership arrangements have been successful in cases, and are an important and a welcome investment modality, but the performance of such arrangements should be reviewed; the public sector does not always benefit to an appropriate extent. Furthermore, where public-private partnership and private investments are concerned, investment and corporate accountability measures should be put in place.

Investment in research: Research is a critical area which should be promoted, and in which investment should be increased, particularly in public research.

***(f) Genetically Modified Organisms (GMOs) – benefits and risks unclear***

GM crops – limited benefits for small farmers and caution needed: The experiences of several countries and the concerns of major groups regarding GMOs and biosecurity issues showed that, in general, the benefits of these seeds for small farmers, general poverty reduction objectives and genetic diversity were not confirmed. Farmers should be able to choose which seeds they would like to use.

Many questions remain regarding biosecurity – what are the options, opportunities and safe limits for the use of these technologies, what are the impacts on biodiversity? Can successes match those of the green revolution?

**(g) *The increasing competition for agricultural resources.***

Eco-efficient vs. intensive agricultural production: Due to the limited regional resource base, and evidence of the mounting environmental pressures related to intensive agricultural production, future increases in food production will require a focus on developing more efficient, rather than more intensive agriculture production models. It was noted that the concept of eco-efficiency should be understood as minimizing both the input of environmental resource use and the production of waste and pollution, and at the same time maximizing the economic and social benefit. Eco-efficiency in agricultural production would be achieved through the application of technology, economic principles regarding the allocation of resources and fiscal incentives. How to scale-up best practices from pilot to broader practices should be explored.

Demand-side management: Demand-side policy interventions to support more environmentally sustainable consumption and agricultural production patterns, in order to reduce environmental pressures, need to take a gender-balanced approach.

**PANEL AND PLENARY DISCUSSION ON MITIGATION OF DESERTIFICATION, LAND DEGRADATION AND DROUGHT RISK**

12. The RIM also considered the assessments of implementation in respect of mitigation of desertification, land degradation and drought risk. A multi-stakeholder panel and plenary discussion on mitigation of desertification, land degradation and drought risk commented on the findings of the synthesis report and the two relevant thematic reports. Participants noted the following lessons learned, emerging issues, constraints and broad areas for policy and other action, which complemented and strengthened those identified in the thematic reports and their synthesis:

**(a) *Renewing commitments to the implementation of the UNCCD – a priority.***

The importance of the convention: The UNCCD serves as the nexus between poverty reduction and ecosystem protection in the drylands, without which mitigation and adaptation to climate change cannot be delivered. The recently-enunciated 10-year Strategic Plan of the UNCCD opened a way for renewed commitment among stakeholders.

Global importance of land issues: It was stressed that land degradation was not just a local issue. Degraded lands signalled a decline in the flow of ecosystem services which have global benefit. Desertification and land degradation are therefore important global issues. This should be stressed at

CSD-16, and the opportunity used to remind countries to renew their commitments to sustainable development. As such, greater effort and new initiatives to support and reward/compensate actions in developing countries for sustainable land management practices should be considered. Thematic Programme Networks under the UNCCD are recognized as good mechanisms to achieve this purpose and, therefore, need to be further strengthened.

Implementation: Implementation lags continue to reflect financial and technical constraints at the national level, although good progress had been noted where policy and institutional support encouraged participation by, and support to, farmers, timberland dwellers and other local stakeholders. More support from the international community for implementation of the convention was encouraged. Drought is regional in nature that transcends political and natural boundaries. In this regard, the regional approach to mitigating the effects of drought and combating desertification is a critical component to enhance the national preparedness. National Action Programmes of the UNCCD should reflect the objectives of the UNCCD 10-year Strategic Plan through regional coordination and capacity-building.

International obligations to be put into action: The Asian and Pacific region recommends, through the RIM outcomes, that the international community meet its obligations regarding the effective implementation of the UNCCD at the national, subregional and regional levels.

Role of science and technology: Mobilizing scientific and technical competencies can be the key to rehabilitating land degradation, combating desertification and mitigating the effect of drought. The RIM recognized the importance of the role of science and technology, and recommended that Committee on Science and Technology of the UNCCD be strengthened through the scientific cooperation and academic exchange at various levels.

