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Follow-up to the outcome of the World Summit on Sustainable Development relevant to the Convention and preparation of the sixteenth and seventeenth sessions of the Commission on Sustainable Development

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Note by the secretariat

Addendum

Executive summary

In the context of the follow-up of the results of the World Summit on Sustainable Development, by its decision 2/COP.7, the Conference of the Parties (COP) acknowledged the importance of the sixteenth and seventeenth sessions of the Commission on Sustainable Development (CSD) for raising awareness amongst the international community and for inducing it to lend more resolute support to the implementation of the Convention on account of the central role it accords to agriculture, rural development, land, drought and desertification. It also acknowledged the need for timely and detailed preparation of the UNCCD's contributions to this process. To that end, the COP requested the Executive Secretary to include an item on the preparation of the sixteenth and seventeenth sessions of the CSD in the agenda of the eighth session of the COP, and to prepare a background paper, drawing in particular on the outcomes of the third and fifth sessions of the CRIC, for discussion at COP 8. This paper has been written in response to that request.

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I. Introduction

1. At its 11th session the Commission on Sustainable Development (CSD) decided to organize its work on the basis of multi-year programmes. The programme for the biennium 2008-2009 (CSD 16 and CSD 17) must succeed in setting priorities for combating desertification, mitigating the effects of drought, rural development and agriculture. In the context of the follow-up of the results of the World Summit on Sustainable Development, the 7th Conference of the Parties (COP) of the United Nations Convention to Combat Desertification (UNCCD) acknowledged the importance of the sixteenth and seventeenth sessions of the CSD and asked the secretariat to draft a policy document on these issues, with special reference to the conclusions of the third and fifth sessions of the Committee on the Review of the Implementation of the Convention (CRIC). This paper was drafted by consultants and does not necessarily represent the views of the UNCCD.

II. The challenge

A. Problem statement

2. Land degradation and especially desertification affect over two billion people, one third of the planet's surface and some one hundred countries spread over all the continents. Three quarters of rangeland in arid, semi-arid and dry sub-humid regions is being degraded.

3. The Millennium Ecosystem Assessment (MA) shows that desertification is part of a worldwide chain of cause and effect and that its impact is felt well beyond the frontiers of the directly affected regions. Thus it is an issue that is both local and global, to do with environment as much as development. Man is both a cause and a victim of desertification.

4. Future development scenarios show that desertification will probably spread over a wider area of land while the population and food needs also grow. The latter imply an expansion of farming land at the expense of forests and rangeland.

5. If nothing is done the living standards of one third of humanity will grow unbearably worse (food insecurity, health risks, destabilization of societies, rising poverty, forced migrations, etc.). Desertification can be regarded as one of today's most important environmental and development challenges.

6. Proactive land and water management policies can achieve better control of desertification and its adverse consequences. Forecasting and monitoring technologies can help to do this.

7. When it was adopted, the Convention raised a great deal of hope in the affected countries. Note that this hope has faded over time and given way to a certain discouragement, particularly among the players on the ground, despite the persistence or even sometimes the aggravation of the environmental and developmental problems that had prompted the international community to adopt such an important instrument as the UNCCD. Demotivation has been observed in the affected zones, especially in the rural world which has witnessed a

gradual deterioration of the natural base of its productive activities (farming, stockbreeding and forestry).

8. It is therefore essential to come up with new arguments to persuade the international development agendas to give more consideration to issues related to desertification and land degradation. In this respect, it will be necessary to highlight and act on the direct links between control of land degradation, adaptation to and mitigation of climate change, water management, the achievement of the Millennium Development Goals (MDGs), international fair trade and displacement of persons.

9. The issue of land degradation is fairly well delimited and the recommended solutions are clearly defined. Now is the time to act before it is too late.

B. The natural capital of arid, semi-arid and dry sub-humid countries

10. The World Bank's recent report "Where is the Wealth of Nations?" backs up the MA's statement by demonstrating that most of the countries affected by land degradation derive their income from exploiting renewable natural resources, classed as "natural capital". Note in particular that over 50% of the gross domestic product of certain poor countries comes from farm produce and livestock, while that of rich countries comes from other types of capital. "Soil" capital represents the majority of this natural renewable capital.

