



Economic and Social Council

Distr.: General
24 November 2008
Original: English

Commission on Sustainable Development

Seventeenth session

4-15 May 2009

Item 3 of the provisional agenda *

Thematic cluster for the implementation cycle

2008-2009 – policy session

Major groups priorities for action in agriculture, rural development, land, drought, desertification, and Africa **

Note by the Secretariat

1. The Johannesburg Plan of Implementation adopted at the World Summit on Sustainable Development¹ and the decisions of the eleventh session of the Commission on Sustainable Development² called for strengthened involvement and enhanced participation of major groups in the activities of the Commission and in the implementation of Agenda 21,³ the Programme for the Further Implementation of Agenda 21⁴ and the Johannesburg Plan.

* E/CN.17/2008/L.2.

** The views and opinions expressed do not necessarily represent those of the United Nations.

¹ Report of the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August – 4 September 2002 (United Nations publication, Sales No. E.03.II.A.1 and corrigendum), chap. I, resolution 2, annex.

² Official Records of the Economic and Social Council, 2003, Supplement No. 9 (E/2003/29).

³ Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992 (United Nations publication, Sales No. E.93.I.8 and corrigenda), vol. I, Resolutions adopted by the Conference, resolution 1, annex II.

⁴ General Assembly resolution S-19/2, annex.

2. The Bureau of the seventeenth session of the Commission on Sustainable Development decided to continue to build on the participatory practices of previous sessions of the Commission and of the World Summit on Sustainable Development⁵ by inviting major groups to contribute their written views as a basis for participation in multi-stakeholder dialogues and interactive discussions at the seventeenth session of the Commission.

3. The organization of the input and contributions of major groups to the seventeenth session of the Commission was inspired by practices used at past sessions through a self-selected multi-stakeholder steering group composed of organizing partners from network organizations representing the nine major groups.⁶ The organizing partners are: Women Organizing for Change in Agricultural and Natural Resource Management, African Women Leaders in Agriculture and the Environment, and the GRATIS Foundation, for women; the Youth Caucus of the Commission on Sustainable Development, for children and youth; the Indigenous Peoples' Caucus of the Commission on Sustainable Development, Tebtebba - the Indigenous Peoples' International Centre for Policy Research and Education, and the Indigenous Environmental Network, for indigenous peoples; the Sustainable Development Issues Network (through the Northern Alliance for Sustainability, Third World Network, and the Environment Liaison Centre International), for non-governmental organizations; the International Council for Local Environmental Initiatives - Local Governments for Sustainability, for local authorities; the International Trade Union Confederation, for workers and trade unions; the International Chamber of Commerce, CropLife International, and the World Business Council for Sustainable Development, for business and industry; the International Council for Science and the World Federation of Engineering Organizations, for the scientific and technological community; and the International Federation of Agricultural Producers, for farmers. These organizing partners facilitated the preparation of the major groups' priorities for action in agriculture, rural development, land, drought, desertification, and Africa, which are contained in the annex to the present note.

⁵ The multi-stakeholder participation in the sessions of the Commission became a standard part of its work programme at its sixth session through the launch of the dialogue segment in response to General Assembly resolution S-19/2, recommending that the Commission strengthen its interaction with representatives of major groups, *inter alia*, through greater and better use of focused dialogue sessions. The dialogue segments launched in 1998 have been recognized as a unique participatory model for effectively engaging major groups and Governments in a genuine dialogue on specific sustainable development issues.

⁶ Section 3 of Agenda 21 defines major groups as comprising women, children and youth, indigenous people, non-governmental organizations, local authorities, workers and trade unions, business and industry, the scientific and technological community, and farmers.

4. The document outlines the contributions of major groups to the discussions on policy options and possible actions to expedite implementation. It builds on the discussion papers prepared by major groups for the sixteenth session of the Commission, which presented their overall views on the status of implementation of commitments related to the thematic issues on the agenda, including reference to cross-sectoral themes, successes and challenges of implementation and practical contributions.⁷ The document presents various policy opinions and proposed solutions for the consideration of policymakers in their deliberations, and will serve as a starting point for the participation of major groups in the intergovernmental preparatory meeting and at the seventeenth session of the Commission. While major groups differ in the identification of needs to be filled and possible synergies that may be adopted, they concur on a number of issues, including on the essential role they play as real partners in support of common efforts for sustainable development.

⁷ The major groups' discussion papers for the sixteenth session of the Commission on Sustainable Development are contained in E/CN.17/2008/13 and E/CN.17/2008/13/Add.1-9, and are available on the Internet at: http://www.un.org/esa/sustdev/documents/docs_sdissues_major_groups.htm.

Annex**Major groups priorities for action in agriculture, rural development, land, drought, desertification, and Africa**

Contents

	<i>Paragraphs</i>	<i>Page</i>
I. Women		
II. Children and youth		
III. Indigenous people		
IV. Non-governmental organizations		
V. Local authorities		
VI. Workers and trade unions		
VII. Business and industry		
VIII. Scientific and technological communities		
IX. Farmers.		

I. Women

Gender equality is vital to accelerating the sustainable development of the concerned themes of CSD-16/17. It represents significant human right issues for women around the world.

1. The following proposed priority policy options and actions are within the domain where Women Major Group as major stakeholders can play an integral role.
2. Governments are urged to implement the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), especially Article 14 focused on Rural Women, and the African Charter on the Rights of Women in Africa.
3. The face of the farmer and natural resource manager is primarily female. Gender sensitization is necessary but not sufficient for both sexes at all levels to change the prevailing misunderstanding of this fact. Gender mainstreaming and transformation of policies, institutions and programs is required to develop the conditions under which women farmers and the women and men professionals who support their efforts can be put in the forefront and centre of the reorientation structures and processes at all levels, recognising their role as primary food producers and environmental managers. We call for a partnership that links women agricultural leaders and women farmers to help them succeed in these critical roles.

