

A brochure series with accompanying materials on development cooperation
for the UN Decade of Education for Sustainable Development

SUSTAINABILITY HAS MANY FACES



User Rights for Pastoralists and Fishermen

Agreements based on traditional and modern law

Contributions from Mauritania

gtz



Federal Ministry
for Economic Cooperation
and Development

The following brochures have been published in the series "Sustainability Has Many Faces":

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People, natural resources and international cooperation
Contributions from the countries of the south
Editors: Stefanie Eissing and Dr. Thora Amend
Languages: German, English, French, Spanish

2 Nature Conservation Is Fun

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6 User Rights for Pastoralists and Fishermen

Agreements based on traditional and modern law
Contributions from Mauritania
Editors: Karl P. Kirsch-Jung and Prof. Dr. Winfried von Urff
Languages: German, English

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Federal Ministry
for Economic Cooperation
and Development



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Foreword to the series

In 1992 the yawning gap between rich and poor, combined with an awareness of the limits to natural resources and the growing threat posed to the ecological foundations of economic and social development, roused the heads of state and government of 178 nations to action: at the United Nations Conference on Environment and Development in Rio de Janeiro, they signed the Convention on Biological Diversity. This agreement, binding under international law, sees the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of this utilization as key elements for future action. Guided by the vision of sustainable development, people in many countries of the world have since then been looking for ways to manage the natural resources available to them soundly and responsibly. Preserving biological diversity is key to this because it means keeping development options open both for the people alive today and for future generations.

A further agreement in international law is becoming increasingly important in view of the changing global climate. The United Nations Framework Convention on Climate Change, also adopted in Rio in 1992, has now been signed by almost all states of the world. The impacts of global warming are threatening people and nature everywhere without regard for national boundaries. While the industrialized nations in particular were at first hesitant to take resolute action to curb greenhouse gas emissions, strategies to effectively counter climate change are now on the policy agenda of practically every country. It is now recognized around the world that climate change threatens the economic capacity and wealth of rich countries while at the same time jeopardizing the development potential of poor countries and the very survival of their populations.

In the year 2000, the United Nations adopted its Millennium Development Goals and undertook a commitment to halve poverty worldwide, improve environmental protection and ensure more balanced development within the following 15 years. Within the framework of the Agenda 2015, Germany set out its contribution to assisting developing countries to attain these MDGs. Today, development cooperation is less and less about finding purely technical solutions; it is about supporting and accompanying people

and organizations through difficult economic and social change processes.

Young people are often keenly aware of what is going on in other countries. Many have a pronounced sense of justice and are eager to understand the complex interrelationships between our actions at home and what happens elsewhere. Moreover, they are committed to identifying fundamental and sustainable solutions. The United Nations has underlined how important education is for just and peaceful global development and has declared the years 2005–2014 the Decade of Education for Sustainable Development.

GTZ's "Sustainability Has Many Faces" series is designed as a contribution to this Decade. The brochures in the series show how people in countries with which we are less familiar find ways to improve their livelihoods while at the same time learning to put less pressure on their environment. The examples presented here effectively and clearly illustrate the different facets or "faces" of sustainability. They encourage us to become more aware of the differences and commonalities between rich and poor countries. And they encourage us to practice global learning by discussing how solutions found in "the South" might also harbor new and stimulating ideas for us in "the North".



Karin Kortmann

Parliamentary State Secretary in the German Federal Ministry for Economic Cooperation and Development (BMZ)

Forward to the Mauritania Brochure

Since the 1992 UN Earth Summit in Rio de Janeiro, sustainability has assumed central significance in German development cooperation. GTZ orients its work along the guiding principles of sustainable development. This forms part of our identity, provides our fundamental political and business orientation, and characterizes our values.

Sustainability is closely bound to other key political themes of development. No one disputes any longer that poverty and the plundering of natural resources are often mutually dependent. Less known is the correlation between sustainability and democratization. Many developing countries have begun to transfer responsibilities from a centralised state to the population in provinces and communities. This does not signify only decentralising civil administration but also moving the processes of collective decision-making to a grass-roots level. These processes must be practiced and need regulated structures. This brochure about Mauritania shows how these structures function.

Through examples you will learn about the resources at Mauritania's disposal, some of them of outstanding global significance, and what is threatening them. For centuries traditional rules were in force which provided the population with the use of natural resources for their sustenance while insuring their conservation. "Modern" law inherited from the colonial period did not accomplish this to any extent. The Mauritanian state claimed ownership of all areas without exercising its responsibilities for their conservation. The result was unbridled exploitation of biodiversity.

GTZ proposed an approach for solving this problem with which it had already gained positive experiences in other West African countries: the transfer of responsibility from the government to an organized local population which would issue and enforce local conservation and use regulations. However, the brochure also shows that this approach cannot be applied in all cases. When the beneficiaries of biodiversity are not the local population, the designation of a reserve with appropriate restrictions might be the appropriate way. But conservation goals can also be achieved in this case only with the cooperation of the population. Strengthening their self-responsibility and participation are two indispensable prerequisites for more democracy.

Such processes of change are not possible without the development of the necessary expertise. GTZ's exceptional understanding of capacity development has an effect here. The improvement of a legal and institutional framework must go hand in hand with the continuing educational efforts of people and organizations. Thus they can school themselves to actively and competently participate in the social negotiation process between the government and the people. The goal of our work is to accompany people as they discover new scopes for acting in the respective spheres of their life and occupation, to exploit these and so take their future into their own hands. In reading this brochure you will be amazed at the diverse and promising paths which were found with our support in Mauritania.



Dr. Bernd Eisenblätter

Managing Director, Deutsche Gesellschaft
für Technische Zusammenarbeit (GTZ) GmbH

Part 1

Introduction, overview and structure

Who is interested in the watering points and fishing grounds?

Who determines the rules?

How can natural resources of global importance be conserved?

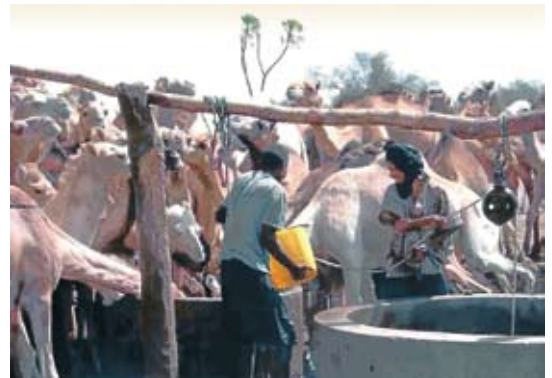
fishing grounds

Mauritania is a country in Western Africa which is relatively unknown in Germany. Since the catastrophic drought in the Sahel in the 1970's and because of population growth, the country, which is among the poorest in the world, has faced a profound structural change: the 70 percent of the population which was formerly nomadic or mobile, as it is widely called, has to a large extent become sedentary so that today only about seven percent can be described as nomads. This radical change has had considerable effects on urban and rural areas. In the countryside the traditional systems for arranging the use of natural resources have lost their effectiveness as a result of this social transition. Adaptation to the demands of a now sedentary population has frequently foundered on general legal and institutional frameworks.

Hence the focus for this brochure lies on the following question: how can legal frameworks be formulated which enable nature conservation and sustainable resource use through the interaction of local inhabitants with governmental structures?



watering points



who determines the rules?



The framework conditions in Mauritania are very special:

- Many ecosystems are ecologically fragile marginal yield areas demanding flexibility and small-scale adaptations in resource use.
- The colonial past with its “top-layer” legal system and cultural distortion has led to a destruction of traditional legal and cultivation systems.
- Lack of assertiveness by a government only partially able to act effectively (e.g., misallocation of financial and personnel resources) has led to legal vacuums and thus to overexploitation of resources. Additionally, the fact that divergent global interests in nature conservation (e.g., in wetlands with international significance for migratory animal species) or in resource conservation (e.g., by the European Union with respect to the important fishing grounds off the Mauritanian coast) do not necessarily correspond to local resource utilization interests.

Further factors result from:

- Commitments arising from international treaties and Mauritania’s involvement in global processes (e.g., the Convention on Biological Diversity, the Convention to Combat Desertification, EU Fishery Partnership Agreement).
- The influence, not to be underestimated, on the government by international donors when these place value on the implementation of democratic principles (good governance).

The current brochure illustrates by means of concrete examples how locally adapted solutions have been found within pre-existing conditions. Different models are presented which show how more sustainability in environmental dealings can be achieved through the interplay of the government and the local population.

The essential prerequisite for this in Mauritania was the adjustment of the legal decrees. For only a legal structure – regardless whether “traditional” or “modern” – creates a socially recognized framework for action. And “law” functions only if it is adapted to changing social circumstances and requirements.

As part of German development cooperation, experts dispatched to Mauritania have already been supporting development there with techni-



Key regions of the “Natural Resource Management Programme” (ProGRN) in Mauritania.

cal and financial assistance for many years. The GTZ’s (Deutsche Gesellschaft für Technische Zusammenarbeit) “Natural Resource Management Programme” (Programme Gestion des Ressources Naturelles) has been in operation since 2005. On the one hand, Mauritania is being supported in further expanding its legal framework for natural resources use (environmental law). Then again tangible, onsite work is accompanied by the development of appropriate models for natural resource utilization, which should make it possible to simultaneously safeguard nature conservation as well as the basic needs of the local population.

In so doing, the regional distribution of those assisted by GTZ takes into account the fundamental sociological, economic and ecological features of the country:

- On the coast: nature conservation and preservation of fishery resources.
- In the East: Sustainable cultivation of wetlands highly important to mobile pastoralists and biodiversity.
- In the South: Integrated resource management of communally shared forest grazing land.

Both levels where ProGRN is active, the national and the regional, are linked together. Recommendations for advancing the legal framework for sustainable natural resource management can achieve their goals all the more effectively if they are built upon practical experience gained at the implementation level. Only in tangible collaboration with the interested parties does it become clear where

legal and administrative regulations are inappropriate, where objectives are met or where they are even counterproductive. Should pertinent modifications be successfully brought about through a political process, then essential foundations are laid at the implementation level. Partners working cooperatively can create organizations and carry out measures which are perceived to be meaningful and necessary for sustainable resource management oriented to the needs of the population.

Part 2 of the brochure therefore pursues the question of how legal frameworks must be modified to make appropriate resource management possible. The primary reason for the intensification of the ecological situation in Mauritania is the social change during the past decades. Added to the factors of population growth and the settling down of the previously nomadic population is the parallelism of the Islamic-influenced common law to “modern” laws, which led to the traditional arrangements for administering natural resources losing their effectiveness. The revival of nomadic grazing rights and the inclusion of Islamic values in Mauritania’s new forest and grassland legislation now create new perspectives.

Part 3 illustrates by means of a film how local use agreements function. Local arrangements for resource utilization represent a voluntary mechanism which, once negotiated, the local population must implement and take responsibility for. The goal of this is to better guarantee the protection of natural resources and their sustainable management by the local population than has been possible thus far by the central government.

In arid Mauritania the livelihood of the population is severely endangered by the overexploita-

tion of its grass- and shrublands. Water access is becoming increasingly conflict-laden for the dominant nomadic pastoralism. At the same time habitat preservation for the bird population is endangered, a low priority for those in the coastal region. In the regions Guidimakha and Hodh el Gharbi where degradation of vegetation is intensifying, German development cooperation has successfully opened new paths toward local use agreements. The film follows the various steps leading up to the implementation of the agreements.

Part 4 of the brochure is concerned with the question of how people can be persuaded to protect natural resources of outstanding value although they themselves must accept use restrictions.

The flat coastal areas of the Banc d’Arguin National Park are important resting places for migratory birds from Europe: the Atlantic off of the Mauritanian seacoast is among the richest in fish worldwide. In Mauritania the export of fish and fish products is an important source of income for the state; fish processing is the most significant employer in the industrial sector. The fishing grounds are, however, threatened by overexploitation by national and international fishing fleets. Besides endangering the ecological balance, the economic development of the country is threatened.

The need to adjust therefore pertains not only to nomadic and sedentary pastoralists but to coastal and deep sea fishing as well. In the long term, the protection and regulated use of these important resources should be ensured by sustainable, high yielding control. In the establishment of the Banc d’Arguin National Park the driving

Callotropis and the slender-billed gull belong to the beauties of Mauritania’s flora and fauna.



The regulation of access to natural resources is, for the population as well as for nature, essential for survival.



motive of bird habitat preservation had world status. In the new National Park law economic and social development are stipulated as having equal rights. Thus the local population was successfully involved and included in the benefits of the nature conservation.

At the end of each individual chapter there are suggestions for discussion and continuing work. Through the use of questions more fundamental connections should be considered. Mauritanian experiences should stimulate thinking about the German context and developing or examining (self) critically one's own personal perspective.

Part 5 brings the two approaches together (resource conservation and user agreements as well as area conservation and collective management), ponders the collected knowledge and conclusions and provides an outlook.

The Background Information section (Part 6) of the brochure contains a geographical section on Mauritania and the regions discussed: Guidimakha, Hodh el Gharbi and the Banc d'Arguin. Additionally, there is an overview of German

development cooperation with Mauritania as well as short descriptions of the most important international conventions which are relevant to the topic at hand.

The appendix (Part 7) contains a glossary and index of abbreviations and acronyms, internet links, suggested references about Mauritania, development cooperation, and the related subjects of biodiversity, nature conservation and protected areas. The entire text of the brochure, illustrations, photographs and all presentation material are contained in the accompanying CD/DVD.

This brochure is addressed to upper-grade secondary school teachers and to school external environmental and development politics education work. The materials and questions posed on the topic of development cooperation, legal issues, or religious relationships to nature and resource conservation are suitable both for cross-disciplinary trans-sectoral studies as well as for classical subjects such as geography, biology, social/political studies, religion/ethics, or subjects like "global studies".