11. Therefore, if this natural capital is eroded, the poor countries will suffer a drop in GDP, the population will get poorer and fall into what are known as "poverty traps". This means that with falling income from natural capital, and in the absence of any other source of income, farmers and stockbreeders will tend to farm larger areas without changing their methods. This leads to further land degradation and lower fertility.

12. This will lead not only to a further drop in income but also phenomena such as the weakening of social ties, forced migrations and a fall in "human capital" and "societal capital", i.e. a loss of capacity on the part of men and women and their organizations while all their energies are needed to organize desertification control.

13. According to the MA, the populations of arid zones (at least 90% of which live in developing countries) are on average very far behind the rest of the world in terms of human well-being and development indicators. By way of example, the GDP per inhabitant of the Organization for Economic Cooperation and Development is almost ten times higher than that of developing countries in dry zones. The average infant mortality (around 54/1000) for all developing countries in dry zones exceeds that of the non-arid countries by 23% or more (forests, mountains, islands and coastal zones).

14. The low level of human development and the serious poverty of the populations of dry zones vary depending on the level of aridity and from one region of the world to another.

15. The populations of dry zones are often socially and politically marginalized on account of their poverty and distance from the decision-making centres.

C. Climate change

16. For Africa, the fourth report of the Intergovernmental Panel on Climate Change forecasts renewed outbreaks of drought and flooding, a reduction in the average flow of the main rivers, and an advance in desertification as a result of declining mean annual rainfall, runoff and soil humidity. The increasing scale and frequency of drought, flooding and other extreme events will accentuate the constraints and the threats to food safety and health.

17. Likewise, in arid and semi-arid Asia, soil productivity will decline owing to thermal aggression and water stress and a reduction in runoff and water resources. The growing influence of the El Niño phenomenon will accentuate periods of drought, especially in Australia.

18. Southern Europe will be affected by a reduction in soil humidity and runoff, and an increase in extreme phenomena, which will have adverse consequences, especially for erosion.

19. In Latin America, flooding and droughts will be more frequent and cause damage to the ecosystems.

20. In North America, where large areas are in arid zones, extreme phenomena will also take place.

21. In all regions, land degradation aggravates the frequency and impact of natural disasters.

22. The vulnerability of the populations potentially affected by these climate changes in the 21st century varies according to their degree of development and capability to adapt. The poorest populations will be the most vulnerable. The resilience of the ecosystems and the preservation of their biodiversity are dependent on their present state.

23. These various reasons justify linking land degradation control to mitigation of or adaptation to climate change.

D. International trade

24. The instability of world prices for tropical produce which are in ever-steeper decline, and the increasing cost of production factors, are leading to a reduction in the incomes of producers, who most often originate in arid or semi-arid zones and cultivate land that is suffering from a serious lack of nutrients. Generally speaking, producers barely benefit from the rise in the price of foodstuffs resulting from speculation. This drop in income, synonymous with non-investment in the preservation of productive capital, is often compensated by the search for new fertile land to the detriment of wooded areas, which contributes to land degradation.

25. Countries in arid zones are relatively isolated and cut off from world markets. They have difficulty accessing them, while produce from developed countries, notably subsidized farm produce, is distributed more easily everywhere. Bodies such as the World Trade Organization (WTO) should take account of this, and positive levers should be sought for adding value to products from arid zones in the context of international trade.

E. Population

26. One third of the world's population lives in arid, semi-arid or dry sub-humid zones and will therefore have to face the issue of the growing hazards related to climate change. But at the same time – according to various United Nations projections – the number of inhabitants will grow, especially in Africa. Today, over 400 million out of 800 million Africans live in arid zones; in twenty years' time, the number of people having to satisfy their food and energy needs will grow to around 800 million.

27. Moreover, at the present time, at least one billion people live in regions below the poverty line of 1 US dollar a day. Traditional methods of adapting to events such as drought are now outmoded and these populations are the most vulnerable while, for example, in twenty years' time there will be twice as many mouths to feed in Africa. The issue of increasing productivity per hectare and per worker is already being raised. The MA's projections indicate that desertification is currently one of the greatest environmental and development challenges. Despite this warning and the MDGs, it seems that neither the countries concerned nor the international community are paying them enough heed.

