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Major groups' Priorities for Action in energy for sustainable development, industrial development, air pollution/atmosphere and climate change**

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 of Implementation.

2. The Bureau of the fifteenth session of the Commission on Sustainable Development decided to continue to build on the participatory practices of previous sessions of the Commission, as well as 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 CSD-15.

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* E/CN.17/2006/L.1

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

3. The organization of the input and contributions of major groups to the fifteenth 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: the Women Environment and Development Organization and ENERGIA International Network on Gender and Sustainable Energy, for women; the Youth Caucus of the Commission on Sustainable Development, for youth and children; the Indigenous Peoples' Caucus of the Commission on Sustainable Development, the Indigenous Peoples' International Centre for Policy Research and Education and the Indigenous Environmental Network, for indigenous people; 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 Confederation of Free Trade Unions (through the Trade Union Advisory Committee to the Organization for Economic Cooperation and Development), for workers and trade unions; the International Chamber of Commerce 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 energy for sustainable development, industrial development, air pollution/atmosphere and climate change, which are contained in the annex to the present note.

4. The major groups' *Priorities for Action* 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 fourteenth 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] It presents various policy opinions and proposed solutions for the consideration of policymakers in their deliberations, and will serve as a starting point for major groups' participation in the Intergovernmental Preparatory Meeting and at the fifteenth session of the Commission. While major groups differ in the identification of needs to be filled as

well as 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 fourteenth session of the Commission on Sustainable Development are contained in E/CN.17/2006/5 and E/CN.17/2006/5/Add.1-9, and are available on the Internet at: http://www.un.org/esa/sustdev/documents/docs_sdissues_major_groups.htm#CSD-14

Annex

Major groups' Priorities for Action in energy for sustainable development, industrial development, air pollution/atmosphere and climate change

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Major Groups' Priorities for Action at CSD-15

I. Women

Integrating a gender perspective into energy planning, decision-making, management and implementation

1. Energy policies, legislation, and programmes should recognize that women and men have different social and economic roles, and should place more emphasis on domestic uses and small-scale agricultural and informal income-generating activities where women predominate.

2. Gender mainstreaming approaches should be used to ensure that concerns of both men and women are considered in planning and policy-making. Government officials should receive training on how to integrate gender issues into their work.

3. Disaggregated data should be used by governments to identify and quantify different energy needs of women and men, design and implement policies and programmes, and evaluate results.

4. Gender audits and needs assessments should be used to ensure that energy policies focus less on supply targets and more on demand-side considerations, in order to better reflect the needs of women and poor households, and also to help integrate energy actions with national poverty reduction plans and development initiatives on health, education, agriculture and job creation.

5. Gender budgeting should be applied to public energy expenditures and investment programmes in order to make targeting of policies and resources more equitable.

Enhancing the roles and status of women, as participants and agents of change

6. Since energy ministries and institutions are generally male-dominated, governments should adopt affirmative action programmes to ensure that more qualified women are trained and hired for policy-making positions.

7. Participatory processes should be used to actively involve women in the design, selection, promotion and use of energy resources and technologies.

8. Training programmes should encourage women to become energy technicians and producers by including machine operation and maintenance, as well as other technical and business skills.

9. Given the gender imbalances in the CSD bureau, panels, and delegations, the CSD should prioritise increasing women's participation and representation.

Providing access for all to reliable, affordable energy services

10. Without modern energy services, women and girls must gather fuel and carry water for household needs, and cook over smoky indoor fires. Increased investments in basic energy infrastructure are needed to reduce women's burdens and meet the Millennium Development Goals, particularly in developing countries and countries in transition. Governments should address women's access to energy in Poverty Reduction Strategy Papers and national sustainable development plans.

11. Increased access to energy for women should be coupled with employment and enterprise development opportunities, since most poor women in developing countries cannot afford to pay for new equipment unless it can be used to generate income or reduce fuel costs.

12. Improved energy financing options should be made available to women for income-generating activities, since women face particular constraints in obtaining bank credit or owning land and assets that could be used for collateral.

Improving health by reducing indoor air pollution from traditional fuel use

13. Governments should focus on expanding access to cleaner burning and more efficient cooking fuels (such as LPG, kerosene, butane, natural gas) especially in small containers that women can afford and carry, and should explore investments in local production of biofuels for use in meeting the energy needs of the poor in an environmentally friendly way. Governments should commit themselves to halve the percentage of people cooking with traditional biomass fuels by 2015.

14. Indoor air pollution should be reduced through cleaner-burning stoves, and solar cookers and hot water heaters, as well as vents, windows, stove hoods, and chimneys for better ventilation.

Taking action on climate change and ensuring gender-sensitivity in related policies and programs

15. Since global warming will disproportionately affect poor women, governments and institutions should conduct gender impact analyses to identify gender-specific needs and protection measures related to floods, droughts, and other disasters. Information is also needed on connections between gender-based resource use patterns and environmental impacts, such as deforestation due to inappropriate agricultural practices or weak tenure rights.

16. Women play a critical role in mitigating and adapting to environmental changes. Governments and institutions at all levels should involve women in climate change decision-making and take advantage of their particular skills in natural resource management and conflict prevention.

17. Without secure access to and control over natural resources, women are less able to cope with climate change. Thus, as part of their climate change activities, governments and institutions should work closely with women's organizations to improve women's access to resources.

18. Governments should work to ensure international cooperation and joint action on implementation of the UNFCCC and Kyoto Protocol. Developed countries that are the major sources of greenhouse emissions should take the lead, and non-binding agreements should be discouraged.

Ensuring accountability for sustainable industrial development

19. Developed countries currently have the most unsustainable consumption and production rates and should use awareness campaigns, legal requirements, and economic incentives to promote renewable energy and energy efficiency.

20. Rather than depending on private sector involvement and market-driven approaches, the CSD and governments should adopt rights-based strategies designed to directly benefit those most affected by energy poverty and the impacts of climate change.

Alternative energy sources that do not endanger the environment or health

21. Governments and other institutions should promote investments in and raise awareness about alternative energy technologies that are readily available and have tremendous potential for supporting economic development with low greenhouse gas emissions. Appropriate alternative energy technologies include wind and solar systems, small hydro-electric generators, modern biofuel systems, and energy efficiency mechanisms.