4. Many governments already endorse 30% women's participation in decision-making processes. This percentage should increase to at least 50% at all levels of decision-making from national representation to local development projects and be backed up by measures to assure implementation, including budget allocations to build capacity and strengthen leadership skills among women farmers and professional women extension agents.
5. Secure access to and control over land and water must be guaranteed through legislation and local enforcement. Agrarian and land policies, water laws, regulation of common pool resources, access to grazing lands and water resources (including irrigated and harvested water) must be ensured. The ability to inherit and own land must be guaranteed to all women, as already incorporated in CEDAW, the Children's Rights Treaty and JPOI.
6. As women are the primary providers of drinking water and hygiene and sanitation in the household, national water and sanitation policies must be established or improved to ensure equitable access for both women and men, particularly for potable water supplies. Sanitation facilities must be improved in accordance with the inputs and preferences of women.
7. Education, especially for girls, vocational training for women, and adult literacy programmes are essential and should be based on the train-the-trainer principle. Training should be designed with illiteracy in mind, particularly when women must be empowered to carry out minor maintenance of agro-processing equipment (access to tools and the means to repair ensured), engage in livestock production, conduct PH and soil fertility testing, understand post harvest technological practices, knowledge of basic bookkeeping and marketing strategies.
8. Women must be consulted in the planning stages of any bioenergy and biofuel production. Strategic policies may trigger rural development and self-reliance by providing local sources of energy for rural communities and new market opportunities for farmers.
9. Adaptation and mitigation practices that address climate change must consider the impact on women as they are often the hardest hit in times of food crisis, flood, drought, loss of livestock and other severe environmental disturbances brought on by climate change. A specific adaptation fund for women should be created to assist women in coping with climate change. As mostly affected by food crisis, female-headed households and widow women must be given special attention.
10. Incentives should be given to small-scale women farmers to enhance their transition to more ecologically and economically sustainable practices, ensuring access to credit, inputs, technology and markets. Rural infrastructure must be improved and storage facilities made available. Fostering collaboration at the grassroots level among women farmers, processors and output/input traders to encourage rural cooperatives with equitable representation of women must be linked to value chain actors and to market information.

11. Promote innovation in technology development for the agricultural sector, disseminate knowledge on improved new and existing technologies and develop female-appropriate technologies and devices. Women's traditional knowledge must be acknowledged and incorporated into research agendas and in order to enable greater rural innovation women farmers and pastoralists must be part of the research process.
12. More women must be trained in agricultural extension with better incentives to encourage them to be stationed in rural areas. Farmer Field Schools, exchange training visits, and affirmative actions to increase the percentage of women enrolled in agricultural training programmes must be promoted. Gender balance must be ensured in all teams of extension workers and subsidized access provided to poor women farmers in locations where extension assistance are privatised.
13. Measures must be taken to improve women's working conditions including exposure to toxic chemicals, heavy labour and inequalities among in terms of payment and benefits. Finding alternative ways to protect women and developing their negotiation skills in the workplace should be integrated into capacity building programmes.
14. HIV/AIDS impact women heavily as they hold responsibilities not only in their workplace but also in the household as care providers. Women must be targeted in health programs in this essential crosscutting issue.
15. Criteria of funding bodies often include proof of legal status and proven track-records despite most women's organizations' inability to obtain legal recognition due to a lack of resources or complicated legal processes. A paradigm shift and creative solutions by policy makers to direct resources and funds that benefit poor women farmers must be devised at the national level.
16. Gender indicators and disaggregated data collection (by sex and age) must be a part of program monitoring and evaluation, and must be used to improve policies and facilitate research. Agriculture research institutions should broaden their work to integrate social, economic and environmental concerns with participatory methods that facilitate women's inputs.
17. Globally and in Africa, women must be enabled to work collaboratively with governments and all stakeholders to shift from managing poverty to alleviating poverty. Agricultural policies must be geared towards income generating activities, job creation and increased food production for food security in rural areas.

II. Children and Youth

A. Introduction

18. Today's children and young people have inherited a world they did not contribute to shaping, and whose future largely depends on the decisions and actions of governments and other stakeholders. In these decisions, sustainable development must be considered from a technical or economic lens within an ethical framework. Young people represent an untapped source of enthusiasm and innovation to tackle the challenges of sustainable development. Collaboration with young leaders will continue to ensure a culture of ethical and environmental responsibility to coming generations.

B. Africa

HIV/AIDS

19. The connection between rural economic stagnation, urban migration, and the spread of HIV/AIDS is difficult to ignore. Reduced economic opportunities in rural areas create significant pressure on rural men to migrate to urban areas in search of employment. Evidence of HIV incidence throughout East and Southern Africa suggests that HIV is highly prevalent along these migratory routes.

Aid and investment

20. Aid and investment in agricultural productivity in sub-Saharan Africa should be a participatory process that includes rural farmers and pastoralists, taking into consideration the conditions, needs, and aspirations of African citizens and their governments. This will result in more robust, context-relevant planning, and increase the political credibility of governments seeking aid and investment.

21. Stronger African governance and increased cross-border collaboration is vital for creating sustainable infrastructure, addressing the issues of water and food sovereignty and reducing conflicts in Africa.

C. Agriculture

Sustainable agriculture

22. Agriculture constitutes the fundamental basis of economic and community life in many parts of the world. Development strategies that promote sustainable agricultural practices ultimately benefit farmers, livestock owners, the poor and society in general. Environmentally sustainable farming that maintains soil resources and provides ecosystem services strengthens the long-term viability of the agricultural sector. Youth, small-scale farmers and women should be encouraged to pursue sustainable farming as an intellectually and physically rewarding career.

Preservation of biodiversity

23. The preservation of biodiversity through initiatives such as community-run seed banks, promotion of native breeds and species, and knowledge-sharing programs should be integrated in the design and implementation of conservation and sustainable development policies and strategies.

Food security

24. The competition of land and other resources to cultivate crops for biofuel production may outweigh the potential benefits of cleaner energy, particularly in resource-strained areas. The introduction of both biofuels and genetically modified organisms (GMOs) in certain circumstances has led to a loss of crop diversity and increased pressure on marginal land and water resources. However, through improved international evaluation and regulation biofuels may have the potential to provide cleaner energy and GMOs may aid in solving growing food production needs. Accordingly, the true impact and sustainability of both must be continuously and critically evaluated.

25. Strong investment toward research in important crops is also essential for the protection of food security to cope with shifting climate conditions.

D. Drought and Desertification

26. All countries have the responsibility to change production and consumption patterns that influence climate and contribute to desertification.

27. Development and implementation of early warning systems for weather phenomena is necessary to facilitate preparation and adaptation, especially in the rural agricultural sector. The inclusion of diverse voices, including those of young people, in creating strategies to combat drought and desertification will ensure that mitigation and coping plans are accessible and lasting. Information and Communication Technologies (ICTs) would also empower drought-affected communities and shift the emphasis of rural development to a long-term, participatory approach with full community ownership.

E. Land

Land rights

28. Insecure land tenure limits small-scale farmers from investing in the sustainable management of their land and natural resources. This particularly impacts poor and marginalized groups, especially indigenous peoples, young people and women.

Land management

29. Urban migration driven by resource scarcity and population growth may be addressed through policies that promote better land management and a more equitable distribution of resources, including community management of local resources.

F. Rural Development

30. Global investment in physical infrastructure including roads, electricity, clean water and health services needs to be significantly increased if human development indicators are to improve.

Economic development

31. To increase financial security for agricultural workers, the establishment of support services and institutions providing credit and access to financial markets for small-scale farmers, women and young people is paramount. This also includes creating jobs and other opportunities in the non-farm sector.