Part 2

Mauritania: Colonial history and legal principles



Mauritania (officially the Islamic Republic of Mauritania) lies on the Atlantic Ocean in north-west Africa. This presidential republic borders Algeria, Mali, Senegal, and the Territory of Western Sahara annexed by Morocco (Sahrawi Arab Democratic Republic). In land area the country is three times the size of Germany but with only 3.2 million inhabitants. The significant influences which shape social life even to this day originate from the French colonial period and from Islam.

Islamic Influences

In the 7th century events began which were to have an enduring, defining influence on the entire African continent. Beginning with Egypt, Muslims, as adherents of the new religion Islam were called, conquered the whole of North Africa, from the Red Sea to the Atlantic and beyond to Spain. Christianity disappeared almost entirely in North Africa. During the Middle Ages Islamic culture reached a high state of development under Arab and Moorish dynasties. In Mauritania today almost 99% of the population are Sunni Muslims.

The enterprising, missionary zeal of the Muslims led to a considerable growth in knowledge about the African continent. However not until the mid-19th century did exploration and missionary voyages lead to important knowledge about Africa's topographic and geologic composition, its interior, and its inhabitants. Between 1860 and 1875 the Germans Gerhard Rohlfs, Georg Schweinfurth, and Gustav Nachtigal (among others) crossed the Sahara.

The World Religion Islam

Islam, with its approximately 1.3 billion followers, is the world's second largest religion after Christianity (approx. 2.1 billion followers). Its believers refer to themselves as Muslims or Moslems. "Muslim" means "he who submits himself (to God)" and is analogous to "Islam - Surrender (to God)".

European Colonialism

After the opening of the Suez Canal in 1869, numerous European countries actively appropriated further colonies and to thereby gain natural resources and geopolitical advantages. Thus Egypt was occupied by Great Britain in 1882. The rivalry among the European powers for the non-colonised areas escalated into a race of colonial expansion. Germany also participated in this after the foundation of the German Reich in 1871. To reduce the risk of war the Great Powers reached an understanding regarding their respective spheres of interest. At the most important of these conferences, the Berlin Conference of 1885 (Kongo-Konferenz), the colonial powers completely divided up Africa among themselves: France gained the regions north and south of the Sahara (French West Africa and French Equatorial Africa), the British the greater part of the east (British East Africa) and the south. The German Empire's claims to central African territory were also recognized. Portugal expanded its coastal enclaves of Angola and Mozambique into the interior. Belgium's King Leopold was awarded the

Colonialism

(From Latin "colonia": settlement) is the designation for a country's system of economic and political control over regions outside of its own borders. Colonies arose through the seizure of land through occupation by military conquest or through contractual agreements with local authorities. They often developed through the establishment of trading posts, military bases or the settlements of emigrants. The greatest colonial powers in the 16th and 17th centuries were Spain and Portugal, in the 19th and 20th century Great Britain and France. In comparison, German colonial possessions between 1883 and 1916 remained insignificant. At the end of the 19th century 85% of the earth's surface stood under colonial rule or semi-colonial dependency.

Source and further information:

www.hschumacher.de/html/kolonialismus.html

Congo region as his private Congo Free State. The colonisation of the Continent (with the exception of Liberia and Ethiopia) took place without any regard for the interests of the people of Africa and was effectively completed by 1900.

French Colonial Structures

By the turn of the 20th century the French began the subjugation of Mauritania from the south upwards. The country had a primarily strategic importance for them as a link between their West- and North African possessions. In 1904 the area became first a French territory within the framework of French West Africa (AOF) and then, in 1920, a colony.

The French variety of colonialism is conspicuous in following goals far beyond the usual

Colonialism and language

Culture means first and foremost language. Nowhere in the schools of its colonies did France tolerate the speaking of any language other than French. The general goal was naturally to smooth out the effects of subjugation, control and exploitation. But two other positive effects were achieved. Firstly, communication within the new political borders was facilitated. These were as a rule substantially expanded compared to those of the pre-colonial period. Secondly, a view towards Europe and North America was opened to the educated elite. A negative effect was the opening of a cultural divide between this elite and the masses who did not attend school.

*Source and further information:
Ansprenger, F. (2004)*



The French colonial period left behind deep imprints, also in Mauritania. With the independence from France in 1960 a new way of state and jurisdiction reorganization began, which has not yet been completed.

Further information:
Benjamin Kirchner
(2005): Frankreich
und Afrika – eine enge
Beziehung unter sich
stark verändernden
Vorzeichen. Von der
Kolonialpolitik zur
Frankophonie.
In: Zeitlupe – the online-
magazin February 2005.

economic and strategic military objectives. There were two distinguishing characteristics for this: the pursuit of “assimilation” and “direct administration”. Both concepts were influenced by the vision of a “mission civilisatrice” which originated during the Crusades. Assimilation was based on the idea of deeply integrating the conquered territories and their people into French society. Direct administration’s basic principle corresponds to the concept of expanding centralism and thereby creating a hierarchal administration system oriented to France and Paris.

After the Second World War, European colonial empires began to slowly break up. Africa’s decolonization began in Libya in 1951 followed by many other countries during the 1950’s. In 1960 there ensued the largest wave of decolonization when almost all of French West Africa became independent as did Mauritania. The borders drawn by the European colonial powers remained largely intact. Since these had been established arbitrarily without regard to pre-existing tribal or ethnic boundaries during conquests, extremely instable multi-ethnic states arose. The sole overarching institution was often the military. A democratic tradition was lacking in many countries due to colonial administration which mostly

excluded self-administration by the population. This prepared the ground for corrupt administrations, military dictatorships or one-party systems.

In Mauritania free parliamentary and presidential elections were held for the first time in 1992. Owing to constant stagnation and neglected reforms, frequent coup attempts took place. A group of officers calling themselves the Military Council for Justice and Democracy (Conseil Militaire pour la Justice et la Démocratie, CMJD) ultimately took power successfully on August 3, 2005. The CMJD promised to introduce democratic conditions in Mauritania within two years. A constitutional referendum was held which approved a new democratic constitution which declared Mauritania an Islamic Republic. Islam is the official state religion and the prevailing Islamic Law (Sharia) was supplemented through modern laws.

Traditional and “Modern” Law as a Framework for Resource Conservation

The traditional body of Islamic religious law, Sharia, stipulates that the earth belongs to the one who “puts value into it” or “gives it life” until all traces of such a development have disappeared. Remaining land belongs to the community. Sharia proscribes free access to grazing land, water and forest resources in equal measure and determines the rules for using these in order to eliminate conflicts and over use. Thus the private appropriation of grazing resources is prohibited. Prior to the colonial epoch landed property and resource access lay under tribal authority. This traditional law was the sole legal framework applying to grazing areas. Water resources and wetlands were also under tribal control but with regulated and flexible access.

So-called modern legal texts were introduced as of 1932 by the colonial tax and land rights administration. They did not recognize common law institutions and rules. Modern texts followed the Napoleonic Code developed for France. A merely half-hearted attempt by colonial law to

Sharia شريعة / šarīa

(Arabic: “the way to the water”)

The doctrine of duties and Islamic religious law by which all cultural responsibilities, ethical norms and legal principles for all areas of life (family, property, inheritance, economics) are governed. Sharia claims universal validity for all people, also for non Muslims. Only a few areas, such as Islamic rites and the greater part of family law, apply exclusively to Muslims. All public and private relationships in life must be regulated according to religious law. There are also rules for the communal dealings with natural resources relating to nomadism. During the 19th Century most Islamic countries adapted their legal systems to the European system. Currently there is a counter movement taking place in many countries.



The abolition of the traditional legal system for a franco-colonial national state constitution led to unregulated open access to commonly used natural resources. Ancient forms and agreements for the use of resources were abrogated and an unsustainable handling of nature fostered.

prevent speculation with untitled land, forest areas and water resources referenced the Islamic principle of “Indirass”. This states that property rights must be continuously exercised in order to be maintained. Signs of land use such as buildings or irrigation systems serve as proof of use. Thus they do not include occasional use which is extensively practiced by the nomadic population of eastern Mauritania especially in wetland areas. In the tradition of the “Code Civil”, the “modern” law introduced by the colonial administration stressed private land ownership and facilitated the acquisition of ownership titles. After independence, Mauritania decided to nationalize land ownership through land reform. Where no title of ownership was ascertained, the state declared itself owner of the land. The state, however, was not in a position to impose use restrictions since the population was dependent on the use of forest and grazing lands for its livelihood and regarded this use as its traditional privilege.

The unsustainable treatment of natural resources is an institutional failure resulting from two overlapping legal systems. Traditional law was made inoperative while the “modern” law introduced in its place was not enforceable when it did not match the legal sensibilities and basic living

requirements of the rural population.

New laws should link current Mauritanian policies more strongly to traditional rules. A decisive step was taken in the year 2000 with the passing of the pastureland legislation which came about with the help of German development cooperation. This integrates the traditional rights of pastoralists into codified law for the first time and attempts to take the justifiable interests of agricultural users suitably into account. The law specifies that, when pastureland resources are not collectively or individually owned, they belong to the nation. Access to them must be guaranteed for sedentary and nomadic pastoralists. Uses which contradict this are illegal.

The Pastoral Code (Code Pastoral)

The purpose of the “Code Pastoral” is to define the concepts and principles for an efficient grazing range regime. The rules for communal pastoral activities are to be so regulated that communal pastoralism is preserved and promoted within the context of harmonious rural development (Article 1).

The 2004 statute implementing the pasto-

Further information:
Altmann, C. (2002):
Poetic Laws: In
Mauritania, Islamic
and modern tradition
are symbiotic. Texts in
modern law in the name
of Allah, set out in poetic
measure and presented
in Arabic calligraphy,
help to solve conflicts in
agriculture as well as in
environmental protection.

ral code incorporates local agreements between direct users into legal text for the first time. It determines that these negotiated hectares take precedence over the ordinances of local administrative institutions. Administrations are instructed to favour such agreements.

With the exception of those under private, collective or individual ownership, all pastoral resources belong to the nation (Article 9). Access to these resources by pastoralists and their animals is to be maintained under all circumstances and can only be temporarily limited for the safety of persons, animals or farming (Article 10). No use may take place at a national, territorial or subordinate level which conflicts with vital mobile grazing interests or which would diminish their added value (Article 12).

Regarding land rights and the administration of pastoral areas, the law decrees that these are inalienably common goods reserved exclusively for herding. All forms of exclusive, individual appropriation are illegal. No land use concessions

may be granted if these impede access by herders (Articles 13-15).

Departmental administrations are granted broad powers for implementing these measures. After a hearing of the regional delegates for rural development and the environment plus the concerned mayor and representatives of herders and farmers, they issue a decree governing which areas are valid grazing lands (Article 17). They can prohibit the designation of reserves when this constricts pastoral areas or rights of way. Agricultural uses which lead to conflicts with herders are also prohibited. On the other hand, setting up nomadic camps in sensitive agricultural zones is forbidden for certain parts of the year (Article 18). Provincial administrations are obligated to create regional land use plans which identify areas free of settlements and not used for agriculture. Should these higher ranking authorities not comply, then the lower ranking departmental administration can exclude certain zones from settlement at their discretion (Articles 19, 20).

Among Arabic-speaking Mauritians oral and written traditions are often communicated in the form of stories and fables. Even complex subject matter is readily expressed in verse format. Country-wide poetry competitions are held. These popular forms of communication were employed by GTZ to inform the population about new pastoral legislation (Code Pastoral). Texts were recorded on audio cassettes in all indigenous languages which herders listen to during their pastoral migrations or by the evening campfire.



The fable with pictures and Arabic lyrics and also the Arabic poem to the new Code Pastoral are enclosed in pdf-format on the CD.

المدونة الرعوية قراءة أخرى

في سالف الزمان كان هناك متمدون ومزارعون متمدنون...
منذ فجر التاريخ ظل يوجد في موريتانيا المتمدن الرعويون (الشمون) الذين يمتلكون قطعان الحيوانات الداجنة: الإبل والبقرة والضأن والماعز ويتنقلون وراء الرزق بحثاً عن تغذية وسقي تلك المشية.
ومن تلك الحيوانات ثروة تنتج الحليب ومشتقاته واللحم والجلود والصفوف بالنسبة لبعضها.
كانت أغلبية الموريتانيين تعيش من هذا الرعي الذي يوفر حاجياتهم الأساسية ولا يتطلب مجهودات كبيرة لأن الأمطار كانت كثيرة في الخريف حتى في الصحراء والمراعي تغطي مساحات شاسعة من البلاد بشكل دائم أو لمدة أشهر طوال.
وفي نفس الوقت كان موريتانيون آخرون يزرعون الأرض إما على ضفاف النهر والتهيرات وإما حول الجداول الكبيرة والبرك أو الأشواك (التاموت والكرابر) التي تسيل من المطر أو خلف السدود أو في واحات التخيل.
كانت تلك الزراعات تنتج كميات وافرة من السنخ والذرة الصفراء والذرة البيضاء والقاصوليا والدجاج والقمح والشعير والتمور... الخ وتستفيد من مناخ لطيف بفضل الأمطار المنتظمة وفيضانات النهر الكافية وبروذه ومئات الأودية المنقطعة.
وسبب التعادم الأرسدة المأيلة كان الرعاة والمزارعين يبادلون منتجات الماشية بمنتجات الزراعة، وكلمهم راض ويحمد الله على نعمه.

