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Consideration of the draft indicative work programme of the African Ministerial Conference on the Environment for the biennium 2009–2010

Draft indicative work programme of the African Ministerial Conference on the Environment for the biennium 2009–2010

I. Proposals for the indicative work programme for the biennium 2009–2010

A. Introduction

1. The African region offers significant potential for human, social and economic development. At the same time, however, it continues to face enormous challenges. Rising levels of poverty and inappropriate development practices are some of the main factors influencing the state of the environment in Africa. Other factors that have led to continued environmental degradation include the impact of climate change and variability, drought and other natural disasters, disease, ineffective development policies, unfavourable terms of trade and the debt burden.

2. The preparation of the work programme of the African Ministerial Conference on the Environment (AMCEN) for the biennium 2009–2010 takes into account the commitments made by heads of State, among other contexts in the United Nations Millennium Declaration, adopted in New York in September 2000; in the action plan for the environment initiative of the New Partnership for Africa's Development (NEPAD); in chapter VIII of the Plan of Implementation of the World Summit on Sustainable Development, held in Johannesburg from 26 August to 4 September 2002; in the Millennium Development Goals; and in decisions made by AMCEN at its eleventh regular session held in Brazzaville in May 2006.

B. Action plan for the environment initiative of NEPAD

3. A coherent, strategic and long-term programme of action has been prepared to promote Africa's sustainable development. This is consistent with the emphasis placed by NEPAD on measures that will ensure that the continent is able to confront its short-term economic growth challenges without losing

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sight of the long-term environmental, poverty-eradication and social-development imperatives. Sustainable development is a long-term undertaking and can only be achieved through investments in the future. Thus, the action plan for the NEPAD environment initiative takes a long-term approach. It involves processes, projects and related activities that are aimed at enlarging Africa's economic prospects through sustainable environmental management.

4. The action plan is comprehensive in the sense that it takes full account of economic growth, income distribution, poverty eradication, social equity and better governance as integral parts of Africa's environmental sustainability agenda. It cannot be implemented in isolation from the overall objectives of NEPAD and will therefore be implemented in harmony with the Partnership's other components.

5. The action plan is organized in clusters of programme areas and project activities to be implemented over an initial period of ten years. The programme areas cover the following priority sectors and cross-cutting issues as identified in the initiative: combating land degradation, drought and desertification; conserving Africa's wetlands; prevention, control and management of invasive alien species; conservation and sustainable use of marine, coastal and freshwater resources; combating climate change; transboundary conservation or management of natural resources; and cross-cutting issues as health and environment, transfer of environmentally sound technologies, assessment of and early warning on natural disasters and the environment directory of NEPAD.

6. The overall objective of the action plan is to complement the relevant African processes, including the work programme of the revitalized AMCEN, with a view to improving environmental conditions in Africa in order to contribute to the achievement of economic growth and poverty eradication. The specific objectives of the action plan are provided below (see paragraph 12).

7. A report on the status of implementation of the action plan for the NEPAD environment initiative for the period June 2006–May 2008, contained in UNEP/AMCEN/12/4, gives an account, among others, of the implementation of the work programme of AMCEN for the biennium 2006–2008. It illustrates the fact that the implementation of the action plan remains a great challenge, requiring the support and active participation of all African countries and their development partners.

8. It is anticipated that various aspects of the action plan will be implemented by different actors, in accordance with the comparative advantage, the added value and the synergies that can be derived. Due account has been taken of these concepts in preparing the work programme of AMCEN for the biennium 2009–2010.

9. The main objective of the twelfth session of AMCEN is to provide a platform for environment ministers to review the progress made in the implementation of the action plan for the NEPAD environment initiative, with a view to enhancing its implementation. The twelfth session will also provide a forum to consider emerging environmental challenges in Africa, particularly those related to climate change. The ministers will deliberate on substantive issues of importance to Africa which must be addressed in the context of the implementation of the action plan for the NEPAD environment initiative and the AMCEN work programme for 2009–2010.

II. Proposed programme elements of the AMCEN work programme

10. The proposed programme elements of the AMCEN work programme for the biennium 2009–2010 are: role of AMCEN in terms of policy, environmental law, advocacy and cooperative arrangements; capacity-building programme; land degradation and desertification; coastal and marine environment; forests and biodiversity; climate change; sound management and sustainable use of chemicals; environmental assessment and early warning; environmental education; environmental impact assessment; sustainable consumption and production; integrated environmental management; poverty and environment; invasive alien species; and small island developing States.

A. Role of AMCEN in terms of policy, environmental law, advocacy and cooperative arrangements

11. The role of the Bureau of AMCEN is to guide and oversee the implementation of the work programme of the ministerial conference, among other things. The work programme of AMCEN is an integral part of the action plan for the NEPAD environment initiative. As stated above, the overall objective of the action plan is to complement the relevant African processes, including the work programme of the revitalized AMCEN, with a view to improving environmental conditions in Africa in order to contribute to the achievement of economic growth and poverty eradication. It will also build

Africa's capacity to implement, comply with and enforce regional and international environmental agreements and tackle African environmental challenges effectively within the overall context of the implementation of NEPAD.

12. The specific objectives of the action plan for the environment initiative are:
- (a) To contribute to the implementation of NEPAD goals;
 - (b) To promote the sustainable use of Africa's natural resources and strengthen public and political support to subregional and regional environmental initiatives;
 - (c) To support the implementation by African countries of their commitments under global and regional environmental conventions and other legal instruments to which they are party;
 - (d) To enhance the human and institutional capacities of African countries to meet the environmental challenges facing the continent effectively;
 - (e) To promote the integration of environmental issues into poverty reduction strategies;
 - (f) To foster regional and subregional cooperation to address environmental challenges;
 - (g) To build a network of regional centres of excellence in environmental science and management;
 - (h) To mobilize and direct African and international scientific and technical communities towards solving Africa's pressing environmental problems;
 - (i) To enhance the effective participation of major African groups and their important contribution to informing intergovernmental decision-making;
 - (j) To improve the institutional framework for regional environmental governance;
 - (k) To mobilize international resources for its implementation;
 - (l) To provide a framework for the establishment of a solid partnership among African countries themselves and between them and their bilateral and multilateral partners, including multilateral financial institutions such as the Global Environment Facility, in accordance with the spirit and the letter of the United Nations Millennium Declaration.

