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# UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION

## IN THOSE COUNTRIES EXPERIENCING SERIOUS DROUGHT AND/OR DESERTIFICATION, PARTICULARLY IN AFRICA

They should also promote access to appropriate technologies, knowledge, and know-how.

The need for coordination among donors and recipients is stressed because each programme's various activities need to be complementary and mutually reinforcing.

## Sustainable development

The Convention opens an important new phase in the battle against desertification, but it is just a beginning. In particular, governments will need to regularly review the action programmes. They will also focus on awareness-raising, education, and training, both in developing and developed countries.

Desertification can only be reversed through profound changes in local and international behavior. Step by step, these changes will ultimately lead to sustainable land use and food security for a growing world population. Combating desertification, then, is really just part of a much broader objective: the sustainable development of countries affected by drought and desertification.


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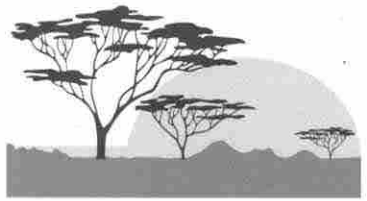

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## The problem of land degradation

Desertification is the degradation of land in arid, semi-arid, and dry sub-humid areas. It is caused primarily by human activities and climatic variations.

Desertification does not refer to the expansion of existing deserts. It occurs because dryland ecosystems, which cover over one third of the world's land area, are extremely vulnerable to over-exploitation and inappropriate land use. Poverty, political instability, deforestation, overgrazing, and bad irrigation practices can all undermine the land's productivity.

Over 250 million people are directly affected by desertification. In addition, some one thousand million (or one billion) people in over one hundred countries are at risk. These people include many of the world's poorest, most marginalized, and politically weak citizens.

## An innovative solution

Combating desertification is essential to ensuring the long-term productivity of inhabited drylands. Unfortunately, past efforts have too often failed, and around the world the problem of land degradation continues to worsen.

Recognizing the need for a fresh approach, over 100 governments have signed the United Nations Convention to Combat Desertification. This Convention aims to promote effective action through innovative local programmes and supportive international partnerships.

The treaty acknowledges that the struggle to protect drylands will be a long one – there will be no quick fix. This is because the causes of desertification are many and complex, ranging from international trade patterns to unsustainable land management practices. Real and difficult changes will have to be made, both at the international and the local levels.

## National action programmes...

Countries affected by desertification will implement the Convention by developing and carrying out national, sub-regional, and regional action programmes. Criteria for preparing these programmes are detailed in the treaty's four "regional implementation annexes": Africa (considered a priority because that is where desertification is most severe), Asia, Latin America and the Caribbean, and the Northern Mediterranean.

Drawing on past lessons, the Convention states that these programmes must adopt a democratic, bottom-up approach. They should emphasize popular participation and the creation of an "enabling environment" designed to allow local people to help themselves to reverse land degradation.

Of course, governments will remain responsible for creating this enabling environment. They must make politically sensitive changes, such as decentralizing authority, improving land-tenure systems, and empowering women, farmers, and pastoralists.

They should also permit non-governmental organizations to play a strong role in preparing and implementing the action programmes.

In contrast to many past efforts, these action programmes must be fully integrated with other national policies for sustainable development. They should be flexible and modified as circumstances change.

## ... and partnership agreements

The Convention's action programmes will be developed through consultations among affected countries, donors, and inter-governmental and non-governmental organizations. This process will improve coordination and channel development assistance to where it can be most effective. It will also produce partnership agreements that spell out the respective contributions of both affected and donor states and of international organizations.

Developed countries are expected to encourage the mobilization of substantial funding for the action programmes.

# An introduction to the United Nations Convention to Combat Desertification

**The Convention offers new hope in the struggle against desertification.** Over the past two decades, the problem of land degradation in dryland regions has continued to worsen. The Convention promotes a fresh new approach to managing dryland ecosystems and – just as important – to managing development aid flows.

**Desertification is caused by climate variability and human activities.** In the past, drylands recovered easily following long droughts and dry periods. Under modern conditions, however, they tend to lose their biological and economic productivity quickly unless they are sustainably managed. Today drylands on every continent are being degraded by overcultivation, overgrazing, deforestation, and poor irrigation practices. Such overexploitation is generally caused by economic and social pressure, ignorance, war, and drought. (See fact sheet 2.)

**Desertification undermines the land's productivity and contributes to poverty**. Prime resources – fertile topsoil, vegetation cover, and healthy crops – are the first victims of desertification. The people themselves begin to suffer when food and water supplies become threatened. In the worst cases, they endure famine, mass migration, and colossal economic losses. Over 250 million people are directly affected by desertification, and some one thousand million (or one billion) are at risk. (See fact sheet 3.)

