



INTERNATIONAL EXPERTS'  
CONSULTATION:  
DESERTIFICATION,  
MIGRATION &  
LOCAL DEVELOPMENT



**The Global Mechanism of the United Nations Convention  
to Combat Desertification**

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# Contents

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DESERTIFICATION,  
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List of acronyms	4
Foreword	5
Executive summary	7
The setting: issues and challenges	9
African emigration to and through the Maghreb	10
Drought and international migration: the case of the central Sahara	12
Drought creating multinational towns: the case of the western Sahara	13
Drought and related processes contributing to migration	14
Development as a positive response to the urbanizing effects of drought	16
Natural resource degradation: a factor fueling migration in the Sahel-Saharan region	19
Burkina Faso: 'mining' of natural resources and internal migration	22
Tunisia: push factors at the departure point	22
Niger: accelerated land degradation	23
The peri-Saharan region: environmental observation systems	24
Land degradation and poverty	27
Poverty and migration	28
Environmental migration: the case of Niger	28
Women and migration	30
Desertification, drought and conflict	33
How to respond to environmental migration	37
The Sahara in the context of globalization	38
Assessment of environmental migration in national development policies	39
North Africa: fighting poverty and rural exodus	40
West Africa: can local development eliminate some triggers of environmental migration?	41
Assessment of the impacts of migration on destination countries	43
Regional and international solidarity	45
A community project to combat desertification and poverty in the Bitinkodji municipality, Niger	46
Migrants' contribution to local development: the GRDR experience (France)	47
A new challenge - think globally, act locally: the local government experience in Italy	50
Acknowledgements	52

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2

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3

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4

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5

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6

## List of acronyms

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ANCI	Italian National Association of Local Governments
CEN-SAD	Community of Sahel-Saharan States
CILSS	Permanent Interstate Committee for Drought Control in the Sahel
DNSE	national environmental observation system
DOSE	Environmental Observation and Surveillance System
GRDR	Groupe de recherches et de réalisations pour le développement rural (Research and implementation group for rural development)
GM	Global Mechanism (UNCCD)
MDG	Millennium Development Goal
NAP	National Action Programme (UNCCD)
NGO	non-governmental organization
NRM	natural resource management
ODA	official development assistance
OSS	Sahara and Sahel Observatory
PEODD	Education for Sustainable Development Programme
SMAP	Short and Medium-Term Priority Environmental Action Programme
SRAP	Sub-regional Action Programme (UNCCD)
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
UNOPS	United Nations Office for Project Services
UNU-EHS	United Nations University Institute for Environmental and Human Security
WWF	World Wide Fund for Nature

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# Foreword

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The Global Mechanism (GM) and the Community of Sahel-Saharan States (CEN-SAD) co-organized an experts' consultation in Tripoli (Libya) from 26 to 29 November 2007, entitled 'Desertification, Migration and Local Development'. This initiative was launched under the partnership between the two institutions on crosscutting issues that are crucial for sustainable natural resource management (NRM) and in the fight against poverty in the Sahel-Sahara region.

According to the United Nations University's Institute for Environmental and Human Security, environmental degradation and climate change will result in 50 million refugees throughout the world by 2010.

Desertification affects 30% of the earth's drylands. At present, there are about 200 million migrants worldwide, most of whom are environmental migrants. Most of the populations affected by desertification and recurrent drought are to be found in Africa, especially West Africa.

The Sahel-Sahara region is both a major source of migratory flows northwards and a preferred transit route for migrants from other areas, some of whom settle in the Maghreb. Migration has many causes: socio-economic, environmental, political, or a mixture of these. For the United Nations Convention to Combat Desertification (UNCCD), it is therefore important to increase understanding of the links between poverty, desertification and migration, as well as the effects that changing global trends in local and international mobility have on the new migratory flows affecting the region.

The links between desertification, poverty and migration can be identified by examining the impacts of the various ecological crises that have affected the region since the early 1970s, which were the first triggers for internal and international migration within the region. However, not enough is known about the impacts of migration on the countries of origin, making it difficult to assess the impact of natural resource degradation on migratory processes.

Early immigration affected the Saharan region, where it still has a strong impact. It then expanded towards the coastal cities of the northern Maghreb, where migrants contribute to the local economy. More recently, piggybacking on the growing traffic between the Maghreb and Europe that migration feeds, migrants are attempting to reach Europe. Although they seldom succeed, this new phenomenon is contributing to a massive increase in migratory flows.

In Europe, migration is constantly on governments' political agendas, where, more often than not, it is viewed as a major security issue. Even though the debates between the broad range of stakeholders at Tripoli highlighted their concern about how to respond to environmental migration, at the same time, it also underlined the limitations of this approach: the only sustainable response to forced migration is development. The challenge is therefore how to portray migration as a factor contributing to peace and cooperation, rather than a security issue.

One of the main concerns at Tripoli was to assess how forced migration is dealt with in the policies of affected countries and in the development assistance policies of European countries, and to recommend, drawing on the experiences of those involved, flexible responses that can encompass the complexity of the phenomenon of migration: responses that respect human dignity and migrants' legitimate expectations.



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# Executive summary

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The Sahel-Saharan region is characterized by large-scale migratory movements. Migration affects this region more than any other as it is a major source of migratory flows northwards, a preferred transit route for migrants from other areas and a final destination (in the Maghreb), whether by default or by choice.

The impacts of migration, however, extend beyond the region. Northbound migration towards the Maghreb and Europe has become one of the world's main international issues and a potential bone of contention in international relations, particularly between northern and southern Europe and between Europe and North Africa.

Migration first emerged in the region as the result of a policy of large-scale relocation, settlement and urbanization aimed at promoting development. It now encompasses the whole of Africa and the Sahara is also used as a transit route by clandestine international immigration networks from Asia and Latin America. Every year some 100 000 people travel towards the Maghreb, many of them heading for Europe. Most are turned back and join the region's existing immigrant population.

Drought plays a major role in migration and urbanization in the Sahara, particularly through breaking up communities and their forced resettlement elsewhere. This results in unplanned and excessive urbanization, leading to overcrowding and stimulating further migration - including international migration. It is not a coincidence that most international migrants come from urban areas. At the same time, many new settlements are established along nomadic routes that are well-suited to human transit, including for flows of migrants.

Other than drought, push factors for migration include conflict, lack of water resources, land tenure issues, low yields from land, inadequate basic infrastructure, low incomes, underemployment and food insecurity. Many of these are directly or indirectly linked to land degradation and desertification. Water is an essential factor in desertification

and migration processes because water erosion, stress, pollution, are the main constraint to agricultural development and food security. This is because water is a trans-boundary resource that, when not jointly managed by the countries and areas concerned, becomes a source of conflict and a cause of population displacements, both locally and regionally.

The Mediterranean region's population will exceed 500 million people by 2025, with about 100 million living in coastal areas. The repressive anti-migration policies adopted by many destination countries, including European ones, have proved ineffective and inappropriate. Current development models, with their focus on urbanization, are no longer sustainable. Instead, the focus should be on development in the areas from which people migrate.

Sustainable human development should adopt an integrated approach that fights poverty while protecting the environment. The European Commission considers that the links between migration and development provide considerable potential for contributing to development objectives, without replacing the need to strengthen official development assistance (ODA) and improve policies, which remain as necessary as ever for achieving the Millennium Development Goals (MDGs) within the agreed time frame.

The European Union has urged the UNCCD to take tangible measures to guarantee more predictable financing and ensure more sustainable decentralization and community development. This call was taken up in the Ten-Year Strategic Plan and Framework to Enhance the Implementation of the UNCCD (2008-2018) adopted in Madrid, in September 2007. Investments in human resources and research are needed in countries where even partial results in terms of rehabilitation of degraded land have been recognized.

Most African countries need better governance systems to ensure rational natural resources management and equitable distribution of financial resources. Existing knowledge worldwide should be used to develop government policies and practical measures aimed at reducing desertification and forced migration. Industrialized countries should propose technologies to mitigate the intensification of desertification and the processes leading to migration, focusing on renewable energy sources to help reduce the causes of climate change.

South-to-South cooperation, supported by international bodies or bilateral cooperation agencies, is effective in generating subregional solidarity for combating desertification. Triangular partnerships should be promoted to improve development-driven responses to migration that place emphasis on local development.

Decentralized cooperation between stakeholders with the same aspirations in the North and the South can complement ODA. The solidarity element underpinning cooperation among stakeholders in the South and between those from the North and the South can contribute significantly to creating consensus on the modes and objectives of cooperation, leading to partnerships based on mutual respect and shared benefits from the activities implemented.

The experience of Tunisia demonstrates how a combination of decentralization and community participation is the main factor for success. In other areas, such as the Senegal River Basin, migrants are also becoming the drivers of development in their areas of origin, initiating development projects and establishing civil society organizations.

The setting: issues  
and challenges

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## African emigration to and through the Maghreb

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The Sahel-Saharan region is affected by large-scale migratory movements. Flows of northbound migrants from south of the Sahara, including those heading to Europe via the Maghreb, are an increasingly significant phenomenon in the region, where their presence is exacerbating existing change processes. The effects of migration extend beyond the region, and northbound migration towards the Maghreb and Europe has become one of the world's main international issues and a potential bone of contention in international relations, particularly between northern and southern Europe.

The importance of migration is reflected in the media coverage it receives, and the intense diplomatic activity between European Mediterranean countries and African nations, aimed at halting it. Migration was the topic of the most prominent diplomatic meeting between the North and the South in recent years – the Rabat Conference<sup>1</sup> that was followed by the Tripoli Experts' Consultation in June 2006. Attended by 57 European and African countries, the European Commission, the African Union and the United Nations, the Tripoli consultation was a response to the crisis of the thousands of 'irregular migrants' from sub-Saharan Africa whose existence was swaying public opinion and shaking the deep-held beliefs and strategies of European political decision-makers. This situation illustrates what happens when the issue of migration, often obscured by the emotional reactions it arouses and the political challenges it poses, emerges as a key player in the regional and international political arena.

African emigration to and from the Maghreb started to expand in the early 1990s, reaching its peak after 2000. Attempts to control or repress it, and the drama that such attempts often cause, have done nothing to stem the flows of migrants who settle wherever they can, even at the risk of expulsion.