13. In view of above, the work programme's contribution to the implementation of the action plan should continue to be harmonized with environmental agenda to be addressed by other environmental initiatives in Africa and the evolving African Union institutions dealing with environmental issues. This will ensure that the resources available to African member States and intergovernmental subregional organizations, for the implementation of the action plan in particular, are not over-stretched.

B. Capacity-building programme

14. A major capacity-building programme is embedded in the action plan for the NEPAD environment initiative. The need to develop institutional and human capacity was unanimously recognized as key to achieving the successful implementation of the action plan by the second ordinary assembly of the African Union, held in Maputo in July 2003; by the special session of AMCEN in Maputo in June 2003; by the Partners' Conference on the environment initiative of NEPAD, which considered the implementation of the action plan, held in Algiers in December 2003; by the tenth regular session of AMCEN held in Sirte in June 2004; and the eleventh regular session of AMCEN held in Brazzaville in May 2006. Participants at all those meetings had called for the implementation of a programme on capacity-building for the implementation of the action plan as a high priority. Towards that end, a number of activities have been undertaken since the tenth session of AMCEN. The ministerial segment will deliberate on the programme on the basis of information provided by the secretariat and contained in the subregional environmental action plans for eastern, central, north, southern, and west African countries. The ministerial segment will deliberate on the programme on the basis of information contained in the report of the expert group segment (document UNEP/AMCEN/12/3).

C. Land degradation and desertification

15. The impact of desertification in Africa is particularly serious and pervasive. It threatens the lives of millions of people and seriously affects more than 39 per cent of the continent's total area. The implementation of the United Nations Convention to Combat Desertification in Those Countries

Experiencing Serious Drought and/or Desertification, Particularly in Africa is aimed at addressing the challenges of desertification from a perspective of sustainable development. Implementation of the objectives of the Convention remains one of the top environmental priorities for Africa. In this regard, the action plan's principal objective for combating land degradation, drought and desertification (programme area 1) – to enhance support for the implementation of the Convention's objective of combating desertification in Africa while improving livelihoods and contributing to the enhancement of food security – will be reviewed in the context of the increase in land degradation and desertification caused by climate variability and change. The ministerial segment will discuss emerging initiatives including the TerrAfrica partnership.

16. The World Bank initiated the TerrAfrica programme in 2004. TerrAfrica is a global partnership designed as a multi-partner platform organized around three programmatic outcomes to enable African Governments and their partners to scale up the mainstreaming and financing of effective and efficient country-driven sustainable land management approaches. It serves to focus attention, facilitate sharing of knowledge and best practices, galvanize advocacy and make the case for increased investment in support of sustainable land management interventions. TerrAfrica has a strategic investment programme which serves as a financing instrument for action to tackle land degradation in sub-Saharan Africa. The strategic investment programme is being developed collectively in support of efforts by TerrAfrica partners to upscale sustainable land management.

D. Coastal and marine environment

17. The coastal States covered by the Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention) and the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi Convention) have a combined coastline that exceeds 12,000 km, extending from Mauritania through South Africa to Somalia. The countries bordering the Canary and Benguela current large marine ecosystems in the northern and southern parts of the Abidjan Convention countries (extending from Mauritania to South Africa) are dominated by desert conditions with an intermediate zone of humid tropical conditions centred on the Gulf of Guinea in the West. The Nairobi Convention countries (extending from Somalia to South Africa, including the island States) share the Agulhas ridge, the Mascarene plateau (for the islands) and the Somalia current large marine ecosystems that are influenced by the southern and northern monsoon seasons.

18. The coastal ecosystems covered by the Nairobi and Abidjan conventions include barriers, lagoons, deltas, wetlands, mangroves, coral reefs and seagrass meadows. The most important resources from an economic standpoint are fisheries, oil and gas and other minerals, including sand, limestone and diamonds. Tourism also makes an important contribution to the economy of the region. Coastal areas are the most densely inhabited and industrialized parts of most coastal States within the area covered by the conventions, with approximately 50 per cent of the population residing within 100 kilometres of the coastline. The coastal areas are also the location of the main import and export centres and provide food supplies for the landlocked countries of Africa.

19. Tourism is a growing industry. Coastal tourism is an important foreign exchange earner for such countries as the Gambia, Kenya, Mauritius, Namibia, Senegal and the United Republic of Tanzania. In the Seychelles, tourism accounts for 18.5 per cent of gross domestic product (GDP) and more than 70 per cent of foreign exchange earnings. In South Africa, tourism generates more than \$1.2 billion annually, with over 20 million international and domestic visitors to coastal areas each year.

20. The region is facing numerous problems threatening natural resources, some stemming from existing resource exploitation practices. Poor regulation, inappropriate quotas, selective harvesting of preferred species, use of inappropriate gear and harvesting of small size classes and reproductive females are primarily responsible for the over-exploitation of fishery stocks. High rates of mineral exploitation in the region are causing widespread degradation of coastal areas with associated effects on living resources. The main problems and threats to coastal, marine and freshwater resources in Africa include pollution, coastal change and modification, stress on ecosystems, threats to the availability of water, invasive aquatic species, fisheries and biodiversity degradation, water quality degradation, urbanization and population growth and global issues of climate change and sea-level rise. The situation in some of Africa's small island States, which largely depend on development and use of coastal zones, is of particular concern.