**The Convention to Combat Desertification will be implemented through action programmes.** These programmes are the core of the Convention. At the national level, they will address the underlying causes of desertification and drought and identify measures to prevent and reverse it. National programmes will be complemented by subregional and regional programmes, particularly when transboundary resources such as lakes and rivers are involved. Action programmes are detailed in the four regional implementation annexes to the Convention – Africa, Asia, Latin America and the Caribbean, and the Northern Mediterranean. (See fact sheet 4.)

**The Convention promises to dramatically reshape the international aid process.** It seeks to engage donor nations and agencies and recipient countries in a new partnership. In the case of Africa, the respective roles of donors and recipients will be worked out in partnership agreements developed through a consultative process. The aim is to ensure that funding programmes are better coordinated, that funding is based on the needs of the affected countries, that donors can be sure their funds are well-spent, and that recipients obtain the maximum benefit from the sums available. (See fact sheet 5.)

**Another radical departure is the strong emphasis on a "bottom-up" approach with strong local participation in decision-making.** Traditionally, local communities have been relatively passive participants in development projects. Now the Convention puts them on an equal footing with other actors in the development process. Communities and their leaders, as well as non-governmental organizations, experts, and government officials, will work closely together to formulate action programmes. For this innovative and complicated process to work, awareness campaigns may be needed to inform people about the new opportunities presented by this Convention. (See fact sheet 6.)

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NATIONS UNIES

**Science and technology are vital tools in the fight against desertification.** Much remains to be learned about the causes and impacts of desertification, so international cooperation in scientific research and observation must be strengthened. Land degradation can be minimized with both new and traditional technologies, ranging from satellite monitoring to the terracing of steep hill slopes. Science and technology must respond to people's real needs, and the Convention encourages researchers around the world to combine their talents for this purpose. (See fact sheet 7.)

**Financial resources need to be channeled and invested more efficiently.** Most funding is raised domestically by the affected countries, but bilateral assistance programmes and international agencies also provide large sums. The Convention establishes a Global Mechanism to promote the mobilization of financial resources. Innovative funding sources, including debt swaps and private-sector financing, will also be encouraged. (See fact sheet 8.)

**The Convention establishes a number of institutions and procedures for guiding international action.** The supreme body of the Convention will be the Conference of the Parties (COP), which will include all ratifying governments. There will also be subordinate bodies for science and technology and for the promotion of funding. The Convention, which has been signed by 115 countries, entered into force on 26 Decembre 1996, three months after the 50th country ratified it. The COP will hold its first session in Rome in October 1997. Until then, the Intergovernmental Negotiating Committee that drafted the Convention will continue to meet and, among other things, carry out its resolution on urgent action for Africa. (See fact sheet 9.)

**Desertification is primarily a problem of sustainable development.** It is a matter of addressing poverty and human well-being, as well as preserving the environment. Social and economic issues, including food security, migration, and political stability, are closely linked to land degradation. So are such environmental issues as climate change, biological diversity, and freshwater supplies. The Convention emphasizes the need to coordinate research efforts and action programmes for combating desertification with these related concerns. (See fact sheet 10.)

# The causes of desertification

**Desertification is the degradation of drylands.** It involves the loss of biological or economic productivity and complexity in croplands, pastures, and woodlands. It is due mainly to climate variability and unsustainable human activities. The most commonly cited forms of unsustainable land use are overcultivation, overgrazing, deforestation, and poor irrigation practices. Seventy percent of the world's drylands (excluding hyper-arid deserts), or some 3,600 million hectares, are degraded. While drought is often associated with land degradation, it is a natural phenomenon that occurs when rainfall is significantly below normal recorded levels for a long time.

**Drylands respond quickly to climatic fluctuations.** By definition, drylands have limited freshwater supplies. Precipitation can vary greatly during the year. In addition to this seasonal variability, wide fluctuations occur over years and decades, frequently leading to drought. Over the ages, dryland ecology has become attuned to this variability in moisture; plants and animals can respond to it rapidly. For example, satellite imagery has shown that the vegetation boundary south of the Sahara can move by up to 200 km when a wet year is followed by a dry one, and vice versa.

**People must also adjust to these natural fluctuations.** The biological and economic resources of drylands, notably soil quality, freshwater supplies, vegetation, and crops, are easily damaged. People have learned to protect these resources with age-old strategies such as shifting agriculture and nomadic herding. However, in recent decades these strategies have become less practical due to changing economic and political circumstances, population growth, and a trend towards more settled communities. When land managers cannot or do not respond flexibly to climate variations, desertification is the result.

**The relatively low priority given to environmental protection often leads to poor land management decisions.** The overuse of land may result from specific economic conditions or from inappropriate land laws or customs. In many cases, unregulated access to land resources may lead some individuals to maximize their own gains by overexploiting the land at the expense of the community as a whole. Poor people, particularly poor women, often lack access to the best land, depending instead on the most fragile areas and resources. Their poverty may give them little alternative but to extract what they can from the scarce resources available to them, even though this degrades the land.