As immigration increased, the geographic origins of migrants also diversified. Initially comprising the Sahel, this area now encompasses the whole of Africa, right down to the continent's southernmost tip. The Sahara's role as a transit route is so well established that it is also used by clandestine international immigration networks from Asia and Latin America.

Today, despite the obvious challenges of crossing the desert and the Mediterranean, streams of migrants continuously use this route. Migratory movements are now an established and growing phenomenon worldwide, regardless of periodic attempts to control them; the joint efforts and controls put in place by Europe and the countries of the Maghreb have had not had the desired effect since migrants soon learn when and where they are likely to be turned back and adapt by continuously changing their itineraries. The sheer numbers involved and their persistence make migrants a cause of

socio-geographic changes that have significant impact on the region and that therefore need to be assessed. Every year, about 100 000 people travel towards the Maghreb; there are estimated to be about 1.5 million migrants in Libya, 150 000 in Mauritania, nearly 300 000 in Algeria and tens of thousands in Tunisia and Morocco.

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<sup>1</sup> The European-African Ministerial Conference on Migration and Development was held in Rabat on 10 and 11 July 2006 and aimed to develop a collaborative, multi-dimensional and respectful response to migration.

Although many of these migrants are heading for Europe, in practice, very few reach their destination. Nevertheless, these people provoke heated political debate in European countries, which continually step up the expensive measures taken in an attempt to keep migrants out, including military means. Most of those heading for Europe are turned back to the Maghreb, where they become 'immigrants by default' and join the existing immigrant population.

Early immigration affected mainly the Saharan region, where it still has a strong impact, before expanding into the coastal cities of the northern Maghreb, where migrants contribute to local economies and leave their imprint on the cities. Migration was one of the drivers of the urban explosion in such Saharan towns as Agadiz, Sebha and Tamanrasset that, at least in terms of their populations, have become African 'towers of Babel'. The coastal cities of Algiers, Oran, Rabat and Tripoli also have 'African neighbourhoods'. In fact, migration affects the Sahel-Sahara region more than any other for several reasons:

- it is a major source of migratory flows northwards;
- it is a preferred transit route for migrants from other areas; and
- it is a final destination (in the Maghreb), whether by default or by choice.

As well as causing social and territorial changes, the effects of which still need to be assessed, migratory flows are a tool for measuring and analyzing changes in the Maghreb and in the Sahel-Sahara region at large. They could be used to help identify ways of involving the region in the globalization process, especially through its role as a 'buffer zone' between Africa and Europe.

Migration first emerged in the region as the result of a policy of large-scale relocation, settlement and urbanization aimed at promoting development, revitalizing mobility in the Sahara and re-establishing links between the Sahel and the Maghreb. Drought played a major role in this process of change and in triggering population movements within the region.

Drought not only triggered the first mass movements and urbanization of the Sahara, but also had a part in generating the conditions for international migration, particularly by breaking up communities and forcing their resettlement in other areas, and through unplanned, excessive urbanization. One important issue here was that towns started to become centres of migration, partly because of urban overcrowding resulting from drought. In the Sahara, drought and urban growth are correlated, especially in the cities that have become migration hubs. Another important issue is that settlements are often established in nomadic areas and along nomadic routes that are well-suited to human transit and have been revived and used once more by recent flows of migrants. There is a clear correspondence between the areas where environmental refugees have settled following droughts, and the routes now used by migrants from the sub-Sahara.

Drought is not the only cause of migration, however. The development of towns and urban infrastructure also encourages and sustains migrants, and the reasons for this need to be examined. While drought has spurred large-scale movements of Saharan nomads, it is the far greater numbers of people coming from other parts of Africa - especially south of the Sahara - who are the protagonists of modern migration. These people, their motives for and methods of crossing and settling in the Sahara and the problems their presence causes, should also be studied.

The relationship between drought and migration that this paper puts forward, based on fieldwork on sites throughout the Sahel-Sahara region, should be studied in greater depth to ensure that the information available is up to date, analyzed and made compatible with regionwide findings and other disciplinary approaches.

Although drought always leads to large-scale migration and urbanization (which in turn triggers new waves of migration), other factors come into play when migration is on an international scale.

### Drought and international migration: the case of the central Sahara

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This section describes migration as it occurred in central Sahara, particularly along the Agadez-Tamanrasset trunk road, which together with its branch roads to Libya and Mali, is the route migrants use most. In this area, drought coupled with conflict caused the break-up of Touareg communities on both sides of the Sahara, with refugees moving northwards towards the Maghreb. At the same time, it strengthened the links and networks between peoples from different areas, facilitating their future mobility and even leading to people from both sides of the frontier converging into a single population. This process had two main results: growth of the twin towns of Agadez and Tamanrasset; and strengthening of the networks within and between the two towns.

When the first drought hit in 1970, Agadez had a population of less than 5 000, as had been the case for more than a century. Within two years, this population doubled and then continued to grow. After a massive influx of refugees in 1974, the 1977 census recorded 20 700 inhabitants. Another severe drought in 1983-84 decimated the livestock of nomads, who flooded into the town to take advantage of food distributions and other support. This helped boost the population to 50 164 in the 1988 census. Agadez was experiencing demographic growth of 7% per year. Most new immigrants came from rural areas, and by 1977 the urbanization rate of Agadez province had reached 32%, rising to 55% in 1988, compared with a national average of only 18%. The population continued to grow as a result of conflict, with rural people seeking refuge in the town when their livelihoods deteriorated because conflict had interrupted local supply chains. In 1997, the town council reported a population of 80 000, which is estimated to have risen to 120 000 by 2001.

Drought and nomad settlement also contributed to major expansion in Arlit, 250 km north of Agadez, on the Tamanrasset road. Arlit, built between 1967 and 1970, was designed to house workers from the local mining industry: a core population of 5 000 with the flexibility to accommodate 18 000 if necessary. Arlit was built just before the first serious droughts (1972-73), which soon upped the population to 20 000. After the second serious drought (1983-84) Arlit's population had increased to 40 000, rising to 80 000 in 2000 - 16 times the number of inhabitants that the town had been planned for.

At the same time, a similar process was occurring on the Algerian side of the border, in Tamanrasset, 850 km from Agadez, and 400 km from Aïn Guezzam, the frontier town for southbound traffic from Tamanrasset. Aïn Guezzam is 200 km from Arlit.

The 1966 census counted 6 300 inhabitants for Tamanrasset. By the time of the 1977 census, this had risen to 42 000. The first large-scale influx of Touareg refugees arrived in 1972-73, followed by a second wave in 1984-85. These new arrivals boosted the population to 95 000 by the next census (1988). Refugee camps along the border developed into towns - Ain Guezzam for people from Niger, and Tin Zouatin for those from Mali - each of which now has tens of thousands of inhabitants. Many refugees have since moved on to Tamanrasset, supported by family and tribal ties.

Nearly all the Touareg refugees - referred to as 'victims' by the local press and local authorities - came from Niger or Mali. According to local authority estimates Touaregs from Mali and Niger still account for two thirds of Tamanrasset's population, in spite of massive repatriations in the late 1980s and early 1990s. This helps to explain why this town's population had declined to below the 70 000 recorded in the 1998 census.

Drought had less of an impact on Algerian and Libyan Touaregs than on those in the Sahel. It can therefore be inferred that drought - like any natural disaster - is an indicator of social malfunction.

In spite of repatriations, a significant number of Touareg refugees settled in Algeria, benefiting from tribal and family ties, the solidarity of Algerian Touaregs and the 'blind-eye' tolerance of the Algerian authorities, who were anxious to consolidate their role as intermediaries in the region and to prevent the conflict from expanding to the Algerian Touaregs. One of the first effects of this influx was the opening up of Algeria's Saharan border. As a survival strategy in the face of drought and police controls, the Touaregs spread out across the Sahara as far as the northern limit of Ouargla, retracing routes and reclaiming areas that they had abandoned, in some cases for hundreds of years. Many refugees settled in Saharan transit points, especially those on the edges of the desert, but retained aspects of their traditional mobility, establishing links between the different areas of settlement and creating a network of 'sedentary nomads' involving nearly all the Algerian Sahara. This developed into the international trans-Saharan network used by increasing numbers of migrants from the Sahel and, more recently, from the rest of Africa. Touaregs have opted not to migrate beyond their traditional territory of the Sahara, where they can turn their experience of mobility into an additional resource by guiding the ever-increasing flows of migrants through the area. The same process is occurring along the Agadez- Sebha route in Libya.

#### Drought creating multinational towns: the case of the western Sahara

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The migration that occurred along the western Sahara trunk road followed a different process and had different effects. This road, which crosses Mauritania from the River Senegal to Nouadhibou and continues up into northern Morocco, became an important migration route more recently. Here, the impact of drought on migration was mixed, while it had a major impact on the surrounding environment, populated mainly by nomads. Unlike other Saharan States, where nomads have always been a minority population (albeit one of varying importance) most of Mauritania's population were nomads. This characteristic means

that drought resulted in concentrations of people forming within national borders, which had an important impact on increasing urbanization, rather than international migration. However, the emergence of towns as traffic hubs and the increased demand for urban services and trades that nomadic populations could not provide led to calls for workers from the black African community, first from within Mauritania and then from elsewhere in sub-Saharan Africa. The resulting internationalism of Mauritanian towns created the conditions for future international migration as sedentary immigrants from both sides of the border, who had more livelihood options than the nomadic refugees, moved in.

In Mauritania - a poor and politically unstable country whose social structure was already disrupted - drought caused more damage and had a stronger impact on urbanization than elsewhere. In particular, it affected Saharan pastoral and agricultural societies, devastating local economies (half the national livestock holdings, especially cattle, were lost), and provoking the collapse of the nomadism that had been the backbone of Mauritanian society for centuries. At independence (1960), three quarters of Mauritania's population were nomads. This dropped to 33% in 1977 and 12% in 1988, in the wake of the first and second waves of drought. Today, nomads are estimated to account for only 3-5% of the population.