E. Forests and biodiversity

1. Forests

21. The forests of Africa cover 520 million hectares and account for more than 17 per cent of the world's total. Forests play an important economic role in many African countries. Africa's forests are threatened by a combination of factors, including unsustainable agricultural practices, commercial harvesting, increased fuelwood collection, inadequate land and tree tenure regimes, inappropriate agricultural systems and increasing urbanization and industrialization. Droughts and armed conflicts also contribute significantly to forest degradation.

22. During the 1980s, Africa lost an estimated 47 million hectares of forests. By 1995, another 19 million hectares had been lost. In most African countries, there has been an increasing demand for wood products, especially fuelwood and charcoal. As a result, the consumption of forest products nearly doubled during the period 1970–1994. At least 90 per cent of Africans depend on fuelwood and other biomass for their energy needs. More recently, new economic reform measures have removed subsidies on energy alternatives, which has further increased the demand for fuelwood and other biomass. Recent projections estimate that the consumption of fuelwood and charcoal will rise by 5 per cent by 2010.

23. In adopting the framework of an action plan for the NEPAD environment initiative, the ministers at the ninth session of AMCEN decided to include forests as a separate transboundary issue to be examined in greater detail. It is generally agreed that Africa's forests are in a state of decline. Urgent measures should therefore be taken to enable the forest sector to continue playing its important role in sustaining forest-dependent communities and contributing to national economies and thereby alleviate poverty.

24. The development of sustainable forest management in Africa requires that the long-term environmental health and ecological function of Africa's forests be maintained in order to provide vital ecosystem services upon which millions of Africans depend. The value of these ecosystem services must be fully incorporated into African forest policy development and decision-making alongside timber resource values.

25. Protected areas have been an effective means of conserving Africa's biodiversity. The creation of protected areas in Africa began in the colonial era and continued after independence. Today, Africa has more than 1,200 national parks, wildlife reserves and other categories of protected area covering more than 2 million square kilometres or 9 per cent of Africa's total land area. The disparity between Africa's biodiversity and the resources to manage it, however, is greater than anywhere else in the world, as are the threats to biodiversity. Providing long-term finance to protected areas is hard to justify for most African Governments, which are struggling to deal with the immediate problems of health, education, poverty and sometimes with intense security concerns. In July 2003, African heads of State met in Maputo and adopted the African Protected Area Initiative as part of the action plan for the NEPAD environment initiative. Although African political leaders today are becoming increasingly aware that, in order to achieve their development goals, it is fundamental to link biodiversity conservation and poverty reduction, still the region is faced with declining budgets and staff allocations. The result is that today many protected areas are poorly funded and managed and the biodiversity they contain is under increasing threat.

26. The biodiversity of Africa, including its genetic resources, is a valuable asset, albeit largely unrealized, that could contribute substantially to local and national economies and sustainable development if properly managed. NEPAD, for example, refers to the role that genetic resources have played and will continue to play in the lives of African people in terms of their food and medicinal value. Africa's communities and developing economies could benefit significantly in the global search for new sources of food stock, medicine, fibre and other resources. Most African countries, however, lack adequate legal and regulatory frameworks to govern genetic resources and consequently the interests of African countries are left open to the possibility of inequitable exploitation.

27. To meet these challenges, there is an urgent need for human, institutional and financial capacity to improve the management of protected areas in Africa, rationalize protected area systems and develop regulatory and institutional capacity for managing access to biodiversity and genetic resources in particular.

2. Biodiversity

28. Africa has a large heritage of biodiversity, forming the region's natural wealth on which its social and economic systems are based. The continent currently holds six of the world's 25 biodiversity hot spots, including the Guinean hot spot, which ranks first in mammalian diversity and is home to half of Africa's known mammalian species. These resources are also of global importance for the world's climate and for the development of agriculture or industrial activities. The region has more than 50,000 known plant species, 1,500 species of birds and 1,000 mammals. The biological diversity found in any one area or country varies depending on physical size, local climatic conditions, topography and vegetation and soil types. For example, South Africa has an estimated 20,000 plant species, Kenya has at least 8,000 and Cameroon more than 15,000. Other African countries, such as Madagascar and the Democratic Republic of Congo, are known for their rare and internationally recognized plant and animal species.

29. A significant proportion of these biodiversity resources is either endangered or under threat of extinction. The major threats to Africa's biodiversity reserves are natural habitat loss, loss of species and subspecies, invasion by alien species, over-harvesting of natural resources and a lack of recognition of indigenous knowledge and property rights. Logging accounts for 79 per cent of forest loss in Africa while agriculture and energy and infrastructure development account for 17 and 12 per cent of biodiversity loss respectively. Loss of species means loss of economic opportunities, both now and in the future.

30. Wetlands cover about 1 per cent of Africa's total surface area and are found in almost every country. African wetlands also have rich biological diversity with many endemic and rare plant species. They are among the most biologically productive ecosystems in Africa and provide important seasonal habitat for migratory bird species. Lake Malawi, Africa's third largest after Lake Victoria and Lake Tanganyika, contains the largest number of fish species for any single lake in the world, with almost 500 species from 10 families. The diversity of the flora and fauna of wetlands in Africa is immense and in many places unknown, with many endemic and rare plant species. Despite their high value and contribution to livelihood support systems, wetlands in Africa are faced with the danger of desiccation emanating from drought as a result of climate change due to natural and human causes.