... ثم أصبحوا خصماء بسبب الجفاف والاختلاط...
... لقد أصبحت الأمطار نادرة مع جفاف 1973 الكبير والرهب حيث تقلصت المناطق التي تغطيها المراعي وجف العديد من البرك والجداول.
تمركز كثير من المتمدن الرعويين وبواسطهم للبحث عن الماء والغلف لحيواناتهم فوق أراض تنقص أكثر فأكثر وتعقر أكثر فأكثر من مناطق الزراعة.
وفي نفس الوقت بينما تقلصت مساحات الزراعة، بدأ المزارعون بواسطة السياجات وأغصان الشجر وسلاخ الحديد الشائكة محضون مزارعهم وبمغارسهم وموارد الماء القليلة المهددة من طرف أعداد المواشي المتزايدة. أجل، أصبحت مناطق الرعي ومناطق الزراعة التي كانت متبادعة في الماضي متصلة مباشرة تقريباً بل مختلطة أحياناً بسبب تدهور الواسط البيئي. عندها أثار الشمون الرعويين والمزارعين ظهورهم لبعضهم البعض حيث اعتبر كل منهم خطأ أن الآخر عدو له، وكان ما كان.
إن أساساً كان بعضهم يعرف البعض غير تباين (مقاومة) منتجاتهم وكانوا بالأسر يعيشون حياة اجتماعية مشتركة قد أصبحوا خصماً، ليست مصالحهم مختلفة فحسب، كما كانت بل لا يمكن الجمع بينها أحياناً.
ونتيجة لذلك نشبت نزاعات تصعدت في مواجهات خلفت قتل جماعي ودماراً للماشية بين رحمة وتدمير المساكن والمزارع الخ...
... قبل أن تسلبهم الدولة والجمع المدي بمدونة رعوية...
... أظفقت هذه الأوضاع المأساة الحكومية والبلديات والوجها، وجمعيات المتمدن الرعويين (الشمون) والمزارعين. لقد كانت تمنع المتمدن الرعويين (الشمون) والمزارعين من الحياة الطبيعية وتكثف الإدارة (الولاية والحكم والشريعة والدرك) والوحدات اللامركزية (البلديات) كثيراً من الوقت والقوة لمح الناس من الجاهلية.
وبعد سنوات طويلة من المحاولات، تعثرت الدولة مع موظفيها (السلطات: أخصائني القضاء والزراعة وتربية الماشية) والعلماء والمنظمات التي تمثل المتمدن والمزارعين بغية إعداد قانون يمكن من تسير العلاقات بين شريكي العالم الرعوي: ملاك المزارع وملاك الماشية.
إن هذا القانون الذي يقتبس من الشريعة تم إكثاله مشروعاً من طرف الوزراء وناقشه منتخبو الشعب (الغواب والشيوخ) وصادقوا عليه وقعه (أصدره) السيد رئيس الجمهورية.
وقد أصبح منذ الآن القانون 44.2000 الصادر بتاريخ 26 يوليو 2000 الذي يحمل اسم "المدونة الرعوية".
تبين تلك المدونة السلوك الذي يتبناه المتمدن الرعويون (الشمون) تغذية وسقي قطعانهم دون إتلاف المزارع والسلوك الذي يتبناه المزارعين لزراعة أراضيهم دون إعاقة تنقلات الحيوانات العابدة.
وتنص المدونة في حالة عدم التقام على أجان تحكيم الأطراف المتنازعة ومسلي جمعياتهم تحت رئاسة العدة في الدرجة الأولى ثم الحاكم إذا لم يتنج ذلك التحكيم.
وإذا كان المشي غالباً أو رفض أحد الأطراف نتيجة التحكيم فإن المدونة تلزم بالأعباء إلى محكمة المقاطعة.

...معدونة تستعطي دون شك بدعم الجميع لأنها نابعة من إجماع الشريعة ...

Water supplies are of crucial importance for pastoralists. Both artificially created and natural water points can be legally and administratively allocated to pastoralism. In this case city and communal administrations, along with representatives of herders and farmers, have a say (Article 21). Watering points found within a grazing range may not be privatized (Article 23). In designated pastoral zones herders can dig watering pits for their animals. However no ownership claim for these zones can be derived from this (Article 24). Watering pits can also be dug in agricultural areas following harvests. No encroachments at all can take place in the vicinity of recognized watering sites which impair their use (Article 25). Traditional users should be given priority in the granting of concessions for the operation of public watering points (Article 27).

Agricultural use within grazing areas can be prohibited if no apparent economic or social interest is present for it (Article 33). Then again

setting up nomadic camps in direct proximity to agricultural areas is forbidden in the time between sowing and harvest.

The Forestry Code (Code Forestier)

The forestry legislation which came into effect in September, 2007 (Code Forestier, Loi No: 2007-055) continues the positive development of enabling decentralised control of natural resources which was begun by the Code Pastoral. In Mauritania the administration rights for all forest areas lie with the state. The new law allows the transfer of these rights to communities as long as they are not national forests. The reorganized law opens the possibility for local authorities to assign to individuals or associations the exercise of control by proxy. This is achieved on the basis of a use agreement (“convention locale”) which lays out the rights and duties of the parties. The right to freely dispose of income arising from such an assignment

Further information:
République Islamique
de Maurétanie: Loi no
2000-044 portant Code
Pastorale en Mauritanie.



The new Code Pastoral is an important requirement to organize the sustainable use of pasturages. Also included is the transfer of responsibility to the population within the context of user agreements.

Wood is also an important commodity in Mauritania: It is often timbered illegally and processed e.g. to charcoal.



is granted to individuals or associations to provide them with an incentive for such an activity. They take over the monitoring of certain rules specified in use agreements (logging bans, compliance with grazing periods, etc.). In return they can keep and utilize the fruits of control (deadwood, fruit, honey, resin, seeds, etc.).

The positive experience thus far with transfer of responsibility and local resource management within the framework of the ProGRN programme played an important role during the parliamentary debates prior to the ratification of the law. The national discussion process was supported by GTZ.

The revision had three objective aims.

- 1 The implementation of the international environmental agreements which Mauritania has entered into (e.g., the Convention on Biological Diversity and the UN Convention to Combat Desertification). These call for an administration which is as decentralised and close to users as possible. It is this aspect which forms the nucleus of the new forestry code.
- 2 The legislation should streamline regulation of the market for forest products between producers and dealers.
- 3 A range of discrepancies present in the former law should be corrected.

Illegal Clearing

Speculation is a popular activity in Mauritania: speculators apply for permits for clearing or logging under the pretext of intending to cultivate the affected areas. Once granted the permits are sold to charcoal producers who clear the land and process the wood. All this happens without any agricultural utilization. In order to stop this, the new forestry law specifies that clearing will only be allowed for a fee. The amount of the fees due depends on the existing tree population (Article 12). This has

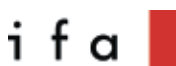
greatly reduced the incentive for speculation. Diverse, newly introduced methods of control have made the job of civil institutions easier. Logging requires a permit issued either by the forestry agency or, in the case of decentralised administration, by the pertinent mayor (Article 15). A traffic permit is required for the transport of forest products (Article 50) which will only be issued when the logging permit is presented. This makes the checking of the legality of the clearing possible.

Further information:
République Islamique
de Maurétanie: Loi no
2007-055 portant Code
Forestier en Mauritanie.

Communication beyond borders

The Arabic word "Quantara" means bridge. Through their joint internet portal the Federal Agency for Civic Education (Bundeszentrale für politische Bildung/bpb), Deutsche Welle (DW), the Goethe-Institut and The Institute for Foreign Cultural Relations (Institut für Auslandsbeziehungen/ifa) wish to contribute to the dialogue with the Islamic world. The project is supported by the German Federal Foreign Office (Auswärtiges Amt).

Partners



www.quantara.de/webcom/show_article.php/_c-349/_nr-1/_lkm-5/i.html

Experts argue over which role Islam should play in development cooperation.

Interview in "Quantara" with Erhard Brunn, who was in Uganda and Niger for the German Development Service (DED). He is the author of the book "Christentum und Islam – ein neuer Dialog des Handelns. Begegnungen in Europa und Afrika". Verlag Brandes & Apsel (2006).

Mr. Brunn, should religion play a role in development cooperation?

Yes, absolutely. I was deployed twice for the German Development Service (DED), in Uganda and in Nigeria. My impression, however, is that religion does not play a big role in preparing for deployment. Many of my colleagues had a very nonreligious approach.

Why does that disturb you? The DED is financed by the state, and we live in a secular society.

Of course, but it is not exactly helpful if development workers live in a country that is practically 100 percent muslim and consider Islam to be the country's main problem. They don't have to be religious themselves. But anyone who is not religious should still know something

about the religious context that determines the thinking and feelings of the people. I think it is important in the process of selecting development workers and cooperants to see if the applicant fits into an Islamic environment.

Is it mainly about respect?

Yes, that is the decisive word. It is about understanding and respect, about empathy as well as basic knowledge. It is not about religious competition. The Bible and the Koran are both books with a highly ethical quality, and we should concede this to each other. This acknowledgement creates an excellent basis for working together. Nowadays development cooperation is increasingly drawing on the potential of Christianity and Islam.

Are there guidelines for dealing with Islamic structures?

The GTZ conducted a lot of research in 2001 on topics such as Islamic banking and reproductive health with its programme "Islam and Technical Cooperation in Africa" in order to adapt its work to Muslim positions. This is a good start and has in part been implemented in practice.

What exactly does this look like?

For example, we have had good experiences in protecting resources. In the desert country of Mauritania livestock farming is an adapted lifestyle that conserves resources. GTZ has tapped on traditional law and Islamic Sharia in order to reform land rights so that they do not prevent mobile livestock farming. Both local and Islamic legal interpretations have basic principles that go well with modern ideas of resource and climate protection measures.

Doesn't Sharia hinder development in a country?

Sharia is very different in its local manifestations. Naturally we find much in it restrictive, but it also offers approaches for sustainable development. Islam emphasizes the collective element, while we give priority to the rights of the individual. With land rights we might be able to work much better with collectives, as was the case in Mauritania. Muslim jurisdiction can be flexible, and this flexibility should be supported.

Source: www.quantara.de, published 2007

Intercultural cooperation and agreement, respect for each of the different cultures and open mindedness to new approaches are basic requirements for successful cooperation.

In contrast to the previous laws, the new set of regulations leaves room for resource users to arrange things among themselves. With the implementation of “simplified administration plans” the actual implementation of the law by organized user groups is made easier (Articles 13, 14). Only in truly technical questions does the law defer to implementation provisions. In this way it has been made easier for the administration to develop and put into effect necessary implementation guidelines.

Various discrepancies in the previous law have

been eliminated by the new code. For example that, by a roundabout way, clearing permits had made it relatively easy to clear supposedly protected tree and plant species. The revised version of the law makes it unmistakable that a clearing permit does not authorize the removal of protected tree and plant species- this requires an additional ministerial permit.

The penalties for violations provided by the former forestry code were generally too high and incommensurate with the income of the population. Fines were therefore reduced.



Suggestions for further work

On the topics of Islam, law and development cooperation.

Analyze:

When one speaks of “Sharia” in Germany, one thinks first of all of the harsh penalties it lays down. This is not the case in Mauritania.

- What positive aspects do you see in a legal system of this kind especially from ecological and social perspectives? What evidence is found in the text?

Discuss

- Do you think it is a good thing to connect religion and law so closely? What advantages/opportunities or disadvantages/risks do you see?
- Do you think that the German development cooperation staff should take religious convictions into consideration? Substantiate!

Analyze:

- The concept of sustainable development encompasses economic, ecological and socio-cultural dimensions. Where do you see areas of agreement/relevance to legal provisions? What effect does legislation such as the pastoral and forestry codes have on these three domains? Give examples from the text at hand.

Research:

- Find parallels between the Mauritanian forestry codes and German legislation. Who issues these regulations? Do they have similar content? Where do the differences lie?



Technical cooperation rests upon the basic principle of respect for the local cultural and aesthetic contingencies of the individual societies as well as the laws and the Islamic elements of the country.

Sheik Hamden Ould Tah, Mauritania

Interview with Sheik Hamden Ould Tah

This religious scholar works with numerous international institutions and is well known beyond the borders of Mauritania. In an Interview with "Akzente" magazine he gives his view on the principles of development cooperation.

Cooperation between these two worlds should proceed from the principle of equality, reciprocity and fair partnership. It must be candid, free of any intrigue and should bear in mind the particular characteristics of each civilization. These principles are the buttresses of Islam. Furthermore tolerance is indispensable to the interests of fruitful cooperation. Cooperation is first and foremost a driving force. It opens up for all involved new approaches and opportunities for improving and correcting existing principles and concepts and it creates a mood of new beginnings. In Islam the West will find tried and true systems for fighting poverty and social discord-spiritual stimulation perhaps- from which it can profit.

What have your experiences been with GTZ?

My experiences with GTZ have been among the best I have ever made with the West. It is a cooperation which proceeds on the basis of each country's cultural and, above all, Islamic features. It is based on the fundamental principle of respecting local cultural and aesthetic potential of individual societies. The fact that it cares for the most important areas first of all shows local riches to their best advantage: water, pastureland, Forests, biological diversity. The experts are at work who have a modern vision and social experience. At the same time they respect prevailing laws as well as the Islamic aspects of the country.

Quotations from: Altmann, C. (2002): Moderne Visionen und kultureller Respekt.

Part 3

Pastoralism in Upheaval – traditional rights versus modern requirements:

Guidimakha and Hodh el Gharbi

The local population takes responsibility for the management of their communal resources – a complex but successful way to more sustainability

Programme areas and approach

In Mauritania the state has, since the French colonial period, claimed ownership of all areas covered by natural vegetation (forest grazing land, grasslands and desert). The local population, reliant on these areas for its livelihood, asserted its traditional cultivation rights. Because of divergent claims and legal positions the state can only partly enforce use restrictions. Legal guidelines have been altered to counteract this regulatory vacuum. The implementation provisions of the new pastoral code (2004) and the revised forestry code (2007) now explicitly allow the transfer of responsibilities from the central government to rural communities. User organizations above local level can also get involved responsibly in resource management.

