Overcoming One of the Greatest Environmental Challenges of Our Times:

Re-thinking Policies to Cope with Desertification

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A Policy Brief based on The Joint International Conference:
"Desertification and the International Policy Imperative"
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Foreword

Over the past few years, it has become increasingly clear that desertification is one of the most pressing global environmental challenges of our time, threatening to reverse the gains in sustainable development that we have seen emerge in many parts of the world. It is a process that can inherently destabilize societies by deepening poverty and creating environmental refugees who can often add stress to areas that may not yet be degraded. The impacts of desertification are exacerbated by political marginalization of the dryland poor, by the slow growth of health and education infrastructure and by the lack of livelihood alternatives to resource depleting agricultural practices.

We also have mounting evidence that desertification leads to strong adverse impacts on non-drylands. The most common and visible are dust storms, typically originating in the Sahara and Gobi deserts and affecting the entire Northern hemisphere. In addition to dust storms, desertification is directly linked to downstream flooding, impairment of global carbon sequestration capacity, and regional and global climate change. These impacts on the natural environment are also linked to societal impacts. For example, some experts estimate that the number of people at risk of displacement due to severe desertification will exceed 50 million over the next ten years. Indeed, such migration of people is a top-level political issue in many countries like Algeria, Morocco, the United States, France, Spain and Italy.

It is also becoming increasingly obvious that our failure as a global community to address this problem in part relates to our inability to formulate effective and successful policies. While the magnitude of desertification has grown by the day, we see a dwindling interest in addressing this issue as a full-blown global challenge. Policies, whether implemented at the national or international level, are failing to take full account of this slow, creeping problem when addressing poverty and economic development at large. Some forces of globalization, while striving to reduce economic inequality and eliminate poverty, are in actuality contributing to the worsening desertification. Perverse agricultural subsidies are one such example.

UNU has a mission to bridge the divide between the research and policy-making communities in order to address pressing global challenges such as desertification. And this is indeed the challenge of today: How can we pull all strands of this human, social and economic development together in a way that we arrive at success for the people most threatened by desertification? We have at our disposal today immense human, technological, institutional and even financial resources to overcome this challenge. What we need is a coherent, cohesive and integrated policy approach.

To date, there have been few examples of effective national efforts to combat desertification. This is because national governments are typically faced with the problem of insufficient resources to address the problem, and ineffective policy integration. This is often further exacerbated by poor implementation at the local level due to lack of capacity and societal motivation.

It is imperative that effective policies and sustainable agricultural practices are put in place in order to reverse the decline of drylands, and allow us to meet the Millennium Development Goals (MDGs) by 2015. Foremost among these are measures that protect soils from erosion, salinization and other forms of degradation. Proper land use management policies are needed to protect existing vegetative cover from overgrazing, over-exploitation, trampling and unsustainable irrigation practices. These policies can be further strengthened by creating viable livelihood alternatives for dryland populations and directly linking

them to national strategies to combat desertification and poverty reduction.

On the whole, combating desertification yields multiple benefits at local and global levels. Addressing desertification is a critical and essential part of adaptation to climate change and mitigation of global biodiversity losses. UNU has led the argument over the last decade that such interlinkages in policy formulations must be beneficially exploited.

It is also important to note that formulation of international and global policies for combating desertification have been hindered by a lack of concrete data about the rates and extent of desertification. We must, as the global international community interested in desertification, put monitoring and assessment at the top of our policy agenda.

This brief report summarizes the wealth of experience and expertise present at the Joint International Conference "Desertification and the International Policy Imperative" (17-19 December 2006, Algiers, Algeria). I trust that the recommendations developed by a group of eminent experts will lead to the mobilization of resources and building of capacity in developing countries. I also want to recognize, and express gratitude to, the partners who made possible the organization of this conference. I am particularly grateful for the financial support provided by CIDA, GEF, FAO, ICARDA, UNESCO and the Flemish Government of Belgium.

Let us work together to re-think our policies and strive to overcome one of the greatest environmental challenges of our times: desertification!

Prof. J.A. van Ginkel
UN Under Secretary General,
and UNU Rector

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This report is an outcome of collaborative partnerships and efforts of dedicated individuals. The efforts started with the organization of a multi-agency, global conference that systematically tackled the issue of policy imperatives to overcome desertification. These efforts continued after the conference, as a team of experts synthesized the findings of the conference into a coherent, focused and readable report. It complements the published proceedings of the conference (available as a book from UNU-INWEH).

The conference organization would not have been possible without the support of partners, which included: Government of Algeria, Government of Iceland, Flanders Government of Belgium, Canadian International Development Agency (CIDA), Food and Agriculture Organization of the UN (FAO), Global Environment Facility (GEF), International Center for Agricultural Research in Dry Areas (ICARDA), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), The Sahara and Sahel Observatory (OSS), UN Convention to Combat Desertification (UNCCD), UN Development Programme (UNDP), UN Environment Programme (UNEP), UN Education, Science and Culture Organization (UNESCO), and UN University (UNU). We are particularly grateful to the Government of Algeria, Government of Iceland, Flanders Government of Belgium, CIDA, FAO, GEF, ICARDA, and UNESCO for providing financial support for this conference.

A number of individuals played a key role in ensuring the success of the conference. Invaluable leadership and support were provided by His Excellency Mr. Abdelaziz Bouteflika, President of the People's Democratic Republic of Algeria and His Excellency Mr. Cherif Rahmani, the Algerian Minister of Land Planning and Environment. A number of heads of institutions were present to lend their support to the conference; these included Ambassador Hama Arba Diallo (UNCCD Executive Secretary), Mr. Shafqat Kakakhel (UNEP Deputy Executive Director), Mr. Ahmed Djoghlaf (UNCBD Executive Secretary), Ms. Monique Barbut (GEF CEO), Mr. Youba Sokona (OSS Executive Secretary), and Dr. Mahmoud Solh (ICARDA Director General). The logistical operations of the conference were facilitated by a number of dedicated individuals. These include Mr. Abdelkader Benhadjoudja, Mr. Djamel Echirk, and their planning team at the Algerian Ministry of Land Planning and Environment. Strong support was also provided by Dr. Mohamed El Mourid (ICARDA Regional Office in Tunis), and Ms. Wafa Essahli (Directrice Chargée du Développement Rural Communauté des Etats Sahélo-Sahariens). The UNU team comprised Zafar Adeel, Iwao Kobori, Ms. Caroline King, Ms. Harriet Bigas, Ms. Ann Caswell, Ms. Corenne Agboraw, Mr. Luohui Liang, and Mr. Terry Collins.

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1 Summary for Decision-Makers

Photographer: UNU-INWEH

The Context and Challenges

Desertification has emerged as an environmental crisis of global proportions, currently affecting an estimated 100 to 200 million people, and threatening the lives and livelihoods of a much larger number. As a result of desertification, persistent reductions in the capacity of ecosystems to provide services such as food, water and other necessities, are leading to a major decline in the well-being of people living in drylands. Recent evaluations, such as the Millennium Ecosystem Assessment, clearly demonstrate that there are no signs that the desertification trends are abating on a global scale (Adeel et al., 2005). This situation poses significant policy challenges.

Fundamental policy-relevant questions remain unanswered or are inadequately addressed. Because future desertification can potentially impact one-third of the world's population directly, and has broad, sweeping global impacts, searching questions have to be asked about the current policy regimes, and their apparent failure to reverse desertification trends.

Policies must overcome the notion that aridity and related water-scarcity for human consumption are a *fait accompli*. Aridity is considered as a "fatality" and not an opportunity. Therefore, it is difficult to develop policies that support investment in drylands and to convince ministers of finance to do so. Policies for sustainable management of drylands, thus, have to optimize the use of the limited amounts of available water and build on the comparative advantages of drylands.

Improper synchronization between environmental and developmental priorities at the national level can become a barrier to success. In many instances there exists a differential prioritization of environment and development issues in national agendas. Additionally, environment and development approaches are typically sector-focused and operate vertically with insufficient horizontal analysis and communication.

Intersection of science and policy remains weak at best, and research and scientific endeavor often do not have a timely focus on emerging issues. Insufficient dissemination and use of sound scientific knowledge on dryland degradation to formulate and implement policies, laws, regulations and action programmes vis-à-vis environmental issues remains an ongoing challenge.

Mainstreaming Policies to Combat Desertification

Many challenges remain for the effective mainstreaming of desertification policies within the context of larger social and economic development policies. These include: (a) societal solutions, including economic incentives, to combat desertification are not always considered; (b) scientists do not play a strong enough role in defining public policies; (c) existing policies on land tenure mesh poorly with economic development policies, which are further exacerbated by adverse subsidies and inappropriate incentives; and (d) international influences on national "mainstreaming", particularly in the form of development aid, are typically not molded to the needs of the dryland peoples.

Governments can harness investments in sustainable land management through the reorientation of existing institutions. Governments should explore payment for environmental services to combat desertification that could be used to prevent

unsustainable land use, manage grazing externalities and rehabilitate the land. Rural income incentives, including planting trees, demarcation of pastoral corridors, and rotational pasturing systems, should be encouraged. To facilitate this reorientation, governments should pay particular attention to greater transparency and accountability, the participation of multiple actors, measurable results, and follow-up systems.

Improving the awareness of national factors impinging at the local scale can be important for populations at the community level. Targeted financial incentives and disincentives, as well as awareness-raising, can be used to inform the land owners and users, and consequently engage them directly. Mainstreaming combating desertification requires the capacity building, and education and better communication amongst local populations and policymakers.

National and Regional Experiences

Policies to combat desertification have common elements that surpass the geographical and social context. Even more surprisingly, the effectiveness of policies to combat desertification also surpasses economic barriers, where policy hurdles and solutions are strikingly similar in developed and developing countries.

Coordination at the regional level makes sense because problems and solutions are often similar or shared. The pooling of resources at this scale to jointly address common problems can be more effective than fragmented national approaches. Regional exchanges of knowledge and technologies tend to be convenient and better adapted than international assistance.