31. The African coastline is vast and comprises a variety of habitats. Diversity of fish species is high, with more than 4,000 species reported. Marine and coastal ecosystems contribute significantly to the economies of African countries. It is estimated that over 40 per cent of Africa's population derives its livelihood from coastal and marine ecosystems and resources, a percentage that will continue to increase with current migration and demographic patterns. Ecosystems are coming under increasing stress from a wide array of anthropogenic impacts and the fight against poverty often leaves no ready alternatives to continued overexploitation of resources. Biodiversity supports the ecosystem functions essential for life on earth. It plays a critical role in overall sustainable development and poverty eradication, and is essential to our planet, human well-being and to the livelihood and cultural integrity of people. It is therefore crucial that the unprecedented rates of biodiversity loss due to human activities be significantly reduced.

3. Climate change

32. The fourth report in the UNEP Global Environment Outlook series, *GEO-4*, stated categorically that there is evidence of unprecedented environmental change at global and regional levels. The earth's surface is warming. This is now evident from observations of increases in global average air and ocean temperatures, spread of waterborne disease vectors, widespread melting of snow and ice, and rising global average sea level. Other major impacts include changes in water availability, land degradation, food security, and loss of biodiversity. The projected increase in frequency and intensity of heat waves, storms, floods and droughts would dramatically affect many millions of people. Climate change may further exacerbate the loss of biodiversity and degradation of land, soil, forest, freshwater and oceans. *GEO-4* states ominously that biophysical and social systems can reach tipping points, beyond which there are abrupt, accelerating, or potentially irreversible changes.

33. Adaptation to climate change is necessary even if major mitigation measures are rapidly implemented. The array of potential adaptive responses available to human societies is very large, ranging from purely technological (such as sea defences), through behavioural (such as altered food and recreational choices) to managerial (such as modified farm practices) and policy (such as planning regulations). However, there are formidable barriers to adaptation. For developing countries, availability of resources and building adaptive capacity are particularly important. Mitigation and adaptation to

climate change can be integrated into development policies, by pursuing innovative and emerging solutions, which will create new opportunities and jobs. The use of economic policy instruments and public and private sector investments in new technologies, clean and renewable energy, energy efficiency, nuclear energy and carbon sequestration are some of the many options being used (credit *GEO-4* 2007).

34. Africa is faced with three major issues in relation to the atmosphere, climate variability, climate change and air quality. Africa's contribution to the global pool of greenhouse gas emissions remains relatively low. It is estimated that the region contributes only three per cent of the world's total carbon dioxide emissions. Nevertheless, Africa is particularly vulnerable to the impacts of climate change because of factors such as pervasive poverty, recurrent droughts, inequitable land distribution and overdependence on rain-fed agriculture. Although some experience has been acquired in coping with climate variability and disasters in the region, the projected pace of climate change still indicates that the time available for adaptation would be less than the existing social and economic systems would need, particularly in African countries.

35. To address effectively the challenges posed by the adverse impacts of climate change and climate variability on the national development efforts of African Governments, there is increasing need for enhanced human, institutional and system-wide capacity-building initiatives, alongside the provision of adequate and predictable financial and technical assistance to assist countries in effectively implementing adaptation and mitigation projects consistent with national sustainable development priorities.

4. Sound management and sustainable use of chemicals

36. It is generally accepted that, notwithstanding the many benefits derived from the use of chemicals, pollution from chemical sources can be particularly serious in view of the insidious nature of some chemical pollutants. Accordingly, the issue of sound management and sustainable use of chemicals should be given higher priority in Africa. Because of a lack of knowledge of environmentally sustainable alternatives and proper quality control of agricultural products, African farmers have greatly increased their use of chemical-based pesticides.

37. More than 11 million cases of acute pesticide poisoning, including those with only minor effects, occur annually in Africa, representing a major public health problem. Chemicals such as arsenic, cadmium, lead, mercury and sulphuric acid used in various industrial processes, including mining, contaminate water and soil and affect human health. Persistent organic pollutants, widely used in agriculture, disease vector control and industry and generated as by-products in industrial processes and uncontrolled combustions, represent a serious threat to human health due to their endocrine disruption effects on the immune function, the nervous system and certain aspects of reproduction in both humans and wildlife. At least 50,000 tons of obsolete pesticides and tens of thousands of tons of contaminated soils have accumulated in most African countries over long periods. These pesticides continue to pose a serious threat to the health of both rural and urban populations and contribute to land and water degradation.

5. Environmental assessment, early warning and environmental security

38. The first report in the Africa Environment Outlook series (*AEO-1*) was launched during the ninth session of AMCEN, held in Kampala in July 2002. In view of its usefulness, AMCEN requested a follow-up publication. The second Africa Environment Outlook report – *AEO-2* – was launched during the eleventh session of AMCEN, held in Brazzaville in May 2006. At that session, AMCEN requested UNEP to assist it in preparing a third Africa Environment Outlook report. The Africa Environment Outlook process incorporates the Africa Environment Information Network and early-warning activities, particularly in the Great Lakes region.

39. *AEO-1* focused on the opportunities which the environment provides for sustainable development in Africa. It has its main thrust the NEPAD environmental objectives and programme areas. The underlying theme of *AEO-2* is "Environment for development" and it profiles Africa's environmental resources as an asset for the continent's development.

40. The report highlights the opportunities presented by the region's natural resource base to support the NEPAD development agenda and attainment of the Millennium Development Goals. The report also highlights some of the emerging challenges in the region that may require policy innovations on the part of African Governments. Some of the emerging challenges which the report examined were genetically modified crops, chemical stock piles and alien invasive species. It also discussed how the

environment could contribute to regional cooperation. Inputs from Governments and other stakeholders helped in highlighting these issues, and the AMCEN Inter-Agency Technical Committee provided valuable policy advice during the preparation of the report.

41. An important publication devoted to environmental change in every African country – *Africa: Atlas of Our Changing Environment* – with an accompanying report on the country's progress toward achieving Millennium Development Goal 7, has been produced by UNEP in partnership with a number of other organizations. This publication, which gives a visual portrayal of the dramatic changes unfolding on Africa's landscapes will be launched at the twelfth session of AMCEN.