**International economic forces can encourage people to overexploit their land.** International trade patterns can lead to the short-term exploitation of local resources for export, leaving little profit at the community level for managing or restoring the land. Similarly, the development of an economy based on cash crops, or the imposition of taxes, can distort local markets and promote overexploitation of the land.

**Ignorance, errors, and natural and man-made disasters can also contribute to land degradation.** Ignorance of the natural environment played an

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NATIONS UNIES

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important role in the US during the infamous Dust Bowl of the 1930s; among other errors, during a time of drought Midwestern farmers used ploughs better suited for the more temperate latitudes of Western Europe. In recent decades, similar mistakes in the choice of policies or technologies have led to land degradation in many countries, both developed and developing. Disasters such as wars and national emergencies also destroy productive land by displacing its managers or causing heavy concentrations of migrants to overburden an area. Natural disasters such as floods and droughts can have a similar effect.

**What role do increasing populations and population densities play?** It is tempting to conclude that an expanding human population is the ultimate driving force behind desertification. More people in an area inevitably exert a greater pressure on that area's resources; sometimes this pressure is indirect, as when growing urban populations place demands on food production in uncrowded rural areas. But the causes of desertification are complex, and the relationship between two variables such as population and desertification is not clear-cut. For example, a decline in population can result in desertification since there may no longer be enough people to manage the land adequately. Many hillside terraces in Yemen have fallen into disrepair with the exodus of labour to neighbouring oil-rich countries. Examples can also be cited of areas that support large concentrations of people without much degradation, such as around the city of Kano in Nigeria.

# The consequences of desertification

**Desertification reduces the land's resilience to natural climate variability.** Soil, vegetation, freshwater supplies, and other dryland resources tend to be resilient. They can eventually recover from climatic disturbances, such as drought, and even from human-induced impacts, such as overgrazing. When land is degraded, however, this resilience is greatly weakened. This has both physical and socio-economic consequences.

**Soil becomes less productive.** Exposed and eroded topsoil can be blown away by the wind or washed away by rainstorms. The soil's physical structure and bio-chemical composition can change for the worse. Gullies and cracks may appear and vital nutrients can be removed by wind or water. If the water table rises due to inadequate drainage and poor irrigation practices, the soil can become waterlogged, and salts may build up. When soil is trampled and compacted by cattle, it can lose its ability to support plant growth and to hold moisture, resulting in increased evaporation and surface run-off.

**Vegetation becomes damaged.** The loss of vegetation cover is both a consequence and a cause of land degradation. Loose soil can sandblast plants, bury them, or leave their roots dangerously exposed. When pastures are overgrazed by too many animals, or by inappropriate types, edible plant species may be lost, allowing inedible species to invade.

**Some of the consequences are borne by people living outside the immediately affected area.** Degraded land may cause downstream flooding, reduced water quality, sedimentation in rivers and lakes, and siltation of reservoirs and navigation channels. It can also cause dust storms and air pollution, resulting in damaged machinery, reduced visibility, unwanted sediment deposits, and mental stress. Wind-blown dust can also worsen health problems, including eye infections, respiratory illnesses, and allergies. Dramatic increases in the frequency of dust storms were recorded during the Dust Bowl years in the US, in the Virgin Lands scheme area in the former USSR in the 1950s, and in the African Sahel during the 1970s and 1980s.

**Food production is undermined**. Desertification is considered a major global environmental issue largely because of the link between dryland degradation and food production. A nutritionally adequate diet for the world's growing population implies tripling food production over the next 50 years. This will be difficult to achieve even under favourable circumstances. If desertification is not stopped and reversed, food yields in many affected areas will decline. Malnutrition, starvation, and ultimately famine may result. The relationship between soil degradation and crop yields, however, is seldom straightforward. Productivity is affected by many different factors, such as the weather, disease and pests, farming methods, and external markets and other economic forces.

**Desertification contributes to famine.** Famine typically occurs in areas that also suffer from poverty, civil unrest, or war. Drought and land degradation often help to trigger a crisis, which is then made worse by poor food distribution and the inability to buy what is available.

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NATIONS UNIES

**Desertification has enormous social costs.** There is now increased awareness of the relationship between desertification, movements of people, and conflicts. In Africa, many people have become internally displaced or forced to migrate to other countries due to war, drought, and dryland degradation. The environmental resources in and around the cities and camps where these people settle come under severe pressure. Difficult living conditions and the loss of cultural identity further undermine social stability.

**Desertification is a huge drain on economic resources.** There is little detailed data on the economic losses resulting from desertification, although an unpublished World Bank study suggested that the depletion of natural resources in one Sahelian country was equivalent to 20% of its annual Gross Domestic Product (GDP). At the global level, it is estimated that the annual income foregone in the areas immediately affected by desertification amounts to approximately US$ 42 billion each year. The indirect economic and social costs suffered outside the affected areas, including the influx of "environmental refugees" and losses to national food production, may be much greater.

