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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 Development[1] and the decisions of the eleventh session of the Commission on Sustainable Development[2] 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 21[4] and the Johannesburg Plan.

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 Development[5] 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,

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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.

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.

Notes

[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.

[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.

[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. Women

Gender equality is vital to accelerating the sustainable development of the concerned themes of the Commission on Sustainable Development at its sixteenth and seventeenth sessions. 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 the 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, 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 the transformation of policies, institutions and programmes are 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, recognizing 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 to succeed in these critical roles.

4. Many Governments already endorse 30 per cent of women's participation in decision-making processes. This percentage should increase to at least 50 per cent 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 the Convention on the Elimination of Discrimination against Women, the Convention on the Rights of the Child and the Johannesburg Plan of Implementation.

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 those most affected by food crisis, female-headed households and widowed 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 grass-roots 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. It is essential to 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 is privatized.

13. Measures must be taken to improve women's working conditions, including exposure to toxic chemicals, heavy labour and inequalities 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 impacts 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 programmes in this essential cross-cutting issue.

15. Criteria of funding bodies often include proof of legal status and proven track records, despite the inability of most women's organizations to obtain legal recognition owing to a lack of resources or complicated legal processes. A paradigm shift and creative solutions by policymakers 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 programme 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 programmes 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 in certain circumstances has lead 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 genetically modified organisms 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 towards 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 communications technologies 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 goals of the Decade of Education for Sustainable Development should be considered within this educational framework.

33. The creation and increased accessibility of formal and community-based education programmes 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 programme 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

36. Stakeholders, such as non-governmental organizations and intergovernmental organizations, and social enterprises are uniquely positioned to effectively

implement 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 the effectiveness of such 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 reconvened, 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 United Nations bodies, international financial institutions, States and indigenous peoples.

40. Such a human rights-based approach, when combined with an ecosystems approach, provides the underpinnings for sustainable development, including on the Commission's 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 is necessary to uphold indigenous peoples' rights to lands, territories and resources, and to recognize and promote the contributions of traditional knowledge, innovations and practices.

43. It is essential to 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. Traditional knowledge, innovations and practices such as seed banking, propagation and sharing of seed varieties, breeds and locally generated technologies should be promoted over the commercial high-yielding varieties and genetically modified seeds that require the use of agrochemical inputs and technologies.

45. It is essential to recognize the substantial contributions of indigenous peoples' customary natural resource management and agroforestry 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. Measures should be taken to address and prevent the negative impacts of corporate expropriation and control of lands, waters and resources of indigenous peoples, including the expansion of extractive industries, monocrop plantations and agrofuels that cause displacements of indigenous peoples and extensive loss of biodiversity.

47. Appropriate technology transfers, inclusive of shared ownership and control, and comprehensive multi-stakeholder assessment of its impacts and desirability should be promoted.

48. Rewards and incentives should be provided for indigenous peoples and small farmers who are managers of biodiversity and providers of the diverse ecosystem services.

C. Land

49. It is essential to 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. Land laws and agrarian policies towards secure tenure and land rights for indigenous peoples and small farmer/tillers should be reformed.

51. The multiple environmental, social, cultural and spiritual values of land, sea and natural resources and the cosmovisions of indigenous peoples should be recognized.

52. Measures should be taken to promote food sovereignty based on the rights to food and self-determination.

53. Trade policies should be adopted that promote and sustain indigenous production and livelihoods in agroforestry, livestock, marine and other traditional occupations and local, regional and national markets.

54. The fundamental role of women in agriculture, sustainable natural resource use and management should be recognized. 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. Measures should be taken to prioritize rural development programmes 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. Indigenous peoples' "Life plans" and local sustainable development plans, which are based on participatory prioritization and decision-making, and resources management should be recognized.

57. Traditional knowledge should be integrated in rural development policies and interventions that facilitate the sustainable use of water, land, forest and fisheries resources and maintain biodiversity.

58. Measures should be taken to implement equitable and inclusive water resources management and address conflicting water uses and demands emerging especially from irrigated agriculture.

59. Community-based extension that values and supports traditional knowledge systems and networks, with training of local farmer-to-farmer extension agents, should be recognized and promoted.

60. Decentralized and locally managed renewable energy systems should be supported and implemented.

61. Participatory mechanisms should be integrated into infrastructure and market development, which can promote technological choices by farmers and facilitate their innovations.

62. Traditional livelihoods, customary sustainable use and natural resource management of indigenous peoples should be supported.