42. At its eleventh session, AMCEN requested the Executive Director of UNEP to continue mobilizing financial support for capacity-building through the Africa Environment Outlook and the Africa Environment Information Network processes and to support the production of the third Africa Environment Outlook report – *AEO-3* – as one of the main components of the programme of work of AMCEN. To that end, an inception meeting for *AEO-3* was held in Cairo on 1 and 2 August 2007. This was a scoping meeting aimed at establishing the principal focus for the report, taking into account the current environment and development debate in the Africa region and other global processes.

6. Environmental education and training

43. African countries generally depend on their natural resource base for social and economic development. Many of these resources, however, continue to be degraded and exploited at unsustainable rates. This has led to environmental problems. Africa has a wealth of natural resources, including minerals, land, biological diversity, wildlife, forests, fisheries and water. It has the largest tropical rain forests and the second largest freshwater lake in the world. The region offers significant potential for human, social and economic development.

44. Africa is, however, facing increasing challenges as briefly discussed in paragraph 1 of the present document. As discussed above, the issues of concern include, but are not limited to, widespread land degradation and desertification, climate variability and change, loss of biodiversity, deforestation and loss of arable and grazing land, declining soil productivity, invasive alien species, pollution and depletion of freshwater resources and deteriorating air quality. These have wider implications on food security, sustainable natural resources management, human health and poverty eradication efforts.

45. It is generally accepted that one of the most effective long-term solutions is environmental education and training. Education and training programmes should develop positive attitudes and stimulate appropriate actions to address the environmental degradation. Various environmental education and training strategies are known and some of the most appropriate ones will continue to be used.

7. Environmental impact assessment

46. The action plan for the NEPAD environment initiative calls for environmental valuation as a component of investment and infrastructure projects for sustainable development, so as to ensure the integration of economic growth, social development and environmental protection. The action plan therefore emphasizes that environmental impact assessments must be carried out for all infrastructure projects.

47. That position is consistent with the appeal made by AMCEN to the donor community in 1995 to assist Africa in developing its capacity in environmental impact assessment. Despite some successes, there is an urgent need to enhance the efforts made so far, as the capacity for environmental impact assessment in terms of administration and performance still remains weak in many African countries. Proposed activities at the continent-wide level will be included in the work programme.

8. Sustainable consumption and production

48. The development of the 10-Year Framework of Programmes on Sustainable Consumption and Production (the Marrakech Process) is one of the core recommendations contained in the Plan of Implementation of the World Summit for Sustainable Development, held in Johannesburg from 26 August to 4 September 2002 (Johannesburg Plan of Implementation). Furthermore, it is an integral part of the action plan for the NEPAD environment initiative. In this context, UNEP has been working closely with AMCEN and other partners to develop the African 10-Year Framework Programme on Sustainable Consumption and Production. The regional framework programme was developed through three technical expert meetings and was approved by AMCEN at the second Partners' Conference held

in Dakar in March 2005. The final outcome of these meetings was subsequently submitted to the second International Expert Meeting on Sustainable Consumption and Production under the Marrakech process, held in San José, Costa Rica, at which the taskforce on collaboration with Africa was launched by Germany.

49. The African 10-Year Framework Programme underlines the importance of linking the promotion of sustainable consumption and production with the challenges of meeting basic needs and the provision of sustainable livelihood, which are of high priority for Africa. The framework programme identified energy, water and sanitation, habitat and urban development and renewable resources-based industries as the four thematic areas of focus and indicated the key priority activities that need to be carried out under each theme. It recommended the launch of a pilot project on plastic waste management, regional training on life-cycle assessment and a pilot capacity-building programme on sustainable consumption and production in the Lake Victoria region.

9. Integrated environmental management

50. Africa's natural resources, like those of other continents, are continuously moving across national borders. Accordingly, sustainable natural resource management requires coordinated transboundary policy and action in conformity with existing agreements among the countries concerned. Transboundary collaboration on the sustainable use, conservation and management of natural resources can provide both economic and conservation benefits greater than would be achieved by countries working alone. A transboundary approach to sustainable use and conservation of natural resources within the action plan for the NEPAD environment initiative should be seen as a complement and extension to existing national initiatives and should build on these national level initiatives where the opportunity arises. This section of the work programme will be limited to integrated watershed for one transboundary system and wetlands.

51. Wetlands in Africa sustain rural livelihoods across large parts of the continent. Their functions include maintenance of the water table by facilitating the movement of large volumes of water into underground aquifers, resulting in the recharge of the water table. They also prevent floods and erosion by slowing surface run-off and reducing overflow into riverbanks downstream, thus stopping erosive flood conditions. They play an important role in storm protection, water purification, microclimate stabilization and provision of habitat for species and for mangroves and other wood products which are harvested for fuelwood, timber and medicinal purposes. They are extremely important to local economies and to many communities where fish is almost the sole source of animal protein. Mats, baskets and thatching material are derived from grasses and reeds in wetlands all over Africa. The provision of other critical life-support elements, such as pasture for livestock, particularly during the dry season, and clean and reliable sources of water for human consumption, agriculture and industry, are also among the services provided by wetlands.

52. Despite their economic, social and ecological importance, Africa's wetlands continue to be degraded increasingly. To address the problem of wetlands degradation, a number of African countries have become parties to the Convention on Wetlands of International Importance, Especially as Waterfowl Habitat (Ramsar Convention), the overall objective of which is to stem the loss of wetlands, promote their wise use, and promote special protection of listed wetlands. The Conference of the Parties to the Ramsar Convention, at its eighth meeting, decided to support the NEPAD programme on conserving Africa's wetlands. The vision of the programme is that African countries and their people should have healthy and productive wetlands and watersheds that can support fundamental human needs, including clean water, appropriate sanitation, food security and economic development.