28. South-north migration is increasingly the response of thousands of young people to the degradation of the productive resources and their livelihood (e.g. "Barca or Barzakh" (Barcelona or die), the displacement of thousands of young people from West Africa on makeshift vessels to Spain, as a result of the despair caused by the degradation of farming land and the desertification of production areas).

F. The cost of desertification

29. The economic and social cost of land degradation has unfortunately been underestimated and is not known with any accuracy. It is therefore difficult to measure. Studies give estimates ranging from 1% to 9% of agricultural GDP, and depending on the proportion of agricultural GDP of total GDP, the economic cost may be as high as several percentage points of some countries' GDP.

30. The methods are based on an estimate of losses of agricultural production or the costs of land restoration. The overall results measured for some 10 countries are underestimated as they take no account of the "off-site" effects such as degradation of catchment areas and loss of biodiversity.

31. A worldwide evaluation carried out in 1992 indicated annual losses of 23 billion US dollars on rangelands, 11 billion on irrigated land and 8 billion on rain-fed crops, i.e. 42 billion US dollars a year: which, in 2006, after adjusting for world inflation, gives a figure of 64 billion US dollars. A further 5 to 7 million hectares are lost each year on account of advanced degradation or phenomena such as salinization.

32. These global economic costs should not be separated from the social costs which are much more difficult to estimate. Indeed, desertification will cause societies to break down as people seek solutions designed to offset falling incomes: borrowing for food security, sale of

livestock and goods, intensification of conflicts over access to resources such as land and water, dislocation of families, temporary migrations, or wholesale migrations to other farming land, the cities or other countries.

33. One can also talk of an environmental cost since: 1) the increase in degraded areas will have an impact on aerosols going into suspension which will play a part in disturbing the climate mechanisms and damage human health; 2) the increased runoff will have consequences on the flow of rivers and silting of reservoirs; 3) the reduction in biomass and organic matter in the soils will limit their carbon sequestration capacity. The total annual costs of desertification are therefore far in excess of 64 billion US dollars a year, while total official development assistance in 2005 was of the order of 100 billion US dollars.

III. Realistic objectives based on successes

A. Populations affected by desertification have developed effective solutions, and economic rates of return for development projects in arid zones are positive

34. In the countries affected by desertification for several decades, the populations have devised ad hoc methods for combating it that enable them to adapt successfully to drought conditions and have sometimes, with support from scientists, adopted more integrated methods. But these methods need external support to offset deficiencies of soil nutrients such as phosphorus and to carry out major work to combat erosion, recover rainwater, establish plantations, etc.

35. Soil fertility does indeed need to be renewed. This requires mineral fertilizers as, especially in Africa, the soils lack phosphorus and cultivated plants lack the nitrogen they need to grow. World statistics show that mean annual consumption of fertilizer per hectare in Africa is of the order of 10 kg – which is quite inadequate – while in Asia it is 60 kg and over 200 kg in Europe.

36. There is also a need for supplemental irrigation. In Africa, no more than 10% of the total cultivated area is irrigated.

37. Organic and mineral fertilizer, supplemental irrigation, and physical and biological restoration work all yield positive results, as can be seen from a number of “success stories” from West Africa, India and China. These analyses of projects for rural development and combating desertification show that the investments required to rehabilitate environments, with minimal use of fertilizers, are around 300 to 400 US dollars/hectare/year for three or four years and can double yields and offer an economic rate of return of up to 20 or 30%.

38. This tends to indicate that under certain conditions investments in sustainable soil management are economically viable.

39. In addition to this economic return, the following should also be considered:

a) social return: maintenance of the population in its environment, maintenance of the social fabric, satisfaction of essential needs, raising of living standards and general well-being.

b) environmental return: halt of loss of biodiversity, adaptation to climate change and participation in carbon sequestration, reduced impact of natural disasters.

B. How can these positive economic, social and environmental returns be achieved?

40. Fundamental issues have to be addressed:

a) firstly, farmers and stockbreeders in arid and semi-arid regions do not have the means to invest in their own land to restore and maintain it and increase production and hence income;

b) secondly, we should ask ourselves whether they alone should pay for the ecosystems in their region to be able to deliver the environmental services expected of them at world level.