In Latin America, policies to combat desertification have been deployed at the national level, limiting any substantial benefits to be gained from regional synchronization. This relates to the absence of strong regional institutions to address desertification. Effectiveness of actions at the national level appears to be waning; the biggest constraint appears to be the lack of sustainable financial mechanisms for implementation.

In West Asia, a relatively strong organizational arrangement is in place to address desertification as an economic and social issue across the West Asian region. Nonetheless, efforts to regionally harmonize action and policies on desertification remain quite limited and constrained. The region lacks a comprehensive approach to combating desertification despite the numerous activities at the national level.

In Africa, continent-wide strategies give significant recognition to desertification as a key factor affecting African development. Institutional arrangements at the sub-continental level are available to further refine and implement policies. There are a number of sub-regional initiatives that are appropriate for joint activities, exchanges and human and institutional capacity building between countries. However, the incorporation and effective integration of regional and sub-regional policies at the national level remains limited.

Opportunities for improved regional coordination of policies exist in many areas:

- South-South cooperation can help alleviate the technological, human resource and economic gaps.
- Improved regional coordination could empower developing regions in trade negotiations, and help reduce trade inequities with developed countries.

- Strengthened regional coordination and improved donor-recipient relations would more effectively secure external cooperation and effective support.
- Systematic assessment of impacts of policy and management interventions across regions would speed up learning processes.

Interlinkages with Climate Change and Biodiversity Loss

More work has to be done to enhance understanding and appreciation of the interlinkages and interdependencies between desertification, climate change and biodiversity. Such work should complement the ongoing discussion and action on developing synergies between the three Rio Convention Secretariats and through the support provided by the Joint Liaison Group.

Structural changes in how the conventions relate to each other are essential. At the Secretariat and administrative level, each convention has its own Constitution, set of priorities and procedures and is at its own stage of evolution and progress, making it difficult to focus sufficiently on the important synergies and interdependencies between poverty reduction, desertification, climate change and biodiversity loss. Pro-active, cross-linked environmental management is called for as a way to directly engage in broader problem-solving.

Carbon sequestration in drylands can play a major role in reversing climate change and providing sustainable livelihoods for drylands people while simultaneously combating desertification. Recent carbon trading approaches can provide one institutional mechanism for capitalizing on this opportunity. International development aid policies should also recognize this in order to maximize the impact of their financial resources.

Future Outlook

Overarching policy reviews, such as the Millennium Ecosystem Assessment, and its continuing follow-up activities, will encourage more integrated, forward-looking policies. Increasing recognition and debate regarding the extent and costs of policy failures will drive better policies for the future. Intergovernmental processes, such as the UNCCD and its implementation mechanisms, will be able to use the findings of such reviews for further improvements in policy formulation. The international development partners are already giving due recognition to the need and significance of overcoming desertification trends.

Learning processes within the UNCCD need to increase the focus on substantive policy discussions. The aim is to enable the UNCCD Secretariat to develop a consensus programme for strengthening the Convention processes and support to interlinked Conventions. Improvements in the interaction of the UNCCD with other development partners, environmental conventions and national governments will enable it to champion better policies at the international level.

Recognition at the policy level of communities' successes in combating desertification magnifies the benefits achieved. The promotion of success stories – also known as "bright spots" – by stakeholders in affected countries, as well as by international agencies, will enable further local benefits from ecotourism, trade and real-estate, in addition to the original achievements in improving ecosystem conservation and productivity.

Synthesis of knowledge – achieved through combining tested traditional knowledge and "modern" sciences – should be geared to developing solutions to desertification. Traditional knowledge on the conservation and sustainable use of natural resources has been largely overlooked or ignored as being "non-scientific." These two streams of knowledge have to be brought closer together and spanning across disciplines dealing with culture, environment and development.

The private sector must be provided with economic incentives to invest in efforts to combat desertification. The engagement of the private sector in providing technical and financial resources has been fairly limited. This can be related to both the absence of appropriate enabling policies and a perceived lack of confidence in the private sector.

2 Introduction: The Policy Context for Combating Desertification

Photographer: UNU-INWEH

Desertification[1] has emerged as an environmental crisis of global proportions, currently affecting an estimated 100 to 200 million people, and threatening the lives and livelihoods of a much larger number. Recent evaluations, such as the Millennium Ecosystem Assessment (MA), completed in 2005, clearly demonstrate that as a result of desertification, persistent reductions in the capacity of ecosystems to provide services such as food, water and other necessities, are leading to a major decline in the well-being of people living in drylands[2]. This situation poses significant policy challenges.

Desertification has major economic and social impacts. The annual loss of income as a result of land degradation is estimated at US$65 billion annually, and this does not include the difficult to measure but extremely important costs incurred in social and environmental terms to the current and future generations (GEF and GM, 2006). Such degradation, and its economic and social consequences, has been observed in recent history; for example, with the so-called "Dust Bowl" in the North American southern Great Plains in the 1930s. In the past few decades, the impacts have been particularly severe in parts of Africa and Central Asia.

Desertification trends show no signs of abatement. Recent evaluations, such as the Millennium Ecosystem Assessment completed in 2005, clearly demonstrate that there are no signs that the desertification trends are abating on a global scale. While there are pockets of "bright spots" such as in the semi-arid zones of West Africa (Steeds and Reij, 2005), and in many countries rates of primary forest degradation are being surpassed by rates of forest plantation (FAO, 2007), such positive examples are not accumulating globally at a sufficient pace. The main barrier to the enlargement of such bright spots that was identified by the MA concerns the lack of effective management policies.

Fundamental policy-relevant questions remain unanswered or are inadequately addressed. Because future desertification can potentially impact one-third of the global population directly, and has broad, sweeping impacts globally, searching questions have to be asked about the current policy regimes, and their apparent failure to reverse desertification trends:

- What impacts, positive or negative, are caused by current massive public subsidies which are estimated at US$4 billion annually (GEF and GM, 2006)?
- When we see "bright spots" and success stories, what policies impose barriers to the scaling up of these results to regional and global levels?
- How can the private sector be better engaged through enabling policies?
- What are the most effective policies for combating desertification?

[1]The UN Convention to Combat Desertification (UNCCD) defines "desertification" as land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities.

[2]According to the Millennium Ecosystem Assessment, drylands include all terrestrial regions where the production of crops, forage, wood and other ecosystem services are limited by water. Formally, the definition encompasses all lands where the climate is classified as dry subhumid, semiarid, arid or hyper-arid. This classification is based on Aridity Index values.

There is a strong need for an engaged dialogue on policies to combat desertification – the IYDD was one such opportunity. Members of the international community met in Algiers in December 2006 to consider the global challenges for combating desertification. Various analyses of the current policy framework exist, although most are sectoral in nature, and few address the global nature of the challenges – as framed in the afore-mentioned questions. The International Year of Deserts and Desertification (2006) provided a stimulus for the review of a wide range of issues affecting global efforts to combat desertification. The timing of the Algiers conference, at the end of the Year, enabled the findings from a serious of preceding events to be reviewed, and policy-relevant conclusions collated from them (please see box 1 and the published conference proceedings).

Box 1: Summary of Policy-Relevant Findings from Various IYDD Events in 2006 (Please see Annex 2 for further details)

1. The role of women and other gender issues were discussed in Beijing in May, with the conclusion that NAPs and national reporting must disaggregate gender information, that a multi-sectoral and holistic approach is required for combating desertification, and that more capacity building efforts should aim at ensuring women's participation in decision making.
2. The International Scientific Conference on "The Future of Drylands" in Tunis, Tunisia in June and the "Challenges" conference in Israel in November, focused on the technological and scientific challenges that we face in reversing land degradation, but also highlighted the economic opportunities afforded by drylands that are so often lost in the international discourse.
3. The "Sustainable Land and Water Management Forum" at the GEF Assembly in Cape Town, South Africa in August discussed resource mobilization and the status of funding for activities related to land degradation. A roundtable meeting summarized the discussions and issued a comprehensive set of conclusions and recommendations in the form of the Cape Town Consensus.
4. Migration and Desertification issues were debated in Almeira, Spain in October, bringing attention to the link that exists between land degradation, poverty and economic migration, whether it be a rural to urban exodus, or a South to North movement.
5. Youth and Desertification issues were debated in Bamako, Mali in September, highlighting the tremendous potential for harnessing the energy of youth for combating land degradation
6. The role of civil society was debated in September in Montpellier, France, and highlighted the need for more coordinated action among national, regional and global NGOs to combat desertification.

Some of the challenges identified during the Algiers conference can be summarized as follows:

Policies must overcome the notion that aridity and related water-scarcity for human consumption are *fait accompli.* Aridity is considered as a "fatality" and not an opportunity. Therefore it is difficult to develop policies that support investment in drylands. It is often difficult to convince Ministers of Finance/Economics to allocate relatively scarce government budgets to dryland issues such as pastoralism or rain-fed agriculture, especially since the perceived "returns on investment" are small. In contrast, recent studies have shown significant potential for investment in drylands. Given the large spatial extent of drylands, the emergence of the Carbon Market is also seen as an opportunity, especially if soil organic carbon were to be accepted as a source of carbon sequestration. Other mechanisms for payment for environmental services (e.g. water credits; value of dust transport for soil nutrient replenishment) are slowly emerging.

There is a multiplicity of developmental and environmental frameworks, each in their own orbit, with little synergy or inter-sectoral actions and impacts. Independently conceived strategies for development and poverty reduction often fail to effectively capture the potential synergy and enhancement that can be achieved through better integration. Although there is recognition at the international level of potential synergies between agendas for environmental management and poverty reduction, still little integration of actions occurs at all levels (see National Experiences detailed in Section 4).

Engagement and enabling of communities leading to effective stewardship should remain at the heart of policy formulation. Communities are not empowered to take charge of their future and the future of the natural resources they depend on. In the majority of developing countries, land is still owned by the State, and development decisions are taken by the State, albeit on behalf of the local communities. Without clear ownership of both decision making and land/natural resources, communities will not be empowered to make long term decisions, and will continue to seek short term gains that may be detrimental to their environment.