53. While Africa uses only about 4 per cent of its renewable freshwater resources, water is becoming one of the most critical natural resource issues. Africa has abundant freshwater resources in large rivers and basins. The continent has more than 50 significant international river basins, more than those of any other continent. One such river basin is the Congo basin, which with its tributaries represents the second largest river basin in the world after the Amazon basin. Africa also harbours the second largest freshwater lake in the world, Lake Victoria. The entire territory of 14 African countries falls within international river basins. The continent has more than 160 lakes that are over 10 square miles in size. Most of the lakes are located around the equatorial region and the sub-humid East African highlands within the Rift Valley. There are 83 river and lake basins in Africa: 11 in North Africa; 29 in West Africa; 8 in Central Africa; 20 in East Africa; and 15 in Southern Africa.

54. At least 14 African countries are experiencing water stress or water scarcity, with those in North Africa being the worst hit. A further 11 countries will belong to this category of countries in the next 25 years, bringing the number to more than half of all African countries. It has been estimated that, by

2025, more than 230 million people (16 per cent of Africa's population) will be living in countries facing water scarcity and more than 460 million (32 per cent of Africa's population) will be living in water-stressed countries. Lake Chad, for example, may become extinct if no measures are taken to protect it. About 50 rivers in Africa are shared by two or more countries. Access to water from shared rivers may become a source of political tension if the situation is not addressed. In addition, water quality is also decreasing at an alarming rate due to industrial pollution and inadequate water treatment, causing major and persistent health problems. Issues of water quantity and water quality are indeed among the most pressing environmental issues in Africa.

55. If used sustainably Africa's freshwater resources can constitute vital economic and social goods. In 2000, the World Water Forum adopted the Africa Water Vision 2025, which establishes water management targets (as set out in AEO-2). Safe water supply and appropriate sanitation are the most essential components for a healthy and prosperous life. In 2002, the United Nations Economic and Social Council recognized water as a human right. One freshwater opportunity that remains poorly used is hydropower. Currently, use is being made of less than 5 per cent of this potential. The Congo river accounts for nearly 30 per cent of Africa's surface water reserves and has the largest hydropower potential in the world – much of it untapped. Estimates prepared in 2000 by the United Nations Economic Commission for Africa suggest that it could generate 40,000 megawatts, sufficient both to meet the energy needs of the whole of Africa and to leave enough over for export purposes.

10. Poverty and environment programme

56. Poverty and environment linkages are well developed in the action plan for the NEPAD environment initiative, which recognizes in particular that rising poverty is related to the degradation of the environment and the increasing loss of the region's natural resources. The linked issues of environmental degradation and poverty alleviation are therefore considered as a cross-cutting theme. Environmental degradation is widely accepted in Africa as undermining prospects for fighting poverty, economic growth and sustainable development. In developing the work programme, emphasis continue to be placed on specific policy recommendations to African Governments in terms of integrating environmental considerations into their national policies, particularly their poverty-reduction strategies.

11. Invasive alien species

57. The impacts of invasive alien species now constitute a major public policy and political concern in many African countries. In East Africa, the invasion of the water hyacinth (*Eichhornia crassipes*) in Lake Victoria has caused considerable environmental, economic and social impacts. The invasion has had such effects as choking fish spawning and breeding areas, rendering fish landing sites inaccessible, disrupting supply routes, reducing the quality of the catch, causing massive amounts of organic decomposition of dead weed and clogging water intakes. In South Africa, it is estimated that 7 per cent of water run-off is lost to invading alien plants, and the figure is rising.

58. Invasive alien species also affect Africa's forestry, horticulture, trade, tourism industries and other sectors of the economy. The control and management of the impacts of these species are thus important aspects of ensuring Africa's economic recovery and development.

59. Invasive alien species are a contributing factor to poverty and a primary cause of species loss and ecosystem decline, and as such pose a threat to sustainable development. The prevention, control and management of invasive alien species will contribute significantly to Africa's economic recovery and development. The goal of the programme area on prevention, control and management of invasive alien species is to minimize the impact of invasive alien species on Africa's people, economies and ecological systems. Renewed efforts will be made to enhance partnerships to address the problem of invasive alien species in Africa. A number of subregional and regional instruments exist that can be used to regulate the introduction and use of alien species in Africa. For example, the Treaty for the Establishment of the East African Community, the Treaty of the Southern Africa Development Community and the Treaty Establishing the Common Market for Eastern and Southern Africa provide measures to regulate or control the introduction of alien species, particularly invasive ones.

12. Small island developing States

60. Small island developing States are a special case for both environment and development. Although they continue to take the lead in the path towards sustainable development, they are increasingly constrained by the interplay of adverse factors clearly underlined in Agenda 21, the Programme of Action for the Sustainable Development of Small Island Developing States adopted at

the Global Conference on the Sustainable Development of Small Island Developing States in Barbados in 1994, the decisions adopted at the twenty-second special session of the United Nations General Assembly in September 1999 and the Johannesburg Plan of Implementation, adopted at the World Summit on Sustainable Development in September 2002. Small island developing States include low-lying coastal countries that share similar sustainable development challenges, including small populations, lack of resources, remoteness, susceptibility to natural disasters, excessive dependence on international trade and vulnerability to global developments. In addition, they suffer from lack of economies of scale, high transportation and communication costs, and costly public administration and infrastructure.

61. From 10 to 14 January 2005, the international community gathered in Port Louis, Mauritius, to review the implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States. The ministers at the meeting unanimously adopted the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States and the Mauritius Declaration.