G. Cross-Cutting Issues

Education

32. Education planning should aim to build the capabilities of rural inhabitants to contribute meaningfully to the development process and reflect local needs and realities. The DESD (Decade of Education on Sustainable Development) goals should be considered within this educational framework.

33. The creation and increased accessibility of formal and community-based education programs will decrease rural-urban migration, empower families with economic security, encourage children to retain sustainable agricultural and pastoral traditions, and discourage agricultural child labour.

Water and sanitation

34. To meet the Millennium Development Goals, any sustainable water or sanitation program must involve community members, particularly women and young girls, in an educational process of organizing, planning, implementing and evaluating the project.

Gender issues

35. Gender Equality is a prerequisite for sustainable development. It is necessary that the education, opportunities and respect given to women and young girls be held at the same level as those given to men. Gender mainstreaming is also a crucial approach to engage the inputs, commitment and cooperation of young girls and women while planning for sustainable development-related initiatives.

National Sustainable Development Strategies (NSDS)

36. Stakeholders, such as NGOs, IGOs, and social enterprises are uniquely positioned to effectively implement NSDS programmes, providing governments with the opportunity to leverage their expertise and creating an accountability mechanism for governments to demonstrate the responsible implementation of solutions. Cooperation across the private, public and civil society sectors will greatly improve effectiveness of NSDS programmes.

Ethical frameworks for international collaborations, negotiations, and trade

37. Climate change presents a pressing example of the need for an ethical framework for international negotiations. Ethically informed actions and strategies to address environmental injustice and support affected communities – while involving young people – are necessary.

38. International trade agreements should be re-convened, with an emphasis on preventing massive spikes in agricultural commodity prices that exacerbate the food crises.

III. Indigenous Peoples

A. Introduction

39. Indigenous peoples' economic, social and cultural development is linked with the promotion, recognition and respect of their human rights as embodied in the United Nations Declaration on the Rights of Indigenous Peoples. The Declaration provides an overarching framework and standard of achievement to be pursued in the spirit of partnership and mutual respect by UN bodies, international financial institutions, States and indigenous peoples.

40. Such a human rights-based approach, when combined with an ecosystems approach, provide the underpinnings for sustainable development, including on the CSD17 themes of Agriculture, Land, Rural Development, Drought, Desertification, Water and Sanitation.

41. Indigenous peoples put forward the following policy recommendations based on this framework for advancing social and ecological balance and equity:

B. Agriculture

42. Sustainable development planning to uphold indigenous peoples' rights to lands, territories and resources, and to recognize and promote the contributions of traditional knowledge, innovations and practices.

43. Revitalize and promote ecological agricultural approaches that allow indigenous peoples, local communities and small farmers to sustain and increase local food production with low-cost, readily available technologies and inputs without causing environmental destruction.
44. Promote traditional knowledge, innovations and practices such as seed banking, propagation and sharing of seed varieties, breeds and locally generated technologies; over the commercial high yielding varieties and genetically modified seeds that require the use of agrochemical inputs and technologies.
45. Recognize the substantial contributions of indigenous peoples' customary natural resource management and agro-forestry practices to climate change mitigation and adaptation; and support community-based practices and adaptive management as invaluable responses to food security, food sovereignty and climate change.
46. Address and prevent the negative impacts of corporate expropriation and control of lands, waters and resources of indigenous peoples including expansion of extractive industries, mono-crop plantations and agro-fuels that cause displacements of indigenous peoples and extensive loss of biodiversity.
47. Promote appropriate technology transfers, inclusive of shared ownership and control, and comprehensive multi-stakeholder assessment of its impacts and desirability.
48. Provide rewards and incentives for indigenous peoples and small farmers who are managers of biodiversity and providers of the diverse ecosystem services.

C. Land

49. Respect, recognize and promote indigenous peoples' customary laws on the ownership, use and management of lands and resources for their continued survival and well-being.
50. Reform land laws and agrarian policies towards secure tenure and land rights for indigenous peoples and small farmer/tillers.
51. Recognize the multiple environmental, social, cultural and spiritual values of land, sea and natural resources and the cosmovisions of indigenous peoples.
52. Promote food sovereignty based on the rights to food and self-determination.
53. Adopt trade policies that promote and sustain indigenous production and livelihoods in agro-forestry, livestock, marine and other traditional occupations and local, regional and national markets.

54. Recognize the fundamental role of women in agriculture, sustainable natural resource use and management. Redistributive agrarian reforms must allow women access to and jurisdiction over land and natural resources and guarantee their representation in decision-making.

D. Rural Development

55. Prioritize rural development programs aimed at ensuring rights to lands and food sovereignty of the small farmers and peoples over those aimed at natural resource extraction for commerce and profit.

56. Recognize indigenous peoples “Life Plans” and Local Sustainable Development Plans which are based on participatory prioritization and decision-making, and resources management.

57. Integrate Traditional Knowledge in rural development policies and interventions that facilitate the sustainable use of water, land, forest and fisheries resources and maintain biodiversity.

58. Implement equitable and inclusive water resources management and address conflicting water uses and demands emerging especially from irrigated agriculture.

59. Recognize and promote community-based extension that values and supports traditional knowledge systems and networks, with training of local farmer-to-farmer extension agents.

60. Support and implement decentralized and locally-managed renewable energy systems.

61. Integrate participatory mechanisms into infrastructure and market development, which can promote technological choices by farmers and facilitate their innovations.

62. Support traditional livelihoods, customary sustainable use and natural resource management of indigenous peoples.

E. Drought and Desertification

63. Develop and implement drought mitigation strategies that identify the most vulnerable, the reasons for their vulnerability, prioritize factors that can be addressed in the short-, medium- and long-term, and integrate action into the broader development agenda.

64. Adopt a comprehensive land use involving carefully planned crop rotation that minimizes erosion and uses less water-dependent crops in drier months/years, conservation agriculture, rainwater harvesting, water recycling, appropriate water restrictions, cloud seeding, etc.
65. Provide support for the development and installation of simple local technologies such as those promoting shallow wells, subsurface dams, water harvesting techniques, for the access of water for domestic consumption and hygiene, and for economic activities such as cattle raising, brick making or small-scale agricultural activities.
66. Adopt policies that value the importance of drylands in economic, environmental, social, cultural and political terms, and respect for the tenure rights and other rights of livestock keepers and pastoralists.
67. Evaluate the costs of not preventing degradation in drylands, due to the inaction of governments and sectors.
68. Recognise and promote traditional knowledge in combating desertification.
69. Support traditional knowledge, innovations and improvement of production systems adapted to climate stress such as pastoralism.
70. Increase collaboration between all actors involved in development projects in drylands and rangelands combined with increased investments.