41. This begs the question as to who should invest in the arid zones.

42. The World Conservation Union supports the idea that investing in environmental sustainability can be effective and act as a powerful lever for development.

43. The United Nations Environment Programme notes that well targeted investments (e.g. in terracing farming land subject to slow erosion) have returns of over 3 dollars for every dollar invested. It also claims that if greenhouse gas emission allowances (measured as the quantity of CO_2 present) remain above 3 dollars per tonne, countries could find it more worthwhile to conserve forests as carbon sinks rather than felling trees.

44. Certain investments in conservation farming, and notably sowing under plant cover, are viable in economic and social terms as well as for carbon sequestration (Brazil, Tunisia, Cameroon, Laos).

45. The sources of funding are already known:

a) public funding: government and local authority budgets; funds from official development assistance, bilateral and multilateral loans or donations, including from the World Bank and regional development banks; additional funding from mechanisms such as the Global Environment Facility (GEF), though the proportion of these public funds allocated to sustainable soil management and desertification control is low (5% of official development assistance (ODA) in 2005);

b) private funding: national development and agricultural credit banks; funds from direct foreign investment (DFI). However, the banks rarely lend to family farmers and stockbreeders since they are unable to provide surety or guarantees. On the other hand they could

take an interest in adding value to farm produce, by financing local processing, or to natural resources (management of nature reserves or protected areas, etc.);

c) investments by farmers and stockbreeders themselves, which as we said above are insufficient;

d) investments from the use of funds sent home by migrants. In 2005 such funds amounted to over 200 billion US dollars, or more than double ODA. They are used mainly for food, health, education and emergency expenses of the migrants' families. They could be used as a guarantee fund for private loans;

e) funds from microfinance, though they are generally insufficient and used for other investments;

f) funds collected by non-governmental organizations from private donors or foundations;

g) other sources to be explored: the Clean Development Mechanism and carbon funds.

C. Public investment in agriculture and sustainable soil management

46. Analyses carried out during 2006 show that for over 25 years, investments by official development assistance in agriculture and sustainable soil management have been declining.

47. In Africa in 1981, for instance, investments in agriculture and rural development amounted to 1.9 billion US dollars, or 22% of ODA; in 1991, the figure was 1.77 billion US dollars, or 13% of ODA and in 2001 it was 0.99 billion US dollars, a mere 6% of ODA; over the same period, food aid rose from 0.9 to 1.49 billion US dollars.

48. In 2004 loans from the World Bank, accounting for 38% of multilateral aid, were of the order of 1.5 billion US dollars for rural development or 7 to 8% of the total, whereas in 1995-1997 they amounted to 2.42 billion US dollars.

49. Over the four-year period 2002 to 2006, the GEF earmarked a total of 244 millions US dollars for tackling land degradation.

50. By way of comparison, from 2000 to 2003, the European Commission allocated 156 million euros a year to these issues, Germany 83, France 62 and the United Kingdom 69.

51. Accurate figures for funds allocated under the budgets of the various States are hard to come by. For example, China allocated 13 billion US dollars over ten years to sustainable soil management following a study estimating the economic losses due to land degradation at 10 billion US dollars a year in direct costs and some 30 billion in indirect costs. Burkina Faso set aside 170 million US dollars for sustainable soil management under its Strategic Poverty Reduction Programme and its National Action Programme (NAP).

D. A facilitating macro-framework must be set up at national level to ensure the success of desertification control and sustainable soil management operations and of private investment

52. Successive sessions of the CRIC have confirmed that a number of conditions must be met in order to safeguard sustainable soil management and desertification control operations by means of a good quality institutional, legal and economic environment.

53. The most effective approaches to participative eco-development have been learnt through experience. Support for a diagnosis by the affected populations of their needs and constraints will be supplemented by a flexible approach and good coordination between all the players; it will cover the aspect of soil restoration.

54. This is a long-term commitment and is designed to ensure that operations do not come to a standstill as soon as external support ends. The programmes include activities to complement farming activities, designed to take the pressure off natural resources and raise incomes.