To facilitate this, residents must first organize themselves into user associations. Following recognition by the government they are requested

to develop use agreements which safeguard sustainable use of resources. After these have been approved by the state in turn, their implementation by the user associations follows. This complex process which proceeds, in several steps, leads to the state's successively transferring natural resource management rights to the local population after being persuaded of its competency and willingness for responsible action. The staff of the GTZ programme ProGRN initiate and accompany these protracted processes. The new legislation (pastoral and forestry codes) meets the goals of the programme. It helps the local population to extend its sphere of operation and to take responsibility for the use of natural resources.

The conceptual framework for this form of resource preservation is based on the self-interest of the population in protecting their subsistence. Self-interest only comes into play when the necessary institutional prerequisites have been created and the state limits itself to support and monitoring functions. The experiences collected in Mauritania

Nomadism

An economic and social system based on pastoralism with a non-sedentary way of life. Nomads migrate with their herds taking their household and extended family with them. They follow the seasonal progression of rain vegetation. They live in tents and do not farm. Plant-based food is traded for products of livestock keeping. Semi-nomads farm and are sedentary with only part of the family migrating with their herds. Nomadism is an economic form which has adapted to the conditions of arid regions – often the only way to use the meagre production options without destroying them. Hence past attempts to make nomads sedentary have often failed or led to a clear deterioration of living conditions.



thus far show that the population identifies with user agreements (taking “ownership” of them) and are prepared to observe the agreed upon limitations. A presumable reason for the high acceptance is also the state’s protection of functioning user associations against competition from resource users from other regions who intrude to collect wood, fodder or fruit, to extract resin or to produce charcoal.

Therefore the prerequisite for success is that the utilization resulting from resource preservation is primarily advantageous to those voluntarily accepting restrictions. The regions Guidimakha and Hodh el Gharbi serve as good examples of the relationship between conservation requirements and resource utilization.

The Guidimakha programme region

The Guidimakha region lies in the south of Mauritania on the borders of Senegal and Mali. Its inhabitants live from livestock, cultivation and using natural vegetation. Agriculture is dependent on rainfall. Rainfall farming is possible only on 5 % of the total area. Yields are sparse and lie

Transhumance

A form of pastoralism where livestock is driven to at least two different, seasonally changing grazing areas. In contrast to nomadism the herds regularly return to their home locations. They are looked after by a family member or hired herders. Transhumance used to be in Europe around the Mediterranean, in Scandinavia and in high- and uplands. In arid and semi-arid regions it still maintains its same high importance.

around a half ton per hectare (in Germany by comparison grain yields are from 6 to 7 t/ha).

Cultivation is spreading into increasingly less suitable sites. Soil erosion is the consequence. Livestock is kept partly in conjunction with cultivation and partly by transhumance (e.g., by moving with the herds). Many livestock farmers have more animals than natural resources can support in the long term. Over-stocking has consequences for the ground cover since tree, bush, and grass growth is used for fodder. This growth is also used for gathering wood (branches for fencing



Pastoralism, irrespective if it is nomadic or agricultural is highly dependent on the natural vegetation.

property, trees as a basis for charcoal production). Products which are gathered, such as wild fruit, tree resin (gum arabic) or leaves, form an important income supplement for local residents.

Above all, natural resource protection in Guidimakha contributes to preserving the livelihoods of the local population. For should soil and natural vegetation be so severely damaged that they cannot regenerate, a rising proportion of the population would sink below the poverty level and be forced to leave. The result would be considerable economic costs, social problems and political tensions.

Wadi

(French "Oued") originally from the Arabic term for the mostly deeply indented bed of a desert river which is only periodically water filled. Large runoff volumes can occur following heavy rain falls.

The Hodh el Gharbi programme region

The wetlands of Hodh el Gharbi lie further to the northeast on the border to Mali. In this ecologically fragile region nomadic pastoralism provides an important – often the only – mode of economically using natural resources without destroying them. Herding provides subsistence to the greater portion of the population and is the major source of the



Further information: GTZ / Kirsch-Jung, K.-P. & M. Sulser (2003): Codes locaux pour une gestion durable des ressources naturelles. Eschborn.

The map shows the agro-ecological zone in Hodh el Gharbi, divided in a north-west direction by three main axis of nomadic pastoralism.

Eastern Mauritania's wetlands are important holding and watering places for mobile pastoralism. At the same time these are bird breeding areas and serve many bird species as an important resting place on their move towards the north or south.

region's domestic product. Extensive marshes provide watering points and camping areas for transhumant and nomadic herding. At regular intervals the roaming herds are led to watering places by their herders. On the borders of the wetlands, cultivation (gardening) is practiced. Here in Hodh el Gharbi, too, natural resource protection principally serves to safeguard the livelihoods of the local population, including those of mobile pastoralists who also use grazing ranges in other regions (e.g., Mali). Beyond that, nature protection is also an important aid in conserving biological diversity since many rare or endangered species are found in wetland areas. Many bird species use the wetlands as resting places or jumping off points during their northerly and southerly migrations or as breeding grounds.

In Hodh El Gharbi, sustainable exploitation of wetlands is at the heart of use agreements. Regulations also respect aspects of nature conservation, especially the preservation of bird habitats.

The film "Open Access or Common Property Rules – Community Based Natural Resource Management in Mauritania"

The film shows how the degradation of vegetation is progressing, the reasons behind it and how this process is being countered through the establishment of user associations. The stages of establishing and accrediting a user association, as well as the process of working out agreements for resource use and their subsequent implementation and monitoring are depicted in the film. Throughout the documentary, representatives of the rural population and the regional coordinator of the ProGRN have a chance to speak in turns.

The 31 minute film was produced in 2007 on behalf of GTZ by the German filmmaker Ulrike Jung for use at international conferences, in continuing education and for public relations (in German, French and English). Local language versions (Arabic, Poular, Soniké) are for information in Mauritania.

Handover of responsibility to the local population

The core of the approach is for the government to transfer responsibility for the protection and sustainable use of natural resources to the local population. A major motivation for this is the fact that the government can only fulfil its safeguarding function poorly since it lacks human resource, financial and institutional prerequisites. The precondition for the transfer of rights and responsibilities is that the local population be organized into groups which can act as partners of the civil administration. Subsequently they will carry out natural resource management with personal responsibility. For this to happen, the local population must know the possibilities which arise from the implementation measures of the pastoral code and be ready to take over the responsibility for the management of the natural resources. While the formation of opinion proceeds to a great extent within the framework of traditional structures, information and impetus for motivation mostly comes from the outside.

No individual rights for using natural resources exist in Mauritania, only collective ones. The process of transferring responsibilities takes place

Film Sequence

Start Scene content

- | | |
|-------|--|
| 00:00 | The president of the user's association Hassi-Chegar heads off to check the conditions of the pastures. The accompanying text explains the conceptual approach to user associations between local pastoralists and governmental authorities. |
| 01:08 | Herders meet in another user association; everybody participates. |
| 01:32 | Outside of the areas of user association the desert is spreading. The reasons are depicted. |
| 02:35 | The concept of local user associations and their implementations are an important work area for the ProGRN programme of the German-Mauritanian cooperation. |

- 03:00 Introduction of the concept by the Mauritanian regional coordinator. Overview of the 8 stages.
Stage 1: The founding committee is invested and the members introduced. The legal basis: the pastoral code and its implementation provisions.
- 04:30 The regional director explains
Stage 2: legal recognition.
- 05:20 The president brings back the government recognition certificate. Commentary on what this means.
- 06:20 The regional director explains
Stage 3: the areas demarcation and its relevance.
- 07:10 Members of the user association meet in Tektake with neighbouring villagers and ProGRN staff members. Clarifying the importance of area demarcation for different ethnic groups with divergent interests.
- 08:15 The Regional director introduces
Stage 4 and explains the importance and methods of an ecological inventory.
- 09:15 **Stage 5:** the application to the prefects to transfer management of the resources to the user association. The user association Goungel has done a good job – it receives the recognition certificate.
- 10:20 **Stage 6:** Finalizing the users' agreement. Commentary on who participates, what its reach is, what it contains.
- 11:48 **Stage 7:** The user agreement worked out by the members is recognized by the prefect. He transfers the power to use the resources. With this comes the duty to protect them.
- 12:30 The user agreement of the Ndoumuli user association is also checked by the prefect before his signature and stamp gives it legal force.
- 13:48 **Stage 8:** The user agreement is applied in practice. Its content is discussed.
- 14:15 A stranger to the area is caught illegally logging.
- 14:55 Herders pay their fees for pasture use. The treasurer carefully registers the receipts – transparency is important.
- 15:55 Special cases such as that for the careful extraction of gum arabic are introduced.
- 17:00 The application areas for gum arabic and its significance to the earnings of the population.
- 17:35 The man caught illegally logging is brought before the treasurer of the responsible user association. He must pay a fine and receives a warning.
- 19:00 The user association lays down protective firebreaks.
- 20:10 Pasture improvement raises the milk production of cattle, sheep, camels and goats. The impact on the earnings of the population.
- 21:20 Careful extraction of gum arabic not only raises long term values but improves the quality as well as leading to higher prices.
- 22:20 Wild fruit is collected by women. Its sale helps them earn additional income.
- 24:53 The treasurer of a user association seeks advice from a programme team member. The accomplishments of the team in supporting the entire process are introduced.
- 26:00 In Guidimakha the programme aims to bring as much area as possible under the control of user agreements. In Hodh el Gharbi a further important goal is the preservation of wetlands as watering points and areas with high biodiversity.
- 27:00 Mayors and other notables assess the programme: resources are being given more care; there are fewer conflicts among groups of the local population. This means that mechanisms for peaceful resolution are being applied as provided for in Islam. Furthermore, vegetation has recovered and livestock is finding watering points and improved pastures.
- 30:00 Flashback to the beginning. User association president Hassi-Chegar is happy with the result of his examination. Signs of the vegetation's recovery are visible.

in several steps. First it is necessary for the government to be persuaded that the local population is in a position to take over management and build the appropriate organizational forms. User associations who want to accept this task must fulfil certain minimum requirements. They must prove that they have created the proscribed internal structure (general assembly, executive office) and that the mandatory posts have been properly staffed (president, general secretary, treasurer and controller). The entirety of the population affected by the scope of activities must be represented. Transhumant pastoralists must also be represented and decision making must follow democratic rules. Only after the proofs are submitted and government recognition has been confirmed does the user association become a partner of the civil administration. For the necessary formal and legal steps, the population which wishes to organize itself is reliant to a great measure on outside support.

Dealing with conflict

User associations mostly refer to multiple villages and their scattered pastoral camps with the grounds where the people settled there claim their traditional user rights. With that the areas claimed by user associations bump into each other or it can happen that the claim of one user association can compete with one from another village.

Laying out the area for which a user association has been granted management and usage of natural resources against competing claims is an important task. Should conflicts arise, in order for them to be peacefully settled by a solution which is to be accepted by all parties, this process absolutely requires mediation.

The members give themselves rules: user agreements

After it is clear for which area a user association claims the transfer of resource management and has brought forth the proof that the boundaries have been accepted by all concerned – also by those with competing interests – there follows the



In a user community where the use agreement pertains, the whole population must be represented.

application for a resource management mandate. This means that the user association itself must issue regulations to ensure the conservation of natural resources. Simultaneously satisfying the needs of its members must follow. The agreements set down the method and scope of permitted uses. This is linked to a catalogue of fees to be paid to the community as well as fines which are to be levied for unauthorized usage.

All affected are to be involved in developing user agreements. Mostly, this complex process requires mediation as well as a consultation in technical and legal questions.

User agreements in overview

The process for founding user associations and the subsequent working and implementation of user agreements ideally can be described in eight steps:

1. Identification of suitable land units and the formation of a founding committee.
2. Legitimizing the user association through the civil administration.
3. Laying out of the borders for the area where communal resource management will extend.
4. A community ecological inventory.
5. Application for a mandate with the civil administration for resource management.
6. Working out the user agreement with the involvement of all concerned.
7. Transfer of resource management responsibility through the decree of the appropriate civil administration.
8. Implementation of the user agreement including monitoring and sanctions.

Community signs document the demand for use in the area and the responsibility of the user association for the protection of the natural resources.

State recognition

Only after the above steps have been completed and the results documented and presented to the civil administration, is it time for the official transfer of resource management to the user association. This happens through the responsible prefect following an expert commentary by the regional head of the Ministry of Environment. Thereafter the responsibility for usage and conservation of natural resources lies with the user association, whose main task now is to implement their self-issued regulations and to punish violations against them. The government restricts itself to a monitoring function but retains the responsibility to protect user associations against external infringements they are defenceless against.

The roles of those involved

The numbered steps describe an iterative process between the locals and the civil administration where development cooperation assumes the functions of the initiator and moderators (also mediators in cases of conflict). It is important that all concerned are involved right at the start.

The declaration of area borders, for which a use agreement should ensue, is an important task. Conflicts through competing demands of bordering villages need to be settled in a mediation process.