E. Drought and desertification

63. It is essential to develop and implement drought-mitigation strategies that identify the most vulnerable and 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. A comprehensive land use should be adopted, 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, and so forth.

65. Support should be provided 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. Policies should be adopted 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. The costs of not preventing degradation in drylands, owing to the inaction of Governments and sectors, should be evaluated.

68. It is essential to recognize and promote traditional knowledge in combating desertification.

69. Traditional knowledge, innovations and improvement of production systems adapted to climate stress such as pastoralism, should be supported.

70. Increased collaboration should be fostered between all actors involved in development projects in drylands and rangelands, combined with increased investments.

F. Water and sanitation

71. The indigenous peoples' traditional knowledge systems and innovations in the collective management and conservation of their water resources should be recognized and promoted.

72. The vital role of indigenous peoples in sustaining the forests and watersheds should be recognized and the support systems, incentives and just payments for environmental services to the rightful protectors of natural resources, biodiversity, forests and watersheds should be provided.

73. It is essential to address and prevent the destruction of natural habitats and ecosystems, pollutions of land and waters, depletion of water sources owing to extractive industries such as mining and large dams; and establish measures to sanction the violators.

74. Programmes and projects on water for livelihoods, and domestic use, health and sanitation of local communities should be prioritized.

75. The inadequacy of potable water, sanitation and waste disposal in rural areas that are most vulnerable to water-borne and other environmental diseases should be addressed.

76. Sustainable and community-driven land and water and/or land and sea management plans should be developed with support from Governments.

77. Community forestry to conserve water resources in small-river systems should be promoted.

IV. Non-governmental organizations

A. Introduction

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

79. Food sovereignty should be adopted as the key concept for decision-making regarding resource use and trade policies.

80. The rights of communities to, and their access to and control over, land, water, seeds and other productive resources should be recognized.

81. Unsustainable patterns of production and consumption should be changed and stopped.

82. 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, should be recognized.

83. The meaningful participation of civil society in the development process should be ensured, and governmental and intergovernmental support provided to

civil society efforts in project implementation, education and information, policy advocacy and establishment of accountability mechanisms.

B. Policies promoting sustainable development

1. Agriculture

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

85. In addressing social, environmental, economic and welfare issues, the important role played by livestock should be recognized and promoted.

86. It is essential to recognize 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. Community-based practices, such as the use of stress-tolerant local varieties and reforestation, which are invaluable for climate change adaptation, should be promoted.

88. It is essential to support technology transfer that uses appropriate and indigenous knowledge systems along with modern ecological science, and involves shared ownership and control, and comprehensive multi-stakeholder assessment of desirability.

89. Technologies that pose adverse impacts to the environment, biodiversity and human health, such as genetically modified organisms, should be phased out.

90. Short chains in food production and distribution should be promoted.

91. Incentives should be offered for small-scale producers to provide ecosystem services and protect biodiversity.

92. Access of small-scale producers, communities and grass-roots organizations to support services and infrastructure such as credit, markets including certification and labelling, technology and information should be facilitated.

93. The local situation should be carefully considered when providing emergency food or seed aid.

2. Land

94. Agrarian reform should secure 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, and so on.

95. The rights of women over land should be recognized, ensuring their access to and jurisdiction over land and natural resources, and guaranteeing their representation in decision-making.

96. The socio-environmental functions of land, water and natural resources should be recognized.

97. Transparent and inclusive processes should be integrated in the development of land policies that are people-centred, 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 agroecological strategies centred on peasant and family agriculture should be implemented.

99. Trade policies that favour livestock-based livelihoods and peasant and indigenous production for local, regional and national markets should be supported.

3. Rural development

100. Demand-driven rural development policies and interventions that promote the sustainable use of natural resources and maintain biodiversity should be implemented.

101. Comprehensive and inclusive water resources management to address conflicting water uses and demands should be promoted.

102. Community-based extension that supports traditional knowledge systems and networks, with training of local farmer-to-farmer extension agents, including women, should be made available.

103. Infrastructure and market development that incorporate participatory mechanisms and promote technological choices and innovations by farmers should be promoted.

104. Locally managed decentralized 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, should be created.

105. Access should be provided 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 programmes for rural youth that develop learning capabilities and encourage investment in their communities should be put in place.

107. Internationally agreed approaches such as the Food and Agriculture Organization of the United Nations Guidelines on the Right to Food, and operationalization of food sovereignty principles should be implemented.