Stakeholder organizations, particularly those representing producers, need to play a central position in policy formulation dialogues. Producer organizations from the south do not influence policy as much as their northern counterparts do. Lack of

empowerment is partly due to the relatively weaker organization of producers in the developing countries. Unions, national associations, chambers of commerce, and other forms of producer organizations hardly exist or are weakened by inadequate governance, policy disincentives, political repression, and corruption.

Intersection of science and policy remains weak at best. Insufficient dissemination and use of sound scientific knowledge to formulate and implement policies, laws, regulations and action programmes vis-à-vis environmental issues remains an ongoing challenge. While scientific knowledge has been increasingly "home grown" in developing countries, lack of financial autonomy coupled with continuing "brain drain" means that local scientists have little opportunity to influence policies and legal frameworks. Where scientific knowledge does exist and is vibrant, the scientific community does not sufficiently ensure that its findings are made available and understandable to decision-makers and local dryland communities so that research can help shape sound policies, good governance, and education. Furthermore, research for development projects is insufficiently done in close collaboration with, and for the benefit of, local dryland communities.

Research and scientific endeavor does not have a timely focus on emerging issues. In some cases, scientific knowledge has not yet addressed emerging issues. For example, it is faced with difficulties of clearly defining and measuring interactions between social and environmental phenomena, such as migration, which is a response to many phenomena besides desertification processes. Another area that requires intensive investigation is that of vulnerability and adaptation to climate change. Similarly, it is important to better understand the notion of thresholds and "tipping points" as they relate to desertification. While the term "tipping point" has been used more extensively in the context of climate change, it can just as easily be applied to livelihood systems. Such a tipping point results in an irreversible pressure forcing farmers and pastoralists to exit the system and become environmental refugees - as opposed to exiting the system by choice. (Please see Box 2 for a further discussion of this point). This problematique is further compounded by the fact that many scientific projects are time-limited due to funding restrictions, and often cannot do justice to the long-term land degradation processes and their consequences.

Photographer: UNU-INWEH
Ecotourism, such as this hillside hotel in Tunisia, offers opportunities to create livelihoods for local communities while minimizing pressures on the surrounding fragile ecosystems.

How to Move Forward?

Policies must work to provide enabling incentives. These incentives should be directed to the critical institutions whose relevance is clear from experience; these include institutions that strengthen land tenure and enhanced management of common pool resources, credit institutions, decentralized government services, and research and extension systems. The scope for influencing investment depends on the architecture of a particular country's institutions (Mortimore, 2005).

Policies should be based on better definitions of environmental migration (see Box 2) and must incorporate measures for coping with them. On the issue of environmental migration, there is a need to develop proper definitions, raise awareness (both substantive and political) on the economic and ecological consequences, develop a global framework to legally recognize the issue; and empower the United Nations system and other major assistance organisations to address environmental refugees from a sustainable development angle.

The vastly different geographical scales of desertification and our responses must be appropriately recognized in policy formulation. Desertification and land degradation affect landscapes and not just single ecosystems. Land degradation in one part of the landscape has an impact on another part of the landscape. The causality of land degradation goes beyond the typical system boundary of a project. The Government of Senegal is using this approach to promote eco-regional planning and implementation. The GEF's Country Partnership Programmes are able to promote a "landscape approach", as they focus on system-wide change at both local and national levels, through the removal of policy, institutional, technical, capacity and financial barriers to sustainable land management.

Creating future scenario analyses can be a productive exercise to test the impact of policies. An "alternative futures analysis" provides an opportunity for policymakers and politicians to understand potential future situations and mobilize appropriate agencies to deal with them. The process also empowers people, and provides capacity building so that they have the tools and confidence necessary to make changes in lifestyle and land use, and to engage in dialogue with policymakers.

Box 2: Environmental Refugees and Desertification

When ecosystems cannot provide services at adequate levels because of desertification, the livelihoods and basic human needs of local population (particularly in rural areas) can become compromised. Consequently the "push" factors motivating people to depart their usual place of residence can become very strong. One adaptation measure is to migrate to other places where livelihoods can be restored. No doubt regions with moderate climatic conditions, as well as a perceived strong economic situation and healthy social fabric are the primary "pull" factors and target areas. It is now estimated that the number of people migrating because of environmental problems is already larger than people migrating for socio-political reasons.

The expected climatic change scenarios as projected by the recently published report of the IPCC give an additional dark shade to an already gloomy picture. However it is difficult to properly quantify the number of environmental migrants and the migration routes as long as the concept itself remains debated even from a scientific point of view. This is principally because migrants may decide to move for a combination of reasons including environmental degradation, economic purposes, quality of life and/or political strife. Due to the delicate interaction of pull and push forces the decision to migrate, or the abrupt reaction to flee is never a single-reason process.

To account for the relative severity of the environmental drivers and whether the move is the consequence of choice (to migrate) or that of survival strategy (to flee). Such distinctions would facilitate the definition of environmental refugees and help develop assistance strategies.

3 Innovations to Mainstream Desertification in the Policy Agenda

Photographer: FAO

Mainstreaming desertification policies implies the integration of desertification policy considerations into core institutional thinking with other economic and social development policies to ensure policy coherence. Thus, mainstreaming can help align desertification policies, programmes and operations with the long-term requirements of sustainable development. The main challenge in mainstreaming desertification policies is to identify a strategic nexus between economic development priorities and environmental management objectives; and to do so in such a way that tradeoffs can be addressed pragmatically, capitalizing on potential opportunities that benefit both the human and natural environments in the drylands. Effective mainstreaming must involve an integration process to pursue desertification policy interests in coordination with other development policies and programmes.

So how do we effectively mainstream desertification policies into the broader context of sustainable development, particularly economic and social development, policies? Some of the new policy directions that can be considered in this regard include: new financing and development options, policies to enable alternative livelihoods, the potential role of the private sector, and development and aid policies to combat desertification and improve drought preparedness.

Challenges in Mainstreaming

There are many challenges for the effective mainstreaming of desertification policies within the context of larger social and economic development policies. Some of the challenges identified in Algiers can be summarized as follows:

Societal solutions, including economic incentives, to combat desertification are not always considered. In some cases pastoralists and cattle producers can play a role in restoring degraded land. Pastoralists, in many areas, are the custodians of drylands environments and pastoralism can be an economically viable means of managing the drylands. Governments need to cooperate with all stakeholders, including civil society, NGOs, women, pastoral and farming communities to ensure that policy options build on local customary patterns and arrangements for grazing and mobility.

Scientists do not play a strong enough role in defining public policies. Scientific results on sustainable development of pastureland are scarce. Where there are data, scientists often do not play a strong enough role in defining public policies. There is a greater need for the integration of science into policymaking at all levels, but especially at the local level, in order to effectively mainstream desertification policies into overall development planning. Similarly, greater emphasis is required on communicating research in a policy-relevant manner.

Existing policies on land tenure mesh poorly with economic development policies, which are further exacerbated by adverse subsidies and inappropriate incentives. In some cases, pastoralists and others exploit public lands – including protected conservation areas – to graze livestock and make a profit, at the expense of the land. There needs to be a way to eliminate this "tragedy of the commons" and other inappropriate incentives. Furthermore, many

of the environmental services of the drylands are not considered in decision-making. For example, rangelands produce biomass for animals, contribute to carbon sequestration and contain a unique array of biological diversity. Yet, often there are no incentives to conserve rangelands for these purposes or even pay pastoralists and other land users for these services that their land provides.

International influences on national "mainstreaming", particularly in the form of development aid, are typically not molded to the needs of the people in drylands. There is an overall lack of coordination of development projects in countries combating desertification. Much development aid is spent on major projects but does not always address the need to improve livelihoods for those living in the drylands.

Ways to Improve Mainstreaming

Effectively mainstreaming desertification policies into development planning at the national level has proven to be a challenge for many governments. National and local level officials often do not have the training and capacities to develop the necessary plans and programmes or to ensure their effective implementation. While there are a number of programmes and organizations assisting governments in this regard, additional capacity building is still essential. Considering the overarching need to address these constraints, some of the recommendations to emerge from Algiers are as follows:

Job alternatives and sustainable livelihoods for pastoralists and other land users in the drylands need to be created to diminish pressure on natural resources. In particular, pastoralists should be enabled by increasing government support and involving them in the development of policies that are conducive to their economic livelihoods and improving the environment. Pastoralism is a modern industry providing food and ecological services and is often ignored or discounted by policymakers. Creating sustainable livelihoods could include both agricultural (including irrigated agriculture) and non-agricultural jobs in industry and tourism, for example. Such a venture would likely require a major engagement of the private sector, underpinned by governmental incentives.

Governments can harness investments in sustainable land management through the reorientation of existing institutions. Governments should explore payment for environmental services to combat desertification that could be used to prevent unsustainable land use, manage grazing and rehabilitate the land. Rural income incentives, including planting trees, demarcation of pastoral corridors, and rotational pasturing systems, should be encouraged. To facilitate this reorientation, governments need to invest in developing more appropriate institutional frameworks to mainstream these policies within economic development frameworks. Such institutional development should pay particular attention to greater transparency and accountability, the participation of multiple actors, measurable results, and follow-up systems.

There must be greater information sharing to harmonize actions and policies that affect the drylands and the people living there. This information sharing must take place at multiple levels: international (between donor and recipients), national (between ministries and between national and local governments) and local (among stakeholders and between stakeholders and governments). This point is further discussed in Section 6.

Photographer: Jiang Gaoming
Consultations with local stakeholders, as shown for this village-based dialogue in China, are central to mainstreaming policy innovations.

4 Lessons Learned from National Experiences

Photographer: Caroline King

Current policy efforts to combat desertification and their implementation are driven at the national level by National Action Plans and Programmes. The discussion presented in this section is based on national case studies focused on Algeria, Argentina, Burkina Faso, China, Iceland and Namibia. While each case study identified the national context for desertification and the policies to counter it, a number of commonalities emerged. In fact, this session provided a rare opportunity for sharing lessons learned from a range of national experiences in policy formulation from various geographical regions and to compare strategies developed. Such policy comparisons are not sufficiently explored within the processes of the UNCCD and its Committee to Review the Implementation of the Convention (CRIC). It subsequently emerged that policies to combat desertification have common elements which surpass the geographical and social context. Even more surprisingly, the effectiveness of policies to combat desertification also surpasses economic barriers, where policy hurdles and solutions are strikingly similar in developed and developing countries. A more detailed description of these national case studies is provided in the published conference proceedings.

