1. DESERTIFICATION IS A GLOBAL PROBLEM

Desertification is not the natural expansion of existing deserts but the degradation of land – this year’s theme on June 17, the World Day to Combat Desertification - in arid, semi-arid, and dry sub-humid areas. It is a gradual process of soil productivity loss and the thinning out of the vegetative cover because of human activities and climatic variations. Over 250 million people are directly affected by desertification and a third of the earth’s land surface, or over 4 billion hectares, is threatened by desertification. In addition, the livelihoods of some one thousand million (or one billion) people who depend on land for most of their needs and usually the world’s poorest in over one hundred countries are threatened.

But its effects are not only felt by those directly affected. As a consequence of desertification, not only are the marginalized people living in drylands hit the hardest with the aggravation of poverty, worsening of the health and food situation and a lack of food security, but as they are forced to seek other means of livelihoods, conflicts and mass migration spill over to urban centers and abroad.

In fact, 135 million – the equivalent to the population of Germany and France combined - are at risk of being displaced as a consequence of desertification. Some 60 million people are expected to eventually move from the desertified areas in Sub-Saharan Africa towards north Africa and Europe from 1997 to 2020. Long term studies on West Africa project a constant migratory flow from Sahelian regions to coastal cities, whose population is expected to grow 3.5 times the numbers in 1997 to 271 million in 2020. According to the Natural Heritage institute, there is a high correlation between migration, poverty and environmental stress. Every year between 700,000 and 900,000 Mexicans leave their rural dryland homes to find a living as migrant workers in the United States. 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. A study carried out in 1994 show that half of the 50 armed conflicts that year had environmental causal factors characteristic of the drylands.

Further, though desertification affects Africa the most, where two-thirds of the continent is desert or drylands and where a large percentage of the population is dependent on natural resources for their livelihoods, it is not problem confined to the drylands in Africa. Over 30% of the U.S. land is affected by desertification. One quarter of Latin America and the Caribbean is desert and drylands. In Spain, one fifth of the land is at risk of turning into deserts. Some 70 percent of the 5.2 billion hectares drylands used for agriculture or 30 percent of total land areas of the world are already degraded and threatened by desertification.

In China, since the 1950s, sand drifts and expanding deserts have taken a toll of nearly 700,000 hectares of cultivated land, 2.35 million hectares of rangeland, 6.4 million...
hectares of forests, woodlands and shrub lands. The estimated annual rate of spread of land turned into deserts, particularly from the mid-1990s to 2000, is 3,436 km², compared to an annual expansion rate of 1,560 km² in the 1970s and 2,100 square km² in the 1980s. A considerable number of villages have been lost to expanding deserts, sand drifts, dune movement and sandstorms. It is estimated that some 24,000 villages, 1,400 km of railway lines, 30,000 km of highways, 50,000 km of canals and waterways are subject to constant threats of desertification. Dust storms from deserts in northern China and Mongolia are blowing as far as Korea and Japan and across the Pacific Ocean, shutting down airports and closing schools. (Sources: 1. China’ National Action Programme, CCICCD, 1996; 2. Desertification and rehabilitation and Ecology Restoration in China: Highlight, Secretariat of CCICCD,1999; 3. “Desertification: Urgent Challenge China Faces,” Kaiming Press, 2000).

Estimates are that in 2025, there will be considerably less arable land available worldwide than it was in 1990. The decline is expected to be two-thirds in Africa, one-third in Asia and about one-fifth in South America. The available water resources in dry zones are expected to be much lower than the global average. In 19 selected countries in the dry zones of Africa and the Far East 1,300 cubic meters of water were available per head in 1990-. In the year 2025, only half of that – 650 cubic meters per head – are expected to be available.

Desertification is a huge drain on economic resources as well. 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.

Desertification also has grave natural consequences. It makes land areas flood-prone, causes soil salinisation, results in the deterioration of the quality of water, silting of rivers, streams and reservoirs. 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. The world’s drinking water supplies have fallen by almost two-thirds since 1950 and every year, twelve million people die as a result of water shortages or contaminated drinking water. Land degradation is also a leading source of land-based pollution for the oceans, as polluted sediment and water washes down major rivers.

2. CAUSES OF DESERTIFICATION

Desertification is caused primarily by human activities and climate variations. 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. What is alarming is that though the land’s topsoil, if mistreated, can be blown and washed away in a few seasons, it takes centuries to build
up. 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.

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 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.

Desertification is both the cause and consequence of poverty. Poverty forces the people who depend on land for their livelihoods to overexploit the land for food, energy, housing and source of income. Past experiences have unfortunately blamed the very victims of desertification for causing it, without addressing the underlying forces that are driving them to overexploit the land. It is poverty that forces the people of the drylands to extract as much as they can from the land, and produces the imperative for short-term survival that gives them no choice but to act against their long-term interests.

For example, in Zambia, where the percentage of households living below the poverty line rose from 68% in 1991 to 78% in 1996, 72% of energy sources come from wood fuel. In 1998, it was reported that households consumed 88% of firewood and 96% of charcoal, with 85% of urban households using charcoal for cooking and heating (Siamwiza, 1999). Consequently, 250,000 to 300,000 ha of land per annum were deforested on average and cultivable land dropped by 30% from 1,004,300 ha in 1989-90 to 701,500 in 1997/98. (Agricultural Statistical Bulletin, Policy and Planning Division, MAFF, 1999/2000) The human and livestock demographic pressure together with inappropriate national land tenure have ruptured the environmental equilibrium in many places.

Therefore, any effective strategy must address poverty at its very center. It must take into account the social structures and land ownership as well as pay proper attention to education, training and communications in order to provide the fully integrated approach which alone can effectively combat desertification.