4. Drought

108. Drought-mitigation strategies should be put in place that identify the most vulnerable, determine the reasons for vulnerability, prioritize factors to address, and integrate action into the broader development agenda.

109. Concerted efforts should be made to develop and implement improved early warning systems that reach poor and marginalized people, and emergency aid for pastoralists during droughts.

110. Investments in crop research should be increased 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 should be implemented.

112. Sustainable agriculture, rainwater harvesting and conservation, water recycling, appropriate water restrictions, and so on, should be promoted.

5. Desertification

113. The importance of drylands in economic, environmental, social, cultural and political terms should be recognized, and the rights of livestock keepers and pastoralists should be respected.

114. The costs of not preventing degradation in drylands, namely, inaction, should be evaluated.

115. The extent of land degradation should be monitored, and awareness raised on the causes and effects of desertification.

116. Local coping strategies for dryland peoples, especially with regard to climate change threats should be identified, developed further and supported.

117. Collaboration should be increased among all actors involved in development projects in drylands, combined with increased investment.

118. It is essential to promote the United Nations Convention to Combat Desertification as the main international instrument to address land degradation, drought and desertification, and its current 10-year strategic plan.

6. Africa

119. Public investment in agriculture and rural development should be increased, particularly in demand-driven initiatives, ensuring that these benefit smallholder women and waged agricultural workers.

120. Indigenous crops should be integrated in national research programmes, and research increased on drought-tolerant crops.

121. Farmers' incomes should be diversified 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 should be established.

123. Local economies should be promoted by processing agricultural products in small enterprises and factories in rural areas.

124. The capacity-building of farmers' organizations engaged in sustainable agriculture practices, to diffuse and replicate successes should be supported.

125. Partnerships among relevant sectors should be fostered to achieve mutual goals, and to promote the important role of smallholders and women in policymaking.

126. Structural, economic and political changes should be made to enable sustainable development in drylands, backed by economic investment, and stemming from collaborative research with local communities.

V. Local authorities[a]

A. Introduction

127. Internationally, local governments are committed to achieving the Millennium Development Goals and sustainable development. Local governments are playing an increasingly important role in managing globalization, 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 themes of the Commission at its sixteenth and seventeenth sessions.

129. The current financial crisis and growing climate pressures impact all the themes addressed in all the Commission cycles. An all-inclusive, multidimensional and integrated analysis and response is therefore urgently required. If the Commission 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.

130. Section V 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.

B. Cross-cutting themes

Global financial crisis and global environmental change

131. It is generally recognized 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.

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[a] 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.

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 major group recommends the following cross-cutting policy priorities:

(a) An immediate examination of the impact of the global financial crisis and climate change on each of the specific themes of the Commission;

(b) Agreeing on targeted responses for Governments, international institutions and stakeholders to address the impacts revealed;

(c) Agreeing on a global public regulatory framework for the global financial markets;

(d) Ensuring that a strong global commitment is made at the fifteenth Conference of the Parties to the United Nations Framework Convention on Climate Change, in Copenhagen in 2009, including a target to reduce greenhouse gas emissions by 80 per cent by 2050.

134. These issues should be addressed globally, by the United Nations, with the participatory involvement of international agencies and major groups. Local governments 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 and Africa

135. The Johannesburg Plan of Implementation contains a number of commitments in relation to local governments 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 Millennium Development Goals is posing the greatest challenges for the African continent, especially the sub-Saharan countries, we call for special attention to this Commission theme and the role of local government. In the context of increasing decentralization of powers to local and regional government across Africa, the Commission needs to recognize the critical role of local government in achieving the Johannesburg Plan of Implementation and the Millennium Development Goals in the continent.

137. United Nations agencies, the African Union, the Economic Commission for Africa, the 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**, including more effective representation, coordination and joint action among local government associations and networks, subregional and national local government associations;

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

(i) Mechanisms to strengthen the capacity of national and regional local government associations;

(ii) Support for cooperation between local authorities internationally;

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

(i) Budgetary support at the subnational level, where countries are not on track with or committed to democratic reforms, for example, Ethiopia;

(ii) Collaborative budget arrangements between local and central governments, for example, Uganda;

(iii) More accessible official development assistance for local and regional government, to work in partnership with other stakeholders;

(d) **Support local government capacity-building in conflict prevention and response**: European Union, African Union and United Nations 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 poverty reduction strategies and national development plans in order to ensure sustainable progress towards meeting the Millennium Development Goals and the Johannesburg Plan of Implementation;

(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 governments and their communities to stimulate sustainable rural economic opportunities** by 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 marginalized groups;

(c) **Provide technical and financial assistance to local governments 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. At its seventeenth session, the Commission 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 the ILO Conventions on Occupational Health and Safety (No. 155), on Chemicals (No. 170), and on Safety and Health in Agriculture (No. 184), 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 concerning Multinational Enterprises and Social Policy;

(f) **National sustainable development strategies** that are guided by United Nations indicators and involve major groups.