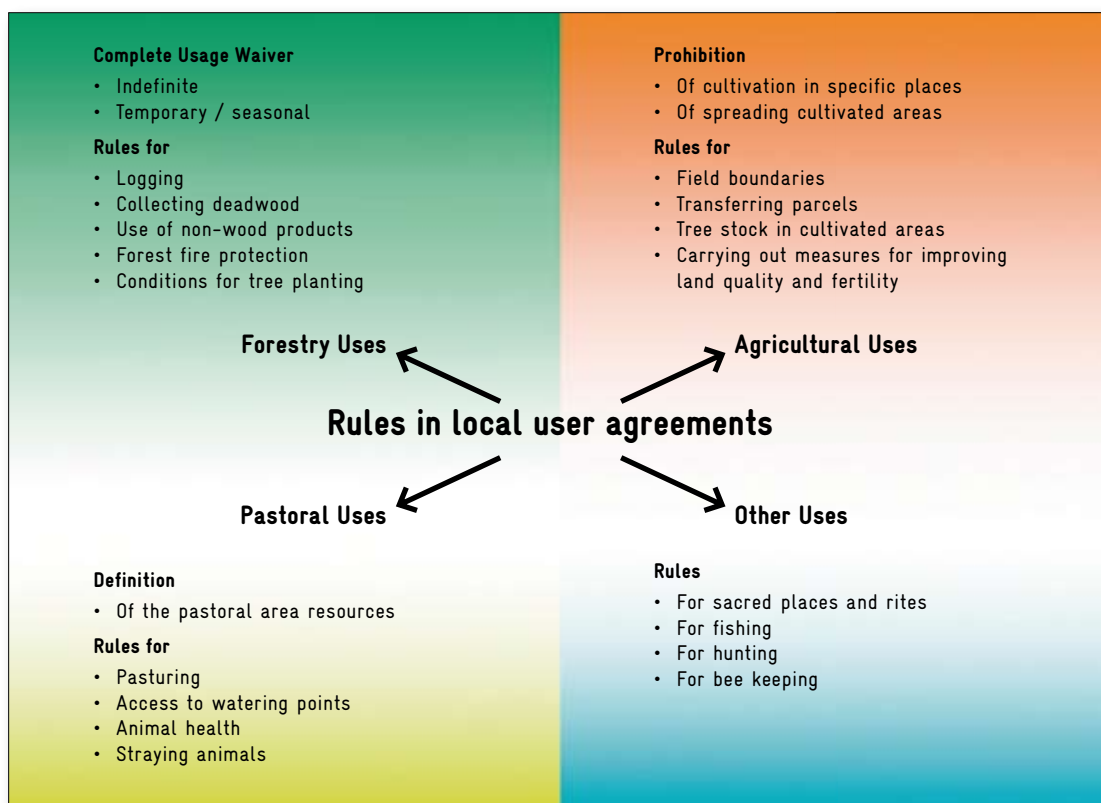
This means all groups settled in the area (especially important where it has to do with different ethnic groups), local leaders and elected officials, transhumant herders with a claim on herding, grazing and watering means professional and special interest groups, and, if available, NGO's. The civil administration is responsible for the formal acts such as legal recognition by the competent territory administration (prefect, sub prefect etc.). The regional speciality services of the ministries (agricultural, forestry, veterinary) provide technical consultancy and warrant the subject-specific quality of the user agreements. Rural communities play an even greater role the more responsibility has been transferred to them in the context of decentralisation policies and the more they have involved user associations.

What is regulated

Most user agreements encompass:

- Rules for different kinds of usage.
- Rules for the proportion of different land use forms to each other (land use plan, or zoning plan).
- Rules for penalizing violations.

Consideration of traditional user rights is usually followed by allowing the locals to harvest grass, collect deadwood, and cut branches or collect plant products for direct household needs. For volumes going beyond that however, (for the commercialisation of the resource) the appropriate fee set down by the user association must be paid. Livestock herding and the related pasturing around the nightly assembly points ("Pacage") are permitted without charge for three days by Islamic law. After this both members as well as nomadic herders must pay a fee based on a graduated schedule based on animal type and herd size. Fees are to be paid for grass harvesting (freshly cut or dry), gathering of deadwood, branch cutting for enclosures and cutting green trees – so long as this is not totally prohibited. Furthermore collecting plant products (gum arabic, baobab, and the fruits of other wild plants) is liable for a fee if it will be marketed. For the bush removal, tree felling, or the digging of watering points there are also charges. If some exercise usage beyond the needs of their own household without having paid the required fee, a penalty several times higher is levied. This will be further increased in the case of repeated violations.



Contents of user agreements.

Fire breaks are laid down in communal actions against one of the most important threats to vegetations: bushfire. The workforce used for this is remunerated. The user association can exclude certain areas from all forms of usage (“Mise en Defense”). Some uses are subject to special regulations, such as the extraction of gum arabic by tapping the Acacia Senegal. This takes place in certain, exactly determined areas with special tools allowed for this. The method, too, of how the tapping is to take place is prescribed. These measures should rule out endangering the trees.

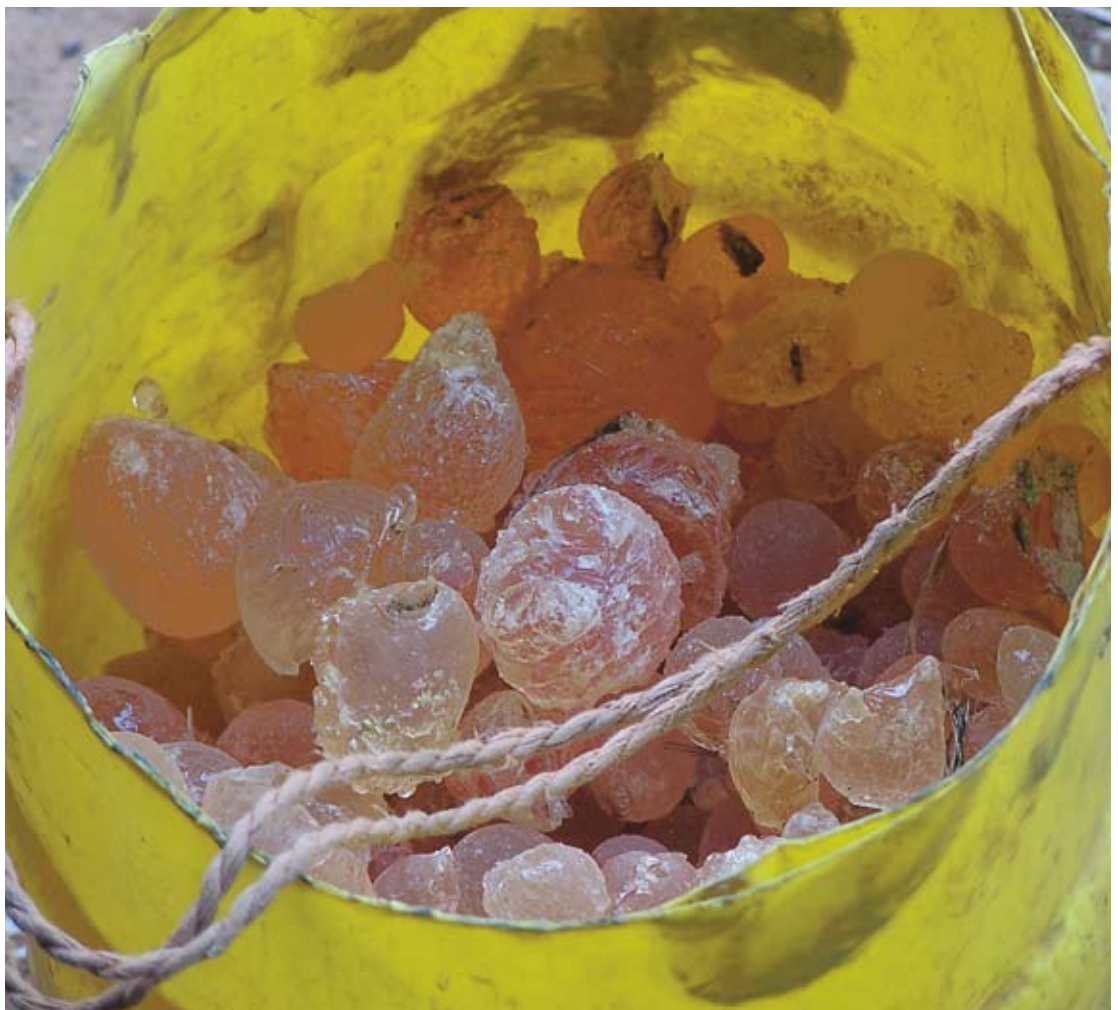
The observance of the agreed-upon regulations is monitored by the user association. The field guardians are also responsible for collecting usage fees or penalties in villages lying outside the central office. The proceeds are at the disposal of the associations in addition to the subsidies of the community.

Controls and safeguards of success

The goal of the agreements is to reach sustainable resource usage. Thus it is necessary to agree on a procedure for testing sustainability. First the ecological situation in the territory of the user association must be determined. Ongoing observations will later evaluate whether improvements or deteriorations take place under the association’s management. Monitoring groups are built up for this purpose with the participation of user associations and the regional civil bureaus (Ministry of Environment) and trained in the methods developed for this. The government reserves the right to revoke the user association’s right to manage natural resources if it becomes clear that it prevents a deterioration of the ecological situation.

After a user agreement has become operative, its effect on the vegetation is continually observed. This happens with the aid of a “groundcover index”. Once documented, this is then newly determined every year.

The Acacia Senegal gives a resin, from which gum arabic is obtained, a water-soluble substance used as glue, thickener or flavour enhancer.





Through the implemented mercy extraction of arabic gum, the trees are only tapped. A further endangering of the Acacia Senegal is thus avoided.



The Groundcover Index

(“Indice du Couvert Vegetal”)

In each area 64 sample sites are selected and pinpointed precisely by GPS where the observation will be repeated on a yearly basis. The index of the baseline situation is matched to a control area with no user agreements for which the value 100 is assigned. The Index can thus indicate the ground cover development in relationship to the comparison area.

The following features go into the index:

- a Extent of ground coverage by tree crowns.
- b Extent of ground coverage by crowns of tree regeneration.
- c Extent of groundcover by bushes.
- d Diversity of tree types.
- e Extent of groundcover by grass or weeds.

Crown cover is determined by using triangulation in the field. The determination of tree type diversity comes by counting species frequency. Groundcover by grass and plants is ascertained by the proportion of bare ground which is crossed while walking a set stretch.



Up to now, solely in the region Guidimakha, 13 local user associations could be founded. Consequently the responsibility and management of more than a quarter of this region's surface has been put into the hands of the local population.

Through the high quality and quantity of sustainably produced arabic gum, secure long-term salaries can be achieved. An exporter ensures at the same time, the training of the producers and the taking of the product within the framework of a development partnership with the economy ("PPP", with support of the GTZ).

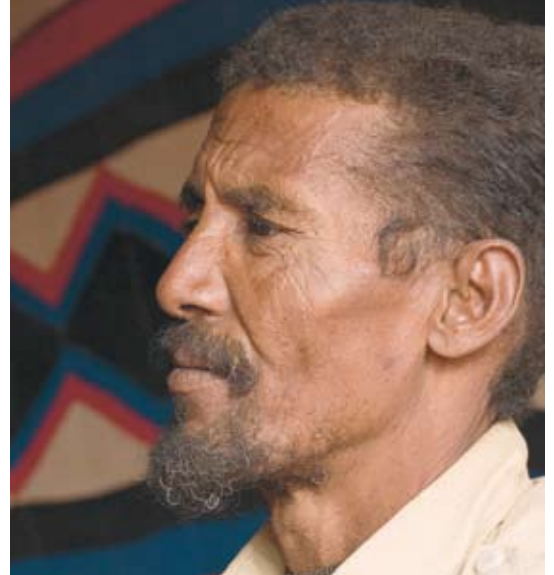
What has been achieved thus far

In the Guidimakha region 13 local user associations have been founded, which cover 26.3 % of the region's total public area. This is more than was foreseen in programme planning. The transfer of responsibility for management of natural resources is completed in these areas. User associations have begun putting the rules into practice and are monitoring their observance.

In the Hodh el Gharbi region 11 areas were identified for possibly establishing local user associations. Of these, five are officially recognized; three have developed a user agreement and are implementing them.

The careful tapping of gum arabic, laying down cattle drives and firebreak strip, placing certain regenerating areas under protection, the introduction of bee keeping, or the collection and processing of wild fruits all belong to the practical, specific measures of resource management. For tree species and areas especially worth protecting, special provisions have been developed. This concerns primarily economic valuable species like *Acacia Senegal*, baobob and fan palms.

Five local user associations participate in a project in collaboration with private business: "Sustainable Management of Gum Arabic in Guidimakha". A commercial exporter carries out



training for tapping, drying and storage and signs marketing contracts with guaranteed quality-based prices with the user association. Thus the quality and quantity of the tree species is increased. The users can achieve a reliable income with this form of sustainable use.

Programme planning for ProGRN laid great worth on clarifying the major roles of the actors by the end of the first phase (2005-2007). Beyond that the transfer of responsibility for resource use



should be described and made known and the process should be tested with the participation of all involved. This was achieved in that the local administrations, technical services, communities and service providers from two communities in Guidimakha were accompanied running through all stages and undertaking all steps independently. This way of proceeding created good prospects for the concept that local user agreements could be pursued even when unaccompanied by development cooperation.

The further decentralisation announced by the government opens mid- to long-term perspectives for a stable participation of the population in development processes at community level. The gap between government service offerings and the claims of the target groups which has often impeded rural development is reduced this way.

Local user agreements therefore contribute to natural resource conservation, strengthen self-sufficiency of the rural populace and, ultimately, of the civil society. They support the policy of decentralisation and create the precondition for a “disengagement” of the state, a withdrawal from costly functions which were mostly carried out without success, such as the agricultural counseling service, making supplies and equipment available, or the marketing of agricultural products, for

example. New space is opened up for the private sector which, if it is given the chance, is often better suited to exercise such functions.

According to the groundcover index, several of the areas of the user associations in Guidimakha already showed improvements in the first year. In light of the short time frame, this is surprisingly positive. The measurements of all user associations allow the conclusion that at least further deterioration could be prevented. This is also to be counted as a success. Field observations recognize the growth of young bushes and trees which were protected from bush fires and grazing. In an evaluation the pride shown by the user association’s members when presented with these results was particularly impressive. A high level of “ownership” was given expression. Surprisingly during the evaluation in interviews a strengthening of the internal cohesion in the region was mentioned. Indeed, the improvement of the relations between different ethnic groups and divers’ villages was not foreseen as an explicit goal of the programme. Apparently the meetings which were part of the processes, a forum was seen which allowed different standpoints to be brought to discussion. Also the working out of compromises was perceived as decreasing latently present tensions. It was stressed many times that there had never been such a



Individually or family owned plots of rainfed agriculture don't fall under the regulations of commonly used sylvo-pastoral lands in Mauritania.

forum and its establishment was welcomed.