22. Governments should work towards reducing reliance on fossil fuels. In addition to contributing to global warming, combustion of fossil fuels produces air pollution that negatively impacts human health, particularly in poor and disadvantaged communities. Extraction and transportation of coal and oil also negatively impacts communities by destroying land and degrading water resources.

23. Given the wide-reaching and dangerous impacts of nuclear accidents and radioactive nuclear wastes, environmental degradation due to uranium mining, and health risks from nuclear energy, the CSD and governments should work to ensure that nuclear energy sources are phased out.

II. Children and Youth

INTRODUCTION

24. Children and youth do not wish to inherit a toxic, radioactive, dirty, carbon-driven world. We call on the Commission, and all concerned stakeholders, to take action to ensure that we will see a truly sustainable future. We need a clear definition of sustainable energy, and clear, time-bound targets for the implementation of sustainable energy that frees us from air pollution, climate change, and a radioactive legacy.

25. Youth and children stand in solidarity with vulnerable communities, disproportionately impacted by air pollution and climate change, including low-income people, marginalized groups, Indigenous Peoples and those living in geographically vulnerable areas.

ENERGY

26. *Address the relationship between affordable energy access and poverty reduction.* Achieving the MDGs requires innovative strategies to improve energy access for the poor. Increased production alone does not guarantee access to energy for the impoverished.

Renewable Energy

27. *Renewable energy is the key to a sustainable future.* A holistic strategy is needed for continued research and development, as well as the full implementation of existing technologies.

28. Small-scale hydro, wind, biomass, and solar energy projects offer a sustainable solution to energy access, providing local, context-sensitive solutions that preserve the environment. Youth have been essential partners in implementing small-scale projects; these contributions need further support.

Energy Efficiency

29. *Create global energy savings by improving how we use energy.* Youth-led, peer-to-peer campaigns advancing responsible consumption and sustainable lifestyles should be supported.

Sustainable Energy

30. *Agree a clear, universally recognized definition of sustainable energy.* This must consider, as stated in JPOI (II.9.a), the reliability, affordability, economic viability, social acceptability, and environmental soundness of the energy services and sources. It is self-evident to youth that nuclear energy utterly fails this test. Likewise, so called “clean” fossil fuels are not viable options for truly sustainable development.

Transcending unsustainable energy

31. *Phase out subsidies supporting the exploitation and dependence on fossil fuels and nuclear energy.* The market distortions these cause continue to prevent renewable energy from being competitive.

Financing energy for sustainable development
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32. *Investment in renewable energy and energy efficiency.* Policies should create markets for renewable energy, reduce risk, provide acceptable rates of return for renewable energy and energy efficiency for SMEs, and finance the gaps in R&D and commercialization of clean, renewable energy.

CLIMATE CHANGE

33. Global climate change is the most pressing issue of our generation. Successful measures to mitigate and adapt to climate change demand innovative policy solutions encompassing multiple sectors, global consensus and cooperation beyond short-term political manoeuvring, and immediate action to curb and reverse harmful trends that contribute to climate change.

Action is needed. Now.

34. Given changes already occurring, and projections for the coming decades, adaptation by way of environmental, social, and economic adjustments is essential to mitigating the most dire impacts of climate change. Particularly important are the needs of rural and urban coastal communities, Small Island Developing States, and research addressing the relationships between international food supply, food security, and climate change.

35. Developing nations are rapidly becoming major contributors to climate change. Providing access to environment-friendly technologies through leapfrogging is vital to ensuring that developing countries are involved in combating climate change.

36. *Strengthen efforts to reach a post-2012 climate regime.* As stated in the International Youth Declaration (Montreal, 2005), we demand minimum binding emissions reduction targets of 30% by 2020 and 80% by 2050 for “developed” nations. The CSD can foster the deployment of renewable energy and provide recommendations that will help these targets be realised.

37. Carbon Capture and Storage methods are an interim solution to mitigating climate change. *Ex ante* strategies such as the development and use of clean, renewable energy are the priority for sustainable development.

38. Solutions to climate change must be consistent with principles of environment justice.

INDUSTRIAL DEVELOPMENT

39. ***Setting the right environment for fair and sustainable industrial development***
Use National Development Strategies to provide an enabling framework for business and industry to operate responsibly. Public-private partnerships are essential, but cannot be relied upon as the only viable strategy. Children and youth strongly believe that corporate social responsibility and accountability must be emphasized; while the JPOI highlighted this need, it was not mentioned at CSD14.

40. *Adequately address the environmental implications of development.* Governments must consider the fundamental importance of the environment in providing basic human services, and take meaningful steps to stop, and reverse degradation.

41. *Match cleaner production with sustainable consumption.* Fundamental changes in the way societies produce and consume are necessary for achieving global sustainable development. As stated in the JPOI, "all countries should promote sustainable consumption and production patterns".

42. *Educate the global community on sustainable development.* Youth worldwide are advancing sustainable procurement policies and environmental education programmes designed to raise awareness and promote individual empowerment. These efforts must be supported.

AIR POLLUTION

Action needed for healthy air

43. Children and Youth have actively engaged in education programmes to address these issues; their efforts need to be strengthened with the support of governments.

Regional action to reduce air pollution

44. Nations of similar geographic location, developmental stages, and air pollution problems will be able to better address air pollution issues together. By addressing these concerns on a regional basis concerted efforts can be carried out to better deal with larger issues.

45. *Internalise the true costs of unsustainable transportation.* Vehicle emissions are one of the largest sources of air pollution. Fiscal policy should be used to promote public transport, fuel efficiency, high-occupancy car pooling and car sharing cooperative initiatives.

CROSS-CUTTING ISSUES

46. Measurable targets and timelines are required. Whilst achievement of targets necessitates cooperation amongst all stakeholders, government accountability must also be stressed.

47. *Ambitiously promote the UN Decade of Education for Sustainable Development, through governments, civil society, and the private sector.* The DESD is a prime opportunity to integrate sustainable development tenets and practices on a global scale. Given its potential for change, youth insist that DESD is heavily emphasized at CSD-15.

48. *Facilitate the inclusion of youth delegates in the international decision making process*. Governments must fulfil their commitment to include youth representation (UNGA 60/2).

III. Indigenous People [1]

49. Indigenous peoples have significant contributions to make in policy development and implementation of solutions to energy and sustainable development, industrial development, air and atmosphere pollution and climate change. Indigenous peoples are not only vulnerable to disproportionate impacts resulting from these processes, but are also producers of solutions.