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# Action programmes for combating desertification

**The Convention to Combat Desertification will be implemented through national action programmes.** Donors and affected countries will consult together on their respective roles in supporting these programmes, which will be developed with the full participation of local communities. Once the (significant) effort has been made to design an overall programme, it should be possible to initiate specific projects and activities within its framework with minimal paperwork and bureaucracy. Because programmes need to be adapted to particular regional circumstances, most of the specific requirements are described in the four regional implementation annexes for Africa, Asia, Latin America, and the Northern Mediterranean. (Most of the following is taken from the highly detailed African annex.)

**Programmes will start with long-term strategies and priorities.** This is essential for providing continuity for long-term programming and for enabling governments to coordinate and administer their resources more effectively. Programmes will address the underlying causes of desertification and pay particular attention to preventive measures. They will consider all aspects of the problem – loss of agricultural productivity, reduced vegetation cover, soil erosion, socio-economic costs, and so on.

**Local communities will play a key role in formulating programmes.** They will also be active in designing and carrying out the resulting projects. Ongoing discussions and effective communication between the local and national levels will be vital. In this spirit, programmes must be sufficiently flexible to accommodate new initiatives and local adaptations as circumstances change. The end result should be an evolving programme that is "owned" by the very people who most depend on and understand the land.

**National governments will commit themselves to providing an "enabling environment".** Communities can only play a leading part in carrying out a programme if the national government removes obstacles and provides support. This will mean strengthening existing legislation and, when necessary, enacting new laws. For example, the government may adopt long-term policies encouraging greater decentralization of political power. Or it may introduce reforms granting people greater security of land tenure. Other important steps might be effective institutions for resolving conflicts over land and other resources, energy policies that encourage sustainable woodland management or the replacement of fuelwood by other energy sources, and economic reforms that promote investment and reduce poverty.

**Action programmes will also specify the practical steps and measures to be taken.** Specific measures to improve the economic environment could include creating financial instruments suited to local needs or introducing drought-resistant crops. Measures to conserve natural resources could involve diversifying energy sources away from the uncontrolled gathering of fuelwood. Other measures could include promoting research activities, drought contingency plans, and improved early warning systems.

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UNITED NATIONS
NATIONS UNIES

**Efforts to combat desertification will be fully integrated with other development programmes.** Reversing land degradation and alleviating poverty go hand in hand. Both involve improving food security, educating and training people, strengthening the capacity of local communities, and mobilizing non-governmental organizations. Similarly, because desertification affects and is affected by environmental concerns such as biological diversity and climate change, national action programmes need to be integrated with the programmes dealing with these issues.

**Programmes will specify the resources available and those still needed.** Part of the national budget must be clearly ear-marked for efforts to combat desertification and drought. The amount will vary according to national conditions and capabilities. At the same time, action programmes will seek to mobilize substantial financial resources from external sources. The requirements for technical cooperation will also be identified and prioritized.

**Subregional and regional action programmes can help to harmonize and strengthen national programmes.** They will be designed through consultations among the affected countries of each region (e.g. Africa) and sub-region (e.g. West Africa). In addition to boosting the efficiency of national programmes, they could promote joint programmes for the sustainable management of shared rivers and other cross-boundary ecosystems. They could also promote better cooperation among scientific and technical institutions.

**Relevant parts of the Convention:** Articles 4, 5, 8, 9, 10, and 11, and Regional Implementation Annex for Africa Articles 4, 8, and 9.

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# Partnership arrangements between donors and affected states

**The Convention to Combat Desertification aims to improve the channeling and investment of official development aid.** It recognizes that, in this era of tightening foreign aid budgets, development aid must be used as effectively as possible. Donors need to be confident that their contributions are well-spent. Recipients need to get the maximum benefit from the limited sums available.

**The Convention expresses a consensus on the lessons of the past.** Over the years, a great deal of insight has been gained on how to improve the process of development aid. For example, it is generally agreed that many past aid efforts suffered because they were "supply driven" by the financing agency, handled top-down by planners, or delivered without adequate coordination at all levels. These insights are recognized in the Convention.

**Partnership arrangements will improve communication and coordination between donors and recipients.** A vital part of the Regional Implementation Annex for Africa, these agreements will spell out explicitly the role of each partner, including donor agencies and governments, recipient governments, and non-governmental organizations (NGOs). This should help to harmonize efforts and maximize the impact of assistance. Partnership arrangements would be part of, or associated with, national action programmes. They could be used for many different purposes, such as mobilizing financial resources, reorienting assistance mechanisms to fit the Convention's approach, making inventories of funding sources, or developing new models of technological cooperation.

**These agreements will be negotiated through a consultative process.** Traditionally, consultations have been initiated and led by a donor agency. Under the Convention, however, consultations would be initiated and managed by the recipient country itself. They will be a continuous process. The resulting aid package should better serve the communities affected by desertification.