3. Desertification, Global Climate and Biodiversity

Desertification is closely linked with global climate change and loss of biodiversity.
Synergies are therefore being sought between the three so-called Rio conventions (Convention on Climate Change (UNFCCC) and Convention on Biodiversity (CBD)) to widen the impact of measures undertaken. It underlines the need to coordinate activities related to environment protection and natural resource management and the complementary nature of the three conventions.

This includes the preservation of agricultural biodiversity – animal and plant genetic diversity – which is essential to promoting appropriate methods and practices of sustainable agriculture and preventing desertification. Dryland species not only remain a vital resource for plant breeders because of their resistance to disease, they also provide drugs, resins, waxes, oils and other commercial products. In fact, drylands supply one-third of the plant-derived drugs in the United States. They also provide critical habitats for wildlife and contain a rich biological diversity, including flora and fauna not found elsewhere. These habitats are particularly vulnerable to land degradation.

Desertification is equally closely linked with climate change. Land may be further degraded and eroded due to severe droughts and flooding from climate change. According to a synthesis report published in 2001 by the Intergovernmental Panel on Climate Change, “meeting the needs for increased agricultural production has the potential to increase global rates of biodiversity loss, climate change, and desertification.” The periodic burning of arid and semi-arid grasslands, often associated with unsustainable slash-and-burn agriculture, emits greenhouse gases. Also, “decreases of water availability in parts of a warmer world are projected in areas like southern Africa and countries around the Mediterranean. Because of sea-level rise, many coastal systems will experience saltwater intrusion into fresh groundwater and encroachment of tidal water into estuaries and river systems, with consequential effects on freshwater availability.”

On the other hand, afforestation in degraded areas not only helps to combat desertification, but also to protect against climate change and loss of biodiversity. The conventions can also complement each other in the collection of data, processing of information, and building of institutional capacities for sustainable development.

4. UNCCD and Good Governance

The first globally coordinated attempt to combat desertification was launched in the aftermath of the great Sahelian drought and famine of 1968-1974 in which over 200,000 people and millions of their animals died. The UN Sudano-Sahelian Office was set up in 1973, initially to assist nine drought-prone countries in West Africa, though its activities spread. Assistance was subsequently given to 22 countries south of the Sahara and north of the Equator. Around the same time, sub-regional organizations were set up in Africa. Also, the International Fund for Agricultural Development (IFAD) established its Special Programme for Sub-Saharan Countries Affected by Drought and Desertification in 1985, after another crippling drought. On a global plane, the issue was first discussed at the UN Conference on Desertification held in Nairobi, Kenya in 1977. But due to a lack of
support, both administrative and financial, attempts to efficiently tackle the problem of
desertification were crippled.

Therefore in 1992, the United Nations Conference on Environment and Development
(UNCED) or so called Rio Earth Summit recommended the elaboration of a Convention to
Combat Desertification (UNCCD). The Convention, the only convention stemming from
a direct recommendation of the Conference’s Agenda 21, was adopted in Paris on 17
June 1994 and entered into force in December 1996. It is the first and only internationally
legally binding framework set up to address the problem of desertification. Up to date,
179 countries have either ratified or acceded to it and five sessions of the Conference of
the Parties (COP) have been held. (COP 1: Rome, October 1997; COP 2: Dakar,

The Convention is based on the principles of participation, partnership and
decentralization – the backbone of Good Governance. It consciously advocates a spirit of
partnership as the basis upon which the states affected by desertification and donor
countries should conduct their relations, unlike traditional top-down approaches that
failed.

The Convention obliges its parties states to guarantee that among all the relevant ‘actors’
– local communities, women’s and youth groups, NGOs, national governments, donor
agencies and scientific research institutions – cooperate by way of deciding on priorities,
developing long-term programmes and implementing these. It insists on full and
effective participation by the affected groups in the decision-making, planning,
implementing and evaluating processes of the programmes.

The Convention also encourages the protection of traditional know-how that are
conducive to sustainable development while also facilitating the exchange of latest data,
information and technology through its Committee on Science and Technology (CST).

The Convention has now reached maturity and is evolving from the preparation of
national action programmes to their implementation. Assessment of the national action
programmes by the parties in 2000 and 2001 showed that the strengthening of capacities
for key actors at the local level proved successful in identifying and addressing
challenges linked to sustainable development. The bottom-up approach of the
Convention helped strengthen relationships between governments and local communities,
particularly in larger countries. It also favored the decentralized involvement of
stakeholders and natural resources end users in the development process.

Also, a Committee for the Review of the Implementation of the Convention, decided
upon at COP 5 last year and the first session of which will be held in November, will play
a decisive role in the future in facilitating country parties prioritize their activities and
policies in their fight against desertification. It will review national reports detailing
progresses as submitted in 1999 and 2000 by African countries and other parties to the
Convention, respectively.
Furthermore, the Convention having been in place for five years, sub-regional and regional organizations have begun facilitating the exchange of information on best practices and lessons learned among countries for efficient South-South and North-South cooperation. Specific recommendations were also drawn up by a panel of eminent personalities comprised of academics, government officials and officials of international organizations to the World Summit on Sustainable Development (Rio +10) to be held in August-September this year. Work is underway between the UNCCD and other international organizations dealing with the environment and development issues such as the Convention on Climate Change (FCCC) and the Convention on Biological Diversity (CBD) to find common grounds and avoid duplication.

However, the implementation process of the national action programmes has been hampered and largely constrained, as pointed out by parties at the Ad Hoc Working Group session in 2000, due to a lack of predictable financial resources. It is hoped that the World Summit for Sustainable Development in August-September this year will call for the establishment of the Global Environment Facility (GEF) as the financial mechanism of the convention and include land degradation as its fifth focal area.