50. There is emerging congruence today between traditional knowledge and modern scientific understanding about the challenges and ways forward to achieve sustainable development. The current extraction of materials, the production of waste and levels of consumption by modern societies is not sustainable, requiring a transition to low-carbon economies implementation of programs for energy conservation and efficiency, and initiatives to address consumption issues.

51. Most human experiences and achievements have taken place in societies where little oil, gas or coal is used. It is the world's rich elite minority that has grown most dependent on fossil carbon; and only in relatively recent times. This addiction can be addressed and overcome by equity in decision-making, through social and technological innovations, and the practice of ecological values like pre-caution and care for the Earth.

52. CSD-15 must demonstrate a model for leadership and inclusive governance on these thematic issues, underpinned by social and ecological balance and justice. Good governance comprises robust policy and regulatory frameworks, full corporate accountability for social and environmental impacts, participatory decision-making which values the central contributions of all major groups, and respect for human rights.

53. This year, the United Nations took a major step forward in the implementation of Chapter 26 of Agenda 21, when the Human Rights Council approved the UN Declaration on the Rights of Indigenous Peoples as the minimum standards to be applied to secure indigenous peoples' rights and well-being. CSD-15 must uphold indigenous peoples' recognized rights to self-determination and sustainable development; to control over their lands, territories and

[1] The Indigenous Peoples' Priorities for Action at CSD-15 was prepared by: the African Indigenous Women Network/Indigenous Information Network, the Indigenous Environmental Network, the Indigenous Peoples' International Centre for Policy Research and Education (TEBTEBBA), the International Indian Treaty Council, Tewa Women United, the Netherlands Centre for Indigenous Peoples, and Tuvanuatu Komiuniti.

resources; to practice their culture and customary laws; and to their free, prior and informed consent to all policies, programmes and projects that affect them.

54. Any partnership with indigenous peoples on energy and sustainable development, industrial development, air and atmosphere pollution and climate change must be based on respect for indigenous peoples' own identity. Our territories are not extractive reserves for outmoded carbon-intensive technologies. In this view, the start-up capital for development is the cultural and social assets of indigenous peoples, catalyzed by the addition of newly understood mechanisms, technologies and resources.

55. CSD-15 must take action to enhance research and development on approaches and technologies to address multiple impacts and objectives in the thematic cluster. There must be a review and development of disaggregated data and indicators on Indigenous peoples. This must be done in full partnership with Indigenous peoples at all stages.

Industrial development/atmosphere/air pollution

56. CSD-15 must promote:

a. Green chemistry- the design of natural chemical products and processes that reduce or eliminate the use and generation of hazardous substances.

b. Green engineering- the development and commercialization of decentralized industrial processes that are economically feasible and reduce risks to human health and the environment.

c. Zero waste- the maximizing of existing recycling and reuse efforts, while ensuring that products are designed of nature for the environment and have the potential to be repaired, reused, or recycled.

d. Clean production- the continuous application and evaluation of precaution, prevention, democracy, and producer responsibility for impacts caused by production processes and products.

Energy for sustainable development

57. CSD-15 must support:

a. The development and implementation of real, verifiable reductions moving towards the elimination of fossil fuel emissions.

b. Governments to accelerate the co-development, dissemination and deployment of community-based affordable and cleaner energy efficiency and energy conservation technologies. Indigenous peoples from developing and developed countries are promoting the

use of renewable energy sources to meet the energy needs of their local communities, as well as explore the potential to be alternative minded energy providers.

c. The phase out of nuclear energy and the shift of subsidies to the research, production and dissemination of clean renewable energy technologies. Nuclear energy is not clean renewable energy. The negative legacy of radiation impacts needs to be investigated and reparations made to affected communities.

d. International mechanisms utilizing indigenous knowledge to support capacity building, financial mechanisms and technology transfer to and from Indigenous peoples to pursue alternative clean energy development.

e. Implementation of recommendations of the World Commission on Dams into domestic energy planning processes, including addressing the legacy of social and environmental impacts caused by large dams, including reparations for affected communities.

Climate change

58. CSD-15 must recognize:

a. That any climate change solutions cannot and should not be separated from issues of social and environmental justice. Economic superpowers have been as successful today in their disproportionate occupation of the atmosphere with carbon emissions as they were in their colonial occupation of land. Global inequality in the form of an industrialised minority has been overusing the earth's ability to cleanse the atmosphere of excess carbon and other greenhouse gases.

b. That slowing climate change requires slowing and halting fossil fuel extraction and the expanding release of carbon into the atmosphere. Social movements and indigenous communities fighting for maintenance of customary land use are also addressing the problems of climate- destabilising land clearance, fossil fuel extraction, commercial logging, high-input intensive agriculture and long-distance food transport.

c. Current carbon-trading policies, in practice, favour the further exploitation of these fuels. Furthermore, new tree plantations, which are claimed as a means of mitigating the consequences of increased carbon dioxide pollution, often drive people out of their traditional living grounds and destroy biological diversity.

d. Indigenous peoples' full and effective participation within climate impact assessments should take into account Indigenous knowledge systems, culture, social values, language, spirituality and ecosystems.

e. Technocratic climate management regimes must be transformed to promote accountability, transparency, and democratic debate and indigenous and local community participation in climate solutions.

f. The implementation and promotion of models for Indigenous and state partnerships, such as the Arctic Council, which incorporate ecosystem approaches, collaboration between traditional and scientific knowledge and local, national and regional implementation plans, as well as genuine partnership between states and indigenous peoples should become a model for common practice. Such partnership models can be replicated to address environmental and climate problems facing drylands, islands, forest and mountain ecosystems.

IV. NGOs

A new paradigm

59. Because of unabated global reliance on fossil fuels and unsustainable patterns of consumption and production, progress in promoting sustainable development will be rendered impossible within this CSD cycle's four themes: energy for sustainable development, climate change, atmospheric pollution and industrial development. The combustion of fossil fuels is a key driver for climate change and atmospheric pollution. Fossil fuel reliance is also causing increased external indebtedness for the least developed countries. Lack of access to decentralised modern energy services, favouring renewables is a key obstacle to a just and sustainable development, including industrial development.