Trends in National Policy Settings

Sectoral divisions in policy formulation represent the greatest hurdle to the integration and harmonization of national policies. Land degradation, desertification and the dangers of advancing deserts have been recognized for some time in countries such as Algeria and Burkina Faso, and programmes designed to reverse the trends introduced. However, the sectoral and technology-oriented approach taken during the early years of efforts to combat desertification in those countries resulted in limited success and inadequate results. The sectoral approaches generally did not involve the local populations and disregarded their needs and perspectives. This presented major obstacles for addressing problems of land degradation and poverty in many of the case study countries. Societal interventions were initially widely ignored, and only more recently have the local populations been involved in the planning and implementation of programmes. Algeria, for example, launched reforestation programmes on a large scale in its northern regions. In the south, the creation of a "Green Wall" was intended to stop the expansion of the desert. However, the decision on the choice of trees to plant initially did not include any analysis of economic viability for the local population; this has changed in recent interventions. Consequently, it can be summarized that:

- Multi-sectoral approaches are essential to achieving results;
- There is a need to test new intervention methods and to apply the technical expertise gained in the process;
- There is a need to emphasize more the multi-functionality of dry areas that include not only agricultural enterprises but also the provision of ecosystem services;
- It is essential to have buy-in from the local population; this should be linked to a needs analysis for the affected population; and
- Reduction of rural poverty and creation of employment opportunities should be part of interventions.

Initiatives to combat desertification need to be flexible and adaptive to changing circumstances. As a result of analyzing and evaluating the less-than-anticipated results of interventions, new and different approaches to development programmes were developed in the countries studied. These have been particularly successful when such programmes have been implemented over longer timeframes, extending to around 10 to 15 years. The longer timelines provide sufficient baseline data and important information on changing trends. Assurance of longer-term financial viability may also be key for such approaches to work. Another major requirement is the presence of robust monitoring and evaluation processes that connect directly to adaptive management strategies. Several case studies demonstrated that monitoring and evaluation needs to operate at all levels, and is of particular importance and benefit at the local level, involving the affected population in the process.

Improving the awareness of national factors impinging at the local scale can be important for populations at the community level. The national case studies discussed the problems related to the affected local population's lack of awareness of the fragility of their natural resource base. In several cases, the understanding and perception of concepts like "drylands," "desertification", etc. were either not widespread or non-existent. This lack of recognition of the fragility of the local environment presented obstacles to essential programme development and intervention. In Iceland, on the other hand, the power of grassroots research was recognized. Targeted financial incentives and disincentives, as well as awareness-raising, were used to inform the land owners and users, and consequently engage them directly. Such engagement led to design and deployment of interventions that could be understood and rationalized by the local population (please see Box 3 for an example from Morocco and Tunisia). Similarly, engagement of local farmers in China led to incentive programmes that were integrated with preferential taxation, exemption and loan support.

Capacity building of local populations and policymakers should receive high priority. Mainstreaming combating desertification requires as a first step the capacity building and education not only of local populations but also of policymakers. In Argentina, the issues relating to land degradation and desertification were first understood and introduced by the scientific community; this promoted awareness-raising. For other segments of the society, the learning grew out of concrete experiences with land degradation. For example in Algeria, the large deforested areas had resulted in serious land erosion. One lesson learned from the subsequent reforestation intervention demonstrated the value of incorporating activities to address the economic needs of the local population; this resulted in successful, sustainable programmes. Notably similar experiences were reported from Iceland where deforestation had been accompanied by degradation of grazing and rangelands. In general, it can be observed that linking land erosion with climate change can increase awareness of its importance, because climate change has attained a level of public understanding that is yet to be seen for desertification and its underlying processes.

Box 3: The Experience from Morocco and Tunisia

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Public incentives may be needed for the adoption of new technologies in dryland environments because of the generally variable returns on such technologies, the high level of risk, and because of institutional constraints such as land property rights issues. Subsidies are justified if public benefits exceed the amount of the subsidy.

A study assessed the returns on investments and uptake of natural resource management technologies in crop/livestock production systems in arid and semi-arid areas of Morocco and Tunisia. The analysis showed that natural resource management investments can be economically justified if appropriate technologies are used. Alley cropping systems were effective in both countries in increasing barley and biomass production, reducing feed costs through reduction of purchased feeds, maintaining livestock production during drought seasons, improving soil organic matter, and reducing soil erosion.

Financial analysis showed that incentives provided by development projects and other means (e.g., government inputs) are important to stimulate technology adoption. In the case of Morocco, conservative valuation shows that the environmental benefits are justifying the additional investment the governments are making.

Major improvements in legal and legislative constructs can be achieved, based on the successful experiences of others. Legislative approaches vary in the case studies presented. In Namibia, for example, the policy framework and a wide range of relevant laws have been written and approved but the implementation process is lacking. There continues to be a disconnect between the legal system and practical implementation. In Iceland, while the laws are out of date, the process for change in the area of land restoration programmes is driven by the civil society. In China, in order to overcome the sectoral approach to land degradation and desertification, a new law on desertification was introduced in 2002. The law prescribes that 19 ministries should work together to ensure coordination for the implementation of programmes. In Argentina and other countries, decentralization has improved the potential for success of legislative measures.

Communication and transparency in national policy formulation is essential to the development of effective strategies and policies. This has been, in particular, observed in Argentina where the scientific community has developed substantial knowledge relevant for combating desertification and has provided backstopping to policy formulation. In other countries, the two-way communication between local populations and policymakers has to be established and strengthened so that technical knowledge and experience can be exchanged at a level that is understandable to all stakeholders. In Namibia, civil society has been very active in capacity building for local communities as well as for policymakers. The need for "boundary organizations" has been identified - organizations that can act as information hubs. In Argentina, the partnerships between NGOs and government have improved the consultation processes and policy development.

Box 4: Policies to Support Transhumance

In general, pastoral transhumance makes use of high mobility to adapt to the ever-changing dynamics of grasslands (Vetaas and Knudsen, 2004). "Mobility is an ecological necessity, and the mobile pastoralism is often the best way to manage dry environments sustainably" (UNDP, 2003). Transhumant pastoralists are well versed ecologists, otherwise they could not have lived that life for millennia. They realized that they had to obey the dictates of climate (Tannehill, 1947, p.113). One may argue, therefore, that policymakers have to gain a deep understanding of causes and effects of desertification, and help nomads to help themselves.

In general, nomadic livestock systems are well adjusted to the local ecosystems, which has been demonstrated in the Sahel region (Breman and de Wit, 1983). This has been proven even for the Himalayan environment; continuance of transhumance within the carrying capacity of the Niti valley (Nanda Devi Biosphere Reserve buffer zone) has been advised for effective management of available resources (Nautiyal et al., 2003). Nomads spread their herds evenly across the landscape, thus causing less damage to the soil (Coughenour et al., 1985).

Provision of infrastructure suitable to transhumance can enable pastoralists to preserve their traditional way of life. Provision of water, feed and fuelwood in their semi-yearly routes, along with infirmaries at strategic locations, removes many of the shortcomings that they claim have pushed them to urbanize in the first place. Establishment of tent schools for the nomads in the 1950s in Iran is a case in point. Some of the elite technocrats in Iran are the alumni of those schools, who received their primary education while trekking between winter and summer camps. This policy alone prevented many of those families from settling in cities.

Small-scale, scattered water harvesting systems, erected with the technical and financial help of the government, and maintained by the nomads themselves, eventually green some deserts; desertification control in its true sense.

Photographer: Richard Thomas ICARDA

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5 The Role of Regional Groupings in Policy Formulation

Photographer: Boshra Salem

Regional groupings have played a key role in the shaping of current international policies for combating desertification, and have gained considerable impetus from the UNCCD processes and other multilateral environmental agreements. This section focuses on actions that can be undertaken through regional organizations, institutions and cooperation. The logic for coordination at this level is that problems and solutions are often similar or shared across contiguous eco-regions or sub-regions. The pooling of resources at this scale to jointly address common problems can be more effective than fragmented national approaches. Regional exchanges of knowledge and technologies tend to be convenient, and better adapted than international assistance. Furthermore, South-South cooperation at the regional level can help to reduce reliance on North-South aid flows.

During the Algiers conference, regional-level analyses were pursued a little further in efforts to determine the extent to which opportunities for regional policy integration and cooperation are developed in three affected regions: Latin America, West Asia, and Africa. Details of these regional studies are provided in the published conference proceedings (UNU, 2007).

The Latin American Perspective

Policies to combat desertification have been deployed at the national level, limiting any substantial benefits to be gained from regional synchronization. Desertification affects around 75 percent of the drylands that cover about one-quarter of the Latin American region. In the absence of strong regional institutions to address desertification, policies on desertification in Latin America have evolved primarily at the national level, and have attempted to simultaneously address environmental degradation, poverty and social inequality. Legislative and institutional frameworks for combating desertification have been put in place and include measures such as land tenure reforms, regulations on natural resource use, and promotion of participatory processes. However, effectiveness of actions at the national level appears to be waning; the biggest constraint appears to be the lack of sustainable financial mechanisms for implementation.

The policy successes and challenges in Latin America have much in common with those observed in other regions. Successful policies in the region are based on: participatory institutional articulation, promotion of education and research, decentralized action at the regional, municipal and/or district levels, follow-up and quantification of results, investment of governmental resources on the implementation of local plans, and incentives for land restoration and conservation. Areas in which policy challenges remain include: land tenure, natural resource management, traditional knowledge, economic policies focused on income-generation, gender, and pro-poor oriented policies. The UNCCD offers an appropriate frame for democratic and participative treatment of desertification but much must be done to strengthen relations between donors and affected countries to better finance needed actions.