Sedentarization was accompanied by a massive exodus towards the towns. In 1960, Mauritania was the least urbanized country in West Africa, with only 3% of the population living in towns of more than 10 000 inhabitants. This figure rose to 22% in 1977 and 40% in 1988. Today, Mauritania is mainly urban, with a quarter of the population living in the capital city of Nouakchott, where the population has increased nearly 100-fold (from 8 000 to 700 000) in 40 years. This is where most refugees settle, because international aid is concentrated here and livelihoods are more secure in the large capital city. From 1975 to 1988, the city's surface area expanded by 3.6 km<sup>2</sup> a year, and its average annual growth rate was 16%. These rates are among the highest in the world.

Besides Nouakchott, nomad refugees also moved into 'modern' economic zones, such as the towns along the River Senegal or those in the south, especially Rosso, or to the port of Nouadhibou - an industrial mining town in the north (fewer moved to Zouérat). Nouakchott was planned so as to be equidistant from the areas populated by the black African community in the south and the Moors in the north. The three towns of Rosso, Nouakchott and Nouadhibou form a north-south axis linking the Sahel and the Maghreb. Nouadhibou also has international links to the Moroccan border, to the nearby European ports of the Canary Islands and, through its international fishing port, to the rest of the world.

### Drought and related processes contributing to migration

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Drought has contributed to creating the conditions for migration between nations, particularly through the uncontrolled urbanization throughout the Sahel-Sahara region that it has engendered. A key element in this context is town's increasingly important role and their emergence as hubs of migration, partly due to the critical mass of migrants that have settled there.

People have tended to settle in areas and along routes previously used by nomads, and thus along potential trading axes, most of which have been revitalized and are being utilized



once again as trade and migratory routes. In fact, there is a strong correlation between the areas where environmental refugees have settled following droughts, and the corridors now used by migrants from the sub-Saharan.

Drought is not, however, the only cause of migration. The development of towns and urban infrastructure also encourages and sustains migrants. If drought has had a part in boosting town populations to a critical mass, it is interaction with other processes that has enabled these towns to survive over time. Although drought has caused large-scale movements of Saharan nomads, it is the far greater numbers of people coming from other parts of Africa - especially south of the Sahara - who are of the protagonists of migration today. The migration of nomads towards the Maghreb started about 20 years before the droughts, albeit on a comparatively small scale. This confirms that nomadic livelihoods were already in difficulty in the two decades before the first droughts, even though there was abundant rainfall. Some nomads were already seeking supplementary incomes on the building sites and in the agricultural zones of the Maghreb Sahara.

Migration, which began again immediately after independence, involved small distances and just the two bordering countries of Mali and Niger. Migration was generally for seasonal work and subsequently for work in the informal sector. At the outset, the migrants were mainly rural people. This migration was fuelled by both the positive and the negative aspects of development in Algeria and Libya. Although the under-populated Algerian and Libyan Sahara was in particular need of labour for its many building sites, restrictive legislation during this period of 'developmentalism' and State control led to the emergence of an important informal sector, which in turn encouraged Sahara-wide movements and networks. Recurrent shortages of everyday consumer goods - which were considered to be luxury items in Algeria and Libya - the subsidizing of basic necessities in both countries and currency exchange restrictions on the Algerian and Libyan Dinar encouraged 'smuggling' involving networks of small-scale Sahelian traders working alongside the large-scale dealers. Gradually, much of this activity evolved into labour migration, often accompanied by bartering to bypass the currency exchange problem. The drought led to the breakdown of established systems of migration, and immediately afterwards large influxes of Touareg refugees took advantage of the tribal and family solidarity that linked them to the Touaregs in Algeria and Libya and the Toubous in Libya.

Since the mid-1990s, however, nomads have continued to migrate, but are now a minority compared with the numbers of migrants of other origins, especially those from south of the Sahara. Initially mainly Sahelian, migration then started to become a more Africa-wide phenomenon, involving countries that had not been affected by drought. At this point, nomads started to offer their services to other migrants, exploiting and adapting their traditional expertise by working as guides, escorts and carriers for transporters, smugglers and clandestine migrants.

Although a relatively large number of Sahelian nomads still migrate to the Maghreb in search of work (15% of all migrants), they do not migrate beyond the Sahara. While Touaregs are still heavily involved in conveying migrants towards the northern Sahara, there are hardly any Touareg migrants in the north (apart from labour migrants from Algeria and Libya) and even fewer seek to cross the Mediterranean. Most migration between the Maghreb and Europe comes from sedentary farming societies (Kabylie or Souss, for example) rather than from the nomadic agropastoral societies of the upland

plains. This illustrates clearly that there is no direct relationship between a 'mobile culture' and international migration. In Mauritania too, although Moor nomads' trading networks extend into Senegal and beyond, Europe has never been on their itinerary and the Moors have little interest in becoming irregular emigrants. In Mauritania, international migration, at least towards Europe, involves originally sedentary, black African communities. Mauritanian citizens and their politicians (mostly Moors) seek to point this out to European leaders when they contest restrictions on their movements. The political implications of this are clear, particularly in terms of how the European Union handles expected influxes of migrants.

### Development as a positive response to the urbanizing effects of drought

Urban development helped to establish the mobility that led to large-scale migration, and drought played an important role by stimulating demographic growth. However, this situation would not have arisen if other development factors had not also been present.

In the western Sahara, for example, while the towns that have become important migration hubs have experienced a massive population boom as a consequence of drought, they have also experienced more development processes than other towns, making them particularly attractive to drought victims.

Agadez's population was below 5 000 until 1970 because it was isolated and detached from the rest of Niger, while the towns of the south were well connected to each other and to the national urban network. It was the discovery and mining of uranium at Arlit, 240 km to the north, and the construction of the 'uranium road' linking Arlit to Tahoua via Agadez that brought Agadez out of its isolation. Road construction coincided with the drought, attracting drought victims to the area. The road was completed in 1980, and Agadez has continued to benefit from the traffic to Algeria via the Tamanrasset-ImGall-Tahoua trunk road.

The 'uranium road' has revitalized trade between the Maghreb and sub-Saharan Africa, as it is linked to the rest of Niger's road network, especially the 'road of unity' between Niamey and Lake Chad and one of the ramifications of the trans-Saharan Agadez-Tahoua-Kano trunk road. The Agadez-Tanout-Zinder road, once the main route to Agadez from the south, has also been developed to become an extension of the trans-Saharan trunk road, and the shortest route between Nigeria and Algeria. Since the late 1980s, Agadez has been so well connected to the rest of Niger that it has become an important crossroads. Its role in the region has also been strengthened by the improvement of its administrative structures and the growth of its population, owing not only to the influx of drought refugees but also to the development of the town, which has become attractive to migrants. Although Agadez's Touareg population increased massively in absolute terms between 1977 and 1988, the Touaregs' share of total population declined from 67.2% to 58.6%, while the Haoussa people, who are mainly traders, saw their share grow from 13% to 26%. The Arab population, who are exclusively traders, more than doubled, demonstrating that the economy has been developing.

All this contributed to a 25-fold population increase in 30 years, reaching an estimated 120 000 people in 2000. It also gave Agadez - which is now at the crossroad of routes to Algeria, Libya, Nigeria, Niamey (Niger) and the port of Cotonou (Benin) - the capacity to invest in and develop trading relations with the Maghreb. As a result, Agadez retains a large settled population, as well as serving as a hub of Sahel-Maghreb migration.

A similar process affected Arlit, which also experienced large-scale influxes of migrants and continues to be important as a mining town, following the development of infrastructure, housing, other facilities and a major road.

On the other side of the border, the strategically-placed town of Tamanrasset benefited first as a military station, then as the last town on Algeria's southern border and on the trade routes to Sahel countries, and then from massive State investments. These were aimed at providing the necessary infrastructure and facilities for Tamanrasset to become the capital of Wilaya province in 1973, and include an airport with links to the Sahel and Europe. Both before and during the droughts, Tamanrasset was already benefiting from flows of migrants from the north of the country, sent by the State to supervise the town and its region and demonstrating the government's desire to consolidate the town's important role in the area.

Many other urban centres in the Sahara have had similar experiences of large influxes of drought refugees leading to the town becoming a migration hub. However, although drought may have boosted their populations, it is only when these towns develop adequate facilities and administration structures that they are able to retain their importance.



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Natural resource  
degradation: a factor  
fueling migration in  
the Sahel-Saharan region

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Desertification has become a feature of the Sahel-Sahara region. Its impacts affect all of society and the environment. Degradation and loss of productive rural land is leading to migration and conflict. This lost productive land is a consequence of desertification, the lack of innovation in production systems, and population growth.

The impacts of desertification include:

- declining agricultural incomes;
- ecosystem changes, especially a switch from economically-valuable species that protect environments to less valuable ones; and
- the resulting impoverishment of communities.

There is a direct link between drought and migration, as was made particularly clear in the Sahel during the major droughts of the 1970s and 1980s, which triggered the first mass migrations in the Sahara and laid the foundations for an equally massive process of urbanization. These migratory flows headed towards areas of production in both the north and the south, on a national, trans-national and international scale.

Water is an essential factor in desertification and migration processes because of water erosion, water stress, drought, pollution, salinity, etc. It is the main constraint to agricultural development and food security in Africa.