60. Based on the precautionary principle, promoting sustainable development safeguarding the environment and promoting social equity we need:

In energy for sustainable development

61. A just transition from fossil fuels and nuclear energy towards accessible and affordable energy alternatives including energy efficiency and energy savings to achieve real sustainable development.

62. An equitable and just access to energy services to fulfil basic needs and develop energy policies with time bound targets and commitments, as an integrated element of the PRSPs and/or NSSD, focusing on the poor to ensure greatest impacts and institutionalising citizen involvement to meet citizen and business needs in a sustainable fashion.

63. A transfer of existing and new energy technologies, excluding harmful nuclear ones, to those countries in need, while respecting and/or strengthening local and regional capacities and culture.

64. An immediate shift in energy funding and investment to phasing out subsidies to fossil fuel and nuclear industries in order to "level the playing field". These subsidies dramatically hamper sustainable development and therefore should be redirected to renewable energy and energy efficiency funding, including access to energy for the poor.

65. To develop a comprehensive strategy on finance, redirecting the International Financial Institutions (IFIs) and their funds to sustainable energy including the introduction of strengthened micro-financing for new renewables and energy efficiency.

66. To recognize and phase out Export Credit Agencies support by 2008 for funding promoting fossil, nuclear and hydro energy production that do not, inter alia, comply with recommendations of the World Commission on Dams and instruct all IFIs to do likewise.

67. To halt the development of nuclear facilities as they are neither safe, nor environmentally and economically sound and sustainable.

68. To set sustainability criteria for energy production and consumption, including the use of bioenergy to avoid negative effects on food security, livelihood, biodiversity and the widening of the gap between the haves and have-nots.

In industrial development

69. To emphasise that industrial development does NOT automatically lead to sustainable development and poverty reduction, but standards of sustainable production and consumption must be the basis upon which all industries are based. They must be set within the limits of the earth's carrying capacity, sharing equitably the burdens of the ecological footprint and internalising the external costs, respecting the polluter pays principle.

70. To stimulate sustainability reporting within the private sector, by developing clear indicators to monitor and guide sustainable industrial development. All large enterprises should utilize principles of corporate responsibility and accountability to ensure open communication and transparency, also with respect to ownership and decision making.

71. To develop short production and consumption chains to avoid unnecessary transport, with added value to manufacturer.

72. To implement the Millennium Development Goals and the goals of the JPOI by ensuring that benefits from industrial development in the South remain in the South, and by avoiding at all costs, negative consequences such as pollution, waste dumping, low salaries, bad working circumstances. Industrial development in richer countries cannot be based on the exploitation of the poorer ones.

In air pollution and atmosphere

73. To promote clean public transport alternatives. Vehicles, particularly those driven by diesel engines, are the main cause of urban air pollution. Cities that have taken decisive steps to curb transport-related air pollution have introduced innovative measures such as mandatory replacement of diesel with CNG or congestion fees and public transport alternatives.

74. To develop an 'indoor clean-air' health/environment policy. These policies must include access to affordable, cleaner and environment-friendly cooking and heating facilities, such as efficient, smokeless and cleaner-burning biomass stoves, biogas and solar cookers. Policies should include the promotion of simple technologies to allow for greater ventilation of smoke from indoor fires. Environmental and social impact assessments should also be used when promoting such technologies.

75. To make available an adequate technology to curb burning of garbage from local heaps and national land fills and outlaw incineration of garbage emitting toxic fumes.

In climate change

76. To hold all member countries accountable to the commitments in the Kyoto Protocol and not allow non-members to direct progress. It is essential to promote early benefits implicit in the protocol concerning transformation of global energy systems in areas such as: job generation, market opportunities, reduced emissions and greater energy self-reliance.

77. To stabilize the climate by keeping man-made climate change well below 2OC as a global average. Hence no country can claim post 2012 Kyoto negotiation privileges, but allocation of emission rights should be based on equitable principles. Action is needed immediately to reduce emissions of greenhouse gases while simultaneously meet the demands of the MDGs.

78. To support most vulnerable and poor communities in their efforts to adapt to climate change.

79. To prevent the transfer of costs for mitigation to developing countries through the Clean Development Mechanisms, supporting the development of socially and environmentally sound CDM projects that respect the 'gold standard'.

In interlinkages

80. To achieve Good Governance, including respect for social justice, human rights, gender equality, democratic institutions and sustainable policies.

81. To make financial instruments of governments more effective in promoting sustainable policies and inter alia, implement Environmental Fiscal Reforms (EFR), as suggested by OECD guidelines.

82. To improve system-wide coherence (within and outside the UN system), and achieve compatibility within international institutions in line with Agenda 21 and JPOI.

83. To include education for sustainable development in all curricula, as sustainable development is not possible without awareness and contribution of current and future generations.

V. Local Authorities

84. Local authorities continue to demonstrate leadership and commitment to the achievement of local sustainable development. Cities, now home to more than half of the world's population, have the power to affect the main sources of air pollution and greenhouse gases: energy use, transportation and waste.

85. Local authorities are instrumental to the achievement of national priorities on all of the thematic areas, and in particular, on air pollution/atmosphere and climate change. In fact, municipal leaders have the extraordinary ability to *change* the current trend of climate change, through local policies and actions that will meet or exceed targets set by sub-national and national governments.

86. If effectively harnessed and supported, city-led actions can positively shift the current path of climate change. Local authorities continue to prove that local action moves the world.

Challenges

87. Local authorities recognize climate change impacts as threats to public health, security and local economies. Politics and science are no longer barriers to local authorities taking action on climate change, rather resources and capacity are.

88. Local authorities lack the financial capacity to integrate long-term sustainable development goals into the planning and development of infrastructure and municipal services.

89. The long-term nature of the challenges of climate change and sustainable development defy the limited political mandate of most local authorities. To properly incorporate sustainable development at the local level, new concepts and practices must be institutionalized and transcend staff.

90. Local authorities bear a large economic burden from dependence on the automobile. As motor vehicle revenues tend to cover less than half of the cost for infrastructure, maintenance and services, local authorities usually subsidize the shortfall.

91. Local authorities have no legislative authority on vehicle efficiency policies as these are traditionally established at the national level, negatively impacting local air quality.

Strategies/programs

92. Local authorities have demonstrated that climate change policies are a path to economic opportunity. Local authorities need to have the opportunity – in national and international fora – to bury the myth of economic harm, and eventually lead/influence national and international policymaking.