F. Water and Sanitation

71. Recognize and promote the indigenous peoples' traditional knowledge systems and innovations in the collective management and conservation of their water resources.
72. Recognize the vital role of indigenous peoples in sustaining the forests and watersheds and provide support systems, incentives and just payments for environmental services to the rightful protectors of natural resources, biodiversity, forests and watersheds.
73. Address and prevent the destruction of natural habitats and ecosystems, pollutions of land and waters, depletion of water sources due to extractive industries such as mining and large dams; and establish measures to sanction the violators.
74. Prioritize programs and projects on water for livelihoods, and domestic use, health and sanitation of local communities.
75. Address the inadequacy of potable water, sanitation and waste disposal in rural areas who are most vulnerable to water-borne and other environmental diseases.

76. Develop sustainable and community-driven land and water and/or land and sea management plans with support from governments.

77. Promote community forestry to conserve water resources in small-river systems.

IV. Non-governmental Organizations

A. Introduction

78. Rights-based approaches to development, including the right to food and self-determination, right of peoples and states to determine their own policies that protect food security, environmental quality and livelihoods, and adoption of land and agrarian reform policies within a human rights framework.

79. Adoption of food sovereignty as the key concept for decision-making about resource use and trade policies.

80. Recognition of the rights of communities to, and their access to and control over, land, water, seeds and other productive resources.

81. Changing and stopping unsustainable patterns of production and consumption.

82. Recognition of the rights of small-scale producers, farmers, fisherfolks, pastoralists and indigenous peoples to directly participate in decision-making processes and resource management, organize collectively, and full access to justice and redress.

83. Meaningful participation of civil society in the development process, and governmental and intergovernmental support to civil society efforts in project implementation, education and information, policy advocacy and establishment of accountability mechanisms.

Policies Promoting Sustainable Development

B. Agriculture

84. Promotion of agro-ecological approaches to food production, including organic agriculture, sustainable livestock production, diversified production, and water- and energy-efficient crops under local control, coupled with creation and expansion of local or regional infrastructures, markets and networks that benefit smallholders.

85. Recognition and promotion of the important role played by livestock in addressing social, environmental, economic and welfare issues.

86. Recognition of the value of traditional and local knowledge, prior informed consent of communities on access to these knowledge and resources, and fair and equitable sharing of benefits arising from their commercial use.
87. Promotion of community-based practices, such as the use of stress-tolerant local varieties and reforestation, which are invaluable for climate change adaptation.
88. Technology transfer that uses appropriate and indigenous knowledge systems along with modern ecological science, involves shared ownership and control, and comprehensive multi-stakeholder assessment of desirability.
89. Phasing out of technologies that pose adverse impacts to the environment, biodiversity and human health, such as genetically modified organisms (GMOs).
90. Promotion of short chains in food production and distribution.
91. Incentives for small-scale producers to provide ecosystem services and protect biodiversity.
92. Facilitate access of small-scale producers, communities and grassroots organizations to support services and infrastructure such as credit, markets including certification and labeling, technology and information.
93. Careful consideration of the local situation when providing emergency food or seed aid.

C. Land

94. Agrarian reform that secures tenure for small-scale farmers, tillers, indigenous peoples and women, complemented by adequate support services. Agrarian reform should integrate the worldview on territory of peasants, the landless, indigenous peoples, fisherfolk, nomadic pastoralists, minorities, displaced peoples, etc.
95. Recognition of the rights of women over land, ensuring their access to and jurisdiction over land and natural resources, and guaranteeing their representation in decision-making.
96. Recognition of the socio-environmental functions of land, water and natural resources.
97. Transparent and inclusive processes in the development of land policies that are people-centered, recognize diverse tenure systems, and involve innovative and accessible systems of recognition of land rights of both men and women.

98. Sustainable land management, conservation and agro-ecological strategies centered on peasant and family agriculture.
99. Trade policies that favour livestock-based livelihoods and peasant and indigenous production for local, regional and national markets.

D. Rural Development

100. Demand-driven rural development policies and interventions that promote sustainable use of natural resources and maintain biodiversity.
101. Comprehensive and inclusive water resources management to address conflicting water uses and demands.
102. Community-based extension that supports traditional knowledge systems and networks, with training of local farmer-to-farmer extension agents, including women.
103. Infrastructure and market development that incorporate participatory mechanisms and promote technological choices and innovations by farmers.
104. Locally-managed decentralised energy systems that benefit rural areas, such as solar renewable energy and small-scale, locally-controlled agrofuel production subject to comprehensive, inclusive risk and impact assessments.
105. Access to rural health care, safe drinking water and proper sanitation technologies, including eco-sanitation, that take into account local knowledge, traditional practices and climate conditions.
106. Education and training programs for rural youth that develop learning capabilities and encourage investment in their communities.
107. Implementation of internationally agreed approaches such as the FAO Guidelines on the Right to Food, and operationalization of food sovereignty principles.

E. Drought

108. Drought mitigation strategies that identify the most vulnerable, determine the reasons for vulnerability, prioritize factors to address, and integrate action into the broader development agenda.
109. Concerted effort to develop and implement improved early warning systems that reach poor and marginalized people, and emergency aid for pastoralists during droughts.

110. Increased investments in crop research for drought-prone areas leading to higher, more secure yields while maintaining environmental and economic viability.
111. Comprehensive land use involving carefully-planned crop rotation that minimizes erosion and uses less water-dependant crops in drier years.
112. Promotion of sustainable agriculture, rainwater harvesting and conservation, water recycling, appropriate water restrictions, etc.

F. Desertification

113. Recognition of the importance of drylands in economic, environmental, social, cultural and political terms, and respect for the rights of livestock keepers and pastoralists.
114. Evaluation of the costs of not preventing degradation in drylands, i.e., inaction.
115. Monitoring the extent of land degradation, and raising awareness on the causes and effects of desertification.
116. Identification, further development and support of local coping strategies for dryland peoples, especially with regard to climate change threats.
117. Increased collaboration among all actors involved in development projects in drylands, combined with increased investment.
118. Implementation of the UNCCD as the main international instrument to address land degradation, drought and desertification, and its current ten-year strategic plan.

G. Africa

119. Increased public investment in agriculture and rural development, particularly in demand-driven initiatives, ensuring that these benefit smallholder women and waged agricultural workers.
120. Integration of indigenous crops in national research programs, and increased research on drought-tolerant crops.
121. Diversification of farmers' incomes through livestock development, agro-processing, and fisheries.
122. Fair trade and good pricing of agricultural products, their promotion and sale in local markets by governments.

123. Promotion of local economies by processing agricultural products in small enterprises and factories in rural areas.
124. Capacity-building of farmers' organizations engaged in sustainable agriculture practices, to diffuse and replicate successes.
125. Partnerships among relevant sectors to achieve mutual goals, and to promote the important role of smallholders and women in policy-making.
126. Structural, economic and political changes to enable sustainable development in drylands, backed by economic investment, and stemming from collaborative research with local communities.