**1. Pessimistic scenario (UN):** 7,000 million people in 60 countries will face water shortages by 2050.

**2. Optimistic scenario (UN):** 2,000 million people in 48 countries will face water shortages by 2050.

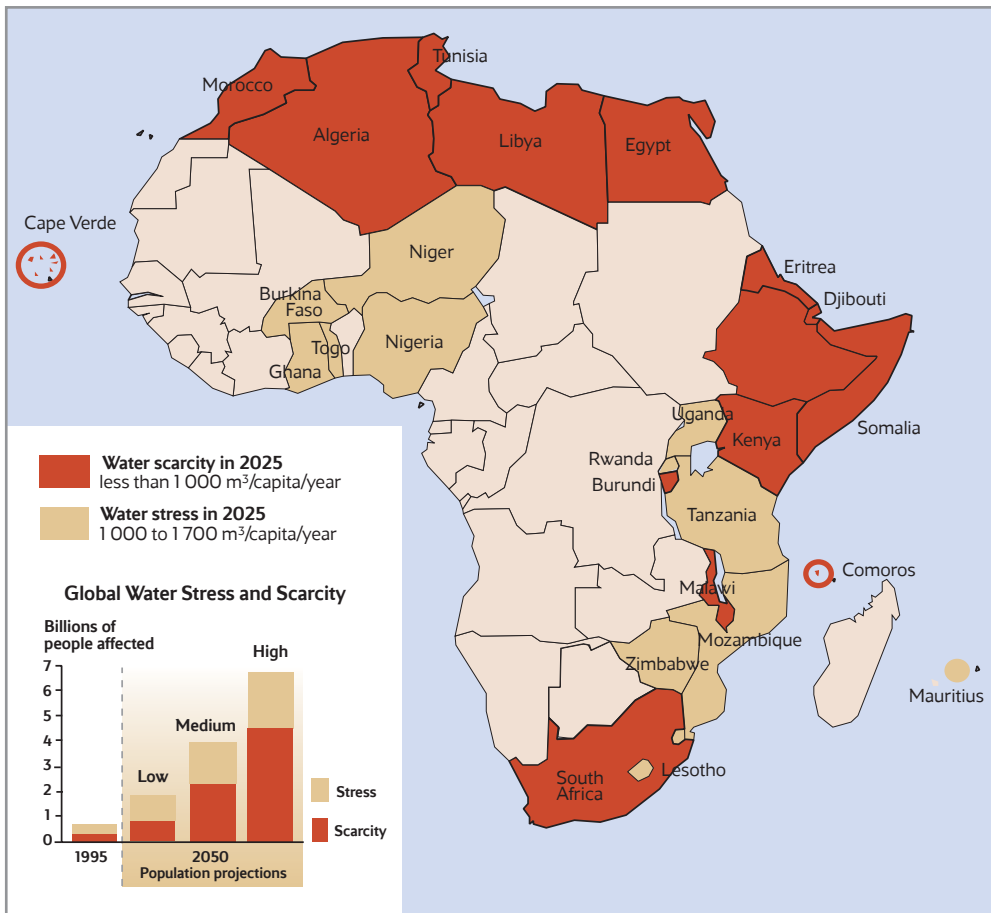
According to the United Nations Children's Fund (UNICEF), by 2025, more than half the world's population will face water shortages.

The link between migration and access to water is due to the fact that water is a trans-boundary resource that, when not jointly managed by the countries and areas concerned, is a source of conflict and population displacements, not only locally but also regionally. This forced migration may then exacerbate the risk of natural resource degradation and conflict in destination areas.

Prolonged periods of drought are a sign of increasing and accelerating desertification and migration. To reduce the risk of conflicts fuelled by migration and desertification, efficient mechanisms for the joint management of shared water resources must be put in place. It is recommended that studies of desertification and migration pay more attention to water issues.

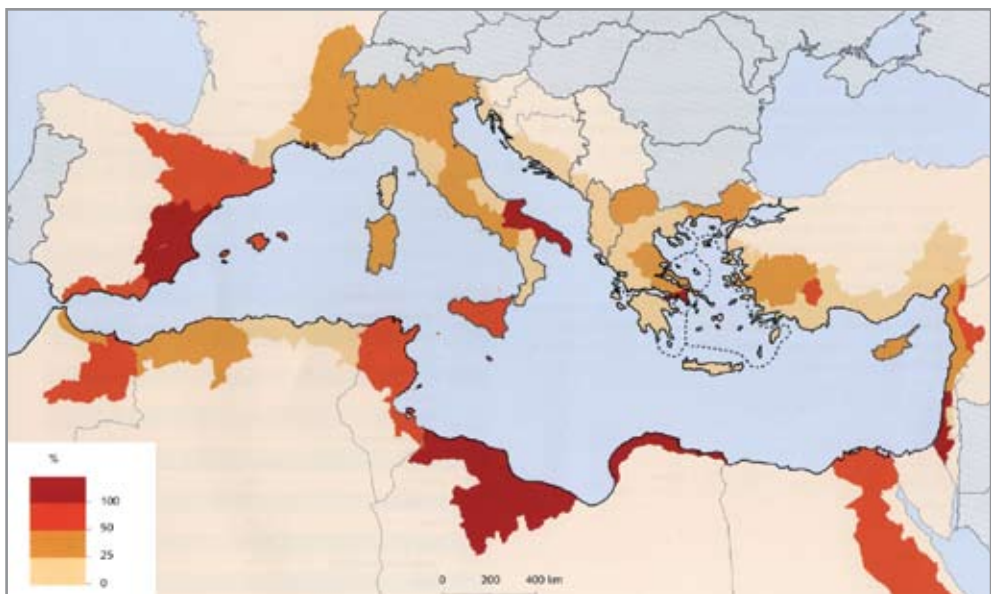
Natural resource degradation: one factor that fuels migration in the Sahel-Sahara region

2



Source: United Nations Economic Commission for Africa (UNECA), Addis Ababa; Global Environment Outlook 2000 (GEO), UNEP, Earthscan, London, 1999, Population Action International

Natural resource degradation - a factor fuelling migration



Water resources in the Mediterranean region

### Burkina Faso: 'mining' of natural resources and internal migration

Burkina Faso is a Sahelian country in West Africa with a population of 13 730 000, according to the preliminary findings of the General Census of the Population and Households conducted in December 2006. Nearly 80% of these people are rural, with an annual per capita income of less than USD 400. According to the United Nations Development Programme (UNDP, 2006), Burkina Faso has a human development index of 0.342, making it one of the poorest countries in the world, even though its poverty index improved from 54% in 1994 to 42% in 2007. This decrease in poverty results from an average gross domestic product (GDP) increase of 5% a year since 1994, owing mainly to a vigorous agriculture sector, which constitutes 40% of GDP.

However, agro-sylvi-pastoral activities, which 'mine' production systems, together with consumer habits and climate factors are putting great pressure on natural resources, accelerating their degradation and increasing poverty in rural areas. Studies of Burkina Faso in 2002 found that:

- 47% of the land is very degraded or degraded; and
- 37% is at high risk of degradation.

Risk of land degradation is closely associated with the spread of agriculture (every year, an additional 185 300 ha of land is converted to farming) as a result of migration, which is a feature of Burkina Faso society. However, the real impacts of migration on the environment - along with those of rural and urban poverty and vulnerability on Burkina Faso - are not well documented.

### Tunisia: push factors at the departure point

Degradation of natural resources in dry areas is the result of human pressures on the environment and climate crises such as prolonged drought. These crises lead to social changes, modified eating habits, the search for non-farming work, and temporary labour migration, as well as the sale of productive assets and permanent migration. Societies affected by desertification suffer declining incomes and increasing food insecurity. Governorates in the central-west and south of Tunisia are those worst hit by desertification and drought. According to surveys of the area, the main push factors for migration are:

- lack of water resources;
- land tenure issues;
- low per hectare yields;
- inadequate basic infrastructure;
- low income and prices paid to producers: reduced fertilizer subsidies, rising interest rates;
- geographic variations in household expenditures, which also vary significantly between rural and urban areas; and
- underemployment.



## Niger: accelerated land degradation

2

At the heart of the Sahel, Niger is one of the countries most affected by desertification and drought. Very unfavourable human and climate factors are increasing the ecological imbalance and exacerbating the socio-economic emergency. For the last 30 years, the process of agricultural land degradation has been accelerating. This degeneration of the natural environment is reflected in the significant drop in the quantity and quality of sylvi-pastoral resources, the disruption of water regimes and the risk of extinction of some wild animal species.

Niger's economy is based on agriculture, livestock and fishing. The country's main environmental problem is desertification, which results in:

- decreasing productive assets (land, water and wildlife);
- increasing aridity;
- food insecurity (famine);
- greater poverty (declining income sources);
- socio-economic imbalance (exodus);
- social unrest (conflicts over land and natural resources are increasing and often end in death);
- weakened human and animal health, as the plant species used in traditional medicine are lost;
- reduced biodiversity; and
- drying up of watering points and a fall in water table levels.

Desertification is both an environmental and a developmental issue. In addition to having an impact on the local surroundings and on people's lifestyles, it also has global repercussions affecting biodiversity, climate change and water resources. Closely linked to human activity, land degradation is a consequence of badly-planned development and a major obstacle to the sustainable development of drylands.

Beyond its local consequences, desertification can also have far-reaching, serious effects on economies and the environment. Soil erosion and movements lead to the silting of nearby areas, infrastructure and sometimes towns. Watershed degradation creates problems with rising water levels, floods and dam overflow. The decline of human living conditions and resources exacerbates the problems of migration.

The main socio-economic consequence of these phenomena is chronic food insecurity, resulting from the imbalance between growing population and declining resource availability, as environmental degradation progresses, especially in zones where people depend on agricultural and livestock production.

According to statistics, Niger's agriculture and livestock raising grew by only 2.2% between 1995 and 2000, while the population increased by 3.3%, during the same period.

Chronic food shortages are estimated to have affected about 20% of the population since the late 1990s.

The cultivable area for millet and sorghum, which need at least 400 mm of rainfall a year, has declined from 25% to 12%, owing to irregular and decreased rainfall and the degradation of farmland.

The expansion of farming in response to low soil productivity has provoked tenure conflicts between farmers and livestock breeders and has resulted in land degradation.

### Environmental observation systems in the peri-Saharan region

Since 2000, the Sahara and Sahel Observatory (OSS) has developed three main working areas for the Environmental Observation and Surveillance System (DOSE) of its environmental programme:

- local surveillance, based on establishing local observatories in eight countries (the ROSELT project (the Long-term Ecological Monitoring Observatories Network project) and expanding to the national level in four (Algeria, Niger, Mali and Tunisia);
- drought monitoring and the establishment of drought early warning systems in the three countries of the Maghreb, to harmonize efforts across the subregion; and
- a follow-up evaluation of UNCCD National Action Plans (NAPs).

The findings of this experience will be of great interest for the future.

#### 1. Local environmental monitoring observatories

- Ecological data pinpoints areas of environmental degradation.
- The matching of remote sensing results to the land contours identifies the dynamics of land use.
- Combining the socio-economic and ecosystem data increases understanding of human-environmental dynamics, providing useful information for decision-making, particularly for land managers.