55. The successful operations are therefore those that are taken in hand by the populations themselves, which implies a good level of organization of civil society, particularly the existence of effective farmers' and stockbreeders' organizations.

56. The legislative context of access to resources must be clear: guaranteed access to land through secure land ownership systems; guaranteed access to water through appropriate water-management arrangements adopted by the users; sharing of income from natural resources in line with established rules.

57. The investment context for private funds must be fixed and guaranteed: the investment code must be enforced and not changed too often. This assumes stable government policies to guarantee private initiatives and the search for measures involving both public and private sectors.

58. Traditional technologies must be enhanced and backed up by modern technologies developed by research in accordance with proper procedures.

59. Another key issue must also be settled: market access conditions must not penalize producers from arid countries, but rather enable them to add value to their products; certification of origin or labels could be considered to facilitate access to world markets by products from arid regions.

60. The last point to be settled to ensure the success of sustainable soil management and desertification control operations is price stability of agricultural produce. This covers price stability of agricultural inputs (seed, fertilizer) and equipment (seed drills, tools) and stability of the selling prices of produce, for both food crops (sorghum and maize) and commercial products (cotton).

IV. Possible types of response

61. Responses to reduce social and ecosystem vulnerability can be divided into the following types: international action, regional action and national and local action.

A. International action

1. The catalytic role of the Convention

62. Of all the international organizations taking part in world governance of the environment and development, the UNCCD, which boasts 191 country Parties, has a text with major advantages for improving sustainable soil management and playing a catalytic role in arid, semi-arid and dry sub-humid countries.

63. Articles 4, 5 and 6 clearly set out the commitments of the countries affected by desertification as well as those of developed countries, and are not restricted only to the physical aspects of land degradation, but take an integrated view of desertification control and its links with the fight against poverty.

64. The recommendations made and decisions taken at the latest meetings of the COP and CRIC 3 and CRIC 5 aim to establish agricultural and sustainable soil management systems, mobilize more public and private funding, guarantee stable government policy, especially regarding access to resources and land ownership systems, and strengthen civil society organisations, especially farmers' groups.

65. The strategic guidelines that the Convention plans to adopt at COP 8 will no doubt combine an emphasis on the need for sustainable soil management in the affected areas with the requirements for a more synergistic approach to protecting the ecosystems. These guidelines will probably aim to a) raise the living standards of populations living in arid zones through judicious investments in use of resources, which will also enable them to adapt to climate change; b) restore degraded ecosystems to enable them to carry out all their roles and functions; c) ensure food security, preserve biodiversity and improve carbon sequestration capacities in arid zones; d) mobilize the required resources.

66. The States Parties are invited to invest further in the achievement of the objectives of the Convention and the secretariat, the Global Mechanism and the GEF are invited to develop closer ties with one another. The NAPs should be essential elements of the Country Partnership Frameworks (CPFs) and serve as a basis for requests for funding from financial institutions.

2. The role of the other international institutions

67. The Convention on Biological Diversity contains obligations identical to those of the UNCCD, notably to prepare national plans to preserve biodiversity. It has devised a programme for arid and sub-humid land that covers conservation of biodiversity and sustainable exploitation. It is implemented through joint action between those responsible for the two Conventions and local players.

68. The United Nations Framework Convention on Climate Change aims to reduce greenhouse gas emissions – which is not applicable to the vast majority of arid countries, notably in Africa – but also aims to step up measures for carbon sequestration. This objective can be achieved by creating new vegetation on arid land (by afforestation or appropriate crops under quasi-permanent plant cover). Measures such as the carbon fund and the Clean Development Mechanism can offer new support to arid countries.

69. The regional development banks have yet to show strong support for sustainable soil management and desertification control operations.

70. Observing that public investment in agriculture per inhabitant of rural areas was less than 10 US dollars per inhabitant in West Africa, less than US$ 7 in East Africa and between US$ 50 and US$ 70 in Asian countries, the International Fund for Agricultural Development (IFAD) has set up an important action plan for agriculture in poor countries. It works on the principle of starting from local needs, supporting farmers, farmers' organizations and rural financial services. This is perfectly in line with the obligations set out in the text of the Convention.