93. The international community needs to provide additional budgetary and technical support for local authorities, as well as incentive-based funding – to promote energy efficiency, sustainable procurement, as well as to adopt integrated planning and risk-management techniques – to respond more effectively, especially in the least developed and rapidly industrializing countries.

94. Local authorities should have access to financial support and incentives for things like clean energy production.

Capacity building

95. Successful programs – like the Cities for Climate Protection™ Campaign of ICLEI – Local Governments for Sustainability (ICLEI) that is working with 680+ local authorities on climate change, ICLEI's Resilient Cities & Communities that focuses on adaptation, and others, especially those that promote north-south and south-south exchanges between local governments and communities - should be supported and promoted. The 680+ local authorities participating in the Cities for Climate Protection™ Campaign together account for about 15 percent of global anthropogenic carbon dioxide emissions.

96. Through sustainable procurement activities, local authorities can help stimulate sustainable production. The buying power of local authorities can accelerate the application and accessibility of clean technologies in the marketplace including renewable energy options.

97. National legislation should provide sufficient local autonomy to meet local development and national targets, enabling effective decentralization.

98. Local authorities need to be fully engaged when strategic decisions on sustainable development and climate change are made.

Specific actions

99. Micro-generation and decentralized energy production should be promoted by effectively planning for and promoting local energy production.

100. Local authorities should have the opportunity to participate in emissions trading in accordance with evolving domestic and international trading systems.

101. Local authorities, especially those in developing countries, should have access to the special adaptation fund established by the United Nations Framework Convention on Climate Change (UNFCCC) to finance the implementation of adaptation activities.

102. Improvements need to be made to national vehicle efficiency standards, and investments be made in alternative fuels and vehicles.

103. Decentralization of both regulatory powers (ability to enforce local guidelines, policies and to create revenue through taxation and fees) and resources (financing as well as technical, management and governance capacity) is essential.

VI. Workers and Trade Unions

104. CSD-14 raised important trade union concerns, i.e., worker participation, training & education, occupational health & safety and ILO labour standards.

105. CSD-15 policy options should include the following CSD-14 proposals:

a. Measures to promote employment through pollution abatement, industry planning, transportation, energy efficiency and access;

b. Skills training and education for workers, with a focus on social and environmental considerations, sustainable consumption and production technological innovation and resource efficiency;

c. Recognition and promotion of worker participation.

106. CSD-14, however did not address the consequences of privatizations and full cost recovery practices. For energy to become a driver for sustainable development, measures should be taken to ensure transparent, locally-driven, accountable and participatory public services.

Energy for sustainable development

Challenge 1: Provide sustainable energy for all

107. **Upgrade and define new roles for public utilities** for improved access by poor and vulnerable groups.

108. **Stop promoting privatisation.** International and Regional Financing Institutions must eliminate the privatisation of public services from their loan conditionalities. Vital public services must be excluded from WTO/GATS discussions as they can not be considered as commodities.

109. **Promote compensation polities** to address negative distributional effects of private financing of services; e.g., fees, special levies and other financial instruments.

110. **Incorporate governance requirements into energy policies**. Energy management and delivery must be locally driven, transparent, accountable and participatory. It must respect local laws and politics and must not undermine international social or environmental standards.

111. **Promote partnerships among and with public utilities**. Initiatives in place have improved management and delivery of public services.

Challenge 2: Promote energy efficiency

112. **Place energy efficiency requirements through urban planning and industrial design**, i.e., develop efficient buildings & heating, upgrade existing buildings (insulation of walls and rooves with rockwool or glass wool, changing windows, putting thermostats to all forms of space heating), ensuring that old asbestos is dealt with properly and new asbestos is not introduced at all.

113. **Encourage joint trade union-employer approaches** to target setting, monitoring, reporting and making change through workplace assessment and audit models.

114. **Implement energy saving through demand side management**, with an increased use of collective transportation, the development of energy services such as relighting and retrofitting in housing.

115. **Build synergies with #9 challenges**

Challenge 3: Capture employment potentials of the shift towards sustainable energy

116. **Invest in a mix of clean, green & sustainable energy sources**, including wind, solar, some forms of biomass, wave energy, microhydro energy, and especially for transitional purposes, in clean coal, advanced technology vehicles, and natural gas.

117. **Capture the employment potential of new technologies, renewable energies and conservation activities**. In the US alone, renewables could create nearly 500,000 jobs, while investing in a progressive energy policy could yield over 3.3 million jobs[2].

[2] Daniel M. Kammen, Kamal Kapadia, and Matthias Fripp (2004) Putting Renewables to Work: How Many Jobs Can the Clean Energy Industry Generate? RAEL Report, University of California, Berkeley

118. **Develop employment transition strategies to address job losses in energy intensive sectors**, through compensation, retraining and social support.

Challenge 4: Mobilize financial resources for social & environmentally friendly energy

119. **Provide a mix of incentives and regulatory obligations** to reorient FDI and other investment flows towards clean and efficient energy sources.

120. **Enhance borrowing power of local authorities** through planning of debt burdens and legislative frameworks for improved decision making. Encourage domestic financing over unstable foreign capital.

Challenge 5: Enhance the role of partnerships

121. **Call for accountability and more stringent evaluation of existing & future partnerships for sustainable development** through democratic decision-making and transparent implementation.

Industrial development

Challenge 6: Orient industrial development towards poverty eradication

122. **Promote decent employment, job creation and skills upgrading** as a means to poverty eradication, social equity and sustainable development.

123. **Foster good industrial relations** with full recognition and respect of conventions safeguarded by the ILO Declaration on Fundamental Principles and Rights at Work, which already binds most governments.

124. **Promote and take advantage of linkages among UN bodies**, e.g., ILO-UNEP Instruments & measures for environment and social policy; WHO-ILO programmes relating to social equity and public, environmental and occupational health.

Challenge 7: Make industrial development and environmental protection mutually reinforcing

125. **Dismiss false choices that pit industrial development against environmental and social protection**. Make these self-reinforcing, instead.

126. **Promote inter-regional learning exchanges** for increasing the use of clean, efficient & modern technologies.

127. **Set clear goals for country adoption of the UN GHS chemical classification & labelling**. Promote ratification of Instruments that pertain to chemicals and chemicals safety. Work with the ILO and WHO in a global ban of asbestos.