***(b) Coordination and harmonization between the sectors which are responsible for desertification.***

Prioritization and harmonization: Harmonized target setting is needed as a basis for strengthening coordination. Coordination is needed within large national programmes at various levels – for example between national programme management and the local governments who will have to implement them, in particular to better enable such programmes to respond to the problems faced at the local level. Coordination between such programmes, is also needed.

***(c) Solutions and knowledge:***

Education for sustainable land management: Education is important for harnessing and adapting and extending indigenous knowledge. Implementing best practices with social participation is the key to

effectively address sustainable land and water management issues towards combating desertification and mitigating the effects of drought.

## **CROSS-CUTTING ISSUES**

13. Both panels and the ensuing plenary discussions also addressed the following issues which cut across the thematic cluster:

***(a) Implementing energy transition in both urban and rural sectors is more urgent than ever; however it must be approached more carefully than ever.***

Energy and land use policy: Increased access to affordable sources of energy, including renewable energy underpins sustainable rural development, but increasingly influences sustainable land management. In each case, energy, agriculture and land use policies must be carefully examined to determine that incentives for particular land uses and production systems represent the optimal uses of land and do not impact negatively on small producers, food security and ecosystem integrity. The incentives and opportunities provided by biofuels require careful assessment and identification of responses.

***(b) Investment in research must be redoubled to bridge the growing gap between current knowledge, and the knowledge needed to face future challenges.***

Multiple challenges: The need for multidisciplinary research is growing, and requires public investments to address wider societal concerns, including the empowerment of vulnerable groups so that they can effectively respond to drought, desertification, agriculture and rural development, particularly in a context of climate change. Such research should engage and document indigenous/traditional knowledge.

***(c) Water resources management is unifying issue in this thematic cluster, particularly in a context of changing climates.***

Water – central to sustainable development: Access to an adequate supply of water of good quality underpins health, livelihoods, resilience to drought and impacts on each theme in the thematic cluster.

Water infrastructure: Infrastructure for water storage is increasingly needed to cope with floods, but also droughts; such storage should take into account country-specific needs. Water storage must be increased via multiple pathways: water storage in soils (green water storage), in reservoirs (blue water storage), and virtual water storage. Reforming the water sector must go hand in hand with greater investments in infrastructure - upgrade of aging infrastructure is a key investment need in many regional countries. However, infrastructure development must avoid environmental damage that has been characteristic, for example in some approaches to irrigation development. “Natural” water infrastructure, such as watersheds (including microwatersheds) must also be managed; and



management can be strengthened through incentives for upstream watershed managers from downstream watershed management beneficiaries.

Fiscal policy: Fiscal policies should provide incentives for water storage and harvesting, including through tax breaks.

Water use efficiency and demand-side management in both urban and rural sectors: The ongoing urbanization process implies the need for a greater emphasis on water use efficiency and demand-side management in both urban and rural areas; water sharing and allocation policies must encourage efficiency of use, and equitable sharing of benefits and costs of water services.

**(d) *Farmers***

The challenges: Farmers are at the core of this thematic cluster – actions must be taken by farmers for any progress on any of the thematic issues. These challenges include achieving a balance between keeping people on the farms and reducing the burden on the land where there are too many farms; keeping productivity high in low-productivity areas; guarding against natural disaster; empowering farmers in the challenge of improving food security; and increasing the participation of small producers.

Investments and resilience: Farmers, primarily small scale producers and poor farmers that comprise the majority, are currently the biggest investors in the agriculture sector, in the form of innovation, traditional knowledge and seeds, undervalued labour and land. Innovative financing must match this investment; farmer suicides attest to the serious lack of financial support, and also financial vulnerability. The development of insurance schemes for farmers against, for example, losses due to drought, must be supported. Entrepreneurship skills must be developed in farmers; support services must be provided to develop skills in all stages of production and trade.