71. The World Bank made the same observation as the IFAD and since it is bound to help attain the Millennium Development Goals, it plans to increase its investments in agriculture and rural development in order to reverse the trend.

72. In Africa, it set up the TerrAfrica partnership with the aim of helping sub-Saharan African countries to implement a common long-term vision of the strategic investment programme for sustainable soil management and to respond to their needs, particularly those of arid and semi-arid countries. It is to be hoped that this partnership will lead to restoration and rehabilitation operations to combat poverty and re-establish the functions of the ecosystems.

73. The GEF has developed operational programme 15 for sustainable soil management, mainly to back up the desertification control activities planned under the NAPs. But it is to be hoped that a more substantial envelope can be obtained to support the CPF partnership agreements so as to respond better to the needs of the least advanced countries.

74. The Food and Agriculture Organization of the United Nations plays an essential role in focusing world attention on the changing situation of agriculture and food, and also in making forecasts and exploring solutions.

B. Regional action: the role of regional organizations

75. The UNCCD is the basis of the drafting and adoption of regional and sub-regional action programmes. Since the beginning of the major periods of drought, sub-regional activities have been set up, especially in Central Asia and Central America as well as in Africa. These activities relate to training, harmonization of data, data interchange and methods, and the setting-up of common information and early-warning systems. The difficulty with these sub-regional measures is to reconcile the respective roles of the sub-regional and national agencies. Substantial efforts are in progress in certain regions such as Africa, which has set up partnership instruments such as the New Partnership for Africa's Development (NEPAD)

76. The African countries have devised a number of strategies aimed essentially at combating land degradation through agriculture and at integrated management of natural resources, giving a more prominent role to the beneficiary populations.

77. There have been a number of successes:

a) From the legislative and institutional points of view, the drafting and adoption of local agreements serving as frameworks for decentralized and participative management of natural land resources, which have helped to reduce conflict over and pressure on those resources, and the setting-up in certain countries such as Algeria of a national agricultural development fund, which supported plantations of trees on more than 1.2 million hectares of land and the conservation and upgrading of more than 2.8 million hectares.

b) The operational level involves efforts to promote sand accretion on dunes and the protection of basins by massive afforestation, which has enabled market gardening and agriculture to be developed all along the long coastline of Senegal from Dakar to Saint-Louis, and the upgrading of the technical, organizational and financial capabilities of the communities (farms, young people) through their involvement in programmes for rehabilitating degraded land and promoting income-generating activities other than forestry or farming.

c) At sub-regional and regional levels, African leaders have taken bold initiatives. In particular these are the Environment section of the NEPAD which gives priority to combating desertification; the Comprehensive Africa Agriculture Development Programme, which aims to improve food security; the Great Green Wall to exploit the resources of the Sahara, which is an initiative of the Community of Sahel and Saharan States; the initiative of the Economic Commission for Africa – African Union – the African Development Bank on land ownership policies in Africa, which aims for a better understanding of land ownership policies and other related issues; and the programme for managing the shared water resources of the cross-border aquifers implemented by the Sahara and Sahel Observatory.

78. One important initiative is TerrAfrica. It was initiated by the World Bank in cooperation with other development partners and in association with the Convention and the Global Mechanism. It is a partnership platform designed to promote the implementation of sustainable soil management practices in sub-Saharan Africa by incorporating measures into the countries' national strategies.

C. National and local action

79. It is important for goal 7 of the MDGs and its links with the other goals that the environment sector should reflect the importance of natural resources as a production factor for most poor people.

80. In a country such as Senegal, "*75% of poor households are located in rural areas and 60% of rural households are poor*". Natural capital is the major component of the assets of the poorest people. This is therefore reason enough for the governments of poor countries to manage their natural resources carefully.

81. We also know that natural resources provide precious environmental services to agriculture, livestock breeding, fisheries, forestry, energy, tourism, water, etc. Accordingly, degradation of natural resources adversely affects the health and growth of these sectors. It is therefore of the utmost importance to optimize the contribution that natural resources make to growth and security in these various sectors of the economy and to growth that benefits the poor.

82. Moreover, all these activities are essentially driven by the will of governments. The national measures and their local implementation are fundamental to the success of desertification control and sustainable soil management operations, and hence of the fight against poverty.