128. **Promote the further evolution of trade union-employer agreements**, including collective and Framework agreements to advance jointly on social and environmental policies.

129. **Promote OECD guidelines for MNEs & ILO tripartite declaration on MNEs & social policy**.

Challenge 8: Reinforce sustainable natural resource management in industrial policies

130. **Promote a shift from global market resource depletion patterns** towards regional/sub-regional/local production and trade, so as to avoid external dependency and negative environmental impacts.

131. **Implement a just social transition strategy** to mitigate the impact of change on working people and industry.

132. **Highlight education & training for sustainable management and conservation of resources**, with a focus on workplaces.

133. **Engage workers, trade unions and employers** in workplace actions and voluntary approaches for protecting the environment. Build upon the 2006 OECD LMP business-trade union proposals.

Air pollution/atmosphere

Challenge 9: Reduce air pollution

134. **Tackle atmospheric pollution with industrial development policies** that emphasise government oversight, compliance and secure financial instruments.

135. **Set sustainable mobility strategies**, such as home-workplaces or 'in mission' mobility plans that provide good examples for cooperative and successful worker-employer initiatives.

136. **Develop a comprehensive public transportation policy.**

137. **Link air pollution policies to public, environmental & occupational health policies.**

138. **Build synergies with #2 challenges.**

Climate change

Challenge 10: Place climate change within a sustainable development framework

139. **Support the UNFCCC and place climate change in a sustainable development context**, by integrating poverty reduction, public & occupational health and environmental priorities to mitigation and adaptation.

140. **Promote research on employment effects** of climate change through sector-by-sector and regional employment analyses.

Interlinkages & Cross-Cutting Issues

141. **Renew the commitments to sustainable production & consumption.**

142. **Improve measurement of the environment social interface** through the use of indicators and mainstreaming gender equity into criteria for measuring progress.

143. **Promote universal access to health & health services**. Call for a global participatory strategy to eradicate HIV/AIDS, TB and Malaria.

VII. Business and Industry

144. Business regards energy for sustainable development, atmosphere/air pollution, climate change and industrial development as interwoven priorities that should be addressed in an integrated manner by governments, business and civil society. Businesses contribute through operational activities, job creation, innovation, investments, capacity building and the sharing of best practices.

145. Access to modern energy services is a key ingredient in reducing poverty and providing essential services including education, food preservation, communications and health care. Currently, approximately, 2.4 billion people do not have access to modern energy services and rely on traditional energy sources. Lack of access to energy hinders development (including the Millennium Development Goals), undermines economic growth and poses strains on the environment. Further, the WEHAB strategy that emerged from the WSSD underlines the contribution of energy to many sustainable development objectives including water access and sanitation, health, agriculture and biodiversity.

146. Climate change affects all three pillars of sustainability. Responding to climate change should be considered in the broader context of a global need for access to affordable energy to meet growing demand, particularly in developing countries. With regard to industrial development, the challenge ahead is in supporting and promoting the growth and improving the economic, social and environmental performance of businesses worldwide.

147. As major providers, transporters and consumers of energy, the business community is central to addressing the challenges of energy for sustainable development. It contributes investment and technological innovation in finding and implementing solutions to climate change mitigation and adaptation. Foreign investors and local companies are the main drivers of industrial development, a central component of economic activity and growth. Thus, business plays a critical role in these three areas.

148. This document serves to highlight the role and recommendations of the business community in the following five priority areas.

Improving access and meeting growing demand: increasing supply and promoting energy efficiency

149. Maintaining and growing the energy supplies required to provide access to those lacking it and meet future demand, with reduced environmental impacts, will require significant investment in the long term across the entire supply and use chain.

150. All energy sources should be assessed on their merits and relative attributes, recognising that each faces issues, barriers and opportunities including cost, performance, safety, environmental impact, primary resource depletion and energy security. This will enable countries to address their particular energy needs in line with their respective resource bases and long-term development objectives.

151. Business supports energy efficiency to help reduce energy costs, energy consumption and negative environmental impacts, in particular climate change. Energy efficiency also contributes to energy security by reducing energy demand and possible supply chain losses, and extending resource life.

152. Business will continue to play a role in both demand and supply orientated policies and approaches. In order to promote and enhance energy efficiency, business supports the following actions:

- The establishment of energy efficiency programmes and partnerships through international cooperation.
- The adoption of energy efficiency strategies by Government, business and civil society in their own operations.
- The promotion and enhancement of energy efficiency along value chains.
- The provision of incentives for actions where the direct benefits of energy efficiency improvements are not gained.

153. At the same, combining actions to improve access is key.

154. Funding agencies, including the World Bank and the International Finance Corporation, should continue developing energy efficiency projects for implementation, while UN organizations, including UNDP and UNEP, should promote and extend such projects globally.

Enabling framework conditions

155. The business community can best contribute to addressing energy, climate change and industrial development challenges, when enabling framework conditions are in place.

156. Governments and donor agencies should emphasize that access to financial resources goes hand-in-hand with good governance. They can do this by creating environments that are favourable to private investment, reducing investment risks, and providing credit support through grants, loans and/or guarantees.

157. Key features of enabling frameworks include:

- Open markets;
- Strong institutions and sound governance;
- Risk management;
- Protection of intellectual property;
- Due diligence;
- Rule of law and honouring contracts;
- Cost effective, consistent policies and regulations based on transparent, stable, economic and uniformly enforced regulatory systems.

158. These framework conditions will support energy investments thereby contributing to energy access and security. Further, sustainable industrial development will flourish if the private sector operates within the proper enabling framework conditions.

Investments and financing for sustainable development

159. Significant investment is required to maintain, grow and deliver the energy supplies required to meet future demand in a sustainable manner, to address climate change mitigation and adaptation, and to further sustainable industrial development. Business (as a major investor), other investors and governments need to collaborate and work in partnership in order to promote energy access and meet growing energy demand.

160. Current prioritization and allocation of funds will influence technologies, infrastructures, and energy options for decades to come. Changes in energy systems happen slowly because of the large investment base and infrastructure, the long lead time and lifetime of installed fixtures and the ongoing investments that are required to maintain and grow capacity.

161. Governments can promote and enable investments in energy for sustainable development by leveraging official development assistance, promoting technological cooperation and exploring innovative financing arrangements.