However, data on migration has yet to be collected. Establishing national environmental observation systems, extending networks of observatories within countries, and building the data collection and analysis capacity of State administrations all help to get national information systems up and running.

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## 2. NAP follow-up evaluations

Introduced before 2000, NAP follow-up evaluations have gone furthest in Morocco and Tunisia. This approach is based on the gathering and analysis of a series of local-level indicators and their aggregation at the national level. Tunisia's NAP follow-up evaluation focuses on biodiversity and climate indicators, in line with the objectives of the three Rio Conventions.

Follow-up evaluations should now be introduced in other countries, and indicators need to be harmonized to produce valid findings for the subregion and region.

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## 3. Drought early warning systems

- The Maghreb Drought Early Warning System (SMAP) project is a consortium of 11 partners focusing on collecting common indicators to build up a picture of drought vulnerability at the regional level.
- The Moroccan model of drought alert bulletins aims to circulate information to all stakeholders at the regional level.
- The OSS has developed tools to facilitate Information sharing at the national and sub-regional levels, including a map database.

### **The cost of inaction**

Inadequate investment in arid areas has the following negative impacts on sustainable resource management and improved livelihoods:

- direct impact on desertification;
- growth of poverty and social instability;
- increased migration and social conflict; and
- more illegal activities and less control of clandestine migration.



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# 3

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## Land degradation and poverty

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## Poverty and migration

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Migration is an inherent feature of social development, and is particularly widespread in West Africa. More and more people are migrating and do so at an earlier age. Although labour migration still involves mainly men, more women are now taking part.

The main characteristic of West African migration is the important role the family plays in initiating and supporting the process. The whole family is involved in the decision to migrate, but to varying extents; men are more likely to decide on their own, while women involve others in their decision - usually somebody who has migrated before them - to the city in this case.

Two hypotheses can be made. The first is that most women migrate to join their husbands who have already settled in the town. In other words, female migration is the continuation of a single migratory process that starts with flows of male migrants to the towns. The second concerns social development. Households and families are becoming more open to women's migration. Women's migration used to be kept to a minimum as a survival strategy to maintain social cohesion, but family and/or household decision-making systems - traditionally the preserve of elders - are changing, along with other relationships of dependence. Decision-making now involves more levels of the family, including those who have migrated, thus breaking elders' traditional hold at the departure point. There is a tendency towards broader participation in decision-making.

## Environmental migration: the case of Niger

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There are two main causes of environmental migration in Niger: persistent degradation of natural resources and sudden environmental change.

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### Environmental migration caused by persistent natural resource degradation

Persistent degradation of the environment and natural resources in rural areas has caused cereal deficits, declining fishery production, and crisis in the pastoral production system owing to agricultural encroachment on to pasture land.

Given the relationship between the effects of natural resource degradation and population increase, seasonal migration constitutes both a survival strategy and a response to rural poverty.

Every year, hundreds of thousands of environmental migrants head to the towns in the interior of Niger and to cities on the West African coast, such as Abidjan, Cotonou, Lomé and Lagos.

For the communities concerned, these seasonal migrations are a survival strategy in the face of chronic food deficits. The seasonal exodus to towns offers security, giving participants the opportunity to find alternative and better paid work than in rural areas and to supplement the needs of families left in the villages.

Able-bodied rural family members can migrate to towns to generate supplementary income to send back to their families. They often opt for temporary or periodic migration because of the cultural, social or historic ties that bind them to their home region and/or because they are poor and have only limited qualifications.

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### Migration following sudden environmental change

As a result of the massive media coverage it has received, this has become the most widely-known scenario for the Sahel. This type of migration is directly linked to the severe droughts that hit the region in the 1970s and 1980s, causing severe food crises and famine. In terms of natural resources, the main effects of drought were the loss of nearly one third of Lake Chad's surface area. This halted the natural cycle of seasonal floods in the Niger's interior delta and along the River Senegal, resulting in the loss of the region's most productive agricultural land, a fall in water table levels, the destruction of vegetative cover; and a reduction in pastureland.

The main socio-economic consequences were the impoverishment of rural people, and a massive, uncontrolled exodus of poor farmers towards towns and cities, where there were insufficient health, education and housing facilities and few income-earning opportunities for the unqualified newcomers.

Rapid warning systems and intervention plans were non-existent, weak or ineffective, leaving governments with no means of responding to this situation or of dealing with the influx of destitute new arrivals into urban centres (capital cities and secondary towns).

Every year, migrants take refuge in Niamey's 2 500 ha green belt, fleeing the effects of low productivity, hunger and natural resource scarcity. In the absence of protective legislation or a management plan, the green belt is now subject to continuous degradation caused by tree felling, unregulated building and lack of infrastructure. The municipality of Niamey has lost control of the situation and the social fabric is being undermined, leaving the new arrivals in extremely precarious living and health conditions.

Before this uncontrolled urban growth, the authorities had not made appropriate contingency plans, underestimating the problems with sanitation (inadequate management of the sewage system, public rubbish dumps, etc.), public infrastructure (health centres, water supply, schools, etc.) and green areas.

Environmental problems are one of the main causes of poverty, malnutrition, famine, epidemics, climate change, environmental destruction, war and forced migration.

While environmental factors influence the movement of people, the movement of people also influences the environment.

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### The impact of migration on the environment in destination areas

Sudden, large-scale displacements can have serious repercussions in the zones where displaced people settle. Although it may not be so immediately obvious, continual flows of environmental migrants into towns and cities with reduced absorption capacity can

accelerate urbanization and have devastating environmental consequences. When immigrants cannot find affordable housing with adequate sanitation facilities, they cut down trees and use sand from beaches as building materials. Migrants ignore building regulations when constructing their makeshift homes, often in flood-prone areas. The result is that migration tends to transfer poverty from rural to urban areas, rather than helping develop the migrants' departure points in rural environments.

Rural poverty causes rural exodus and unplanned urbanization. Large-scale migration networks are based on movements to and through towns that provide the infrastructure for and culture of migration. Most international migrants come from urban areas.

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### The impact of migration on the environment at departure points

Migration can reduce population density, improving resource availability and management. Large-scale, permanent transfers can, however, deprive communities of the resources they need to combat persistent environmental degradation.

The link between environmental change and migration poses a serious threat for peace and security, provoking conflict over damaged assets, landholding disputes and overexploitation of local resources. Most conflicts in Niger are over rural land - either between farmers and livestock raisers when farmland is extended into pastoral areas; or between farmers when poor migrants whose own farmland has been degraded encroach on the land of others.

Remittances from migrants' incomes help families to maintain a basic standard of living when facing food insecurity, caused particularly by cereal deficits. But migration can also contribute to rural stagnation by hindering innovations in rural production systems. There are few investments in productivity and socio-economic conditions in areas from which people migrate. This partly owing to the low incomes of migrants in Niger, and partly to migrants opting to invest in the urban host area - especially in property - which is considered more secure and valuable.

One of the most negative effects of seasonal migration is that young migrants bring HIV/AIDS back to their departure points.

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### Women and migration

Men and women at the departure points are affected differently by migration in response to desertification and poverty. For socio-economic and cultural reasons, migration has become a recognized social phenomenon for men rather than for women. Rural women are therefore left in the front line of desertification all year round. Their daily activities depend on the exploitation of constantly deteriorating natural resources (collection of fuel wood and drinking-water and cultivation of poor, marginal land) in an environment that makes livelihoods increasingly difficult.



Among the negative effects of male migration is women's increased vulnerability, owing to their lack of landownership rights and access to State services and farming inputs, as well as to credit.

Generally, women, the elderly, children and people with disabilities are those hardest hit by the migration of their household heads. Moreover, their responses to this increased vulnerability, can exacerbate desertification processes. This said, male migration has both negative and positive effects on the women left behind; while it adds to their burdens because they must take on more activities and assume additional responsibilities, at the same time it promotes their emancipation. Unfortunately, to date, these positive and negative implications are not well documented.

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### Women's difficulties in Kanem, Chad

Kanem's cultivable land has disappeared under the sand, and its wadis<sup>2</sup> are silting up.

The direct consequences are increased poverty and a massive rural exodus towards urban centres. Able-bodied family members are forced to seek work elsewhere, leaving the women, the elderly and the children in the village. Seventy percent of those aged 20 to 40 have already left.

Women have become the heads of households and, to survive, are turning to alternative activities, such as gathering spirulina or blue algae. Unfortunately, of the 600 functioning wadis 30 years ago, only 200 have survived, and these are at risk of siltation.

To limit the effects migration and desertification:

- women must have the same access as men to training, farming inputs, etc.
- gender issues must be mainstreamed into policy-making, and ongoing activities in this area should be promoted; and
- the migration of household heads as a factor in women's emancipation must be documented.

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<sup>2</sup> A wadi is a riverbed in a desert environment that contains water only during times of heavy rain. Wadis tend to be associated with centres of human population because sub-surface water is sometimes available.