V. Local Authorities⁸

A. Introduction

127. Internationally local governments are committed to achieving the Millennium Development Goals (MDGs) and sustainable development. Local governments are playing an increasingly important role in managing globalisation, managing vital ecosystems services, protecting and enhancing the natural environment, and tackling global poverty, through working in partnership with all sectors of the local community.
128. Sustainability calls on us to address the interdependence between economy, society, ecology and good governance. Consequently, we must address the impacts of the global financial markets and climate change on the global world order and specifically on sustainable development within the context of the CSD 16/17 themes.
129. The current financial crisis and growing climate pressures impact all the themes addressed in all the CSD cycles. An all-inclusive, multi-dimensional and integrated analysis and response is therefore urgently required. If CSD continues on its business-as-usual trajectory it will be ignoring at least two major obstacles that will prevent us from reaching our commitments in relation to sustainable development and the Millennium Development Goals (MDGs).
130. This paper focuses on the policy priorities regarding sustainable development from the perspective of local government. The topic will be mainly addressed from a cross-cutting and all-inclusive perspective but includes some specific thematic recommendations, particularly in relation to Africa.

⁸ For list of references, please refer to the expanded version of Local Authorities' Priorities for Action, available at: http://www.un.org/esa/sustdev/mgroups/about_mgroups/amg_local_main.htm

B. Cross-cutting Themes

Global financial crisis and global environmental change

131. It is generally recognised that the world is facing a global economic recession. For local governments, a recession will have the following impacts:

- (a) Reduced access to finances for sustainable solutions, especially regarding urban infrastructure;
- (b) Cancellation or delay of investments in environmentally friendly and socially sound infrastructure projects;
- (c) Unsustainable / perverse subsidies will recur.

132. Equally, if we fail to adequately respond to climate change and its consequent impacts we will be unable to depend on the natural resource base to sustain our communities and economies.

133. Therefore, the Local Government (LG) major group recommends the following cross-cutting policy priorities:

- (a) Immediate examination of the impact of the global financial crisis and climate change on each of the CSD specific themes.
- (b) Agree on targeted responses for governments, international institutions and stakeholders to address the impacts revealed.
- (c) Agree on a global public regulatory framework for the global financial markets.
- (d) Ensure a strong global commitment is made at the UN Framework Convention on Climate Change 15th Conference of the Parties in Copenhagen in 2009, including a target to reduce Green House Gas emissions by 80% by 2050.

134. These issues should be addressed globally, by the UN, with participatory involvement of international agencies and major groups. Local government should have a prominent role in this process, with targeted support to enable them to proactively address the challenges ahead.

C. Agriculture, Rural Development, Land, Africa

135. The Johannesburg Plan of Implementation (JPOI) made a number of commitments in relation to local government and their communities. It is important that we recall these

commitments and address in policy terms the factors that have prevented their achievement.

Policy priorities for local government in Africa

136. Noting that progress towards Sustainable Development and the MDGs is posing the greatest challenges for the African continent, especially Sub-Saharan Countries, we call for special attention to this CSD theme and the role of local government. In the context of increasing decentralisation of powers to local and regional government across Africa the CSD needs to recognise the critical role of local government in achieving the JPOI and MDGs in the continent.

137. UN agencies, African Union (AU), UN ECA, African Development Bank, international donors and other agencies should work in partnership with local government, in Africa and internationally, to:

(a) **Increase local government voice** – more effective representation, coordination and joint action amongst local government associations and networks, sub-regional and national Local Government associations.

(b) **Scale-up local good practice and build-up local government capacity** – through:

- Mechanisms to strengthen the capacity of national and regional local government associations
- Support for cooperation between local authorities internationally

(c) **Create greater flexibility in development assistance** - in particular:

- Budgetary support at the sub-national level, where countries are not on track with or committed to democratic reforms, e.g. Ethiopia;
- Collaborative budget arrangements between local and central governments, e.g. Uganda;
- More accessible ODA for local and regional government, to work in partnership with other stakeholders.

(d) **Support local government capacity building in conflict prevention and response** - EU, AU and UN conflict prevention programmes need to target local government as a key actor in promoting peace and stability.

(e) **Support and monitor local gender equality** by the international community.

(f) **Promote bottom-up Poverty Reduction Strategy processes** - Local government, civil society, the private sector and other actors should be involved in formulation and implementation of PRSs and national development plans in order to ensure sustainable progress towards meeting the MDGs and the JPoI.

(g) **Stimulate local economic development** - Local government can play a vital role in promoting fair, sustainable and free trade from the bottom-up, through facilitating and enabling local economic development, local employment and trade links. The International Community should therefore establish tools to **strengthen local economic capacity and build pro-poor and sustainable local economies**.

Rural Development, Land and Agriculture

138. The pressures on local government to sustain their rural, urban and peri-urban communities and ensure food security are greater than ever. Governments and the international community need to undertake the following policies as a priority:

(a) **Promote the removal of distorting global agricultural subsidies** in the global markets and provide additional resources to local government and their communities to enable them to respond to the changing market demands in a sustainable way.

(b) **Provide targeted assistance to rural Local Government and their communities to stimulate sustainable rural economic opportunities** - promoting market diversification into sustainable agricultural and rural market areas, as well as enabling local government to better promote and regulate employment, health and safety as well as environmental standards in local communities, especially to target opportunities for the poorest and most marginalised groups.

(c) **Provide technical and financial assistance to Local Government and their communities to increase and improve rural service provision especially in relation to providing for basic needs.**

(d) **Support regional / provincial cooperation between rural, peri-urban and urban authorities.**

VI. Workers and Trade Unions

139. CSD-17 must promote the following policies and actions:

(a) **Democratic governance and respect of fundamental rights**, including labour rights as well as the equitable provision oversight and regulation of public services. Governments must engage in national and local dialogue with all Agenda 21 partners;

(b) **‘Decent Work’** for combating poverty, reducing vulnerability to economic, social and environmental changes and for empowering communities. This ILO concept includes the respect of rights at work, secure employment, social protection, and social dialogue;

(c) **Opportunities for ‘green and decent job’ creation**, along with sustainable agricultural production patterns. Action needs to be undertaken against occupational injuries and diseases in agricultural work, which kill 170,000 workers every year. Governments must ratify ILO Conventions 155 on Health and Safety, 170 on Chemicals and 184 on Health and Safety in Agriculture, as well as the Stockholm Convention on Persistent Organic Pollutants;

(d) **Planned transition** to protect workers in environmentally-vulnerable sectors, such as agriculture and fisheries, from loss of employment or livelihood. Adaptation of agriculture to altered weather patterns, economic diversification, non-farm development, education and skills development are essential;

(e) **Worker and trade union involvement** through effective workplace action for sustainable development, environmental protection and community well-being. This requires the promotion of the OECD Guidelines on Multinational Enterprises and the ILO Tripartite Declaration of Principles for Multinational Enterprises and Social Policy;

(f) **National Sustainable Development Strategies (NSDS)** that are guided by UN indicators and involve Major Groups.