62. Africa's small island developing States have their own particular vulnerabilities and characteristics and face severe and complex difficulties in the pursuit of environmentally sustainable development. Chapter VII of the Johannesburg Plan of Implementation, in the light of their peculiar and fragile ecosystems, calls for actions to promote the sustainable development of small island developing States. Small island developing States are characterized by a high degree of endemism and high levels of biodiversity. Some of these endemic species, however, are at high risk of extinction and require protection measures. Furthermore, the biological resources on which small island developing States depend are threatened by the large-scale exploitation of marine and terrestrial living resources. Owing to the small size, isolation and fragility of island ecosystems, their biological diversity is among the most threatened in the world. This means that, in the pursuit of development, special attention must be paid to protecting the environment and people's livelihoods. Climate change, climate variability and sea-level rise are issues of great concern for small island developing States: accordingly, the action plan for the NEPAD environment initiative mainly addresses the issues pertinent to Africa's small island developing States, broadly in its programme area 4, relating to conservation and the sustainable use of marine, coastal and freshwater resources.

63. This section of the work programme will be implemented primarily through activities undertaken in connection with the Abidjan and Nairobi conventions.

Annex I

AMCEN draft indicative work programme for the biennium 2009–2010

N.B: Specific activities are given only where these have been negotiated by stakeholders.

Programme elements and overall cost estimates	Main objectives and key components	Specific activities
<p>1 (a) Role of AMCEN in the implementation of the action plan for the NEPAD environment initiative</p> <p>1 (b) Environmental law</p>	<ul style="list-style-type: none"> • To enhance the preparedness of AMCEN to oversee the implementation of the action plan • To enhance the existing links between AMCEN, the African Ministerial Conference on Water (AMCOW), the African Union, NEPAD and UNEP • To facilitate the implementation of priority projects selected through the NEPAD environment initiative process and those identified in the context of the Bali Strategic Plan • To prepare AMCEN member States for the regular and special sessions of the UNEP Governing Council • To prepare AMCEN member States for COPs of, in particular, the Rio conventions and chemicals-related conventions • To strengthen the capacity of Africa to develop, improve and implement environmental legal frameworks • To develop environmental legislation and legal materials • To build capacity in compliance and enforcement of environmental law • To train and raise awareness among the judiciary and other legal stakeholders about the application of environmental law 	<ul style="list-style-type: none"> • Provide support to the AMCEN Bureau and to the subregional consultative groups of environment ministers that will generally oversee implementation of the action plan for the environment initiative • Maintain communication links with AMCOW, the African Union, the NEPAD secretariat and UNEP and build synergies between them • Initiate the process for the implementation of the NEPAD environment initiative and the Bali Strategic Plan at country level • Hold preparatory meetings for member States for the regular and special sessions of the UNEP Governing Council • Facilitate preparatory meetings for AMCEN prior to the conferences of the Parties to the Rio conventions and chemical-related conventions • Compile environment-related legal instruments relevant to Africa • Develop a model checklist or guidelines on national legislation for implementation of clusters of legal instruments • Undertake study on cost-benefit analysis to implement and enforce legal instruments • Undertake research on human rights and environmental

Programme elements and overall cost estimates	Main objectives and key components	Specific activities
		<p>justice in Africa</p> <ul style="list-style-type: none"> • Train judges and magistrates on environmental problems and application of environmental law • Train environmental inspectors, police and prosecutors in enforcement and compliance of environmental law • Train government officials and NGOs in the negotiation of environmental instruments • Train legal drafters in environmental law drafting • Create environmental law awareness among parliamentarians
2. Capacity-building programme	<ul style="list-style-type: none"> • To continue supporting the implementation of the action plan for the NEPAD environment initiative • To support existing Africa-China cooperation with regard to environmental protection 	<ul style="list-style-type: none"> • Facilitate the implementation of the action plan for the NEPAD environment initiative • Facilitate implementation of activities related to Africa-China cooperation with regard to environmental protection
3. Land degradation and desertification	<ul style="list-style-type: none"> • To enhance the implementation of the Convention to Combat Desertification, especially its regional implementation annex for Africa • To enhance the implementation of TerrAfrica and its strategic investment programme for sustainable land management in Africa • To support and enhance the harmonization of the Comprehensive Africa Agriculture Development Programme (CAADP) with the action plan for the NEPAD environment initiative 	<ul style="list-style-type: none"> • Support the implementation of national, subregional and regional action plans under the Convention to Combat Desertification • Support measures aimed at effective implementation of TerrAfrica and its Strategic Investment Programme • Support dialogue on CAADP, TerrAfrica strategic investment programme and the action plan for the NEPAD environment initiative

Programme elements and overall cost estimates	Main objectives and key components	Specific activities
4. Coastal and marine ecosystems	<ul style="list-style-type: none"> • To continue implementation of Abidjan and Nairobi conventions under four main themes, namely: assessment; management; coordination and legal aspects; and cross-cutting issues such as information dissemination and exchange and emerging issues 	<ul style="list-style-type: none"> • Continue with the implementation of the project addressing land based activities in Nairobi Convention areas • Carry on with measures aimed at strengthening the implementation of the Abidjan Convention • Strengthen further the coordination mechanism and legal review within the Nairobi and Abidjan conventions • Continue with the development of a regional tool kit on the establishment and management of the marine protected areas
5. Forest and biodiversity	<ul style="list-style-type: none"> • To enhance the implementation of regional and subregional agreements on forests in Africa • To support and enhance the implementation of the Convention on Biological Diversity and some of its related conventions, with particular reference to the regional implementation component for Africa 	<ul style="list-style-type: none"> • Provide technical support to regional and subregional forest-related initiatives • Provide technical support for capacity-building efforts • Provide technical support in matters related to protected area
6. Climate change	<ul style="list-style-type: none"> • To support and enhance the implementation of the United Nations Framework Convention on Climate Change and the Kyoto Protocol 	<ul style="list-style-type: none"> • Provide support to, among other processes, measures to implement the relevant aspects of the outcomes of COP13 of the Framework Convention on Climate Change and MOP3 of the Kyoto Protocol
7. Sound management and sustainable use of chemicals	<ul style="list-style-type: none"> • To facilitate the implementation of the Strategic Approach to International Chemicals Management (SAICM) in Africa 	<ul style="list-style-type: none"> • Encourage Governments to nominate SAICM national focal points, establish inter-ministerial or inter-institutional arrangements to oversee national implementation of SAICM and develop national action plans for SAICM implementation • Encourage inclusion of sound chemicals and hazardous waste management considerations in national planning strategies and programmes, where appropriate