**The consultative process will start within the affected country.** The government could set up a coordinating body to act as a forum for consultations. To prepare the way it might want to promote the Convention through public awareness and training activities. It would then need to gain the participation of policymakers, community leaders, members of non-governmental organizations, and others responsible for the resulting activities. They would work together to evaluate past efforts, identify the country's needs, and set priorities. This participatory approach should result in a national action programme and a national consensus on how to work with international partners.

**The recipient country must link up with international partners.** These partners could include donor governments, regional development banks, and other

UNITED NATIONS
NATIONS UNIES

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international agencies. At the same time, donor partners, particularly developed country governments, could also develop a consultation process among themselves to structure their dialogue with recipient governments. This would help them to coordinate their policies, minimize overlaps and gaps, and evaluate and respond to requests for assistance.

**Non-governmental organizations are granted an unprecedented role in this process.** NGOs tend to be well-organized, close to the community level, and able to draw on a pool of skilled and experienced people. The Convention recognizes these strengths and makes specific provisions for NGOs to become active partners in these partnership arrangements.

**Relevant parts of the Convention:** Articles 10 and 14, plus Regional Implementation Annex for Africa Articles 6, 8, 9, 18, and 19.

# Participatory development: A bottom-up approach to combating desertification

**What role do local communities have under the Convention to Combat Desertification?** Traditional development planning has too often been "top-down". Outside experts start the process by defining objectives, activities, and expected outputs. Sometimes they visit the area to consult local authorities, inform them of the plan, and invite the community to help execute projects. The Convention turns this approach upside-down. The spirit and letter of the Convention reflect the philosophy of participatory development. Action programmes to combat desertification are now to originate at the local level and be based on genuine local participation.

**Why is local participation in project planning so important?** Over the past two decades, programmes designed with little reference to the perceptions and capacities of local people have often failed. Outsiders cannot necessarily identify local needs and priorities or figure out how best to meet them. Local communities have valuable experience and a special understanding of their own environment. When the responsibility for natural resource management is taken away from them, their use of land and other natural resources can become highly inefficient. The result is often land degradation. Participatory development recognizes the rights of local communities over their resources. They have a greater stake than anyone else in improving agricultural productivity while ensuring the long-term ecological balance of their fragile lands. In addition, local participation in planning and decision-making is essential for building local capacity.

**Who should participate?** Those most directly involved in the management, use, and benefits of a particular resource must be active participants. In the case of desertification, small farmers (both men and women), pastoralists, nomads, and other local land users are clearly vital to the process, as they have the most intimate contact with the land. Local leaders – village elders, traditional chiefs, representatives of community groups – and regional and national officials are also essential for mobilizing action. Technical experts, researchers, non-governmental organizations (NGOs), and voluntary associations are needed for the invaluable skills and expertise they can bring.

**When should local participation start?** At the very inception of a development initiative. To begin with, the objectives and planned activities should be identified through a participatory process. Once a programme has started, the participants will need to make regular reviews of the progress made and obstacles encountered. When each phase is completed, they should all be involved in evaluating its outcome and deciding on the next steps.

**How should the process be initiated?** The unique culture of each society shapes its patterns of decision-making and communication. Activities *must* originate at the local level, but sometimes additional encouragement may be needed to make people feel that they truly own the process of participatory development. NGOs may have a key role to play here. It may also be necessary for the government to delegate more decision-making authority to the local grassroots level.

UNITED NATIONS
NATIONS UNIES

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**How can participation be strengthened?** The participatory process is time-consuming and labour-intensive. There are no short-cuts. Awareness campaigns may be needed to educate the public about the Convention and about national action programmes. Agricultural extension services and NGOs can help to build up the community's capacity for "participatory programming". Local decision-making procedures may have to be adapted and strengthened. The community may have to go through a long learning and confidence-building process in order to take full advantage of the new resources it will now receive and manage directly. Due attention should also be paid to involving the more marginalized social groups.

**How should local inputs be used at the regional and national levels?** At the local level, discussions are likely to take place in informal groups as well as in organized meetings. The results need to be brought forward to the provincial level to ensure inter-village cooperation and the coordinated management of the regional environment. At the national level, all of this input will need to be translated into a national action programme. In addition, the national government will need to respond to local aspirations by providing an "enabling environment", including public infrastructure and technical assistance. It will also serve as the central contact point with foreign aid providers. Ideally, information and ideas will flow back and forth continuously between the various levels.

**Relevant parts of the Convention:** Articles 3, 5, 9 and 10, plus Regional Implementation Annex for Africa Articles 6 and 9.

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# The role of science and technology

**The Convention to Combat Desertification establishes a Committee on Science and Technology.** Composed of government representatives, the Committee will advise the Conference of the Parties to the Convention (COP) on scientific and technological matters relevant to desertification and drought. In addition, ad hoc panels of government-nominated experts will provide information and advice on specific issues. These experts will be appointed by the COP on the recommendation of the Committee. They must have field experience and will represent a wide range of disciplines.