A. Agriculture

140. Promote land reform, food security and sovereignty, rights for workers and farmers, environmental sustainability and justice.

141. Put in place international and national regulations for preventing instability and speculation on food prices, ensuring a fair distribution of benefits and protecting the purchasing power of rural and urban workers.

142. Take measures to enforce the rule of law and combat forced labour in rural areas.

143. Phase-out toxic pesticides which put workers, consumers and the environment at risk.

144. Combat the expanded use of agrotoxics and intensive agricultural production based on unsustainable techniques and promote family agriculture.

145. Mainstream climate change impacts. Adaptation is vital for securing the world’s food supply.

146. Undertake an ecological and social assessment of the full-life cycle of agroenergy.
147. Implement policies aimed at providing rural women equal land access, tools, technology, education, rights and credit.
148. Apply the precautionary principle to genetically modified organisms (GMO) or new chemicals for the food-chain.
149. Encourage organic farming.
150. Enforce integrated and sustainable water management, as agriculture is the largest user of global water supplies.

B. Rural Development

151. Promote decent employment and the shift from informal to formal work, thereby extending coverage of rights, social protection and social dialogue as well as increasing earnings.
152. Develop appropriate systems of education, vocational training and lifelong learning policies for helping workers to find and sustain decent jobs and keep pace with changing technologies and new employment opportunities.
153. Empower communities through access to quality public services, such as water, sanitation, health care and clean energy. Health care services and service providers need support to tackle HIV/AIDS and other diseases.
154. Respect workers' rights, including the right to organise and bargaining collectively, provide security and protect trade unionists and community leaders from violence, particularly in rural areas.
155. Address agriculture and food security in education programmes. Skill-based education, such as that provided by trade unions, offers immediate results on resource efficiency and productivity, food safety and occupational health.
156. Ensure adequate rural transport, in order to reduce unemployment and exclusion in rural areas.
157. Reverse the trends causing losses of income of common resources-dependent communities.
158. Privatisation, agricultural intensification, population growth and ecosystem degradation are some of these factors.

C. Desertification, Drought and Land

159. Ensure decent income and increased power for communities as a means to adapt to extreme weather events such as drought or to long-lasting modifications in ecosystems, such as desertification.

160. Improve international cooperation, including aid for emergencies and disasters and funds for adaptation in agriculture and the food supply chain. Secure livelihoods through social protection, poverty reduction strategies and decent jobs programmes.

161. Honour the commitments made at Monterrey and Gleneagles for an increase in development aid and for greater accountability by governments to properly deliver on their commitments.

162. Promote synergies between different UN Conventions (UNFCCC, UNCD and UNCBD) and institutions (ILO, FAO, OECD). Trade union participation in these bodies must be ensured and expanded.

D. Africa⁹

163. Decent Work should be taken to embrace also environmental sustainability.

164. Make the rights of workers and their unions a central feature of sustainable development strategies.

165. Ensure gender equity and women workers' issues as indicators of sustainability.

166. Guarantee the participation of trade unions and other civil society groups in decision-making.

167. Promote tripartite dialogue, collective bargaining and other democratic processes.

168. Promote the introduction of sustainable development in education at all levels and provide adequate tools for workers to become meaningful actors of change.

169. Call for Governments to:

- (a) Regulate companies and world markets, as it relates to the provision for sanitation, health, water, energy, housing, education and public transportation.

⁹ The content of this section is derived from a Resolution agreed by the 2006 Trade Union African Conference on Labour and the Environment. Sixty-two union members representing twenty-four national centres from nineteen countries met for the First African Trade Union Conference on Labour and the Environment, held in Johannesburg, 28-29 July, 2006.

- (b) Increase investments for environmental policies and their implementation.
 - (c) Create "just transition" programmes to ensure that workers negatively affected by restructuring obtain Decent Work provisions.
 - (d) Establish and improve the accountability and transparency of multinational enterprises and reject their "double standards" that "export" environmental, social and production methods to Africa which are not allowed in the countries of origin.
170. Make water a priority. Promote universal, equitable, egalitarian and environmentally sound access to basic resources such as water and energy as essential components of human rights.
171. Ratify ILO and UN Conventions.¹⁰ Adopt the Strategic Approach to Chemicals Management (SAICM) and call for a global ban on asbestos use, for its proper handling and disposal in accordance with the Basel Convention and for its inclusion in the Rotterdam Convention.
172. Promote accountability to promises for universal access in connection to HIV/AIDS and other infectious diseases and help address these through workplace-based approaches.

VII. Business and Industry

173. Although there has been great progress in raising agricultural productivity over the past-half century, populations continue to struggle for access to safe and affordable food. A number of factors are working against adequate and sustainable food supplies including restrictions to trade, climate change, increasing world population and changes in demand, particularly in rapidly growing economies.
174. The global population has almost tripled since 1950. By 2030, there will be another 1.7 billion more mouths to feed, most of who will be born in developing countries. The ratio of arable land to population is expected to decline by 40-55% by 2030. By 2025, 1.8 billion people will be living with absolute water scarcity. The basic livelihoods of tens of millions more will be threatened by a more extreme and variable climate. To cope with these effects, the world's farmers need to double, or even treble, food production by 2050.
175. There is no one single tool or policy to ensure sustainability; the CSD should enable a wide range of policy, market and voluntary measures and approaches. Prioritizing market-based, flexible approaches will be more important than ever as governments and the private sector cope with recent economic downturn conditions.

¹⁰ Mentioned in first section.

176. Food and agricultural commodities chains are increasingly global and comprise many different stages and players, including farmers, manufacturers, suppliers, transport, retailers, consumers and waste managers, all of whom generate different environmental impacts. Sustainability in food and renewable commodities chains therefore requires shared responsibility and engagement among all those involved along their life-cycles. For this reason, business and industry strongly supports integrated policymaking and international cooperative approaches to sustainable agriculture, including use of the UN's Comprehensive Framework for Action (CFA).

A Call to Action

177. Deliver a sustainable value chain for global agriculture, centred on the entire agriculture industry from farm to consumer, and continue to establish a long-term framework of partnerships to maintain sustainable development and open new opportunities for a shift towards more "bio-based" economies.