In Mauritania user agreements have made a contribution toward:

- Overcoming legal pluralism.
- Democratisation of resource administration at local level.
- Closer collaboration of the organizations of civil society with the administration at communal level.

Lessons learned: Criteria for the quality of local user agreements

Four questions can ascertain the most important quality characteristics of a local user agreement:

- Does it guarantee the representativeness of the interests of all?
- Are the rules for conduct perceived as fair?
- In drawing up the rules is the authorship of the local populace guaranteed?
- Does the administration take over the sponsorship for local conventions and regulation mechanism?

Experiences with the implementation of local user agreements have shown that it is important to take

into account the access and user rights of all the populace. The mediator must take care that also the interest of mobile pastoralists and other groups are represented. As a non-sedentary population they have access rights according to local law but are increasingly being pushed back as a result of population growth and the degradation of natural resources. A further aggravation is due to falling yields, cultivated areas are making inroads into former grazing lands. In cases where overlapping resource utilisation takes place in some regions and users cannot be restricted to the inhabitants of a single village, user agreements must be developed by a supra-village organization.

The involvement of all users is a prerequisite for the legitimacy of the agreements. The suggested solution for sustainable resource management and usage conflicts must be perceived by all users to be legitimate and reasonable. This presupposes that agreements are linked to local knowledge and know-how and to the local legal system and that this fact is recognized in the formulation of the rules. It is of central importance that the rules are primarily oriented to the local population's problems where resource management and their authorship is transparent from first draft through to the approval of the final version. The civil

A sustainable usage of the natural resources raises the quality and quantity of collective products and thus the women's income.



administration and the technical services should be involved only after the first draft stage when the text is first adjusted to valid legal constraints and the clarification of concepts and formulations has occurred.

An indispensable prerequisite is that the civil administration and technical services identify with the mechanism of local user agreements and get involved with them. Their function is to legalise the agreements which have been reached. They

must therefore be included in the process. On the one hand local user agreements signify the safeguarding of the sustainability of resource usage by the local populations. On the other hand it means increased efforts for monitoring. A successful co-management of natural resources by the population and the government can be measured by whether the civil administration and technical services invoke local user agreements when conflict cases must be decided.

Source & further information:
Kirsch-Jung, K.P. and Gensler, M. (2003): Lokale Konventionen – Ein Instrument des dezentralen Managements natürlicher Ressourcen. Eschborn.

Suggestions for further work

The examples Guidimakha and Hodh el Garbi demonstrate the problem of free access to communal resources. But they also reveal what happens when the state claims ownership of previously collectively used and protected resources without being able to fulfil its associated duties to protect them. The solution which has been presented here is based on a connection between the self-interest of the user in resource conservation and state control.

Research:

In Germany there were also communal land use laws.

- How did they work out?
- When and how were they abolished?
- What was the result of their abolishment?

Compare:

- How does agricultural land use in Germany differ from that in Mauritania?
- What are the differences in livestock farming between Germany and Mauritania?

Analyze:

- Why must the local population be organized before the Mauritanian government can hand over the responsibility for areas which belong to the general public?

Discuss:

- How can it be assured that transfer of user rights to the local population does not lead to the destruction of nature?
- Could intensifying cultivation and livestock farming be a way for Mauritania to increase its food supply and reduce poverty?
What are the reasons for and against this?

Research:

As in other developing countries, certain "disengagement" by the state is taking place, i.e., the withdrawal by the state from certain non-sovereign functions.

- What are the motivations for this; what are the associated risks?
- What is the relationship of "local user agreements" to such a strategy?

Research:

Many developing countries have started decentralised their administrations and are being supported in this by international institutions and the donor community. This is also the case in Mauritania.

- Does Germany have a centralised or decentralised administration?
Which administrative levels are there and how are duties distributed among them?
What are the experiences with this?
- What meaning does the so-called "Subsidiarity principle" have in this context?
- Which role does the concept of "local user agreements" have in Mauritania's efforts to decentralise?

Part 4

Traditional Fishing, Nature Conservation and Local Development: Banc d'Arguin National Park

A bird habitat of international importance is placed under protection; the government and local fishermen agree on conservation measures of the rich fish stocks with benefits for many.

The Banc d'Arguin programme region

The Banc d'Arguin runs along the northern third of Mauritania's Atlantic coast with a length of about 180 km. When the area was declared a National Park by the Mauritanian government, the preservation of its unique bird population stood in the foreground. During the winter months it is visited by over 2 million birds. These are to a large extent migratory birds with breed-

ing areas in northern Europe or Asia. After a stopover in the wetlands of the North Sea, they fly to the Bank D'Arguin to overwinter. Next to these are numerous species which live on the Banc D'Arguin all year round. The existence of all these species would be endangered without the National Park. There is a global interest in their preservation which is primarily derived from their "existence value". This is the value which humans place on the existence of some animal or plant species even when they themselves draw no direct ben-



The red knot – from the far north through the German Wadden Sea to Mauritania

A striking example of the bird species which overwinter on the shorelines of Banc d'Arguin, is the red knot [*Calidris canutus*]. On its way to northern Greenland, Canada and Siberia where it breeds, the knot uses the mudflats in the Wadden Sea as a resting place, or "ecological stepping stone". Ornithologists have studied its migration paths in detail. In mid August flocks assemble whose size grows day by day at the end of the brooding period. The knots assembled on the northern coasts must eat to develop fat reserves which they will need for their flight. Once started, they already land a few days later on in the Wadden Sea of Lower Saxony. It is essential that the birds cover the enormous distance non-stop. Using up about 2 grams of fat per hour of flying, they have lost about 120 grams-reducing their 250g body to

130g. The knots rest anywhere from a few days to several weeks in the lower saxon Wadden Sea. Once new fat reserves have been put on they leave the Wadden Sea and move down the coast over the Netherlands, Belgium, France, Spain and Portugal toward southwest and reach the African continent in Morocco. Finally they fly further until the Mauritanian mudflats within the Banc D'Arguin National Park where most of them spend the winter. All knots arriving here from Europe flew the second stage of their flight to winter quarters non-stop or at most with one or two rest breaks. Some continue flying to South Africa. The air distance from Siberia to Banc D'Arguin is 8,500km, to South Africa 14 to 16,000 km.

Source: Moritz, V., B. Ziesmer und K. Wonneberger (1999)

efit from them. The conservation of these species serves commercial interests as well: tourism would lose an important attraction without the great swarms of birds in the Wadden Sea.

This would have serious economic consequences for the region. In the Banc D'Arguin National Park, however, earnings from bird-watchers are still less developed but could gain greater economic significance for the local populace in the future.

The Banc D'Arguin also has an important function as a fish reproduction area. The fertile fishing grounds off the Mauritanian coast are the richest in West Africa. For its designation as protected area this did not yet play a role, since in the 1970's fishing was still slightly developed. It had also not yet penetrated the public consciousness that these seemingly inexhaustible stocks could be endangered by overexploitation. The recognition

of Banc D'Arguin's importance as a reproduction area for the fish stocks resulted in setting an additional important goal. This is in the interest of all countries involved in fishing off the Mauritanian coast, in the first place, the EU. But it is also in the interest of the population of the National Park who mainly live from traditional fishing; the conservation of the fish stock preserves their own livelihood.

Support Approach

In the Bank d'Arguin National Park, as in all protected areas, rules and bans serve to protect flora, fauna, the landscape, and the ecological processes. Restraining activities, access restrictions and surveillance are seen to be suitable protective instruments in these areas. Then again the local

How does GTZ support the management of the National Park?

Conservation and sustainable use of resources are core themes within Germany's development cooperation with Mauritania. One of the components is the support for the Banc d'Arguin National Park. Activities have been running since 2005 as part of the programme "Management of Natural Resources". The German contribution essentially lies in the improvement of the park administration's capacities. To this end, a specialist has been seconded to the park and short-term assignments of international consultants are provided for particular tasks. Further contributions are carried out by supporting the cooperatives and providing continuing education at different levels. Through these measures the park administration became more effective and efficient. The work's emphasis encompassed the following activities:

- Support the design of an executive order for the National Park legislation.
- Develop the bylaws and rules of procedure for the park personnel.
- Assist the publication of a manual of procedures.
- Furnish computers and technical equipment.
- Develop a management plan, annual plan and monitoring system.



- Conduct an organizational analysis of the park administration and design measures for capacity development:
 - Restructure personnel and personnel management.
 - Introduce a new organization chart.
 - Conduct training seminars.

The staff was trimmed down (superfluous staff were let go, others replaced with better qualified people). Job descriptions were developed specifying responsibilities and authorities. A management plan and a business plan were developed and, by means of a budget oriented annual working programme, put into action. Measures for the support of cooperatives focussed on fish processing and eco-tourism. The participative preparation of a development plan for the community Mamghar came about through the initiative and support of ProGRN.

population has a legitimate interest to use tourism as an income source next to fishing. A compromise was worked out with the administration of the protected area which allowed local residents to practice ecologically compatible forms of tourism. Those responsible at the National Park supported them with the development of the capabilities for this. Just as important is that the government imposes limitations on itself, for instance when awarding licenses for oil extraction or building the new asphalt highway which goes around the National Park.

Traditional fishing and local agreements

In the protection of aquatic resources the distinction is made between the waters lying within and outside of the National Park. The control of the latter is a sovereign task of the state. In first place is to enforce the national and international fishing regulations such as monitoring the agreed upon catch volumes or surveillance of the 200 mile zone against incursions by foreign fishing vessels. The preservation of fish stocks within the National Park takes place in the interplay of the state with the local population. Fishing is only permitted to residents practicing traditional fishing methods. The Mauritanian government, represented by the National Park administration, and local population agreed to accept limiting certain fishery activities necessary for stock preservation. To these measures belong the type of permissible nets, limitations in the number and type of approved boats

Fishing agreements

According to international law, coastal states appertain to the sole right to fish, while the deep sea is accessible to all. In recent times many states have demanded a zone of 200 sea miles. In their sovereign waters, states can cede the right of fishing to other states, which is done by agreements regulating output and reward (payment or sharing of benefits). The EU negotiates with a number of other countries for fishing partnership agreements of this kind for its member states, especially in West Africa.

(only sail boats), or forgoing fishing of certain threatened fish species.

Compliance with the agreements is safeguarded by a combination of self control and park administration control. The population is ready to cooperate with the authorities since they are protected by state control against incursions by foreign fishermen. It is certainly clear to many fishermen that their self restraint helps to preserve their own livelihood. Numerous state assistance measures above and beyond that improve the living conditions of the local populations. This is intended to encourage a greater willingness to relinquish usage which at this time has led to lower fishing income.

The park is a world class bird paradise and important as a breeding place for fish. At the same time it serves as a livelihood for the allocated Imragues. Protection and sustainable use need to be rebalanced repetitively, for the wellbeing of all.



The film “The Banc d’Arguin National Park: Environment and Sustainable Development”

The film makes clear how the state regulates the protection of unique bird habitats and valuable fishing stock by designating a protected area. Thereby they are not only protecting the interests of the local population, but involving them in conceiving and carrying out conservation decisions. The Banc d’Arguin National Park public relations film describes the global and local importance of the protected area as well as the management concept from the view of those involved.

The 16 minute long film was produced originally in French (also in a French version with English subtitles) in 2004 by the production company Cultures & Communications-Production. The company produced the German version of the film under contract by GTZ in 2008.



Film Scenes

Start	Scene content
00:00	Location and value of the National Park are introduced.
01:38	The park director emphasises the ecological uniqueness of the park and Mauritania’s performance for international nature conservation.
02:50	Oliver Rue, scientific consultant of the National Park explains Banc d’Arguin’s hydro-geographic features.
03:20	The park administration director illustrates the history.
04:20	Banc d’Arguin’s value as a regeneration area for fish and its control are outlined.
06:50	Amadou Sall who collects data for the Mauritanian Institute of Fishing and Oceanography, explains the data collection and the taking of decisions from park administration, scientists and local population concerning the fishing plan.
07:45	Olivier Rue underlines the relevance of this cooperation for the use of resources.
08:34	The area’s population, the Imragues with their livelihood in fishing and pastoralism, are introduced.
11:15	Harbune, park warden and member of the local cooperative reports on his tasks and experiences with tourists.
12:25	The park’s director emphasises the interest in ecological tourism – not mass tourism.
13:20	Olivier Rue moves to the dangers threatening the National Park.
15:22	The park administration director stresses the challenge for the conservation of the unique ecological system Banc d’Arguin in an increasingly dynamic economy.

The world heritage area Banc d’Arguin is included in the most impressive landscapes of Africa’s west coast.

The reserve Banc d’Arguin is a true bird paradise – it accommodates West Africa’s largest breeding bird colony and serves as a rest area for millions of migrating birds.

Detailed presentation in the "Background Information"

Further information:

- République Islamique de Maurétanie: Loi no 2000-024 du 19 Janvier relative au Parc National du Banc d'Arguin.
- République Islamique de Maurétanie – Secrétariat Général du Gouvernement: Synthèse du Plan d'Aménagement et de Gestion du Parc National du Banc d'Arguin, Novembre 2004.
- République Islamique de Maurétanie – Ministère Délégué auprès du Premier Ministre, chargé de l'Environnement Bilan 2007 et programme d'actions 2008 du PNBA
- Document de synthèse, Mars 2008.

From conservation to sustainable development

The boundaries of the National Park were laid down in 1976 (Law of 24.07.1976). One year later it was made an establishment regulated by public law ("Etablissement Publique à Caractère Administrative", Law of 17.03.1977). Its foundation can be traced to the initiative of the scientists and nature protectionists, the French Theodore Monod and the Swiss Luc Hoffmann. They were supported by the World Wide Fund for Nature (WWF). Further supporters followed such as the "Fondation Internationale du Banc d'Arguin" (FIBA), which was founded for this purpose in 1986, Birdlife International, and the Naturschutzbund Deutschland (NABU). The National Park region was recognized as a wetland of international importance in 1982 (Ramsar Convention) and was designated a World Heritage Site by UNESCO in 1989.