**Success in combating desertification will require an improved understanding of its causes and impacts.** There is still much to learn about the linkages between desertification and climate, soils, water, plants, animals, and, in particular, people. Key research areas include climatology and meteorology, soil sciences, hydrology, botany, zoology, ecology, and the social sciences. Action programmes for combating desertification will outline the research priorities for particular regions and subregions, reflecting local conditions. The Committee on Science and Technology will also advise on research priorities.

**The Convention promotes international cooperation in scientific research and observation.** The Parties to the Convention agree to integrate and coordinate the collection, analysis, and exchange of scientific data and information. They will also ensure the systematic observation of land degradation in an effort to better understand and assess the processes and effects of drought and desertification. The Convention stresses the need to coordinate such efforts with other related Conventions, in particular those dealing with climate change and biological diversity.

**New technologies and know-how should be developed, transferred to affected countries, and adapted to local circumstances.** Modern communications, satellite imagery, and genetic engineering are only some examples of modern tools that can help to combat desertification. Better weather forecasts and alerts can help to maintain or increase the land's productivity while improving food security and local living conditions. So too can new plant and animal varieties that are resistant to pests, diseases, and other dryland stresses. Photovoltaic cells and wind energy may reduce the consumption of scarce fuelwood and thus deforestation. For all these reasons, the Convention commits Parties to promoting technological cooperation. It calls for promoting and financing the transfer, acquisition, adaptation, and development of technologies that help to combat desertification or cope with its effects. These technologies should also be environmentally sound, economically viable, and socially acceptable.

**Local and traditional technologies and know-how should be protected.** People have been coping with the degradation of land and other natural resources at least since the advent of agriculture thousands of years ago. Many local populations have developed techniques for managing soil and water, domesticating plants and animals, and even forecasting the weather. Examples include the terracing of steep slopes in the Andes and Himalayas and the use of irrigation systems around the world since prehistoric times.

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UNITED NATIONS
NATIONS UNIES

Many of these traditional technologies are still in use and have proved their effectiveness over centuries. Too often, however, changes in economic, ecological, or cultural conditions have led people to abandon techniques that could still be valuable today. The Convention therefore states that traditional and local technologies and know-how should be protected. Inventories should be made of such technologies and information about them widely disseminated. Local populations should benefit directly from any commercial use of their techniques.

**The Conference of the Parties will draw scientific and technology researchers into a global network to support the Convention.** Under the leadership of the COP, the Committee on Science and Technology will survey and evaluate existing networks, institutions, agencies, and other bodies working on issues relevant to desertification. It will then promote a global research network committed to supporting the Convention. Scientists world-wide will be encouraged to contribute their know-how and research results to this international effort.

**Affected developing countries need more scientific and technological capacity.** They often suffer from a scarcity of domestic skills, expertise, libraries, and research centres. Many also need improved hydrological and meteorological services. The Convention encourages developed countries to support capacity-building efforts that will enable developing countries to combat desertification more effectively through science and technology.

**Relevant parts of the Convention:** Articles 8, 16, 17, 24, and 25.

# Financing action to combat desertification

**How much money is needed to combat desertification?** It is difficult to estimate just how much money will be needed to achieve the objective of the Convention to Combat Desertification. In large part, the cost will depend on the contents of the national action programmes through which affected countries will seek to implement the Convention. The United Nations Environment Programme (UNEP) estimates that an effective 20-year global effort would cost US$ 10 - 22 billion per year. To put this estimate in perspective, UNEP also calculates that desertification currently causes affected countries to forego some US$ 42 billion in income per year.

**How much money is being spent now?** Neither national budgets nor statistics on international financial flows to developing countries give clear figures on spending to combat desertification. Producing such figures will be an important new task for the Conférence of the Parties to the Convention (COP) and its Global Mechanism (see below).

**What are the major sources of funding?** The largest source of funds is the affected countries themselves. The largest *external* source for Africa is bilateral official development assistance provided on grant or concessional terms. Multilateral bank loans made on a commercial basis are the major external source of funds for Latin America and Asia. Foreign private investment is also important in these regions, although it has been largely untapped in Africa. The World Bank, the International Fund for Agricultural Development (IFAD), regional development banks, and other international financial institutions also play a prominent role, as do United Nations organizations and agencies. Non-governmental organizations (NGOs) are another significant source, particularly in Africa.

**How will action under the Convention be financed?** Unlike its sister conventions on climate change and biological diversity, the Convention to Combat Desertification does not establish a new financial "mechanism" to administer funds for Convention-related projects and activities. Instead, it emphasizes the need to mobilize substantial funding from existing sources and to rationalize and strengthen their management.

**What financial commitments do the Parties make?** Affected developing counties are to allocate adequate resources, given their circumstances and capabilities. Developed countries are to provide "substantial financial resources and other forms of support", including grants and concessional loans through both bilateral and multilateral channels. They also pledge to seek new and additional funding through the Global Environment Facility (GEF) for activities to combat desertification which are also relevant to the GEF focal areas of biological diversity, climate change, and international waters. Furthermore, developed countries will encourage funding from private sector and non-governmental sources, including debt swaps and other innovative means to reduce external debt burdens. Over and above these commitments, any Party can voluntarily provide financial resources to affected developing countries.