- (a) *Safeguard the land.* Fostering access to land and stewardship of that land.
- Ensure more secure land tenure for women.
 - Encourage more use of conservation tillage to prevent soil erosion.
 - Protect wildlife habitat and diversity in harmony with established protection and management initiatives under the UN Convention of Biological Diversity.
 - Develop integrated water resource management to ensure efficient use and recycling strategies to conserve and replenish water resources.
- (b) *Share knowledge.* While many solutions needed to improve global agriculture already exist, they are incomplete and often isolated – in research labs, on modern large-scale farms or within remote indigenous communities.
- Increase integrated crop management education for farmers.
 - Multiply the number of village-based knowledge centres.
 - Access to information technologies for farmers to get weather, crop, and market alerts.
- (c) *Build local access.* Fundamental resources should be available to farmers to help them manage their production process more reliably and at a lesser cost.

- Rural access to microfinance services, especially microcredit.
- Infrastructure in terms of roads and ports to get supplies to farmers.
- Improved access to agricultural inputs and services, including mechanical tools, seeds, fertilisers, and crop protection materials.
- Support rural agro-dealers to get information and supplies into farmers' hands.

(d) *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 production and consumption phases.

- Construct appropriate local storage facilities.
- Localised application of agronomic knowledge, pest-identification and meteorological information.
- Public education around sustainable consumption and production patterns.
- Build an efficient cold chain including transport, storage, and retailing to prevent spoilage and food safety issues.
- Enhance safety, quality, affordability and diversity of foods through developing and enforcing of industry standards by government and business.

(e) *Reduce market distortions.* Improve opportunities for the agriculture industry worldwide.

- Development of key infrastructure, such as roads and marketplaces.
- Encouraging co-operative approaches to marketing for smallholders.
- Improved skills through entrepreneurship training for smallholder farmers.
- Enable marketplace rewards for green practices that have demonstrable positive impacts on the environment.

(f) *Research imperatives.* Achieving sustainable agriculture requires continual research, including prioritising locally relevant crops and stewardship techniques.

- Use science and technology to increase productivity.

- Increase resources from governments and business towards relevant R&D.
- Improve capacity building and sharing of good practices through partnerships.
- Agronomic research adapting to water, waste, and climate priorities.
- Research into seed varieties needed by the poorest and most vulnerable regions.
- Enable public-private research collaboration around integrated solutions.

VIII. Scientific and Technological Communities

A. Agriculture, Land, Rural Development

178. *Sustainably meeting the world's growing food demands is an urgent global challenge.* Increasing agricultural production, while maintaining critical ecosystem services, will require massive public and private sector investments. The advancement and application of *agricultural knowledge, science, and technology (AKST)* must be at the centre of efforts to address this challenge. The long trend of declining investments in AKST and extension services by many governments and by international donors must be reversed. Additionally, AKST must be applied 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 and particularly threatened by ecosystem degradation.

179. To address these challenges, S&TC recommends:

(a) Major increases in national, international, and private donor *investments in science, engineering and technology, including extension services*, achieving:

- Global and regional food security;
- Improved livelihoods for the rural poor;
- Sustainable use of natural resources;
- Effective, integrated research on agriculture, and agroecosystem services; and
- Mitigation of and adaptation to climate change.

(b) *Public and private partnerships* targeting small-scale agricultural systems, for greater opportunity for development of science, technology, and extension services.

180. *Development and adaptation of AKST for use by small-scale farmers* requires interdisciplinary, integrated research, education, information dissemination and extension that:

- (a) Uses enhanced data collection and research to better understand the diverse environmental, socio-economic, cultural and gender contexts in which farmers/pastoralists live and work;
- (b) Blends science, engineering and technology with local knowledge to develop innovative methods in soil and water management, and agricultural production;
- (c) Empowers farmers through appropriate policies and investments, notably in health services, education for all, and institutional arrangements and infrastructure development that provides access to markets;
- (d) Enhances North-South and South-South partnerships.

181. *Climate change* has major, mainly negative impacts for food systems. Urgent efforts must be made to reduce the vulnerability of the agricultural sector to climate variability and change, especially floods, droughts and other extreme weather events to protect regional and global food supplies. There are *critical gaps of knowledge* in this area, as well as a lack of climate-informed early warning and response systems.

182. To fill these knowledge gaps, CSD-17 should call for stronger linkages between the climate change science and development communities to strengthen research and monitoring aimed at:

- (a) A better understanding of climate change impact on agriculture;
- (b) Developing and evaluating policy options, technologies and practices needed to decrease the vulnerability of food systems and adapt sustainably to climate change.

183. *Biotechnology* developments could significantly contribute to increasing agricultural production, especially in drought-prone areas, and to improving the micronutrient status of major crops. Optimal utilization of genetically modified crops (GMCs) will only occur if public concerns are addressed. When crops, including GMCs, are developed, they need to be assessed for health and environmental risks through pre-market regulatory review on a case-by-case basis. Small farmers in developing countries must be ensured direct benefits from GMCs.

184. The S&TC recommends increasing research and deployment of new and emerging scientific knowledge for increasing yields and making plants more resilient to climate factors, in particular drought. It recommends greater transparency through:

- (a) Enhanced involvement of researchers in public debate on GMOs;

- (b) Government regulatory systems that are science-based, transparent and involve community participation; and
- (c) Invasive species management through appropriate regulations and monitoring.

185. *Biofuel agriculture* versus food production is an important sustainable development topic. A scientific, engineering, social, economic and sustainability analysis should be conducted on a case-by-case basis, of the comparative advantage of extensive planting of food or biofuel crops, especially given the ongoing global food crisis. Focusing on second generation biofuels which do not compete with food production can offer promising results to mitigate climate change and to stimulate economic and rural development.

B. Drought and Desertification

186. *Drought and desertification* rank among the greatest environmental challenges and are a major impediment to meeting basic human needs in drylands of the developing world. Inappropriate land and water management, combined with recurrent drought, are the main causes of desertification. While the impacts of climate change in drylands will vary by region, the frequency and duration of droughts are predicted to increase further reducing water availability and vegetation productivity for the vast drylands of sub-Saharan Africa and Central Asia.

187. Capacity building, focused on effectively sharing existing knowledge must be a priority. Additional knowledge is needed about integrated land and water management, engineering, and technology suitable to drylands conditions, as well as a thorough assessment of irrigation and other technologies currently used in drought- and desertification-prone regions,.

188. CSD 17 should call for:

- (a) *Prevention of desertification in at-risk regions* by promoting policies that:
 - Integrate land and water management, including water harvesting;
 - Enhance vegetative cover (through reseeded, promotion of higher plant establishment, reforestation and protection of riparian areas);
 - Develop soil quality (by restocking soil organic matter and preventing erosion);
 - Phase out inappropriate irrigation methods that initiate or accelerate desertification processes;

- Integrate locally-available traditional technology with the selective transfer of appropriate “new”, innovative technologies for optimal water management; and
- Facilitate active participation of recipient communities in these processes.