Box 5: The Latin American Experience in Combating Desertification

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The regional analysis of policies to combat desertification in Latin America identified six factors related to success in improved environmental management and desertification control.

- ***Participatory institutional development.*** Countries that have good coordination among national institutions have built capacity to influence public policy on environmental issues. The inclusion of the private sector has facilitated interventions. The International Year of Deserts and Desertification (IYDD) provided a platform to engage governmental actors and civil society.
- ***Promotion of education and research.*** Countries with strong long-term strategies for promoting research and education have invested most resources into the promotion of the Rio conventions and dryland environmental management.
- ***Decentralized action at the regional and municipal levels.*** Decentralized institutions commanding environmental projects at the regional and municipal levels act as two-way channels: bottom-up identification of needs and proposals, and top-down application of plans and strategies. Decentralized institutions also facilitate diffusion of information and coordination of local non-governmental and educational institutions, resulting in, for example, school and university educational programmes to combat desertification and joint efforts among governments.
- ***Quantitative impact assessment.*** Knowledge from 40 years of efforts to combat desertification by NGOs, universities and government institutions remains dispersed in institutional reports and systematic evaluation of intervention impacts is lacking. There is limited capacity for data collection on land degradation and impacts of rehabilitation measures. The weak situation regarding systematic monitoring and impact assessment is limiting learning from previous and current efforts.
- ***Investment of governmental resources in the implementation of local plans.*** Some governments have increased the share of national investment on natural resource conservation and management. Channeling these resources through regional and municipal government bodies has resulted in more autonomy of decision-making, increased negotiation capacity with co-funders, and greater appropriation of projects.
- ***Incentives for land restoration and conservation.*** Governments generally have weak capacity to enforce environmental legislation and the private sector is traditionally reluctant to consider environmental costs. Experience with economic and non-economic incentives with local communities and small- to medium- sized producers have proven successful, but now need to be systemized.

The West Asian Perspective

A relatively strong organizational arrangement is in place to address desertification as an economic and social issue across the West Asian region. Dryland ecosystems in the UN Economic and Social Commission for Western Asia (UN ESCWA) region are vulnerable to desertification and 83% of the region is already affected due to removal of the natural vegetation, overgrazing, agricultural activities, and bio-industrial activities. UN ESCWA promotes economic and social development through regional and subregional cooperation and integration and serves as the main general economic and social development forum within the United Nations system for the West Asian region. It has compiled information on desertification assessments for use by national and regional decision makers.

Efforts to regionally harmonize action and policies on desertification remain quite limited and constrained. The region lacks a comprehensive approach to combating desertification despite the numerous activities at the national level. Actions at the regional level are intended to promote information sharing, and enforcement of legislation to prevent industrial pollution. Regional coordination of National Action Plans and Programmes to combat desertification, however, is relatively limited. Consequently, a low percentage of these plans are successfully implemented, and there is a disconnect between scientists and policymakers. Policy recommendations from regional organizations emphasize better integration of land degradation into national policies for development, with greater resources apportioned to desertification control, and creation of conditions and institutions that promote participation of rural populations. Once such example is a regional programme for the West Asia and North Africa region, established and facilitated by the UNCCD-Global Mechanism and International Center for Agricultural Research in the Dry Areas (ICARDA); this programme is focused on developing integrated financing strategies to combat desertification.

The African Perspective

Continent-wide strategies give significant recognition to desertification as a key factor affecting African development. Desertification is one of the primary causes of poverty and under development in the Africa continent. The recognition of this link by African governments is manifested in the form of African Union (AU) policies at the continental level. These policy frameworks include: the Comprehensive Africa Agricultural Development Programme (CAADP) and the Environment Action Plan of NEPAD, the Sirte Declaration on agriculture and water, and an integrated CAADP-Sirte framework. The AU has a number of policy instruments for the deployment of resources. These include, for example, the Special Emergency Assistance Fund for Drought and Famine in Africa, the revised African Convention on the Conservation of Nature and Natural Resources, and the Africa Monitoring of the Environment for Sustainable Development (AMESD) project. The AU also has an Environment and Natural Resources Division to create environmental awareness. The African Development Bank also incorporates environment in its assessments.

Institutional arrangements at the sub-continental level are available to further refine and implement policies. There are a number of sub-regional initiatives implementing policies to combat desertification, including CILSS, SADC, IGAD, ECOWAS, AMU, and CEN-SAD[3]. This level is convenient for joint initiatives, exchanges and human and institutional capacity building between countries. The 'Green Wall for the Sahara' Initiative is an example of an integrated sub-regional development project to control land degradation. It aims to slow the advance of the Sahara Desert and contribute to poverty reduction in the context of NEPAD and the MDGs. The transboundary nature of the project needs policy harmonization, review of policies and legislation in different countries, and carefully crafted land use policies at national level. TerrAfrica is another broad regional initiative which was launched in 2006 and is based on three pillars: coalition building, knowledge management and investments. It provides a platform for partners to support African leadership and better target and align policy, institutional and investment dialogue at multiple levels.

[3]CILSS: Comité inter Etats de lutte contre la sécheresse au Sahel; SADC : Southern African Development Community; IGAD: The Intergovernmental Authority on Development - a seven-country regional development organization in East Africa; ECOWAS: Economic Community Of West African States; AMU: Arab Maghreb Union; and CEN-SAD: The Community of Sahel-Saharan States.

The incorporation and effective integration of regional and sub-regional policies at the national level remains limited. At the national level, all AU Member States have ratified the UNCCD, and 37 of the 53 states have prepared National Action Plans to combat desertification. Many countries are in the process of integrating desertification control into their national poverty reduction policy frameworks. However, greater efforts on a number of fronts are needed to achieve desired impacts. These include, for example, increased capacity to integrate environmental considerations into national poverty reduction strategies, greater human and financial resources to translate policies into effective and sustainable actions on the ground, and better policy harmonization across countries to deal with transboundary issues.

Photographers: David Niemeijer and Valentina Mazzucato
Farmer families in Burkina Faso often work as vendors to make ends meet.

Benefits of Improved Regional Coordination

Although considerable achievements have been observed in developing regionally integrated efforts to combat desertification, this approach has not been systematically fostered. Consequently, affected regions have often found themselves competing for attention on the international policy agenda. As cooperation and exchange is strengthened on regional and sub-regional levels, efforts are also needed to foster inter-regional policy coordination. The discussions that took place in Algiers highlighted a number of policy areas where there are opportunities for improved coordination of policies:

- South-South cooperation (e.g. Latin America-Africa) is an increasingly important mechanism for exchanging experiences and alleviating technological, human resource and economic gaps. Better regional coordination is needed to enhance these benefits.
- Developing countries remain largely dependent on industrialized countries for their export markets. This, together with the need to fulfill international obligations, such as external debt, drives short-term growth to the detriment of long-term planning. Trade inequity between developed and developing countries is further imposing serious constraints on progress in developing dryland countries. Improved regional coordination could empower developing regions in trade negotiations.
- The UNCCD offers an appropriate frame for democratic and participative action to combat desertification. Nevertheless, much needs to be done to strengthen relations between donors and affected countries and among national actors to ensure concerted and effective action. Strengthened regional coordination would more effectively secure external cooperation and effective support.
- More systematic efforts to assess impacts of policy and management interventions and synthesis across regions would speed up learning on successful approaches for combating desertification (please see Section 6 for an in-depth discussion on this topic).
- Improved regional coordination is a prerequisite for dealing with transboundary issues such as integrated river basin management and environmental refugees.

6 Harnessing Traditional Knowledge and Scientific Innovations

Photographer: Iwao Kobori

In the broadest sense, implementation of the Rio-based environmental conventions, particularly the UNCCD, has been hampered by inadequate translation of knowledge into policy change. As desertification arises from the interactions of the environment and social, political and economic systems, through the actions of stakeholders as well as the vulnerable people, the policies developed in response have to draw upon a holistic knowledge base of coupled socio-ecological system. However, the situation is exacerbated by policy decisions that are continually made on premises that contradict new and emerging scientific knowledge. Therefore, a concerted effort must be made to recognize and lift the barriers that prevent knowledge from being translated into policy reform. This may entail involving policymakers in integrated ecosystem management.

How to Better Manage Knowledge and Bring it to Bear on Policies

Better harmonization of information at various levels is urgently needed – together with standardization of definitions, indicators, monitoring procedures, impact studies and evaluation techniques. Needless to say, such information and knowledge is crucial to policymakers. However, it is important to convey this information to decision makers in an easy, understandable, and most importantly, usable form. This could include knowledge on tangible ecosystem goods and services. Such an information flow would ensure a better strategic approach to implementation, if policymakers can readily adapt their agendas to it. In a pragmatic sense, such harmonization can be achieved through a panel of specialists at the national level, forming a coherent advisory team that would narrow down the gap between scientists and policymakers.

Understanding the twin problems of risk and vulnerability is the key to improving human capacity for adaptation and prevention of desertification. The distribution of risks and vulnerability to desertification is usually uneven. It is important to understand the options available for human adaptation in drylands, as well as the environmental threats faced and the associated tradeoffs. Vulnerability to desertification is linked to limitations on adaptive options. For example, in households that are dependent on rainfed agriculture and grazing, vulnerability may be greater than it is in areas with less resources, but more livelihood options. Information on adaptation options is essential to build resilience at local, national and sectoral levels.

Knowledge of water management approaches is essential to formulating policies for drylands development. Water is the primary limiting factor in the development of drylands, and it plays a key role in desertification-related processes like soil erosion, water logging and soil salinization. Thus, policymakers concerned with the sustainable management of drylands have to optimize the use of the limited amounts of available water by focusing not only on water saving technologies but also introducing innovative measures for water pricing, cost recovery, and allocation of water for food and other uses.

Combining traditional knowledge with new tools provides policymakers with valuable information. Neither local knowledge nor modern knowledge alone can solve the problem of desertification. There is a need for converging scientific and technological tools (remote-sensing, modeling, geographical information systems) as well as expert and local knowledge to combat desertification.