1. Who should invest how much, and how should action be carried out?

83. A number of “success stories” and cost-benefit analyses, unfortunately too limited in number, indicate that the costs of restoration, including minimal mineral fertilizer, are around 400 US dollars/hectare/year for at least three years before a positive economic rate of return can be obtained.

84. The latest study by GEF/GM (L. Berry, 2006) claims that the financial contribution to reducing degradation is less than the costs of degradation in the same areas. It suggests that the instruments mentioned above increase their contribution to sustainable soil management by 10 to 15% for 10 years, thereby releasing 10 to 12 billion US dollars a year, which is apparently sufficient to reverse the process of land degradation and generate income for the poorest people.

85. Who should invest? The sources of funding were described above: in the initial years it is not sufficient for farmers and stockbreeders in the affected countries to invest themselves as they are already living below the poverty line and are neither either able nor bound to fund the services the ecosystems provide to the planet.

86. Other possibilities: the State budget, which has to manage a host of priorities (health, education, infrastructure, public security, basic administration, etc.); private investors – savings banks, investment banks, development banks – which have never yet lent to family farmers, since they have no surety; micro-loans, which cannot provide sufficient funds. There remains the use of part of the money sent by migrants, most of which is used to cover basic family needs (food, health, clothing, household equipment and education).

87. Recourse must also be had to official development assistance, both bilateral and multilateral, whether in the form of loans or donations. To mobilize this ODA, requests must come from the States: it is therefore up to them to give top priority to investments in sustainable soil management; furthermore, aid agencies often have their own agendas and especially working methods. One cannot be sure that ODA instruments are currently well suited to ensuring that aid reaches the real players in desertification control and sustainable soil management, namely farmers and stockbreeders.

2. Options for investment, agriculture, desertification control, sustainable management and rural development

88. When discussing investment in agriculture, sustainable soil management and desertification control, it is essential to specify what sectors are being covered and to set national and local objectives and priorities. The review and recommendations of the 16th and 17th sessions of the CSD should help to achieve the following objectives.

89. **The first objective could be to restore and rehabilitate natural capital** so as to correct the adverse effects of ongoing erosion and degradation in the zones that are already seriously degraded; to prevent land degradation in order to guard against future risks of this type in zones that have so far practically escaped; to restore land that is currently cultivated or grazed in order to increase the soils' fertility, water retention capacity and content of organic matter.

90. It is essential to meet these correction and prevention objectives in order to respond to the four basic environmental, economic and social needs of all threatened societies and of the whole planet: to re-establish the services provided by the arid and semi-arid ecosystems; to re-establish the production function of land for food security while considering factors such as the likely doubling of the population in Africa; to fight against poverty thanks to the new income generated by the restored land and finally to fight against the degradation of social ties, the loss of capabilities by the population and migrations.

91. These investments of funds to be made on the ground also tally with the objectives of the three Conventions: climate change, desertification and biodiversity.

92. **The second objective could be to define sustainable agricultural, pastoral, agro-pastoral and agro-forestry systems that meet the production and environmental protection objectives.** Some authors have termed these systems the "double green" revolution since investment of funds in restoration measures will help to produce more, while maintaining the natural capital at a high level. Efforts must therefore be directed at defining more intensive systems that make use of supplemental irrigation, fertilizers, improved seed, renewed farming practices, and information and early-warning systems.

93. This objective implies the choice of crops to be recommended. There is a need for a debate at national and sub-regional levels on the balances that exist between subsistence crops (types of sorghum, millet, maize and other food crops) and commercial crops such as cotton, grown to generate income for farmers.

94. **The third objective is to invest in human and societal capital:** transforming crop systems also means transforming social organizations; innovation can work only if the society wants it and finds new ways of functioning. It is therefore appropriate to invest in personnel training (basic education, education in environment, farming and stockbreeding) and assistance in forming groups of farmers and stockbreeders.

95. Moreover, it is important for the ongoing decentralization processes to succeed, in other words for the rural municipalities and communities to be able to control their futures, enjoy genuine financial autonomy and be able to do business with banks or agencies involved in

development aid, so that the funds arrive as close as possible to their end-users, the farmers and stock breeders.