(b) Implementing *restoration and rehabilitation of desertified drylands*.

189. *Long-term observations*. Decision makers and the scientific and engineering communities face a widespread lack of reliable and easily accessible data on land and water resources, weather and climate, drought and desertification, biological diversity, land-use and -cover and other parameters related to the topics of CSD-17.

190. To address this information gap, S&TC recommends that:

(a) Countries review and strengthen national data collection and long-term environmental monitoring networks; and

(b) Increase efforts to (i) strengthen the CSD-17 related components of existing observing systems, and (ii) fully operationalise existing global environmental observing systems, within the context of the Global Earth Observation System of Systems.

C. Partnerships and Multi-stakeholder Dialogues

191. The S&T community is committed to developing strong partnerships with all other stakeholders concerned. Partnerships are required at local, national, regional and global levels with governments, farmers, the private sector, and all other major groups. Governments need to support such partnerships, and enhanced interaction between scientists, engineers and educators, with farmers and pastoralists, as well as public and private decision makers and civil society groups.

IX. Farmers

192. Agriculture and rural areas are faced with multifaceted challenges from rising population, shifting food demands, economic growth, bioenergy demands and sustainability due to strains on natural resources. These challenges need to be faced in a new context of global crises in the areas of finance, food and energy. After more than twenty years of neglect of agriculture, including investments in research and development, extension services, affordable credit, as well as problems of land availability and infrastructure, rural areas are under stress and poverty is exacerbated. Public policy makers worldwide need to re-engage with farmers and other stakeholders to build a new agricultural model which would be **“people-centred and knowledge-based”**.

This shift in thinking is aimed at harnessing the full potential of agriculture to reduce poverty, revitalise rural areas while conserving natural resources.

193. What are the actions needed?

A. Recognise Agriculture as an Engine for Economic Growth and Rural Development

194. The fundamental role of agriculture is to feed consumers and to secure livelihoods for producers worldwide, while preserving the environment. Agricultural development is key to reducing poverty and an engine for economic growth and rural development. This needs to be recognised.

B. A New Agricultural Model: Increased Investments in a Conducive Environment

Long term plans involving farmers

195. The “knowledge based and people centred” agricultural model should be built on an integrated global long term vision and a commitment from governments to involve all the stakeholders including farmers in the sustainable development of agricultural and rural economies. The right policies, regulatory mechanisms and a proper allocation of resources are needed, so that agriculture can play its full role in contributing to the global economy.

196. A conducive policy environment for agricultural investment is key to economic growth, in particular, for most developing countries. This was stressed in the World Bank’s Development Report 2008. Hunger and rural poverty will be conquered through the transformation of subsistence farmers into small-scale entrepreneurs.

From subsistence farmers to small scale entrepreneurs

197. Building commodity supply chains is fundamental to helping subsistence farmers, cooperatives and other economic organizations enter markets and become small-scale agricultural entrepreneurs. Farmers, including women farmers, need capacity to work together to group supplies, to meet food safety and quality standards, to share price information, and to develop local and regional markets. This is good for consumers, for the empowerment of farmers, and it reduces the high transaction costs of having many middlemen.

Modernization of agriculture through innovation, knowledge and access to technology

198. In developing countries, especially in Africa, facilitating access to appropriate technologies and upgrading existing ones is critical.

199. To successfully combat desertification, adapted farming technologies are needed for dry land farmers to sustain their livelihoods while protecting fragile eco-systems and capitalizing on the presence of basic infrastructure and extension services. Support from developed countries is essential, especially in terms of knowledge-sharing and technology transfer.

Farmer-centered research

200. Applied research systems need to mainstream farmer participation at all levels to facilitate the adoption of and access to sustainable technologies and the best farming practices.

201. Farmers' organizations need to be involved in setting research priorities and in disseminating results to their members.

202. *Eco-system services* are increasingly being demanded from farmers as they need to conciliate food production with environmental conservation through landscape valuation, integrated water management, and biodiversity conservation. Farmers need to be rewarded through incentive mechanisms for these "non food services" to encourage them to adopt environmental conservation practises.

C. An Integrated Approach to Rural Development

203. A successful rural development strategy needs to look at all assets: natural, social, physical human and financial capital. An integrated territorial perspective must involve long-term strategies matched with adequate resources.

Rural infrastructure and rural employment

204. Farmers need basic infrastructure in order to develop their farms. Roads are needed to bring in inputs and to access markets; irrigation systems, modern equipment and improved seeds and livestock breeds are needed to improve farm productivity; processing and storage facilities are needed to avoid post harvest losses and create value-added employment.

Women as the driving force for rural development

205. Women farmers are main food producers in developing countries and yet they are one of the most vulnerable groups. Their economic empowerment to produce more and to participate in policy formulation is critical to addressing poverty and food insecurity.

Bioenergy, a promising tool for rural development

206. Bioenergy will not replace the priority of producing food. However, it represents a new market opportunity for farmers and a way of diversifying risk. It contributes to meeting climate change targets by reducing greenhouse gas emissions, and it contributes to energy security and to rural development.

207. Enabling policy frameworks and investment incentives are needed to ensure that farmers have the capacity to produce sustainable bioenergy from local sources.

208. Farmer ownership is key. Long term assessment of economic, environmental and social benefits and costs is necessary.

D. Land, a Critical Asset for Farmers: Sustainable Land Management and Secure Land Tenure

209. Rural development strategies need to include secured land tenure arrangements (land titles) especially for women farmers. They give farmers strong motivation to manage and protect the land through improved agricultural practices and provide collateral for farmers to obtain farm credit.

210. Sustainable land management is a prerequisite to sustainability and underpins long-term land productivity. It also contributes to breaking the poverty cycle.

E. Combating Desertification as a Way to Reduce Poverty

211. Efforts to combat desertification should be accompanied by integrated measures that encourage economic and social change. They should be an integral part of the development process in development projects and national strategies.

212. Well-organized farmers and rural community groupings are formidable agents of change. Dryland farmers can best capitalize on their limited resources by forming strong rural organizations which provide various services (training, information and extension) to grassroots farmers.

Turning dry lands into economic assets

213. To attract investments in agriculture in dry lands and degraded areas, it is necessary to translate the different impacts of natural resource management investments into monetary terms e.g. increase in biomass production, higher levels of water in wells and recapitalization of land. Success stories should be documented and the relevant data should be compiled to convince policymakers of the economic benefits of regenerating the land. This will help turn dry lands into real economic assets.

214. *Managing risks* is essential for all farmers to have the confidence to take innovative production decisions in the face of weather, disease, market risks and loan repayments.

Risk management tools such as crop insurance schemes and early warning systems are thus needed.