What is a National Park?

A natural rural or maritime area, declared to (a) protect the intactness of one or several ecosystems in the interest of present and future generations and (b) to exclude use or demand, differing to the aims of the declaration and (c) to create a basis for intellectual-emotional experiences as well as research, educational and recreational offers for visitors. These all ought to be environmentally and culturally adaptable.

(EUROPARC & IUCN, 2000)

According to the IUCN categories for protected areas the Banc d'Arguin is, in fact, not a National Park in the sense of the pertinent management category II. In official statistics it is listed as a Managed Resource Protected Area (Category VI). Corresponding to its goals and its de facto management it was categorized as a protected area whose management, along with the preservation of natural ecosystems, also provides sustainable use by local inhabitants.

After the establishment of the National Park, the preservation of bird habitats was the focus. Particular attention was paid neither to the inhab-

What is a Managed Resource Protected Area?

An area managed mainly for the sustainable use of natural ecosystems. Area containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

Management goals for this type (IUCN-Category VI):

- Permanent security of biodiversity and other natural merits of the area.
- Fostering responsible economic ways for sustainable production.
- Protection of the natural resources from production methods which could damage biodiversity.
- Support of regional and national development.

(EUROPARC & IUCN, 2000)

itants living in the area nor to the conservation of aquatic resources. Their endangerment through overexploitation had not yet been perceived and fishing played a minor economic role in Mauritania. By the passing of a new law in 2000 the situation fundamentally changed. The central focus of the new law for the Banc d'Arguin National Park is the sustainable use and preservation of all natural resources in conjunction with the economic and social development of the population.

What is a Ramsar area?

An area which particularly counts as a habitat for water birds and waders of international importance, according to the 1975 enforced law (named after the Iranian city where the convention took place – Ramsar Convention), and recorded in a worldwide register. The contracting countries have committed themselves to the protection of these areas.

Detailed presentation in part 6

What is a World Heritage Site?

An area, recognised by the World Heritage Committee at the UNESCO convention in 1972 for the protection of the world's cultural and natural heritage; natural phenomena of outstanding beauty or important stages of world history or for the in-situ-preservation of biological diversity in its typical habitat.

*Detailed description in part 6
"World Heritage Convention".*

Participation of the population

While in many cases the management of protected areas takes place without the involvement of local residents, the inhabitants of the Banc D'Arguin National Park area are part of its management. Approximately 1,500 Imragues live in the small coastal fringe between the Sahara and the Atlantic. Fishing and mobile pastoralism is their livelihood. A large part of the fish catch is marketed in processed form. Processing is the responsibility of the women. Mullet roe is enjoyed as local caviar, called Poutarge, and is very popular, dried fish is made from its meat.

Since the National Park only surrounds the northern part of the community Mamghar (600 inhabitants), nine villages in the community lie within and four more outside the National Park.

Differing rules apply to the population of the community. For example, fishing with motor boats is prohibited in the park but allowed in all other waters. The right to use motors is exercised by the fishermen from Mamghar and other villages beyond the banned area.

The local population is included in the country's general development activities. Within the National Park additional aid comes to the Imragues through the park administration. This has a comparatively higher value than the general provisions of the state and the conditions for acceptance of conservation measures are thus improved. Additionally the local population enjoys exclusive user rights and does not have to compete with large numbers of other fishermen. Within the protected area, approximately one third of the Mauritanian coastline, there are about 90 boats. In the remaining two thirds of the coast the crews of about 4,000 boats must share the resources.

The National Park law and the negotiation of resource uses

The involvement of the local population in the management of the National Park had already begun before the passage of the new National Park law of 2000. On the occasion of the 20th anniversary of the National Park a "Declaration of Arguin" was signed on May 21, 1996. This document granted the local population certain participation possibilities after they had been repeatedly



In the park area live about 1,500 people of the traditional fishing people Imragues. They are meanwhile integrated successively into the management of the area.

pushing for them. The National Park law of 2000 anchors this involvement through the participation of the population in the administrative council of the park.

The following procedure for collaboration evolved: The park administration works in coordination with the local population and the other concerned national institutions such as the Fisheries Ministry (Ministère des Pêches, MP), the Mauritanian Institute for Oceanographic Research and Fishing (Institut Mauretanien de Recherches Océanographique et des Pêches, IMROP), and the Office of Fishing Surveillance and Control of the Sea (Délégation à la Surveillance de Pêche et au Contrôle au Mer, DSPCM). In a participatory approach detailed regulations are negotiated for access to the resources, which are presented to an election workshop. The results obtain legal force in the form of an ordinance which is issued by the park administration.

Fishing shall serve as an example of this communal process of negotiating regulations for resource use. In 2006 a village fishing committee ("Comité Villageois de Pêche") was established in Banc D'Arguin as an elective body. Elected representatives from all villages in the park area belonged to it. They meet regularly with repre-

sentatives of the park administration under the leadership of the park director. In the sessions they agree on details of the allowed (or prohibited) fishing methods (length, depth, mesh size of the nets which are used, the use of gill nets, and observance of closed season). Also discussed are the personnel allowed to fish (the captains of fishing boats must categorically be members of the Imragues and have their domicile in their settlement area) the remaining crew can contain two persons who do not meet these criteria. In this context penalties for violations are set down such as the level of fines, what to do with confiscated catches (80 % to the local population, 20 % to the park administration), or the release of confiscated boats as well as the minimum time prior to their release. The raising of penalties in a first or second recurrence is determined by this committee.

Local development support

The second type of collaboration between the population and the National Park administration takes place through performance of the aid mandate. What does this mean, what conceptual thoughts are at the basis of this regulation? Experience has shown that the population is ready to accept restrictions of fishing activities or income

The fishing committee representing all villages allocated in the reserve discusses the fishing plan with the park director. Who is allowed to use which source how is negotiated here.



Regulations in the National Park

The direct use of natural resources in the National Park is prohibited. The law passed in 2000 for National Parks provides exceptions for the park's resident population. Numbered among these are traditional fishing (by foot, shoulder net or harpoon, or with a sailing boat), transhumant pastoralism (including the places for pastures, rest and watering), as well as the use of collecting goods and deadwood (article 11).

Further regulations concern special exceptions for scientists, tourists, member of the

Park Administration, Military and Public Administration, as well as for all who are related to specific reserve tasks (article 16). Furthermore there is a general prohibition for power boats (except for the transport of people and goods into or out of the National Park, for the purpose of surveillance and science (article 17).

All regulations of laws can be further specified or adjusted to the circumstance by statutory instrument (article 18).

Detailed information to National Parks legislation: see Background Information

reductions, if, thanks to state aid measures, additional income arises in other areas or the general quality of life is improved, for example through better basic provisions. The handling of aid measures and allocation of funds takes place through the community Mamghar or through cooperatives established for this purpose.

The responsibilities of the community Mamghar include the building and maintenance of the public road network and public buildings (schools, infirmaries), the provision of drinking water and

electricity, waste water disposal, fire protection and the upkeep of markets and slaughterhouses. These are to some degree financed by their own income but for the most part by funds allocated by the government. Since these are scarce, it is natural for the community to seek support from the park administration for all activities which arise from the provisions of the National Park law.

In the villages of Banc d'Arguin National Park there are cooperatives, which date back to an initiative from the International Fund for Banc



With the Imragues, literacy is at high priority.

**Women as beneficiaries:
fish processing and eco-tourism**

Within the Cooperation Teichott seven "Groupe-ment des Femmes" (grouping of women) have been created (of which 5 are official).

With the support of the National Park (provi-sion of two buildings for fish processing) they apply themselves to the preparation and con-servation of fish roe and the production of dry fish and fish oil.

One of these groups serve as a typical example:

In 2006, the women received a credit to the value of 500,000 UM (1,470 Euros) from the Cooperative. This was payed back after 45 days, including a 10% sharing of profits (5,500 UM). Thus the benefit was 55,000 UM (160 Euros) of which, multiplied by 6 turnovers in a catch-ing period of nine months, resulted in a total benefit per annum of about 1,000 Euros. This is 150 – 200 Euros per woman (as a comparison: the income per capita in Mauritania stands at 280 Euros, the national poverty line, 200 Euros).

This example illustrates that in individual cases, significant income for women can result. According to the women this income can be used as they find appropriate.

A further interesting example illustrated by the women`s income, is the Cooperative Arkeiss. This consists mainly of women and specialises in ecotourism. The Cooperative has more than 23 tents at its disposal and charges 6,000 UM rent per night for a large tent and 3,000 UM per night for a small tent. During the seasons of 2005/06 they generated a gross cash flow of 7.8 million UM (23,000 Euros),

The women are faced by labour costs for main-tenance, cleaning and also labour and material costs for the renewal of the tents. According to the women, they contribute the largest part of their family income (80%) from their tourism revenues.

This is to do with nomads who only settled there some years ago. The men have just start-ed fishing on a small scale; additionally they participate in tourism.

Tourism which is compatible with nature and society, for example by renting out nomad tents, can generate new income sources for women.





Landscapes in Banc d'Arguin are breathtaking and contain beautiful artworks of nature.

d'Arguin (FIBA) and the United Nations International Fund for Agricultural Development (IFAD). FIBA contributed to create a cooperative, helping all the villages in repairing and building fisher boats. IFAD fostered the funding of multiple purpose cooperatives in the single villages. The capital creation of these cooperatives occurs by contributions from the local population but mainly from external support in the form of bestowals. In these cooperatives there are many sub-groupings, mostly set up by women, which carry out various tasks. The most important are fish sales and distribution, as well as tourism. In addition to this, they take care of the water supply and the village shops. The initiatives are partly co-financed by subsidies from the Park Administration.



How high are the costs for conservation and local development in Banc d'Arguin?

Every year 1.2 – 2 million Euros are provided to finance the National Park Administration. This amount is given, for the most part, by the state of Mauritania and the contribution of diverse international donors. A section of the donor contributions is processed by the technical development cooperation. The majority of the National Park's budget goes to tasks which have been assigned to the Park Administration by law. The plan to create a charity fund of 20 million Euros has not yet been realized. Its annual revenues should be provided for the protection of the environment but paramount are development measurements for the local population. During the signing of the latest fishing agreement (July, 2006 concluded for six years), the Mauritanian state agreed to provide an annual 1 million Euros to the National Park Administration.

One of the eco tourism camps in the National Park Banc d'Arguin, managed by women.

Suggestions for further work

The history of the Banc d'Arguin National Park is indicative of a different management approach; away from restrictive nature protection which excludes humans, towards collaborative management which involves the locals. In many countries the state's lack of effectiveness – limited by insufficient personnel and financial means, as well as institutional and conceptual deficiencies – but also social concerns and societal requests for stronger involvement of civil society led to nature reserves not being seen anymore as exclusive areas of the state. According to the protection goals and the local situation, increasingly local resource users and other actors such as tourism entrepreneurs, research institutes, NGOs or private landlords are being involved in the management.

Represent graphically:

- Who has which interest in the Banc d'Arguin area?
- Where could conflicts of interest arise?
- Who has to carry which loss / condition / costs?
- To whom accrue advantages? Draw a point balance out of this cost - benefit evaluation.

Analyze:

- Which reasons are behind the changed goal setting or management direction for the National Park Banc d'Arguin?
- Would other instruments or approaches also be imaginable to sustainably protect and cultivate the natural resources of Banc d'Arguin in the long-term?

Research:

The IUCN (International Union for Conservation of Nature) distinguishes six different types or categories of nature protected areas, differentiating themselves through the protection goal and the therefore resulting management.

- Which categories of nature protected areas are there in Germany? Which differentiation do the German laws provide for, how does this correspond to the international classification? Give examples!

Research:

Nature protected areas are often presented as a throttle to economical development.

At times these are actually motors for regional development.

- What could these differences of opinions result from?
- Find a nature protected area in your area.
 - What is the goal / the specific protection mission of this nature protected area?
 - Who could be interested in its conservation?
 - Are local inhabitants or other interest groups involved in its management? In which way?
- Depict for your chosen example, how disadvantages and advantages of the park impact the regional economy

Compare:

How does your depiction / balance of the German nature protected area you chose look like compared with Banc d'Arguin?

Research:

- Which other animals or plants there, use or need other ecologic systems outside of single state borders, such as migrating birds? What is being done for their protection? Which influence has one country over another to protect their species away from their own borders?

Discuss:

- How should the international community engage in the conservation of Banc d'Arguin? Who carries responsibility for the conservation of globally important nature areas?
- Do industrialized countries have co-responsibility for the treatment of resources in developing countries? Why? Which liabilities derive from this?
- What would some developing countries possibly say to the "intervention" of the industrialized countries over how they deal with their resources?
- What (user) rights do local inhabitants have (e.g. pastoralists and fishermen) between the poles of user arrangements and modern law?
- How can a country with relatively weak assertiveness at the same time fulfill international liabilities and meet the expectations of its inhabitants?

Research:

- How does the federal government justify its engagement in the development cooperation for more sustainability in dealing with natural resources?

Debate:

- If you would need to explain to critical fellow citizens (taxpayers), the German contribution toward sustainable use of resources in Mauritania, what would you say?