Taking stock: Policymakers in developing countries must assess, compare and analyze the performance of successful and less successful farmers in developed and developing countries, to see where policies can better to support farmers. Such analysis should take account farmers access to, and control over natural resources, and the entire production and consumption cycle, in a whole-system approach. Equally important to the assessment of economic performance, will be the assessment of environmental and social impact of different farming systems.

Provision of ecosystem services: Sustainable management of resources by farmers provides ecosystem services to the wider community, for example by reducing emissions of greenhouse gases, or reducing soil erosion and sedimentation. Farmers are also dependent on ecosystem services.

Incentives: Innovative incentives for sustainable land management must be provided to farmers. Research support must be extended, for example, to assess the contribution of various soil management techniques on soil carbon sequestration, as a possible basis for carbon market investments in this ecosystem services. Other innovative incentives are needed for farmer who provides other types of ecosystem services which benefit the wider society, but who currently are faced with shouldering the costs of the provision of these services.

Organic agriculture: Niche production, as in organic agriculture, can be supported through collaboration between developed and developing countries. More than one delegation noted that any fiscal incentives provided for production based on genetically-modified crops could be better directed to support agricultural production based on organic agriculture.

Farmers as part of the operational climate change preparedness systems: Strong information dissemination and extension support is needed by farmers. Farmers rely on the information disseminated by early warning systems, but can themselves be important providers of data/information to support such early-warning systems.

*(e) Climate change adaptation.*

Country impacts – already underway: Several countries and UN agencies reported adverse impacts of climate change, ranging from droughts, desertification, floods, melting glaciers, extreme weather events, loss of biodiversity and sea level rise. Climate change already threatens food security. Efforts to address disaster risk reduction through early warning systems are required.

Gender: Understanding women's issues is key for developing effective responses. The impacts and responses of climate change are differentiated by gender, based on the social rules and societal expectations, as well as access to critical resources and livelihood opportunities.

Water resources management: Adaptation to climate change means better drought preparedness. More political commitment to climate change adaptation and drought preparedness is needed.

Climate variability and early warning: Drought risk reduction relies on early warning systems with strong information dissemination mechanisms that can be linked directly to farmers, as part of the operational aspect of drought preparedness. Long-range planning can then influence cropping practices to adapt them to expected weather, and so mitigate the severe losses faced by many farmers.

Environmental knowledge: Climate change adaptation strategies should increasingly rely on local environmental knowledge.

Funding for adaptation: Sufficient funding should be made available for measures to adapt to climate change.

*(f) Land is becoming a more valuable resource than ever, optimizing its use, while increasing access to land as a basis for sustainable livelihoods is increasingly critical for human security.*

Balanced ecosystem approaches: Rural development, agriculture and land development communities must begin to think in the frame of ecosystems. Eco-efficiency of water use and ecosystem approaches reinforce each other, and support the development of holistic view of sustainable agriculture, land use and rural development.

Sustainable land management – cross-cutting strategy: Combating land degradation, desertification, drought, is key for mitigating the impacts of climate change, reducing poverty, as well as protecting biodiversity. Sustainable land management practices stress indigenous knowledge application and drought preparedness. Finding ways to attract funding for sustainable land management, in particular through the preparation and implementation of national action plans under the UNCCD, is important.

#### **ADDITIONAL OBSERVATIONS**

14. The RIM invited formal statements by the Governments outlining the key developments in national response to major challenges in the thematic areas. Representatives of each Major Groups also delivered their statements. In addition to the issues covered by previous sections, the following observations were made in the context of the regional and global follow-up through the CSD process:

- Importance on global partnership – common and differentiated responsibility.
- Transboundary nature of climate change and its impacts on the land related aspects of national development, needing subregional/regional cooperation.
- International actions to address climate change be fully compatible with the process of economic and social development in developing countries.
- Attention to international trade liberalization as a challenge facing agriculture and rural development, especially for agricultural exporting countries.
- National capacity-building focusing the governance/law enforcement aspects.
- Importance of complementary reforms.
- Synergy with national activities to attain the Millennium Development Goals and the importance of links between progress in agrarian reforms, and increased agriculture production, and improvement of the living standard of rural populations.