Programme elements and overall cost estimates	Main objectives and key components	Specific activities
		<ul style="list-style-type: none"> • Facilitate possible regional approaches to SAICM implementation and encourage relevant regional and subregional organizations to participate actively
<p>8. Environmental and integrated assessment and early warning, and environmental security</p> <ul style="list-style-type: none"> • Africa Environment Outlook (AEO) • Africa Environment Information Network (AEIN) • Capacity-building 	<ul style="list-style-type: none"> • To prepare the third Africa Environment Outlook report (AEO-3) • To enhance the work of AEIN to support the AEO process • To enhance capacity in integrated assessment and reporting at national and subregional levels 	<ul style="list-style-type: none"> • Facilitate measures to prepare AEO-3 • Facilitate the expansion and strengthening of AEIN to more countries in Africa and AEIN pilot countries • Develop the capacity of the network of professional and Government stakeholders, universities, centres of excellence, etc, to support national and subregional environmental assessment and reporting and the AEO process • Increase numbers of trained practitioners in integrated assessment processes that facilitate generation of reports that underpin decision making • Build capacity on data and information management (including the use of satellite datasets) to generate information to support decision making at city, national, subregional and regional levels

Programme elements and overall cost estimates	Main objectives and key components	Specific activities
9. Environmental education and training	<ul style="list-style-type: none"> To support the implementation of the action plan and the subregional NEPAD environmental action plan 	<ul style="list-style-type: none"> Facilitate innovative programmes in African universities to mainstream environment and sustainability into teaching and learning Provide institutional capacity-building and facilitation in the development of regional training courses in environmental education Develop learning support materials on cross-cutting environmental issues
10. Environmental assessment	<ul style="list-style-type: none"> To support the capacity development and linkages efforts in Africa with particular reference to environmental impact assessment and strategic environmental assessment 	<ul style="list-style-type: none"> Provide technical and institutional support for institutions that are prepared to provide training of trainers programme at the regional and subregional levels
<p>11. Sustainable consumption and production</p> <ul style="list-style-type: none"> Implementation of the African 10-Year Framework Programme on Sustainable Consumption and Production Pilot project on plastic waste management in Nairobi 	<ul style="list-style-type: none"> To provide capacity building and technology support for the development and implementation of the African 10-Year Framework Programme at the national and subregional levels To assist in developing and implementing a city-wide plastic waste management programme that would be implemented with the broad participation of all stakeholders and develop region-specific experience 	<ul style="list-style-type: none"> Create awareness on the African 10-Year Framework Programme on Sustainable Consumption and production by organizing national seminars Assist countries to develop their national framework programme on sustainable consumption and production in the context of their national development strategies and the African 10-Year Framework Programme Develop and implement pilot projects in areas that have significant regional importance Identify the key policy measures that need to be taken by the national and local governments in order to address the problem of plastic waste Further develop and implement a plastic bag levy as part of a package of policy measures identified in a UNEP Economics and Trade Branch study and through multi-stakeholder consultation process Provide technical assistance in the area of cleaner production and sustainable consumption in the areas related to the plastic industries

Programme elements and overall cost estimates	Main objectives and key components	Specific activities
<ul style="list-style-type: none"> • Capacity building on life-cycle assessment in Africa • Capacity-building for promoting sustainable consumption and production in Lake Victoria Region • Engineering education for sustainable 	<ul style="list-style-type: none"> • To introduce the participants from universities and national cleaner production centres in the region on how to train or educate on life-cycle assessment including life-cycle inventory and life-cycle management • To develop institutional capacity for the development and implementation of sustainable consumption and production programmes within the Lake Victoria Region in the context of the 10-Year Framework Programme on sustainable consumption and production and the Lake Victoria Development Programme • To enhance the national capacities of African countries to absorb and use environmentally sound 	<ul style="list-style-type: none"> • Facilitate the establishment of community-based groups that would engage in the various activities of plastic waste management • Train participants on methods and training resources including software on life-cycle assessment • Provide training on a multi-language, information system management tool (ESTIS), which would assist the transfer of environmentally-sound technologies • Provide training on selected tools and techniques related to sustainable consumption and production so that there will be a core capacity for the development and implementation of programmes at national and subregional levels • Enhance the institutional capacities of the Lake Victoria Basin Commission, the three national cleaner production centres and other relevant institutions in the area of developing and implementing sustainable consumption and production programmes with special focus on sectoral approaches • Provide technical back-up support to sustainable consumption and production activities within the region • Facilitate the transfer of knowledge and expertise to African engineering faculties in the area of developing and providing courses in the field of cleaner production, cleaner products, cleaner technologies and related concepts of sustainable production and consumption • Develop common and specialized course modules on the concept of cleaner production, cleaner products, cleaner technology and related concepts • Train African engineers who would be able to facilitate and manage the transfer of environmentally sound

Programme elements and overall cost estimates	Main objectives and key components	Specific activities
consumption and production	technologies for the fulfilment of their development objectives on the basis of sustainable production and consumption	technologies to their respective countries, on the concept of sustainable production and consumption <ul style="list-style-type: none"> • Strengthen the linkages between African universities and the national cleaner production centres in the respective countries