Challenges and Solutions

A major challenge remains that holistic and improved data gathering seem not to be impacting the rates of desertification. In spite of many global, regional and national efforts to better monitor and record desertification processes, discernible impacts on rates of desertification are hard to come by. On the one hand, it reinforces the presence of a disconnect between information generation and policy formulation. On the other hand, it also threatens future funding and support for crucial monitoring programmes.

Synthesis of knowledge – achieved through combining tested traditional knowledge and "modern" sciences – should be geared to developing solutions to desertification. Traditional knowledge on the conservation and sustainable use of natural resources has been largely overlooked or ignored as being "non-scientific." These two streams of knowledge should be brought closer together and spanning across disciplines dealing with culture, environment and development (UNESCO, 2007).

A significant effort needs to be made to improve harmonization of definitions, enhance adaptive management, and assimilation of knowledge management in policies and institutions. Assessment is essential in quantifying the state of desertification and the advances made in its control; at the same time, there is also a need to standardize the technology needed to monitor environmental changes. The Land Degradation Assessment in Drylands (LADA) is a tool to monitor, assess and quantify the nature, extent, severity and impacts of land degradation on dryland ecosystem, carbon storage and biological diversity. LADA will also help in establishing a baseline against which the extent and quality of restoration may be measured.

Cooperation protocols and information networks at the regional level can play a key role in harmonized information generation, sharing and uptake for policy formulation. Such cooperation activities should be afforded political support and promotion. Multilateral cooperation between countries that seek solutions to similar problems is another form of regional cooperation that has demonstrated success in the last decade. Exchange of knowledge and experience and dissemination of successful results and experiments are key activities to develop effective regional cooperation, as is evidenced by the Sustainable Management of Marginal Drylands (SUMAMAD) initiative which promotes information exchange among eight dryland countries in Africa and Asia (UNESCO, 2006).

Photographer: UNU-INWEH
Traditional water harvesting in a Pakistani desert village is greatly improved by introducing a better reservoir, manual pump and a simple filter.

7 Connecting Policies for Desertification, Climate Change and Biodiversity Loss

Photographer: UNU-INWEH

Interlinkages between key global environmental issues and policy responses emerging from UN-based, global conventions (multilateral environmental agreements, or MEAs) is a complex and multifaceted topic. It can be examined through a variety of analytical lenses including: institutional (between MEA governing mechanisms, between national focal points); cross-cutting scientific issues (research, capacity building, technology transfer, etc.); and governance (between local, regional, and national actors and partners). While discussion and action on developing synergies is already underway between the three Rio Convention Secretariats, namely those focused on desertification, climate change and biological diversity, and through the Joint Liaison Group (JLG), more work has to be done to enhance understanding and appreciation of the interlinkages and interdependencies between desertification, climate change and biodiversity loss.

The emerging core policy question for which answers must be provided, based on the presentations and discussions in Algiers, is: "What can governments, civil society organizations, international aid and development agencies, and the UN system do to facilitate the interlinking of policies for poverty reduction with those for coping with desertification, global climate change and biodiversity loss?" An attempt to answer this question must include concepts for addressing three key challenges outlined here.

Challenge 1 – How to Coordinate Action at the Convention Level?

Structural changes in how the conventions relate to each other are essential. At the secretariat and administrative level, each convention has its own Constitution, set of priorities and procedures and is at its own stage of evolution and progress, making it difficult to focus sufficiently on the important synergies and interdependencies between poverty reduction, desertification, climate change and biodiversity. Although each convention emerged from the Rio Summit in 2002, and while the JLG is facilitating dialogue, no significant institutional mechanism has been put in place to coordinate the mandate, functioning and priorities of the three conventions.

Lack of coordination capacity at the level of national governments can pose serious challenges to harmonizing policies and action. The focal points for each convention at the national level are dispersed among government ministries and agencies, making communication and coordination between them difficult. Even in the few cases where focal points for all three conventions are housed within a single ministry, there is often the challenge of insufficient financial and human resources, particularly in many developing countries, to sufficiently explore synergies between desertification, biodiversity and climate change.

Improper synchronization between environmental and developmental priorities at the national level can become a barrier to building effective interlinkages. At the national level, there is often a disconnect between international development policy goals and activities on the one hand, and environmental policy goals and activities on the other. In many instances there exists a differential prioritization of environment and development issues in national policy agendas. Additionally, environment and development approaches are typically sectorally focused and operate

vertically with insufficient horizontal analysis and communication. Both barriers, in turn, inhibit the active consideration of the important interactions and interdependencies between poverty reduction and environment.

Cross-cutting programmes across sectors and ministries can help improve coordination at the national level. National governments and their focal points should focus on increasing the operationalization of sustainable development as a cross-cutting theme to improve coordination between all participating ministries and/or agencies (for examples those dealing with environment, economic development, water resources, foreign affairs, agriculture, and natural resources). A focus on sustainable development as a horizontal theme can effectively bridge the information divide between poverty reduction and environment for more synergistic policy development and implementation.

Challenge 2 – How to Work with Scientific Uncertainty and Information Gaps?

New thinking on how to measure progress, in human-development terms, for coping with desertification is needed. The inclusion of socioeconomic aspects in the definition of desertification has made it more difficult to measure progress through scientific indicators or other quantitative or qualitative measures, which is how the success of other instruments of environmental governance are measured. It becomes more complex when trying to link the impacts between climate change, biodiversity and desertification. To overcome this challenge, national governments and/or institutes should develop a common set of environmental indicators and data collection methods to enhance consistency for comparative purposes; link different levels of decision making to overcome institutional obstacles; and take into account all the costs of climate change on desertification, biodiversity and development.

Generating scientific information that is policy-relevant and cross-sectoral is essential. There is a need for more relevant information and data to implement effective adaptation strategies. The application of integrated, inter-sectoral approaches to environmental and development analysis, which places natural resource considerations at the core, is key. For example, this approach is essential in identifying the impacts of climate change on desertification in the most vulnerable regions (i.e. Sahel), particularly as they relate to food and water resources management.

The conceptual development by the Millennium Ecosystem Assessment provides a robust framework for evaluation of policies. There is a need for more in-depth examination, application and awareness of cross-cutting approaches to environmental analysis, such as the Ecosystem Approach. Focused on long-term sustainability of the environment, the Ecosystem Approach is a strategy for the integrated management of land, water and living resources, or "services," that promotes conservation and sustainable use in an equitable way. Its focus on provision of services is directly linked to the well-being of populations, and hence, the development of strategies for improving livelihoods and poverty reduction.

Challenge 3 – How to Effectively Relate to Other Major Development Issues?

Pro-active, cross-linked environmental management is called for as a way to directly engage in broader problem-solving. In general, there is a lack of awareness and consideration of the nexus between desertification, climate change and biodiversity loss on the one hand and the exacerbation of other salient development issues such as food security, famine, conflict, health and migration on the other. The uncertainties of science have been used by politicians to marginalize the importance of scientific predictions. Climate modeling suggests significant rises in global temperatures and modified precipitation regimes, and highlights the potentially dramatic impact of climate change on the dry areas of Africa, West Asia and other vulnerable regions. It goes without saying that the world's poorest and most vulnerable will have to adapt dramatically or migrate unless the problem is treated seriously.

The interactions between poverty, environment and natural resource exploitation are typically complex, but can be understood at the local level. Local economic pressures can result in the overexploitation of land, usually hitting the poorest the hardest. Forced to extract as much as they can from the land for food, energy, housing and of income, the most vulnerable populations can be both the sources and the casualties of desertification. Additionally, international trade flows are based on the short-term exploitation of local resources for export, often acting against the long-term interests of the local population. This presents a vicious downward cycle in which poverty leads to desertification, which in turn leads to greater poverty in vulnerable regions. Some of the policy innovations presented in Section 3 can help break this vicious cycle.

Soil conservation may be a "handle" with which to grasp a broad range of issues. To more effectively mitigate desertification, greater emphasis among governments, farmers and other stakeholders should be placed on soil improvement and conservation strategies (short and long-term). Such strategies could ensure food security and overall well-being by focusing more on: erosion control; afforestation; reclamation of salt-affected soils; and the creation of positive nutrient balances through efforts to maintain land cover, soil structure and soil organic matter.

Photographer: Boshra Salem
Drylands are low in vegetation cover but vast available areas can be used for sequestering organic and inorganic carbon.

8 Future Outlook – Informed and Effective Policy Regime

Photographer: Caroline King

Previous sections of this document have highlighted a range of new and innovative options available to policymakers to achieve sustainable land management, combat desertification and reduce poverty. Many new approaches have been identified by communities, researchers and decision-makers at various levels, and incorporated into current strategies, to differentiated degrees and effects. In this context, the discussion of comparative country and regional case studies, as took place in Algiers, was found to be a particularly effective approach to identifying policy opportunities. Reviewing accumulated experience, exploring transferable lessons and debating new options are activities that could be more frequently incorporated into policy processes at all levels under the UNCCD.

Recognizing Positive Policy Experiences

Recognition at the policy level of communities' successes in combating desertification magnifies the benefits achieved. Positive efforts developed over recent years to collect success stories from sustainable land management (for example, WOCAT, etc.) have begun to provide better models for policy-making. The promotion of such success stories by stakeholders in affected countries, as well as by international agencies, will enable further local benefits from ecotourism, trade and real-estate, in addition to the original achievements in improving ecosystem conservation and productivity.

Efforts to replicate and test successful examples of sustainable dryland management by and for local communities can be shared across national boundaries. Just as the effects of desertification, dust storms, soil erosion and mismanagement of aquifers are transboundary in nature, so can be the shared benefits of sustainable land management strategies. National governments that cooperate on joint regional scientific programmes to review and enhance land management policies through exchanges of policy-experience will benefit from improvements not only in their own countries, but also in their neighbors'.

International initiatives to raise awareness of desertification issues and to strengthen collaborations have been fostered and led by champions from affected countries. The International Year of Deserts and Desertification, championed by Dr. Wangari Mathaai and H.E. Cherif Ramani, began a series of collaborations at the international level to improve efforts to prepare for and manage drought, desertification, food shortages and human migrations. As these collaborations develop into longer term initiatives, whether through an international decade focused on desertification issues or other proposed initiatives, such leadership will achieve international recognition and replication.