UNITED NATIONS
NATIONS UNIES

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**How will the flow of funding from donors to affected countries be coordinated in order to ensure maximum effectiveness?** At its first session, in October 1997, the Conference of the Parties will name an organization to house a "Global Mechanism". While the financial mechanisms for climate change and biodiversity actively administer funds, this Global Mechanism will only coordinate and facilitate. It will support efforts to boost the effectiveness and efficiency of how existing financial sources are used to combat desertification, and it will promote access to new and innovative financial resources. For example, the Mechanism will prepare an inventory of relevant cooperation programmes, offer advice on innovative financing methods and sources of financial assistance, help governments to coordinate cooperation activities at the national level, and provide interested Parties and organizations with information on funding patterns. It will operate under the authority and guidance of the COP and its operating procedures will be agreed between the COP and the host organization.

**How will funding be channeled to the projects and activities where it is most needed?** The Convention stresses that funds must be raised and then allocated using an integrated, "bottom-up" approach involving the full participation of local communities. The Regional Implementation Annex for Africa states that recipient governments will establish policies and procedures for channeling resources more effectively to groups at the local level. They will enable non-governmental organizations to assume an unprecedented role in ensuring that local communities obtain the external resources they need to carry out their own programmes. Governments will also provide a macroeconomic framework conducive to mobilizing financial resources and will ensure that the financial package is fully integrated into their overall national development programme. For its part, the COP will promote national desertification funds and other mechanisms for directing funds to the local level.

**Relevant parts of the Convention:** Articles 5, 6, 13, 20 and 21, plus Regional Implementation Annexes for Africa (Article 15), Latin America and the Caribbean (Article 6), and Asia (Article 6).

# Institutions and procedures of the Convention

**The Convention to Combat Desertification was negotiated under the auspices of the United Nations.** In June 1992, the United Nations Conference on Environment and Development (UNCED – also known as the Rio Earth Summit) recommended that the United Nations General Assembly establish an Intergovernmental Negotiating Committee (INCD) to prepare a convention to combat desertification in those countries experiencing serious drought and/or desertification, particularly in Africa. The Committee was established in early 1993. It held five preparatory sessions before adopting the Convention on 17 June 1994 in Paris. The Convention was opened for signature in Paris on 14-15 October 1994.

**The Convention entered into force on 26 December 1996, 90 days after it had been ratified by 50 countries.** Over 115 countries have signed it. After a government's representatives have signed the Convention, the national parliament or other designated authority must ratify it. The government then sends its instrument of ratification to the United Nations in New York, which acts as the Depository. Only after the 50th such ratification was received did the 90-day countdown begin for the Convention to enter into force. The first 50 ratifiers became Parties and legally responsible for carrying out their treaty commitments, while other governments will become Parties 90 days after they ratify. In the meantime, many of the Convention's provisions are being carried out voluntarily on the basis of a Committee resolution on urgent action in Africa.

**The Conference of the Parties (COP) will oversee the implementation of the Convention.** It is established by the Convention as the supreme decision-making body, and it will comprise all ratifying governments (and regional economic integration organizations, such as the European Union). The COP will hold its first session in October 1997 in Rome and will continue to meet at least once a year for its first four sessions. One of its main functions will be to review reports submitted by the Parties detailing how they are carrying out their commitments. The COP will make recommendations on the basis of these reports. It also has the power to make amendments to the Convention or to launch negotiations for new annexes, such as additional regional implementation annexes. In this way, the COP can guide the Convention as global circumstances and national needs change. To assist the COP, the Convention provides for several other supporting bodies and allows the COP to establish additional ones if necessary.

**The COP will be supported by a secretariat.** Like other Convention secretariats, this one will service the COP by arranging its meetings, preparing documents, coordinating with other relevant bodies, compiling and transmitting information, and facilitating consultations and other actions. Affected developing countries should also be able to rely on the secretariat for information or advice on, for example, organizing their national consultation process.

**The Committee on Science and Technology will advise the COP on scientific and technological matters.** It will identify priorities for research and recommend ways of strengthening cooperation amongst researchers. It could also advise

UNITED NATIONS
NATIONS UNIES

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on such issues as joint research programmes for new technologies. The COP may set up ad hoc panels to assist with specialized issues. The panels would draw their members from a roster of government-nominated experts.

**A Global Mechanism will help the COP to promote funding for Convention-related activities and programmes.** This Mechanism will not raise or administer funds. Instead, it will encourage and assist donors, recipients, development banks, non-governmental organizations (NGOs), and others to mobilize funds and to channel them to where they are most needed. It will seek to promote greater coordination among existing sources of funding, and greater efficiency and effectiveness in the use of funds. The Global Mechanism will be under the authority of the COP, but the COP will identify another organization to house and operate it.