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# 4

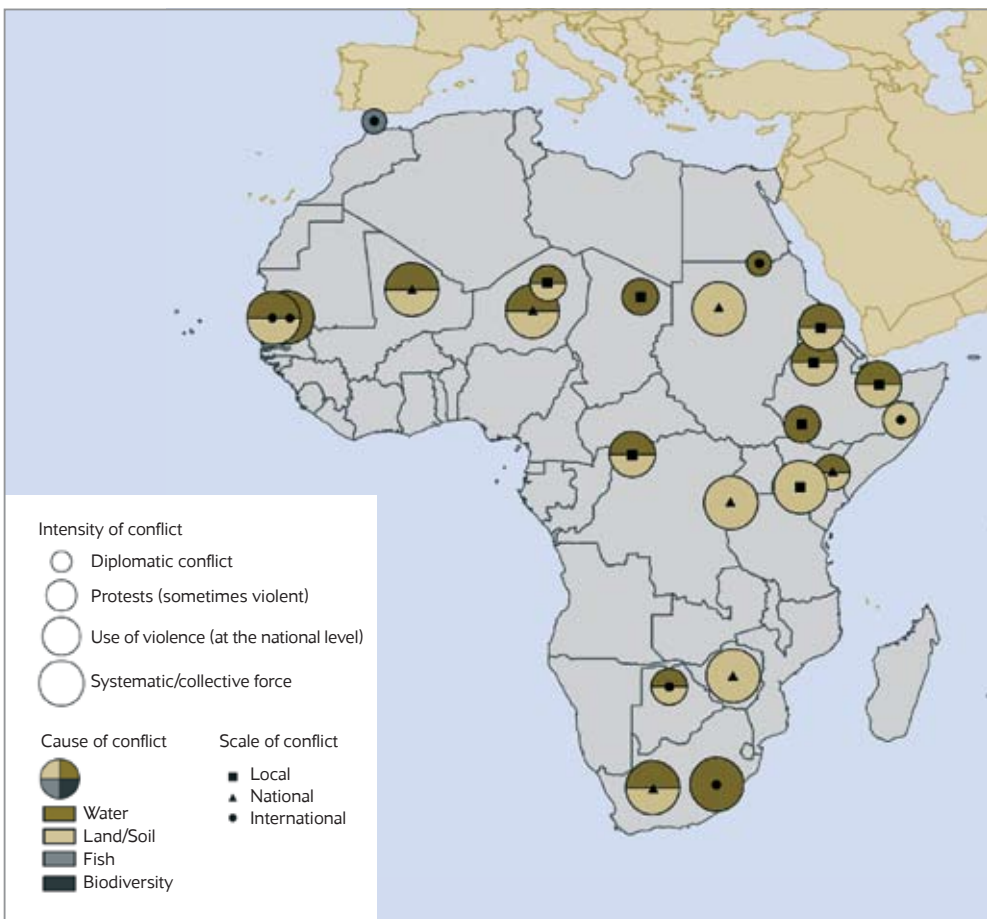
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## Desertification, drought and conflict

When can a conflict be described as 'environmental'? Direct links between environmental stress and conflict are extremely rare and at least three factors must coexist:

- reduced quantity and quality of renewable natural resources;
- increasing population and/or per capita consumption; and
- inequitable access to natural resources.

Under these conditions, 'ecological marginalization' can lead to conflict. Examples include Latin America and the Philippines, when agribusinesses take over fertile valleys and drive small farmers off the land and on to fragile mountain slopes; or when development of waterways pushes land prices up, forcing local people to adopt more capital-intensive practices, as was the case with the River Senegal, the development of which was at the origins of the conflict with Mauritania.



African environmental  
conflict map, 1980-2005

Source: German Scientific Council for Global Environmental Issues; 2007

By reducing resource availability, drought becomes a potential element of conflict. It may create new conflicts or fuel existing ones, particularly in migration destination areas. Conflict, in turn, creates new migration. The link between environmental change and migration threatens peace and security by provoking conflict over damaged assets, landholding disputes and overexploitation of local resources.

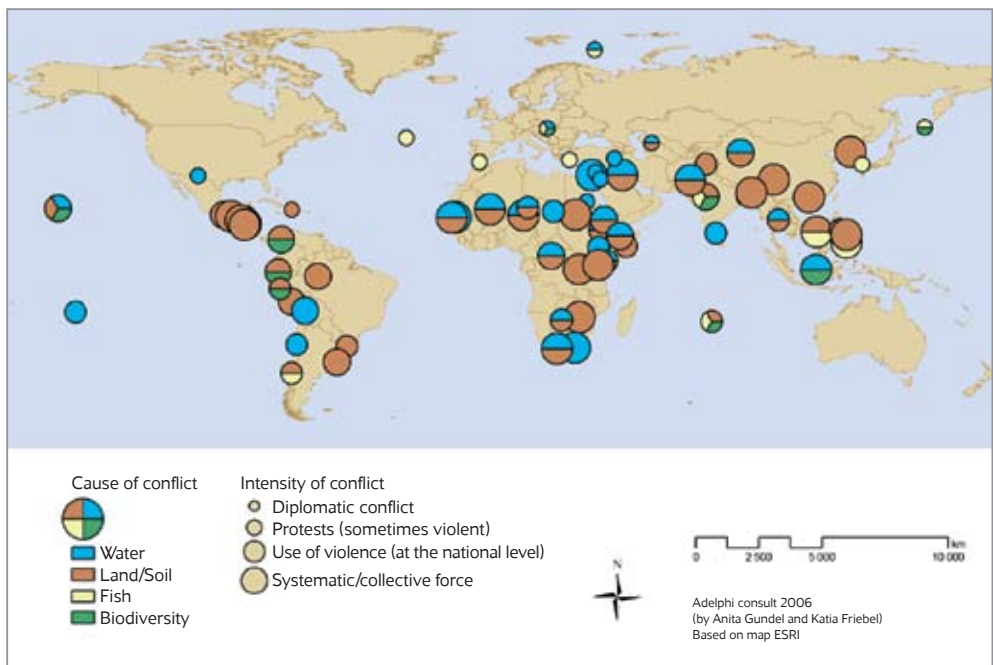
In Niger, most conflicts are over rural land and between farmers and livestock raisers, when farmland is extended into pasture land. However there are also conflicts between farmers, when poor migrants whose own farmland has been degraded encroach on the land of others.

Besides these environmental constraints, social and political factors trigger conflict. These include land tenure issues, family and community organization, economic and legal incentives, historic issues, and the lack of conflict resolution mechanisms. Natural resources are seldom the sole cause of a conflict.

A study of 22 African conflicts found that they were all connected to land degradation and declining water supply.

Land tenure issues play an important role in nearly all conflicts.

Most conflicts develop at the local level. Those at the national level are more serious and intense, and many expand into widespread organized violence.



Source: German Scientific Council for Global Environmental Issues; 2007

Worldwide environmental conflict map, 1980-2005

Nearly all Sahel countries have experienced conflicts that are directly or indirectly linked to natural resources management: Senegal (Casamance); northern Mali (Touaregs); Chad; Sudan; and Somalia. Research into environmental conflicts concludes that they have many causes. Degradation is never the only one; instead it forms part of a complex system of conflict factors and causes, and is very rarely the most important of these.

Most environmental conflicts are local; even when they cross national borders, they rarely lead to war between the affected countries.

The outbreak and resolution of conflicts depend entirely on the capacities of the societies concerned, and therefore on governance issues. The conflicts of the future are expected to arise in so-called fragile countries.

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# 5

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## How to respond to environmental migration

## The Sahara in the context of globalization

Paradoxically, it is the danger and impenetrability of the Sahara that have helped make it one of the main routes to Europe. Crossing the Sahara is a strategy for getting round Europe's fierce resistance to incomers, and the desert has become both a settling area and a springboard to Europe for forced and clandestine migration.

The need to bypass Europe's immigration regulations is resulting in growing numbers of migrants converging on the Sahara from all over Africa and beyond, with clandestine emigration networks from as far afield as Asia and, more recently, Latin America now using the trans-Saharan route. This is transforming the region from an outlying, marginalized area into an intercontinental crossroads.

The result is a sort of 'revenge of the outer edges', with the Sahara - previously the epitome of isolation - now influencing and accelerating globalization processes, in unexpected and informal ways.

Migration can no longer be viewed as an issue for Europe and the Maghreb alone; it now has intercontinental repercussions. In effect, Europe's borders have shifted down to the Sahara, and need to be redrawn far further south than their traditional Mediterranean demarcation line. The Sahara is becoming a new European frontier and this new role is having profound impacts on the region.

The migratory traffic crossing the Sahara is revolutionizing the socio-economic geography of the area. The routes used by migrants to cross the desert retrace the old trans-Saharan trade axes, revitalizing them and helping to re-establish their role in trade. At the same time, age-old Saharan transit points that had become isolated are regaining some of their importance. Migration is helping to redesign national urban fabric, to the benefit of these former centres (so that today, for instance, Agadez is growing more rapidly than the capital, Niamey) and to the benefit of new centres that are being built at the potential intersections of trade routes south (Sebha, Tamanrasset)

Influxes of migrants are also helping to regenerate the urban areas. These towns' new role as migration transit points has encouraged their inhabitants to specialize in mechanics and 'service provision for travellers', with entire neighbourhoods dedicated to these activities. As a crossroads for departing migrants and a haven for migrants expelled from elsewhere, these towns are also places for gathering information and listening to what to expect along the road ahead.

This trans-Saharan network of routes and centres had been marginalized during colonization, when the old linear ways of organizing areas were abandoned in favour of a 'zoned' approach that tended to overlook the Sahara. By revitalizing these routes and centres, migration is promoting a return to the former ways of managing areas.

The remodelling of the urban fabric to benefit the former trans-Saharan centres, points clearly to increased mobility between countries, and closer links between the Maghreb and sub-Saharan Africa. Existing and planned trans-Saharan roads from Morocco, Algeria and Libya are helping to consolidate these developments by following the example of Algeria, which was already developing its Saharan transport links and connecting them to the main trans-Saharan route when this route was only in its initial phase of development.



The roads that the Maghreb and countries such as Nigeria are investing in, sometimes going as far as to finance sections beyond their own national boundaries (as Algeria and Nigeria did in Niger), are the exact replica of the roads that animated the Sahara for centuries and forged closer links between the Maghreb and sub-Saharan Africa.

Today, the Sahara is the region most affected by migratory flows. While trans-Saharan migration is an offshoot of the winds of change that have swept through the Sahara, migration has reached its current scale partly because of massive changes in the Sahara and is now contributing to the speed and scale on which those changes are taking place. This can be seen in the population explosion in Saharan towns, which have become real 'towers of Babel' where African migrants from more than a dozen countries often account for more than a third of the urban population. Many such towns in the middle of the desert now have more than 100 000 inhabitants. This clearly raises questions about these towns' sustainability.

#### **The unsustainability of current development models**

Many studies demonstrate the ecological and socio-economic unsustainability of today's development model. The urbanization phenomenon is a good example: over the last few decades, uncontrolled urban development has brought more profound global changes than in any other period in human history. Although towns play a major role in terms of economic productivity, they also consume vast quantities of land, air and energy, and produce a lot of waste. The challenge for the next decades is how to make towns more ecologically friendly.