A. Agriculture

140. Land reform, food security and sovereignty, rights for workers and farmers, environmental sustainability and justice should be promoted.

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

142. Measures should be taken to enforce the rule of law and combat forced labour in rural areas.

143. Toxic pesticides which put workers, consumers and the environment at risk should be phased out.

144. It is essential to combat the expanded use of agrotoxics and intensive agricultural production based on unsustainable techniques and promote family agriculture.

145. Climate change impacts should be mainstreamed. Adaptation is vital for securing the world's food supply.

146. An ecological and social assessment of the full life cycle of agroenergy should be undertaken.

147. Policies aimed at providing rural women equal land access, tools, technology, education, rights and credit should be implemented.

148. The precautionary principle should be applied to genetically modified organisms or new chemicals for the food chain.

149. Organic farming should be encouraged.

150. Integrated and sustainable water management should be enforced, as agriculture is the largest user of global water supplies.

B. Rural development

151. Decent employment and the shift from informal to formal work should be promoted, thereby extending coverage of rights, social protection and social dialogue as well as increasing earnings.

152. Appropriate systems of education, vocational training and lifelong learning policies should be developed for helping workers to find and sustain decent jobs and keep pace with changing technologies and new employment opportunities.

153. Communities should be empowered 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. Workers' rights should be respected, including the right to organize and bargaining collectively, provide security and protect trade unionists and community leaders from violence, particularly in rural areas.

155. Agriculture and food security should be addressed 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. Adequate rural transport should be ensured, in order to reduce unemployment and exclusion in rural areas.

157. The trends causing losses of income of common resources-dependent communities should be reversed. Privatization, agricultural intensification, population growth and ecosystem degradation are some of these factors.

C. Desertification, drought and land

158. Measures should be taken to 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.

159. International cooperation should be improved, including aid for emergencies and disasters and funds for adaptation in agriculture and the food supply chain; and secure livelihoods through social protection, poverty reduction strategies and decent jobs programmes.

160. 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, should be honoured.

161. Synergies should be promoted between various United Nations Conventions (the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification and the Convention on Biological Diversity) and institutions (ILO, FAO, OECD). Trade union participation in these bodies must be ensured and expanded.

D. Africa[b]

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

163. The rights of workers and their unions should be made a central feature of sustainable development strategies.

164. Gender equity and women workers' issues as indicators of sustainability should be ensured.

165. The participation of trade unions and other civil society groups in decision-making should be guaranteed.

166. Tripartite dialogue, collective bargaining and other democratic processes should be promoted.

167. The introduction of sustainable development in education at all levels should be promoted and adequate tools provided for workers to become meaningful actors of change.

168. There should be a 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;

(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;

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[b] The content of the present section is derived from a resolution agreed by the 2006 Trade Union African Conference on Labour and the Environment. Sixty-two union members, representing 24 national centres from 19 countries met for the First African Trade Union Conference on Labour and the Environment, held in Johannesburg, South Africa, 28-29 July 2006.

(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.

169. It is essential to make water a priority. Universal, equitable, egalitarian and environmentally sound access to basic resources such as water and energy must be promoted as essential components of human rights.

170. The relevant ILO and United Nations conventions[c] must be ratified. It is essential to adopt the Strategic Approach to Chemicals Management 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.

171. Accountability to promises for universal access in connection to HIV/AIDS and other infectious diseases must be promoted and help provided to address these through workplace-based approaches.

VII. Business and industry

172. 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.

173. 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 per cent 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.

174. There is no one single tool or policy to ensure sustainability; the Commission 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.

175. 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 United Nations Comprehensive Framework for Action.

[c] Mentioned in section I.