**While only national governments that ratify the Convention can be members of the COP, other bodies and organizations can also participate.** International conventions are, of course, legal agreements among sovereign countries. However, this Convention makes special provision for national and international agencies and qualified NGOs to attend the COP's meetings and to contribute to its work. NGOs have not only played a prominent role in the Convention process, but they continue to raise public awareness of the Convention and to lobby parliamentarians for its speedy ratification. For their part, international and regional organizations provide crucial information, expertise, contacts, and research and managerial capabilities.

**The Intergovernmental Negotiating Committee will continue to meet until the COP takes over.** Comprising over 110 governments, the Committee has been meeting about twice a year to develop recommendations for the first session of the COP. This should allow the COP to start implementing the Convention more quickly and effectively than it otherwise could. The Committee is being serviced by a Geneva-based interim secretariat which is administered by the United Nations Department of Policy Coordination and Sustainable Development (DPCSD).

**Relevant parts of the Convention:** Parts IV, V, and VI.

# Desertification, global change, and sustainable development

**The Convention to Combat Desertification cannot be viewed in isolation from other efforts to promote sustainable development.** The Convention text refers frequently to sustainable development, climate change, biological diversity, water resources, energy sources, food security, and socio-economic factors. The interactions between these issues and desertification are often not fully understood, but they are clearly important. The Convention therefore emphasizes the need to coordinate desertification-related activities with the research efforts and response strategies inspired by these other concerns.

**Efforts to combat desertification complement efforts to protect biological diversity.** While many people tend to identify the issue of biodiversity with tropical rain forests, dryland ecosystems also contain a rich biota, including plant and animal species not found elsewhere. Many of humanity's most important food crops, such as barley and sorghum, originated in drylands. Though disappearing fast, indigenous varieties remain a vital resource for plant breeders because of their resistance to stresses such as disease. Dryland species also provide drugs, resins, waxes, oils, and other commercial products. For example, drylands supply one-third of the plant-derived drugs in the US. Finally, drylands provide critical habitats for wildlife, including large mammals and migratory birds. These habitats are particularly vulnerable to land degradation.

**Land degradation affects the quantity and quality of freshwater supplies.** Drought and desertification are associated with lower water levels in rivers, lakes, and aquifers. For example, unsustainable irrigation practices can dry the rivers that feed large lakes; the Aral Sea and Lake Chad have both seen their shorelines shrink dramatically in this way. Water crises are raising political tensions in many parts of the world, particularly where rivers and lakes are shared across borders. Land degradation is also a leading source of land-based pollution for the oceans, as polluted sediment and water washes down major rivers.

**Natural climate variations can strongly affect drought patterns.** Currently the best understood link between global climate variability and drought involves sea-surface temperature patterns. For example, the El Niño-Southern Oscillation, or ENSO, events, are associated with a warming of the eastern equatorial Pacific; they were especially frequent in the 1980s and early 1990s and occurred in tandem with widespread droughts in southern Africa and elsewhere. Research into such climate patterns is starting to improve seasonal rainfall predictions. Efforts to strengthen predictions are an important part of national action programmes to combat desertification and will help dryland farmers and herders to prepare better for droughts.

**Climate change could worsen the effects of desertification.** According to the United Nations Framework Convention on Climate Change, "countries with arid and semi-arid areas or areas liable to floods, drought and desertification ... are particularly vulnerable to the adverse effects of climate change." Scientists cannot yet predict how rising atmospheric levels of greenhouse gases will affect the global rate of desertification.

UNITED NATIONS
NATIONS UNIES

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What they can predict is that changes in temperature, evaporation, and rainfall will vary from region to region. As a result, desertification is likely to be aggravated in some critical areas but eased in other places.

**Desertification may temporarily affect climate change.** Land degradation tends to reduce surface moisture. Because less water is available for the sun's energy to evaporate, more energy is left over for warming the ground and, as a result, the lower atmosphere. Meanwhile, wind erosion in drylands releases dust and other particulates into the atmosphere. By absorbing the sun's rays or reflecting them back out into space, they may help to cool the Earth's surface. However, the energy they absorb can heat the lower atmosphere and in this way reduce temperature differences between the atmosphere's vertical layers; this can lead to fewer rainshowers and thus drier land. Finally, the periodic burning of arid and semi-arid grasslands, often associated with unsustainable slash-and-burn agriculture, emits greenhouse gases. So does the unsustainable use of fuel-wood and charcoal, a major cause of land degradation. On the other hand, reforestation is likely to have a cooling effect and is also, of course, an important way to combat land degradation.

**Desertification exacerbates poverty and political instability.** It contributes significantly to water scarcity, famine, the internal displacement of people, migration, and social breakdown. This is a recipe for political instability, for tensions between neighboring countries, and even for armed conflict. Evidence is mounting that there is often a strong correlation between civil strife and conflict on the one hand and environmental factors such as desertification on the other.

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