Analyzing Policy Disconnects and Suggesting Ways Forward

Increasing recognition and debate regarding the extent and costs of policy failures will drive better policies for the future. Even in the best policy scenarios, the challenges to achieving integration across all policy sectors and securing equitable benefits for all current and future stakeholders will remain ever-present. Inclusive and transparent discussion of weak points will enable continual improvement, and will

*WOCAT: World Overview of Conservation Approaches and Technologies

offer more critical and instructive models that can be considered by decision-makers elsewhere. A number of affected countries, particularly those such as Algeria and China where large investments were made over extended periods of time, have learned the lesson that achieved results can fall far short of expectations. Other countries that have the opportunity to learn from these experiences, both in terms of technologies and policy processes, will develop different approaches, including more and earlier policy evaluations and adaptive management.

Learning processes within the UNCCD need to increase the focus on substantive policy discussions. Both affected countries and donor countries have voiced frustration with the lack of progress made by the Convention and the provision of financial resources, highlighting the need to bridge the gap between commitments and action. Much of the criticism has been constructive, highlighting opportunities to focus on substantive policy issues in sustainable land management. The aim is to enable the UNCCD Secretariat to develop a consensus programme for strengthening the Convention processes and support to interlinked Conventions.

Improvements in the interaction of the UNCCD with other development partners, environmental conventions and national governments will enable it to champion better policies at the international level. The recent report by the Joint Inspection Unit (JIU, 2005) has provided a broad overview of the policy-related challenges in the operation and implementation of the UNCCD, and led to an inter-governmental strategic review. Fresh thinking spurred by the recommendations made in this report will be built into a COP approved strategic platform to improve implementation of the Convention at all levels over the next 10 years.

Enhancing the Policy Review Processes

Overarching policy reviews, such as the Millennium Ecosystem Assessment, and its continuing follow-up activities, will encourage more integrated, forward-looking policies. As presented in Section 7 (Challenge 2), expert opinion and scenario-building enable instructive analyses of available options for policymakers. Intergovernmental processes, such as the UNCCD and its implementation mechanisms, will be able to use and further develop the findings of such reviews to provide impetus for further improvements in policy formulation. In this endeavor, there are lessons to be learned from both the successes and limitations of intergovernmental scientific debates, such as the IPCC, as well as from the international expert process of the MA.

Involvement of a broad range of stakeholders in policy reviews at regional, national and sub-national levels will improve our understanding of policy effectiveness and challenges. Media, youth and scientific communities demonstrated during the IYDD their readiness to become more deeply engaged in desertification policy debates, including evaluation of existing and proposed National Action Programmes. Such multi-stakeholder processes will continue to gain momentum, support and application over time as public awareness of policy debates and priorities continues to grow.

Developing Institutional and Financial Capacities

Building the capacity of national governments will be all-important. This becomes particularly relevant when sectoral and ministerial differences have to be bridged. Allocation of new resources to undertake integrated capacity building is a critical element in ensuring that national policies are harmonized and not operating at cross-purposes. Regionally-focused efforts, such as TerrAfrica and the Central Asian Initiative for Land Management (CACILM), will provide an opportunity to integrate capacity building, and eventually actions to cope with desertification.

Desertification-affected dryland dwellers must be at the centre of any remediation measures. National decision-making bodies and the scientific community are requested to increase their efforts in implementing research for development projects in close collaboration with, and for the benefit of, local dryland communities, integrating modern technologies with traditional knowledge with a view to achieving sustainable development in drylands.

The international development partners are now giving due recognition to the need and significance of overcoming desertification trends. The increased recognition is partly reflected in greater amounts of resources pledged to deal with desertification. Recently the Council of the Global Environment Facility increased the funds available for sustainable land management by about 20% over the next four years.

The private sector must be provided with economic incentives to better invest in efforts to combat desertification. The engagement of the private sector in providing technical and financial resources has been fairly limited. This can be related to both the absence of appropriate enabling policies and a perceived lack of confidence in the private sector. This approach has to change through a positive dialogue engaging the key stakeholders.

Carbon sequestration in drylands can play a major role in mitigating climate change and providing sustainable livelihoods for drylands people – at the same time as combating desertification. As discussed in Section 2, although the vegetative cover in most drylands is comparatively sparse, their large surface area (more than 40% of the global land area) provides immense opportunities for carbon sequestration. Recent carbon trading approaches can provide one institutional mechanism for capitalizing on this opportunity. International development aid policies should also recognize this in order to maximize the impact of their financial resources.

Photographer: Gogo Ndiaye Macina
A girl from a Senegalese village collects firewood, while missing out on opportunities for education.

9 Annex 1 – Bibliography

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10 Annex 2 – Policy-Relevant Findings from the Various IYDD Events

Compiled by Lindsay Stringer

Event	Content	Policy-Relevant Outputs
Jan 19 – 20; Rome (Italy) Workshop on **Combating Desertification and Poverty in Drylands:** Promoting the participation of civil society and decentralized cooperation in the framework of the UNCCD implementation Organizers: UNCCD Secretariat and NGOs	**Points discussed:** Level of knowledge and understanding of the UNCCD (and its operative instruments, NAPs) seems still to be inadequate in the case of civil society actors; Methods of improving the level of knowledge of NAPs among civil society stakeholders need to be designed according to the context in which they are supposed to operate; Communication and cooperation among local entities and civil society should be improved in order for them to become active actors in fighting land degradation; Dialogue and collaboration should be "internal" (among entities of the same administrative area) and "external" (among entities of different administrative areas); The complex institutional framework and the different levels of decision-making make this goal an extremely challenging task; Decentralized cooperation depends mostly on issues linked to local economic development. If it is considered to be more than a "local" need, the fight against desertification can be more effective.	**Declaration** states that: Desertification is important and urgent; International community can and should do more; Civil society has a role to play in awareness raising; Want consensus on causes and symptoms of desertification, future outlooks and consequences of inaction; Concern for lack of methodological rigour in examining UNCCD implementation; Delays in NAP production problematic

Event	Content	Policy-Relevant Outputs
February 27; Washington DC (USA) World Bank Rural Day: **Tackling Degraded Land to Ensure Future Food Production** Organizer: World Bank	**Aims:** Overview of regional land degradation and strategies and methods used by local and regional initiatives to mitigate and rehabilitate degraded land; Role of the Bank in SLM.	**Policy recommendations:** Common ground between regions identified as: land tenure and property rights, confusion over institutional collaboration, watershed management, payments for environmental services, costs associated with land degradation (need to put a price on degradation), effects of climate change on SLM; Land administration and management need to cooperate effectively to develop more holistic approaches to SLM; Analytical work is needed to deepen interventions to incorporate SLM into community driven desertification (CDD) projects.
April 13-16; Marrakech (Morocco) Workshop on **Decentralisation and Local Development** Organizers: Haut Commissariat aux Eaux et Forets and UNCCD	**Aims:** To exchange information and knowledge on decentralization experiences in the peri-Saharan countries, particularly in raising funds for natural resource management and building local capacity; Identify the constituent parts, structure and workings of an appropriate sustainable platform for an exchange of experience and management of knowledge on mobilizing resources to combat desertification.	**Recommendations:** Promote technical cooperation between sub-regions to facilitate community access to financial resources such as the Global Environment Facility (GEF), Municipal Development Programme (MDP), TerrAfrica, and the new European Union programming cycle; Analysis of local natural capital, including increasing understanding of the role of natural resources in local economies and observing the need for economic evaluations of goods and services in arid regions; Promotion of environmental education and information sharing, through processes such as: an E-forum; workshops/study tours; development of teaching kits; training of trainers; Facilitation of access of local groups to financial facilities like the GEF, the MDP, TerrAfrica, GM etc; Reflection by expert scientists from North Africa and the Sahelian countries on links between poverty, desertification and migration; Set up co-operation networks in the areas of decentralization, local development, the fight against desertification and poverty reduction ; Development of oasis zones; Encourage decentralised co-operation between the communities of countries of the South.

Event	Content	Policy-Relevant Outputs
May 14-19; Marrakech (Morocco) Fourteenth Conference of the **International Soil Conservation Organization** Organizers: ISCO	**Aim:** To promote the analysis, exchange and diffusion of knowledge, in the search for solutions to the growing problems of degradation of the increasingly scarce two basic resources – soil and water- for the sustainability of life in the World.	**Recommendations:** Degradation of previously naturally vegetated or productive agricultural lands is extending, mainly due to incorrect policies; Soils play a central role in water protection and regulation. Sustainable development of land resources must consider soil and water resources at the same level; There are not universal soil and water conservation practices or systems - they should be adapted to any particular combination of biophysical, social, economic and political conditions; The generalized use of mostly qualitative indicators and indices may introduce elements of subjectivity in the assessment of degradation, depending on the interpreter's experience or bias. More acceptable and measurable criteria are needed; Lack of sufficient good local information about soils and water prevents those who manage land resources from planning properly, and introduces constraints into the operation of early warning systems with regard to agricultural production and disasters such as flooding and landslides; Although legal measures and sound development policies are necessary for sustainable land use and management, for adequate land use planning site specific data on soil and water resources under actual or previewed conditions are required.