162. Additional financial resources to replace and expand energy infrastructures are imperative. Additional funds have to be sourced from donors, multilateral agencies, and through foreign direct investment, particularly for developing countries.

163. Governments and donor agencies are urged to assist innovative partnerships (between local governments, the private sector and civil society) that use various sources of funding to jump-start and test shared-risk models. Donor agencies should also streamline the process of releasing official development assistance for relevant projects and initiatives.

Research, development and technology innovation

164. Business is investing resources towards technology advancement and deployment of lower carbon, renewable and more efficient technologies. Developing and utilizing both existing and new energy technologies are critical to improve access to energy, promote energy efficiency and reduce greenhouse gas emissions.

165. Recognizing that ongoing technological innovation may provide solutions to current challenges, all energy sources should be considered as options to meet increasing energy demand.

166. Governments need to support business technological development and deployment activities by:

- Funding R&D activities directly (research centers) and indirectly (universities);
- Assisting in capacity-building initiatives by streamlining processes for international cooperation and participation;
- Supporting R&D and technology transfer across borders, by lowering tariffs, maintaining strong intellectual property right protection and establishing trade agreements;
- Providing an R&D friendly environment by guaranteeing a workable effective patent system;
- Engaging major stakeholders in discussions on the advancement of innovation and new technologies.

Partnerships

167. Business believes that voluntary multi-stakeholder partnerships can address energy, climate change and industrial development challenges. Successful partnerships allow the strengths and areas of participants to be combined for practical and visible results.

168. The business community works with partners to identify, develop, commercialize and deploy technologies suited to individual national priorities, resource availability and development strategies. Business will continue to play an important role in finding solutions, within its sphere of responsibility, in partnership with other stakeholders. The value chains of large, medium and small companies in the context of industrial development provide many opportunities for alliances and partnerships to promote sustainability.

169. Governments need to continue to support partnerships by:

- Participating in partnerships and offering local expertise as well as financial resources and infrastructure;
- Establishing a regulatory environment that supports the formation of partnerships.

170. Governments, business and civil society need to partner to leverage resources to provide training, share knowledge and skills, share more sustainable energy technologies and cooperate to accelerate their dissemination.

VIII. Scientific and Technological Communities

Energy

171. Meeting the world's growing energy demands in a sustainable manner will require massive efforts to further develop and deploy a wide array of energy technologies, including technologies for energy efficiency and conservation, for advanced renewable energy systems, for clean coal and other fossil fuels, for carbon sequestration technologies, and for secure nuclear energy systems. Decisions regarding the use of any given energy technology must be based upon thorough analyses of technological and economic feasibility, as well as analyses of long-term sustainability and compatibility with goals for environmental protection, climate stability, social equity, and personal health and safety.

172. There is no uniform solution for making sustainable energy available globally. The optimal energy mix for any particular location will depend upon the local natural resources base and socio-economic context. In some contexts, such as dispersed rural and island populations, decentralized electricity supply systems, based largely on advanced renewable technologies, will be most appropriate. In other contexts, such as rapidly developing countries with large urban populations, major centralized electricity supply systems will be needed. In general, a high priority must be placed on efforts aimed at optimizing energy conservation and efficiency. In the transportation sector, urgently needed actions include diversification of engine fuels, increased use of low-emission vehicles, and a strong emphasis on urban mass transit.

173. While strong public policies and economic incentives play a central role in promoting a transition to more sustainable energy systems, there is at the same time an ongoing need for

vigorous research and development (R&D) efforts, aimed at bringing to market a new generation of clean technologies for heat, fuels, and electricity. The needed R&D must encompass further development and optimization of existing technologies; basic research as a foundation for fundamental new technological advances; and social, economic, and ecological studies aimed at better understanding the drivers and impacts of energy systems. Such efforts must involve partnerships between government and the private sector, and significant international cooperation for sharing knowledge, technology, and capital.

Air pollution/atmosphere

174. Air pollution, resulting from the emissions of power plants, transport vehicles, industrial processes, and biomass burning, remains a serious, and in many places growing, threat to human health and to the agricultural and natural ecological systems upon which life depends. Effective air quality management requires that all nations maintain a strong scientific and technical foundation for assessing air quality status and impacts; for setting emission standards and ambient air quality objectives; and for designing and implementing pollution control strategies and technologies.

175. As the impacts of air pollution emissions can reach well beyond national boundaries, there is an inherent motivation for strong international cooperation in addressing this issue. A high priority should be placed upon sharing cutting-edge observational and modelling tools, and pollution prevention and control technologies, among all nations.

Climate change

176. The broad international scientific consensus on climate change is documented in the reports of the Intergovernmental Panel on Climate Change (IPCC). The IPCC 4th Assessment Report (2007) will provide comprehensive and up-to-date information, including on possible response measures to climate change and its impacts, based on the latest scientific, technical and socio-economic literature.

177. Urgent action is needed to reduce greenhouse gas emissions, in order to mitigate future climate change impacts. At the same time, as climate change is already occurring, action is needed by all countries to design and implement strategies to adapt to the consequences of climate change and to limit its socio-economic costs for societies worldwide, but particularly for the most vulnerable regions, nations and socio-economic groups. Participation of a broad range of stakeholder groups, with the S&T community assuming fully its role, will be essential in this undertaking.

178. Action is also critical in the domain of science. We must continue to improve our understanding of the climate and the Earth system, to refine our predictive tools and reduce uncertainties in projections of future climate and its impacts, particularly at the regional level. In this respect, important priorities during the coming years are:

- Countries to enhance support for long-term observations of the Earth and climate system, thus enabling the global environmental observing systems, including the Global Climate Observing System, to become fully operational, and the Global Earth Observing System of Systems to be implemented;
- Countries to vigorously pursue climate change related research, notably through the World Climate Research Programme and related global environmental change research programmes;
- National and international research funding agencies to support interdisciplinary research, involving natural, social and economic sciences, aimed at a better identification and understanding of coupled environmental and socio-economic impacts and vulnerabilities, and at increasing knowledge and technology needed for preparing climate change adaptation strategies.

Education, training and S&T institutional capacity building

179. Strong national, regional and international S&T systems are required for addressing the challenges of developing sustainable energy systems, mitigating and adapting to climate change, reducing atmospheric pollution and promoting a sustainable path to industrial development. Nothing less than a massive effort will be needed in order to build the needed critical mass of scientific, engineering and technological capacity in all regions of the world.