Italian National Association of Local Governments (ANCI)

### Assessment of environmental migration in national development policies

#### National Action Programmes (NAPs) to Combat Desertification

Given the current levels of land and natural resource degradation due to drought and desertification, the question is how, if at all, NAPs incorporate the environmental dimension of migration into their response strategies.

Although most countries have developed a NAP, none of these make specific reference to migration. Only aspects of transhumance are mentioned in certain countries' NAPs, and these are all in the region covered by the Permanent Interstate Committee for Drought Control in the Sahel (CILSS).

Indirectly, however, NAP implementation, especially activities to fight poverty, develop rural areas and combat drought, helps reduce migration and, above all, rural exodus. While all the CILSS countries have national population policy documents, these do not address international or environmental migration.

At the regional level, the Ouagadougou Population Action Plan has not been implemented nor does it include environmental issues.

The Sub-regional Action Programme (SRAP) to Combat Desertification in the CILSS region includes responses to mobility, migration and associated conflicts (especially between farmers and livestock raisers), but these are limited to transhumance and transboundary water resources.

NAPs and SRAPs are strategic documents and therefore need to be improved to make specific reference to national, regional and international migration and to recognize its links with natural resource degradation.

NAPs should also be implemented more consistently, to help improve local livelihoods conditions and reduce forced migration to urban centres.

### North Africa: fighting poverty and rural exodus

In Tunisia, the basic principles of Agenda 21<sup>3</sup> focus on ways of eliminating poverty, developing human resources and conserving the environment.

#### An integrated approach to development

The main objective of Tunisia's approach is to establish a strategy specifically aimed at fighting poverty as an essential condition for ensuring sustainable development. This type of sustainable human development strategy adopts an integrated approach that fights poverty and protects the environment, and covers:

- control of population growth;
- improvement of basic health systems, especially for mother and child health;
- education and empowerment of women; and
- regional development.

Poverty can be evaluated through household budget and consumption surveys, based on a living standards threshold below which people are considered poor.

Tunisia has been fighting poverty and seeking to reduce immigration since independence. One of the objectives of its national development plans is to establish a new policy for improving incomes and fighting poverty, especially by promoting employment opportunities, controlling income distribution and redistribution mechanisms and ensuring that social expenditure reaches those who need it most.

<sup>3</sup> Tunisia's national Agenda 21 has been developed and adapted since 1995. It has played a major role in reorienting development policies and programmes towards sustainable development and mainstreaming sustainability into the country's development mechanisms, as well as guiding the design of the 9th and 10th National Development plans.

Tunisia's social policy has three aims:

- to focus more on deprived families and individuals or those without family support; this involves improved targeting of social expenditure;
- to ensure that the needy can engage in productive activities in order to have access to a stable source of income, by creating jobs for long-term poverty relief; and
- to improve the management of social programmes and welfare through enhanced coordination and rationalization.

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### Employment as a factor of mobility and a driver of regional development

Employment is central to local, national and regional socio-economic development policies and strategies.

The labour market is characterized by a widening gap between a growing, more exigent and increasingly diversified demand for employment and the limited, inequitably distributed supply the economy is able to provide. The willingness to emigrate usually has economic causes, such as unemployment, inadequate earnings and a lack of career development.

Between 2002-2006, unemployment averaged 14.5%, rising to between 16% and 20% in central-western and southern governorates (where desertification and drought are worst). Net migration in the central-west region (68% rural) was -4%, calculated as the number of arrivals minus the number of departures, divided by the region's total population.

This is why the priority of the National Poverty Reduction Plan is to achieve regional balance, through efforts to share the benefits of growth as widely as possible across regions.

Since the 1980s, Tunisia has had a decentralization and investment policy that aims to create new industrial hubs and to capitalize on the natural resources of interior regions, thereby engendering a knock-on effect.

This approach has benefited from a new concept of regional development that focuses on the economic and social development of specific regions, with the aim of reducing inter-regional disparities.

A combination of different activities, programmes and tools has helped reduce poverty in Tunisia. Such tools include the National Solidarity Fund 26-26 (established in 1993), the Tunisian Solidarity Bank (1997), employment opportunities, the 21-21 Fund (2000) and programmes to promote small businesses.

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West Africa: can local  
development to eliminate some  
triggers of environmental migration?

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Development in areas affected by desertification and its consequences: food insecurity; impoverished rural households; and seasonal migration; needs to be realigned with a new model that gives due consideration to:

- a preventive approach to development that targets zones at environmental and/or socio-economic risk;
- development based on natural resource management (NRM) activities that generate income for the most vulnerable groups, and provide access to short- and medium-term credit;
- participatory techniques and procedures that ensure the involvement of local communities and their most vulnerable groups, including young people (who are potential migrants) and women (who stay behind throughout the year), but also local administrations such as town councils; and
- the inclusion of migrants in all development initiatives occurring at their departure points - not only socio-economic ones but also health-oriented initiatives (e.g. awareness raising on the risks of HIV/AIDS).

The main advantages of migration in African countries are the positive effects that migrants' remittances of income have on poverty, foreign currency reserves and the balance of payments; the transfer of knowledge and capacity during migrants' temporary or permanent returns home; improvement of the un- and underemployment situation; and the growth of local enterprise based on new opportunities for the private sector.

Several development initiatives in Niger are based on this model. The Fund for Combating Desertification to Reduce Poverty (FLCD-RPS), a joint initiative between the Italian Cooperation agency, the Government of Niger, and CILSS, and implemented by the United Nations Office for Project Services (UNOPS), deserves special mention for its approach, guiding principles, and especially two main features:

- i) the selection of project areas based on criteria that take into account cross-referenced environmental and socio-economic indicators. Using this methodology the administrative departments/areas at greatest environmental risk (persistent degradation of natural resources) and socio-economic risk (lack of or weak socio-economic infrastructure, and growing poverty) can be identified; and
- ii) the FLCD-RPS's implementation procedures, which aim to ensure that project beneficiaries have control over the activities implemented, with the following results:
  - local communities steer their own development processes;
  - ongoing decentralization processes include capacity building for local stakeholders, to ensure their effective participation in the design, implementation and follow-up of grassroots development initiatives; and
  - responsibility for designing, presenting, implementing and internally evaluating their own development, is transferred to local communities, in accordance with the principles of subsidiarity.

Communities in areas of high environmental and social risk need to have access to a local development fund, so they can invest in their own development. This fund should have two windows: one that provides grants to finance natural resource conservation activities and community infrastructure; and one dedicated to income-generating activities, implemented through local micro-finance institutions that support investments that can have a real impact on the poorest population groups, particularly women and the young, enabling them to increase their incomes.

## Assessment of the impacts of migration on destination countries

# 5

Migration can bring substantial macroeconomic benefits to destination countries by filling gaps in the workforce, enriching human capital and creating employment and earning opportunities in immigrants' own enterprises. These factors can enhance economic flexibility and productivity, thereby contributing to growth.

Many destination countries are taking a restrictive approach to immigration, in the belief that it leads to declining working conditions and wages, and creates social and security problems. However, the repressive migration policies that are emerging in Europe - and in Africa - are undermining social and political stability in Africa and could potentially lead to conflict. Yet very little research has been done on this issue. Projections of the impacts of migration policies in terms of conflicts and socio-geographic destabilization are urgently needed.

To alleviate migration, industrialized countries should propose technologies to mitigate intensification of desertification and the processes leading to migration, focusing on renewable energy sources to help reduce the causes of climate change. Arid, semi-arid and sub-humid zones have enormous potential for sustainable energy development.

Existing knowledge worldwide should be used to develop government policies and practical measures to reduce desertification and forced migration. As part of such efforts, South-to-South cooperation, supported by international bodies or bilateral cooperation agencies, is an effective way of promoting subregional solidarity for combating desertification.

Finally, most African countries need better governance systems to ensure rational NRM and equitable distribution of financial resources. This depends to a large degree on the quality of the decentralization processes underway in these countries, and on local communities' capacities to manage local development issues.

Triangular (North-South-South) partnerships should be promoted to improve development-driven responses to migration that place emphasis on local development.



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# 6

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## Regional and international solidarity

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*The [European] Commission considers that the links between migration and development provide considerable potential for contributing to development objectives, without replacing the need to strengthen official development assistance (ODA) and improve policies, which remain as necessary as ever for achieving the Millennium Development Goals (MDGs) within the agreed time limits.’<sup>4</sup>*

In the same spirit, it can be said that decentralized cooperation can complement, but not replace, ODA. The solidarity element underpinning cooperation among stakeholders in the south and between those from the north and the south is based on shared aspirations and stakeholders’ close ties with their own communities. Such solidarity can contribute significantly to creating consensus on the modalities and objectives of cooperation, resulting in partnerships based on mutual respect and sharing the benefits of the activities implemented.

### A community project to combat desertification and poverty in the Bitinkodji municipality of Niger

The socio-economic conditions in the Bitinkodji municipality are all too common among local communities throughout the region. Here, poverty is characterized by:

- natural resource degradation;
- food insecurity;
- low incomes;
- migration; and
- low school attendance by young people.

Education for Sustainable Development (PEODD) is one of several projects and programmes designed to respond to this situation of natural resource degradation.

PEODD is financed by French development partners, including the Departmental authorities of Essonne, the Association of Communes of Vallée de l’Orge Aval, the Water Syndicate of Hurepoix, the French Ministry of Foreign Affairs and the Commune of Itteville, and the World Wide Fund for Nature (WWF), Bitinkodji municipality, the President of Niger’s Special Programme, and the general public.

It has five components:

- protecting the environment and combating erosion;
- education - raising awareness on the importance of environmental protection;
- improving access to water;
- improving primary education; and
- supporting the setting up of community facilities.

<sup>4</sup> Communications of the European Commission, *Speeding up progress towards the Millennium Development Goals - The European Union’s contribution* (COM/2005/0132); *Accelerating progress towards attaining the Millennium Development Goals - Financing for Development and Aid Effectiveness* (COM/2005/0133); and *Policy Coherence for Development - Accelerating progress towards attaining the Millennium Development Goals* (COM/2005/0134).