96. **The fourth objective should be to set up a regulated market economy in which prices of farm produce are stable.** As we said in paragraph 10, farmers and stockbreeders cannot be expected to commit to restoring their land and adopting new farming and stockbreeding practices unless they have guarantees of selling their produce at fair and stable prices.

97. At the moment, cereal prices on the markets can double over a year and prices of imported foodstuffs can be lower than those on local markets. Producers' organizations, especially in Africa, are afraid that fully opening up markets in 2008 might work against them.

98. There is therefore a need to improve the negotiating skills of national producers and negotiators in bodies such as the WTO.

99. As we have seen above, the setting-up of a favourable institutional and legislative environment and government policies guaranteeing access to resources and investments are essential pre-requisites for the above.

100. **The fifth objective should be to promote activities other than farming and stockbreeding.** The promotion of sustainable agricultural and rural development, aimed at conserving natural resources and marketing products using sector-specific policies is another example of a profitable strategy.

101. It is recommended to introduce positive discrimination, by helping women's or young people's groups in their efforts to exploit forestry resources (such as gum arabic or shea) by means of substantial funding, setting up processing units to add value to the products and means of transporting them to market. There is a need for local measures for processing and adding value to products.

102. There is also a need to consider other activities that can benefit arid zones. An example would be solar energy, which could take advantage of an incomparable solar resource; aquaculture facilities in certain areas; or ecotourism and exploitation of potentials such as wildlife, oases or nature reserves.

103. Arid zones are reservoirs of important genes for the development of improved varieties – such as drought-resistant ones – using conventional genetic processes. To achieve that, government policies should control the processes used.

104. Finally, some people believe that arid or semi-arid spaces could specialize either in reforestation for firewood or for producing biofuels. In such a case one would have to ensure the necessary balances between resources and food independence, which could suffer if the prices of agricultural produce were not attractive enough in relation to these future biofuels.

V. Conclusions and recommendations

105. Desertification is happening on a scale that makes it a global challenge: it affects two billion people, one third of the earth's surface and a hundred countries on all the continents. It is mainly the poorest populations, especially in Africa, that are the most seriously affected. And yet these populations derive most of their income from natural resources. Some people are already forecasting incalculable consequences in terms of forced migrations and threats to public order. If the natural resources continue to run out, poverty will increase, people's capacity to adapt to climate change will diminish, and the functions provided by the ecosystems will be impaired.

106. This degradation has a cost of up to several percentage points of annual gross domestic product (GDP). This challenge will only get more serious if the population increases and unless we introduce sustainable soil management systems. However, it is acknowledged that there are solutions for restoring the land's productive capacity. Favourable institutional, legal and economic conditions must be established to implement them.

107. Since farmers and stockbreeders are both causing and combating desertification, they must be offered favourable terms and also priority for loans from official development assistance (ODA) in that they are the poorest.

108. Worldwide, the proportion of ODA earmarked for sustainable soil management and agricultural investments has been in constant decline for twenty-five years.

109. It is therefore recommended to reverse this trend and above all to change the procedures for allocating ODA, so that the main players in combating desertification and their professional groups can be the main beneficiaries. The UNCCD can and must play the necessary facilitating role in this context.

110. Owing to the clear and increasingly recognized links between desertification and other global environmental issues, such as protecting biodiversity and adapting to climate change, the Convention must be a focal point for the synergistic implementation of all the environmental conventions and for achieving the MDGs for the rural population.

111. The CSD should set clear priorities regarding policies and measures directly supporting farmers. Since physical and biological restoration involves labour, irrigation and fertilization at plot level, it must obviously be carried out by the farmers themselves.

112. The CSD should recommend a significant increase in the proportion of ODA earmarked for investments in sustainable soil management.

113. In this context, ODA procedures must be adjusted to actually attain this level by supporting the formation of professional groups of farmers and stockbreeders and village and rural community groups capable of doing business with the main national operators and aid agencies, so as to enable local operators to carry out these restoration operations.

114. The CSD will therefore wish to help devise a macro-economic approach establishing favourable institutional and legal frameworks and a micro-economic approach at local level to ensure the sustainable exploitation of ecosystems through prevention in and rehabilitation of degraded areas, and the productivity of land and workers.

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