180. The North-South gap in S&T capacity continues to widen. There is a need for much greater investment within developing countries for higher education and training, and for building the scientific, engineering and technical skills and infrastructure (e.g., research institutions, laboratories and adequate equipment) needed to develop, adapt, apply, and maintain on an ongoing basis, the technologies that are specific to their needs. Bi-lateral donors and international funding mechanisms should include S&T capacity building among their priority areas. South-South cooperation between countries and regions must also be given increased attention, as an effective and cost-efficient means of capacity building.

181. Detailed needs in S&T capacity building related to climate change have been drawn up by the Subsidiary Body of Scientific and Technological Advice to the UN Framework Convention on Climate Change. Governments should enhance support for implementing these actions. Likewise, the UN Decade on Education for Sustainable Development (2005-2014) should be used by governments and all major groups as an instrument for enhancing education focused on climate change, energy and air pollution issues in a context of sustainable development.

IX. Farmers

Agriculture and climate change

182. Agriculture is both a sector which experiences the effects of climate change and has a huge potential in providing answers to mitigating and adapting to its effects. The role of

agriculture and farmers' organisations is important and must thus be documented and recognized.

183. Costs associated with climate change adaptation and mitigation represents a burden for farmers. They must be shared by all stakeholders.

National policies: decoupling economic development from environmental degradation

184. Farmers' organisations must be involved in climate change decision making processes through specific follow-up multistakeholders commissions.

185. National governments should initiate policy reform by:

- Ensuring that the creation of carbon credits established by a change of agricultural practices be attributed and paid to the farmer. This would provide them with an alternative source of income while promoting good agricultural practices.

- Mainstreaming agricultural and climate change policies into broader frameworks and other planning sectors such as energy. They also must ensure consistency with other government sector policies.

- Internalizing climate vulnerability into agricultural policies is necessary. Setting up a clear national strategy and budgeting predicted financial losses incurred by climatic events that will impact food security are needed. Foresight into farmers' needs by consulting with them will facilitate implementation of remedial programs.

- The needs of rural areas in particular in developing countries must be addressed along with the promotion of gender equality. Poor farmers need to diversify their insurance sources to financially safeguard them from climate induced catastrophes through international catastrophe bonds, weather insurance contracts and crop insurance guarantee fund schemes.

Supporting farmers' driven initiatives

186. Farmers need support in their efforts to mitigate and adapt to climate change effects through sustainable farm management practices such as conservation agriculture, crop rotation, and integrated pest management. The challenge for farmers is to document them and to highlight key areas of action.

Partnerships between farmers and researchers

187. Regional studies on the potential impacts of climate change on agriculture, farm specific climate change information, farmer training programs to identify and scale up best practices,

research projects addressing energy harnessing techniques on the farm, technologies related to early warning systems, are needed.

International mobilisation

188. Climate change related measures should be integrated into development agencies agendas and poverty reduction strategies.

189. Despite existing financial mechanisms, improvements should include:

- Direct access of farmers' organizations to UNFCCC funds.
- The Least Developed Countries Fund should serve as a finance mechanism for adaptation issues, by farmers.
- Existing funds for other Multilateral Environmental Agreements should serve for mitigation and adaptation efforts.
- The Clean Development Mechanism could offer additional incentives for opportunities for energy technology transfer.

Agriculture and sustainable energy

190. Increased utilization of renewable energy will have a significant impact on agriculture. This is an issue of policies by governments, institutions and organisations. A stable investment environment is necessary to develop this potential.

191. Farmers want to become providers of value-added products instead of producers of raw materials and buyers of energy. Therefore, farmers' ownership is key and must be facilitated to ensure improvements of their incomes and to avoid all the benefits going to large bioenergy industries.

The role of Governments

192. To expand sustainable energy production in agriculture, governments need forward-looking policies, including the following priorities for farmers:

- Making sustainable energy technologies cost competitive
- Providing access to the necessary capital
- Minimising risks

Mainstreaming energy policies

193. Governments must incorporate the goals of sustainable development into all policies. Energy affects many economic sectors (rural and agricultural development, land-use planning, etc.).

Enabling environments

194. Government bioenergy related policies and regulations should reflect the farmers' interests in rural areas.
195. Management models aimed at reducing production costs, while stimulating environment friendly practices, must be promoted.

A whole value chain strategy supporting farmers

196. Farmers need a strategy which encompasses tax incentives to encourage investment, incentives for processing facilities, development of quality standards and direct marketing of bioenergy to consumers. Partnerships with stakeholders are needed, including retailers, financial institutions, cooperatives to encourage primary producer investment and ownership, the business sector for technical support for producers' business skills improvements, and research institutions to develop cost effective new processing technologies and suitable energy-specific crop varieties.

Competitive domestic feedstock

197. A competitive policy for commodities and energy feedstock is needed to create gains for local farmers.

Support for R&D

198. Small-scale technology for bioenergy is needed for farmers. Diversification of the possible sources of bioenergy is needed through strong primary research on new energy crops, new energy-specific varieties of existing crops, increased production efficiency, improved processing techniques and crops that yield both high energy content and high quality by-products.

Appropriate incentive mechanisms for farmers' investment

199. Bioenergy support systems have been implemented across countries, including tax exemptions, duty rebates, and capital allowances.

200. Most appropriate mechanisms should be identified to ensure benefit for farmers. These should include measures to: improve market access of farmers and the financing of biofuel plants to increase their participation, address regulatory issues, reduce business risks for farmers for the commercialization of new technologies and establish carbon accreditation to reward farmers.

Database and information sharing

201. Standardised databases and websites are needed, where investors and farmers can exchange information and negotiate projects.

Participatory frameworks

202. Before designing any instruments for bioenergy development, a thorough and coordinated diagnosis of the situation is needed through a Stakeholder Commission.

Farmers' organisations and extension services

203. Farmers' organisations have their part to play in providing extension services and technology transfer to their constituents in the form of training support on bioenergy production, information sessions, and provision of local agricultural advisors and identification of specialised advisory services.

204. Income opportunities for farmers exist in the high level of attention of the development of bioenergies. If farmers are to benefit from this development, careful analysis and planning before pursuing bioenergy programs are needed. The potential for bioenergy to provide a better alternative to fossil fuels with environmental benefits and economic opportunities for farmers is a good reason to work out sound strategies with all stakeholders.