Event	Content	Policy-Relevant Outputs
May 29-Jun 1; Beijing (P.R. China) International Conference: **Women and Desertification** Organizers: Governments of Italy, China, Algeria and UNCCD Secretariat	**Objectives:** To explore ways and means of strengthening the linkages between the key players of various affected Parties, especially at the grassroots level. In particular, it aims to enable: The creation of reviewing and assessing mechanisms aimed at empowering local communities, particularly women, in order to allow end-users to participate fully in land-use choice and the adoption of sustainable land management techniques; The sharing of experience among local communities and women's associations worldwide through success stories and presentations on current bottlenecks, thereby facilitating a learning exercise geared towards the drafting of recommendations for future UNCCD actions in line with the broader Beijing 1995 strategic orientations for adequate empowerment of women in dryland ecosystems; The identification and putting into place of adequate means of disseminating appropriate technologies, of improving women's ability to access information in desertification-prone regions, and of deciding upon pilot activities at national, subregional and regional levels which will ensure that women's issues are fully embedded into action programmes promoted by the UNCCD; The devising of a mechanism by which recommendations for priority actions are channelled towards decision makers including the UNCCD Conference of the Parties (COP) and the donor communities, and by which continuous updates on progress are made through channels to be identified.	**Major priorities for women in areas affected by drought and desertification:** **Education:** promotion of literacy, education, skills and information dissemination; improve women's participation in decision-making; facilitate women's participation in training and capacity building; provide technical and managerial skill acquisition training for women. **Health:** promotion of multi-purpose trees and crops for medicines and food of high nutritive value; studies on the nutritional capacity of areas affected by drought and desertification and ways and means of improving the nutritional status of the younger generation; address water availability and quality and promote simple, cost-effective technologies to improve them; Consider health indicators in the UNCCD reporting process; Recognise the negative effects of HIV/AIDS on communities living in areas affected by desertification and drought; provide adequate reproductive health facilities. **Management of natural resources, particularly land and water:** Women should be empowered to take informed decisions on the planning and integrated management of water resources; Decentralization of forest, land and water resources management to local communities; Rural communities involved in the conservation and

protection of water, forest and land resources should benefit from payment for environmental services; incomes should be primarily invested in environment protection programmes, with the active involvement of women; Technologies for water conservation and management should be improved to respond to women's needs, taking into account the protection of non-renewable water resources; Management of water, forest and land resources based on an integrated, gender-oriented and ecosystem approach; Collection and dissemination of best practices/lessons learned in different regions; Ensure women have access to land and land resources including land ownership rights.

Energy: Women should be ensured access to technology, and to the appropriate use of energy sources through investment in affordable alternative energy sources; dissemination of information on alternative (renewable) sources of energy; training, information exchange and skills building at the local level and adaptation to, and acceptance of, new appropriate technologies; Study to provide a better understanding of the potentials of renewable energies for providing equal opportunities for women; Public/private and community partnerships to create new financial instruments for the promotion of gender-sensitive use of renewable energy; Special value of CDM projects in drought and desertification-affected areas should be promoted among the governing bodies of the Kyoto Protocol, in particular those involving female participation.

Food security: Build on traditional knowledge and appropriate technologies for food production, conservation and value addition in affected areas; Promote research into, and dissemination of information on, the value, use and processing of local plant varieties; Promote the full utilization of all agricultural products and plant components, such as fruit and fibre, and the conservation of local crop varieties through training and experience sharing among local communities; Develop urban agriculture; Facilitate women's access to market information, agricultural technologies, transport facilities and micro-finance opportunities; Expand food security into livelihood security, incorporating employment, income and social security; Encourage public awareness and capacity-building activities to reduce the impact of globalization on small economies and biodiversity.

Funding: Economic policies should provide an enabling environment for national consultations; consultation with local communities should ensure the participation of women on issues directly affecting their lives. Additional funds are needed for women's capacity-building to improve their participation in decision-making to combat desertification.

Event	Content	Policy-Relevant Outputs
June 19-21; Tunis (Tunisia) International scientific conference: **The Future of Drylands** Organizers: UNESCO, UN and international other partners	**Aims:** To base dryland management decisions on solid science, raise global awareness on drylands and their specific challenges, and define future paths of drylands research. Specific objectives are to: Review the current state-of-knowledge of dryland ecosystems and the socio-economics of dryland development in order to provide scientific and technical advice to decision-makers and for the implementation of the United Nations Convention to Combat Desertification (UNCCD); To identify important knowledge gaps for defining future paths of research into drylands, in particular to promote application-oriented science for the sustainable development of dryland regions and to contribute to reaching the Millennium Development Goals; To commemorate and examine 50 years of dryland research in the UN System in the context of the "International Year of Deserts and Desertification"; To widely diffuse conference results to relevant organizations and scientific institutions.	**Tunis Declaration,** which highlights the following priority areas: Interdependence and conservation of cultural and biological diversity; Integrated management of water resources in the context of a looming water crisis; Assessing and forecasting dryland ecosystem dynamics in order to formulate adaptation strategies in the context of global change and to alleviate poverty so as to achieve the MDGs; Agriculture and pastoralism as opportunities for sustainable land use; Coping with and management of natural and man-made disasters; Formulating and implementing scenarios and policy options for good governance in the context of global change; Identifying viable dryland livelihoods and policy options for the benefit of dryland dwellers (such as ecotourism); Educating for sustainable development and knowledge sharing; Reversing environmental degradation and promoting rehabilitation; Costs related to inaction in the field of land degradation; Renewable energies suitable for dryland development; Evaluation of dryland ecosystem services and their trade-offs;
June 26-27, Amman (Jordan) **Drylands' Hidden Wealth** - Integrating Dryland Ecosystem Services into National Development Planning Organizers: The World Conservation Union (IUCN)	To raise awareness and strengthen capacity on the relationship between both ecosystem services in drylands and livelihoods, as well as between poverty and land degradation. This conference aims to raise drylands and the ecosystem services they provide higher up the political agenda and promote investments in dryland ecosystem management and restoration.	Peer-reviewed document on the specific roles and values of ecosystem services in drylands; Guidance on the use of economic valuation in the design of land use policies and incentives; Elements for the development of a global initiative on dryland ecosystem services and valuation.

Event	Content	Policy-Relevant Outputs
August 28, Cape Town (South Africa) GEF **Forum on Sustainable Land Management** Organizers: GEF	**Objectives:** To celebrate IYDD, the first Assembly anniversary of the GEF Land Degradation Focal Area, and GEF becoming a financial mechanism for the UNCCD. To celebrate GEF achievements and impacts in the area of Sustainable Land Management, and chart the future directions for land degradation activities and their linkages to the MDGs.	**Key points:** The integration of land, water, biodiversity and societal issues enables responses to problems affecting whole ecosystems and economies, through coordinated land use planning and resource management. Integrated land and water management is important everywhere but critical in drylands. SLM involves a combination of scientific knowledge, local knowledge and know-how, innovation, and community-driven action. New capacity for knowledge management and exchange plays a key role; transparent knowledge-sharing and feedback are important GEF principles. GEF, as a coordinating agent, should take the lead to develop a policy and administrative framework within which various sectoral, national and district organizations can contribute to such integrated approaches as SLM. GEF and its partner agencies are urged to focus on activities that will result in a significant reduction in land degradation and its damage to ecosystem services and to the poor. Every effort should be made to increase resources at national and international levels, and to improve effectiveness where the need is greatest – in particular in Africa. At a minimum, an additional 10 – 15 % annual increase in resources for the next ten years by countries and donor agencies is recommended.

Event	Content	Policy-Relevant Outputs
Sept 4-6; Bamako (Mali) Bamako International Conference on **Youth and Desertification** Organizers: UNCCD, Republic of Mali	**Objective:** to encourage countries most affected by desertification and land degradation to give priority to creating youth employment as a matter of national urgency, with job creation mainstreamed into macroeconomic and sectoral (agriculture, industry, services and labour) policies, by offering concrete cases of challenges and opportunities for youth in drylands.	**Recommendations:** Include the youth and desertification agenda in International consultations and land tenure reforms; Create enabling policy and legislative environments for youth development. Build and strengthen partnerships with the private sector and NGOs in increasing the involvement of young people in the fight against desertification; Support volunteer service schemes that are targeted at young people and that provide them with opportunities to contribute to development, as well as options for enhancing their prospects to enter the labour market; Encourage countries to enhance the participation of young people in the elaboration and implementation of NAPs at local, regional and national levels; Form a youth network in drylands; Advocate more resources and capacity building for young people in drylands; UNCCD should have a focal point for youth. This will be of tremendous help, especially before a fully operational global youth network in drylands is established; Expedite and facilitate UNCCD implementation in various countries by: Giving priority to drylands in both national and international political agendas; Increasing the role of young people in the fight against desertification and in the formulation and implementation of NAPs/RAPs; Ensure the rights of young people, especially young women, in drylands are respected.

Event	Content	Policy-Relevant Outputs
Sept 21-23; Montpellier (France) International conference: **Civil society and desertification** Organizers: CARI, Both ends, ENDA	Three key issues are addressed: 1) How can increased priority be given to the issues of dryland areas? 2) Economic potential of dryland areas and increased resources of local communities: What are the constraints and opportunities, and possible innovations? 3) Strategy of civil society organizations and of their national and international networks: What is their role, what are their new common involvements? What has the work of the United Nations Convention to Combat Desertification produced during the last decade? In what field should there be renewal and improvements? What other instruments and partnerships can contribute to the achievement of the engagements taken?	**Declaration:** **Appeal to states:** to set up coherent policies regarding international trade at the level of the WTO and of regional trade; For agreements to allow equitable access to markets for dryland products; to fix clear, quantifiable, time-bound objectives in relation to the UNCCD; to introduce more substance to COPs and CRICs; to ensure that the functioning of the CSTis re-examined to increase its efficiency; to raise NAPs to a strategic framework level and mainstream into them the advanced efforts concerning desertification; to create incentive measures and a regulatory framework to favour the emergence of local stakeholders groups such as professional organizations of farmers and pastoralists; To facilitate the effective participation of agricultural representatives and populations of arid zones to the formulation of public policies concerning them. **Appeal to the UNCCD** and its parties: to strengthen the effective integration of local traditional knowledge with modern scientific approaches in actions to combat desertification. **Appeal to the research community to:** involve end users in the definition of research programmes and make research findings reach end users in an understandable, usable way; to set up procedures that take into account the needs of local actors and involve them in the creation, validation and diffusion of knowledge. **Appeal to the GEF and its entities:** to increase funding to combat desertification, and to increase the budget devoted to small projects. **Appeal to state beneficiaries of aid for combating desertification:** to closely coordinate the actions of funders with Civil Society.

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