Launched in July 2003 for four years, the programme is part of a decentralized cooperation initiative involving district governments in France and Bitinkodji. So far, it has undertaken development activities worth African Financial Community francs (CFAF) 245 800 000 especially:

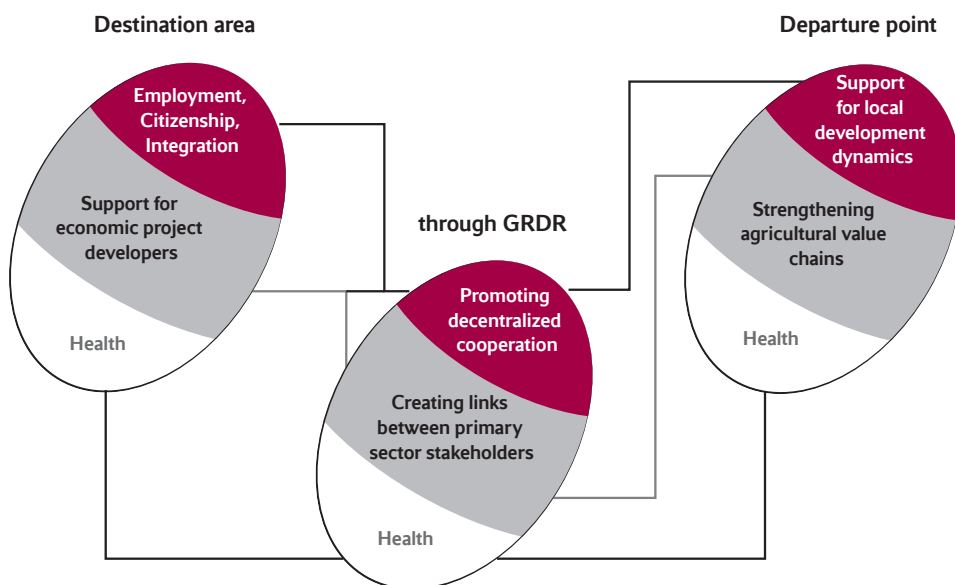
- environmental education;
- soil rehabilitation;
- planting species at risk of extinction; and
- producing a municipal development plan for Bintinkodj.

Migrants' contribution to local development: the GRDR experience (France)

The *Groupe de recherches et de réalisations pour le développement* (GRDR) works in Africa with local authorities, State technical services, town councils and civil society stakeholders, to promote control of local decision-making processes and activities through:

- **methodological and operational support** for decentralization, increasing community participation and strengthening local stakeholders' capacities;
- **transparency** at all stages of the process (from identification to implementation through the provision of appropriate tools);
- **capacity-building** in priority areas (health, education, NRM and communications).

The GRDR operates both in destination areas and at departure points.



The migration dimension

Analysis of migrants' role in the development of migration departure points in Senegal found that between the 1970s and the 1990s, migrants were almost entirely responsible for the development of the Senegal River Basin. Activities took a 'project approach' focused on creating community infrastructure (schools, wells, clinics, mosques, etc.).

During the 1990s, civil society organizations were set up throughout Africa, often by returning migrants, who became the drivers of development. Inter-village organizations gradually acquired the capacity to manage local development.

At the beginning of the 21st century, decentralization policies transferred authority for basic necessities (water, health, education, local development, etc.) to local authorities. New figures were elected to take up the challenge of local development.

What are the advantages of local authorities leading the fight against poverty, and what constraints do they face? Several advantages make the local authority level an effective one for combating poverty, as long as:

- decentralized authorities are close to the people they represent;
- the areas concerned are large and diverse enough to allow solid, coherent development;
- a range of dynamic, experienced, economic and social stakeholders exists;
- technical partnerships are possible with non-governmental organizations (NGOs), or through cooperation; and
- migrants are involved in development of their villages.

However, there are also many constraints, when:

- local authorities lack financial resources;
- illiteracy rates are high and trained human resources, scarce;
- most of the population is very poor;
- the region suffers from rural exodus and emigration;
- little is known about the area;
- district authorities have limited local resources;
- isolation makes communication difficult; and
- there are misunderstandings within and between villages.

Support to district authorities is provided in several stages:

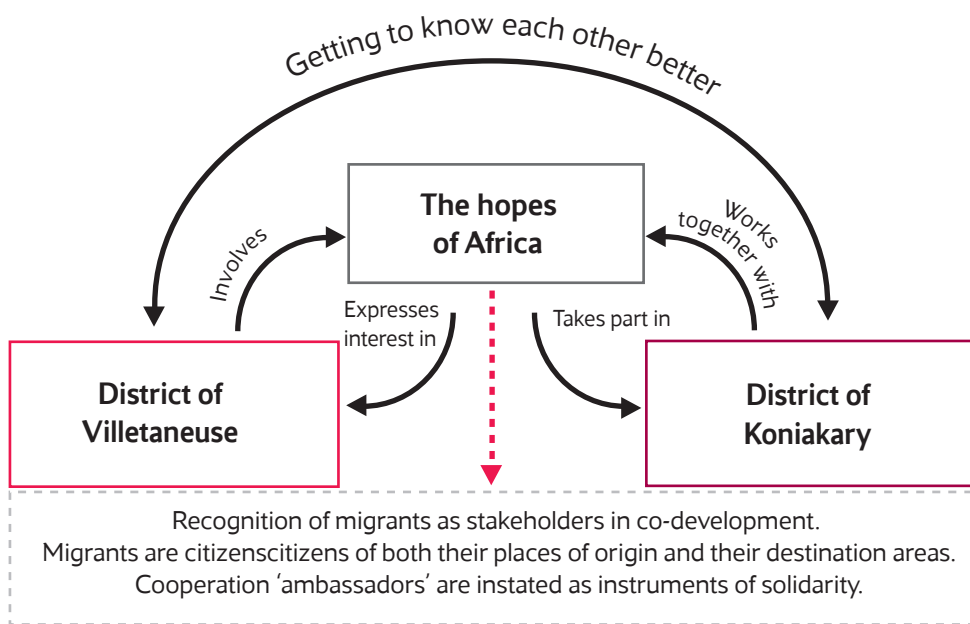
**1. Knowledge of the area**, through the development of a local authority survey involving local people in the analysis of their real-life situations. This district mapping covers the villages, positions them geographically and permits the spatial analysis of resources and infrastructure.

**2. Fostering dialogue** between the different groups of stakeholders.

**3. Planning** according to a Priority Action Plan.

**4. Mobilization of resources and partners by:**

- appointing a local development officer;
- contracting technical partners;
- contracting financial partners;
- involving local stakeholders; and
- involving migrants (in France).



The main benefits of migration in North Africa and the sub-Saharan are:

- the positive effects of migrants' remittances on poverty, foreign currency reserves and the balance of payments;
- the transfer of knowledge and skills when migrants return virtually or in person, temporarily or permanently to their own countries;
- improvements in unemployment and underemployment figures; and
- increased local business activities, owing to new opportunities for the private sector, the links forged between migration departure points and destination areas, and collaborative local co-development initiatives and decentralized cooperation.

Here, migration is not seen as a problem but as a driver of development in the departure areas. Immigration can also drive development in destination areas (workforce, economic development, cultural exchange and productive population).

A new challenge:  
think globally, act locally - the local  
government experience in Italy

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The Mediterranean region's population will exceed 500 million people by 2025, with about 100 million living in coastal areas. Around 25 areas in the Mediterranean Basin are fragile and vulnerable to biodiversity loss owing to severe events such as floods, temperature rises and chronic drought.

Today there is another important social issue on the table: simply hosting migrants is no longer enough. Time is short, and we cannot keep procrastinating - urgent measures must be taken immediately. The European Union's response, urging the UNCCD to take more tangible actions to guarantee more predictable financing and ensure more sustainable decentralization and community development, was taken up in the Ten-Year Strategy (2008-2018) adopted in Madrid in September 2007. Investments in human resources and research are needed in countries where even partial results in terms of rehabilitation of degraded land have been recognized. The experience of Tunisia demonstrates how a combination of decentralization and community participation is the main factor for success.

The European Parliament Development Commission's Conference on Combating Desertification, attended by the European Commission, the Commission on Climate Change, the United Nations, and European and African NGOs, boosted interest in the issue. This initiative highlighted practical actions to be taken, particularly for Africa, and its focus on local communities and local development policies is particularly promising.

The resulting project proposals must now be carefully evaluated: participation of local community stakeholders is key to the success of any project and must be promoted and facilitated. While national governments meet at the United Nations to define the guiding principles for the future of humanity, regional and local governments must be empowered to take action.

One example is the Government of Italy's proposal to achieve worldwide acceptance of the principle that water is a global common and a human right - a reminder that one MDG is to reduce by 50% the number of people in the world without access to water.

On Italy's National Day to Combat Desertification - marked throughout the country by local-level awareness raising events, exhibitions, public debates and studies aimed at identifying projects to combat desertification, the Italian National Association of Local Governments (ANCI) launched an appeal encouraging other European local communities to support Mediterranean and African local community development: now is the time to put this appeal into action.

ANCI brings together and supports Italian local governments and is working to establish a permanent conference of Mediterranean towns and local communities, which - like the European Conference - would be a tool for knowledge management, analysis and responses to desertification and the other issues faced by local governments, based on the principles of autonomy and solidarity.

'Combating desertification days' have been held in other countries, including Libya, which has been tackling the issue for many years and has a wealth of experience to share. Such days could provide the opportunity to launch local government coalitions aimed at improving the environment and living conditions for everyone.

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#### Institutional cooperation: autonomy, responsibility and solidarity

No public or private institution, local or national government, scientific organization or voluntary initiative can solve the current problems on its own.

A new development model must include the effective management of resources that - up to now - nature has defended and preserved on its own.

All stakeholders must be involved in identifying solutions and confronting the future. Local authorities and local communities can play an active part in ensuring that their areas are safeguarded and developed according to sustainable principles.

Less invasive agricultural practices that protect local producers and biodiversity must be adopted. 'Ambassadors' such as intellectuals, writers, film directors and people in the music and show businesses must be involved. This requires the constant, long-term effort that only local governments and institutions working closely with local people can achieve.

The task is difficult, but not impossible.

## Acknowledgements

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