A call to action

176. It is essential to 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.

177. Steps should be taken to:

(a) Safeguard the land. It is essential to foster access to and stewardship of that land, by:

(i) Ensuring more secure land tenure for women;

(ii) Encouraging more use of conservation tillage to prevent soil erosion;

(iii) Protecting wildlife habitat and diversity in harmony with established protection and management initiatives under the Convention on Biological Diversity;

(iv) Developing 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. It is essential to:

(i) Increase integrated crop management education for farmers;

(ii) Multiply the number of village-based knowledge centres;

(iii) Ensure 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, including:

(i) Rural access to microfinance services, especially microcredit;

(ii) Infrastructure in terms of roads and ports to get supplies to farmers;

(iii) Improved access to agricultural inputs and services, including mechanical tools, seeds, fertilizers, and crop protection materials;

(iv) Support to rural agro-dealers to get information and supplies into farmers' hands;

(d) Protect harvests. In many of the poorest countries, 20-40 per cent 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. It is essential to:

(i) Construct appropriate local storage facilities;

(ii) Implement localized application of agronomic knowledge, pest-identification and meteorological information;

(iii) Provide public education around sustainable consumption and production patterns;

(iv) Build an efficient cold chain, including transport, storage, and retailing to prevent spoilage and food safety issues;

(v) Enhance safety, quality, affordability and diversity of foods through developing and enforcing of industry standards by government and business;

(e) Reduce market distortions. Opportunities should be improved for the agriculture industry worldwide, including:

(i) Development of key infrastructure, such as roads and marketplaces;

(ii) Encouraging cooperative approaches to marketing for smallholders.;

(iii) Improved skills through entrepreneurship training for smallholder farmers;

(iv) Enabling marketplace rewards for green practices that have demonstrable positive impacts on the environment;

(f) Research imperatives. Sustainable agriculture requires continual research, including prioritizing locally relevant crops and stewardship techniques, by:

(i) Using science and technology to increase productivity;

(ii) Increasing resources from governments and business towards relevant research and development;

(iii) Improving capacity-building and sharing of good practices through partnerships;

(iv) Adapting agronomic research to water, waste, and climate priorities;

(v) Conducting research into seed varieties needed by the poorest and most vulnerable regions;

(vi) Enabling public-private research collaboration around integrated solutions.

VIII. Scientific and technological community

A. Agriculture, land and 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 must be at the centre of efforts to address this challenge. The long trend of declining investments in agricultural knowledge, science, and technology and extension services by many governments and by international donors must be reversed. Additionally, agricultural knowledge, science, and technology 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, the scientific and technical community recommends:

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

(i) Global and regional food security;

(ii) Improved livelihoods for the rural poor;

(iii) Sustainable use of natural resources;

(iv) Effective, integrated research on agriculture, and agroecosystem services;

(v) 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 agricultural knowledge, science, and technology 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, the Commission, at its seventeenth session, 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 will only occur if public concerns are addressed. When crops, including genetically modified crops, 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 genetically modified crops.

184. The scientific and technical community 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 genetically modified organisms;

(b) Government regulatory systems that are science-based, transparent and involve community participation;

(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. At its seventeenth session, the Commission should call for:

(a) Prevention of desertification in at-risk regions by promoting policies that:

(i) Integrate land and water management, including water harvesting;

(ii) Enhance vegetative cover (through reseeding, promotion of higher plant establishment, reforestation and protection of riparian areas);

(iii) Develop soil quality (by restocking soil organic matter and preventing erosion);

(iv) Phase out inappropriate irrigation methods that initiate or accelerate desertification processes;

(v) Integrate locally available traditional technology with the selective transfer of appropriate "new", innovative technologies for optimal water management;

(vi) 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 the Commission at its seventeenth session.

190. To address this information gap, the scientific and technical community recommends that:

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

(b) Efforts are increased to (i) strengthen the Commission-related components of existing observing systems, and (ii) fully operationalize existing global environmental observing systems, within the context of the Global Earth Observation System of Systems.

C. Partnerships and multi-stakeholder dialogues

191. The scientific and technical 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 owing 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 20 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 policymakers 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, revitalize rural areas while conserving natural resources.

193. What are the actions needed?

Recognition of 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 recognized.

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 *World Development Report 2008: Agriculture for Development*. 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 dryland farmers to sustain their livelihoods while protecting fragile ecosystems 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-centred 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. Ecosystem 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 practices.

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 the 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.

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 cycle of poverty.

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 grass-roots farmers.

Turning drylands into economic assets

213. To attract investments in agriculture in drylands and degraded areas, it is necessary to translate the different impacts of natural resource management investments into monetary terms, for example, 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 drylands 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.