Which different interests are delineated in Mauritania among the priorities of nature protection, resource utilization and development?**Local inhabitants**

- Long-term resource conservation
- Assurance of user rights
- Respect for tradition and cultural identity
- Appreciation and strengthening of autonomy
- Resource cultivation in traditional values & patterns
- Expectation of the state to be a "protector" of local communities against external interests

Mauritanian State

- Assuring the inhabitants' basic needs
- Long-term territory planning and administration
- Harmonious integration / linkage with other sectors of economy and society
- Overcoming the colonial era and societal consequences (e.g. juridical system, administration, religion, tradition, culture-clash)
=> improved adaption to actual requirements of society and state
- Questions of power / assertiveness
- Good governance / democratization / civil participation
- International image contextual to nature conservation (observance of conventions)
- Image also important as potential tourism destinations

Global community

- Conservation of intact and diverse ecological systems (Ramsar Wetlands Convention, World Natural Heritage, Convention on Biological Diversity)
- EU: accessibility to fish resources, long-term conservation of the very same
- CBD and UNCCD based calls for support of developing countries for biodiversity against desertification

Part 5

Summary and Outlook

The designation of nature protected areas as an instrument of area protection and the agreement of user rights within the strict sense of resource conservation are important strategic elements of spatial planning. Besides national planning they also serve the implementation of international conventions. New democratic processes and the creation of near-base regional corporations are strengthened.

In **Guidimakha and Hodh el Gharbi**, gained experiences show that the transmission of responsibility for the use of natural resources to the local population, without endangering the nature potential, is possible and all those involved identify themselves largely with the user rights if

- they were fully involved in its preparation,
- the regulations correspond with their traditional perception of the law,
- and if these are considered by all as target-aimed within the meaning of long-term resource conservation.

Under these prerequisites, restrictions of resource use are accepted. As a sense of necessity, the safeguard against rival users plays an important role. Succeeding generations especially benefit from development measures. With this, the results in Mauritania confirm the lessons learned in other countries: after the concept was developed by GTZ in Burkina Faso in the mid 90s, it has been implemented in eight other countries in West Africa. Along with Mauritania are Burkina Faso,

Benin, Cameroon, Mali, Niger, Senegal and Chad.

The negotiated user rights can lead to success for all involved parties:

- For the **local population** because the use agreements are built upon cultural characteristics and interests of the local population as well as their legal system.
- For the **state** because national law is integrated into local agreements. This has a double effect: On the one side national land-laws gain a new legitimacy and enable acceptance within the local population. They become the key factor for the establishment and implementation of national law. On the other side resource protection can be created more effectively within the sense of the state through co-management of national actors and the local population.
- For the **development cooperation** because such approach to the development goals through public participation creates strengthening of local interests and trade capacity.

Now the achieved successes in Guidimakha and Hodh el Gharbi need to be secured and their sphere of action widened. Long-term goals should be to cover the complete region as soon as possible with user rights, embedded in spatial-use planning.

A new task field arises in the transformation of the recently protected areas of forest into organized sustainable use. The user societies still need to gain further experience in this field. If the State of Mauritania continues its policy of decentralisation and strengthening of autonomy, there is the chance of reaching widespread sustainable use of the natural resources through agreement.

In **Banc d'Arguin National Park** – as in all national nature protected areas – to begin with, control is the sovereign responsibility of the state. Particularly relevant to this is the observance of the international and national rules for fishing and the surveillance of the 200-miles-zone. In the coastal areas of the National Park the management of the resources is an interplay between the state and the local population. Accordingly, the National Park administration and the traditional inhabitants agreed to accept certain necessary constraints towards fishing activity in the interest of maintaining the fish quota.

Experiences have shown that local fishermen

Temporary wetlands are a precious resource for people in drylands who depend on the sustainable use for their livelihoods.



Succeeding generations especially benefit from development measures.



are by all means ready to accept constraint if:

- The observance of the negotiated agreements is secured through an alliance of self control and control through the park administration.
- State control protects the local inhabitants against the intrusion of foreign fishermen.
- The constraints are compensated by development assistance measures. Numbered among these are e.g. the processing of fish and the support in the creation of touristic activities, of which the beneficiaries are principally women.

Many fishermen are aware that with self-constraint they contribute to their own livelihood and preserve the basis for economical development of the area.

The future of the Banc d'Arguin National Park will come down to securing the achieved successes in collaborative management of the area. The integration of the fisheries into long-term agreements and the high priority given to the National Park by the Mauritanian state offer good conditions for this. This not leastly, expresses itself in the prohibition of oil exploration in the park area and in the government commitment to

provide annually, one million Euros from the EU compensation payments within the framework of the fishing agreement for the National Park. It is hoped that through the united efforts and the support of the German Development Cooperation through the planned foundation, the financing of the National Park is laid on a durable basis. Particularly in the improvement of the infrastructure for the local population a lot is still to be done.

Through collaborative management of the reserve and the creation of agreements of use within the framework of the development cooperation, forms of nature and resource protection in Mauritania have been fostered which have been twice legitimated – by the state and by the population. This is important because the integration of local values and traditional systems of justice are decisive for the sustainability of local usage agreements.

A significant amount has already been achieved in Mauritanian contributing to a different handling of nature and a strengthened respect for traditions and cultural identity. Other parts of the world are also learning from this.

Part 6

Background Information

Mauritania

The natural environment

Geography

The Islamic Republic of Mauritania is 1,030,700 km², three times as large as Germany, but with barely 4 % of its population. The result is a low population density typical for countries in arid environments. About two thirds of the country is desert varying between gravel, rocks and sand with shifting sand dunes north of 18° N. In the south the Sahara borders the Sahel zone (Sahel, Arabic for shore).

The only continually flowing river in Mauritania is the Senegal. Between the Senegal estuary and Cape Timiris lies a flat coastal plain which extends in the north into a steep coastline with numerous bays and islands. The extensive interior lowlands with their fields of sand dunes form the western edge of the Sahara. A short steep rise leads into the central part of the country with a wide, flat sandstone plateau (300-500 m above sea level) and occasional solitary mountains among which is the Kedia d'Idjil, at 915 m, the country's highest point. To the east the predominately gravel covered high land drops down into the outlet-free, sand filled basin El Djouf.

Areas and Population

The country is bordered by the Atlantic Ocean to the west; in the south the border follows the route of the Senegal River while the border to the neighbouring country of Mali in the east and south runs practically in a straight line. In the north and northeast of the country the border to Algeria and the West Sahara is not a natural land frontier but rather one based on political understandings.



The loose knit, roughly 8,100 km long road-network contains only a very few paved and graded major arteries. All other roads can be characterized as sand or gravel tracks. A railway line, which runs from the iron-ore mine in the north to the port town of Nouadhibou, is the most important transport link in the country. The railway track's greatest enemy is sand. To keep the tracks free, a de-sanding troop is stationed every hundred kilometres. Both the port cities of Nouakchott and Nouadhibou have international airports.

Climate

A desert climate defines the country. The day-time temperature in the summer months reaches over 40°C; nights average 20°C. At the height of winter one can expect temperatures to be 10 degrees lower. Through the influence of the sea, the temperature on the coast is moderate, between 20°– 30°C throughout the entire year, whereas the maximum summer temperature can reach up to 50°C. In the northern half of the country

	Mauritania	Germany
Area (1000 square km)	1003	357
Inhabitants (million)	3.2	82.4
Population growth (%)	2.7	-0.1
Population density (capita/km ²)	3.2	230.8
All data applies to 2005.		

Source: UNDP, Human Development Report 2007/08

rainfall occurs mainly in winter, however seldom more than 100 mm per year. In the extreme south it is 300 – 400 mm and generally from July till October. The constantly blowing north-east wind frequently builds sand drifts. In the winter an unpleasant dry, hot desert wind from the north-east, the “Harmattan”, often prevails. In March and April the hot “Sciroccos” sometimes cover the coastal regions with a thick layer of sand and dust.

Flora and Fauna

In broad areas of Mauritania the low precipitation supports only very sparse vegetation consisting of a few low trees, acacias and other heat-resistant bush species. To the north of the Sahel zone abuts a thorn bush savannah, after which the sand and gravel deserts of the Sahara begin. Oases are found in the desert in which, among other things, date palms grow. Most fertile however are the flooded savannahs along the Senegal river south of the country. Vine palms thrive there, baobabs,

bamboos, raffia and doum palms. The doum palm’s round stone-fruits are edible. On the coast there are extensive salt marshes. Scientific studies have documented more than 1,100 species of higher plants. Between 1990 and 2000 there was a decrease of 2.7 % in forest area.

In the past, the Savannah region of Mauritania showed a considerably higher animal population than today. Along with antelopes and lions, free-roaming elephants, who had adapted to the desert-like conditions, were found in the southern part of the country until 1920. Also gazelles, panthers, hyenas, warthogs and lynx were counted among the original Mauritanian fauna. In the few watering places, crocodiles are found. 61 species of mammals are documented in Mauritania of which 10 are endangered (Data for 2002). 172 bird species have their breeding colonies in this desert country.

On the Atlantic coast the Canary Current works with the dominant Passat winds to bring mineral-rich water from the deep sea to the sur-



Banc d'Arguin accommodates West Africa's largest bird colonies.

face. This mineral-rich, deep sea water and the tropical sun create one of the most productive marine areas in the world. The coastal waters of Mauritania act as a habitat for the endangered sea turtle and as a breeding and rearing ground for approximately a thousand fish species. The extensive wetlands are also an important wintering area for millions of migrating birds

Protected areas in Mauritania

The first protected area in the country, the Protected Game Area of El-Agher, was classified in 1937. At that time the whole area still had an important animal population. Until 1920, 400 elephants lived here which, after the introduction of firearms, were hunted into extinction.

The Banc d'Arguin National Park was established in 1976. In 1991, after 10 years of research, the second National Park (Diawling) was added.

On the right bank of the Senegal River, opposite the National Park Djoudj in Senegal, the Diawling-Park was founded in order to preserve an important part of the Delta. This succeeded despite the territorial changes which were carried out on the Senegal River as part of an irrigation programme. Since its creation in 2007, the Ministry of the Environment has been responsible for this reserve.

The cultural and economic environment

Population

Roughly 60 % of the 3.2 million inhabitants live in rural regions. Only nine cities have more than 10,000 inhabitants. During the last century large settlements formed in Mauritania where there were water-wells and where the caravan trails intersected. The capital, Nouakchott, is a young city. During the colonial period the French had a military base here. In 1960, shortly before independence, it was decided to establish the capital city here. Major factors for this decision were the proximity to the sea and the transport connections to the Senegal capital, Dakar. Nouakchott was originally planned to hold 20,000 inhabitants; in the meantime it is home to over 900,000 people. Especially during the drought period of the 1970s when many nomads lost their herds, a massive influx of people into the city took place. With the exception of the cities, the greatest population concentration is in the south of the country along the Senegal River where the population density is 633 inhabitants per km². Four fifths of the population live on 15 % of the land area.

Mauritania's population reflects the geography and history of the country. About 30 % are

Source:

www.unep-wcmc.org
www.mauritania.mr/fr
www.parks.it/world/MR

Mauritania's population is composed of Arabic-Berberic Moors, dark-skinned Haratin and black African peoples.



Arabic-Berberic Moors who identify themselves as “white”. Culturally proximate are the dark-skinned Haratin (their previous slaves) who make up about 40 % of the population. Both groups speak the native vernacular Hassaniya, an Arabic dialect with Berberic tones. The south of the country is home to the black African people of the Soninke, the Halpoular (Fulbe), the Wolof, Sarakole and Bambara. They speak their tribal languages. Due to reasons of national unity, their tribal affiliation was not ascertained so their numbers are unknown. Besides French, Arabic is the official language.

Both the black African and the Moorish communities are hierarchic, strong in structure and organised in tribes, clans and families. Although slavery was abolished in 1980, traditional dependency roles still continue to exist. In every family there is a servant who carries out the physical work in the house, on the field or by the keeping of livestock. They belong to the family unit and receive care in old-age and during illness. To make the anti-slave laws more effective, the newly elected parliament passed a law in July 2007 penalizing slavery-like dependencies.

Until the beginning of the 20th century the traditional economy and way of life was that of the nomads. With limited areas of useful arable

land, nomadic pastoralism created a possibility for optimizing the usage of natural vegetation for producing animal products. The nomadic diet was principally based on bartered cereals and dairy produce. By and large the nomadic life-style has strongly declined.

Social Situation

As seen in the relevant development indices, Mauritania ranks as one of the poorest countries in the world. It is categorized among the least developed countries (LDC). The soaring rise of the per capita gross domestic product (GDP) between 2005 and 2006 is linked to changes in the economy which began with the intake of revenues from crude oil (more on this theme is found in the section on the economy).

Combined with the yearly fluctuation in rainfall, which is significant for the net agricultural product, the indices for income and poverty can show extreme variation from year to year. In comparison with Germany the GDP per inhabitant in Mauritania stands at only 2 %. By recalculation to purchasing power parity it is 8 %.

The distribution of income in the country is, as in many developing countries, disparate. In 2000, only 6.2 % of the national income was earned by the poorest 20 % of the population

Development Indicator	Mauritania	Germany
Human Development Index	0.550 (Rank 137 of 175)	0.935 (Rank 22 of 175)
GNP/capita (US-\$) (2005)	580	34,870
GNP/capita (US-\$) (2006)	740	36,620
GNP/capita (US-\$ to purchasing power parity)	2,234	29,461
Population under the national poverty line (2000)	46.3 %	k.A.
Children under 5 years age suffering from malnutrition (2000)	32.0 %	k.A.
Life expectancy (in years)	53.7	78.9
Schooling rate (% of the age group)	93.3	101.0
Primary graduation (% of the age group)	44.5	94.3
All data, unless otherwise indicated, refer to 2005		
<i>Source: UNDP, Human Development Report 2007/08; Worldbank Data Profiles</i>		

At early age, the Imragues learn to handle water sparingly.



whereas 47.5 % attributed to the richest 20 %. 10 % of the population are classified as chronically undernourished. Malnutrition is especially pronounced in children under 5 years. Only 47 % of the people have access to clean drinking water.

Social legislation and the health service system in Mauritania are inadequate. According to official statistics, the school enrolment rate has considerably increased in the last years but this is not reflected in primary-school-leaving-qualifications. The illiteracy rate for women stood at 57 % in 2004 and for men at 40 %. In 2002-04 the state invested about 3.4 % of the GDP in education and 3.2 % in health care. Expenditure for the military in 2004 stood at a comparably low 1.4 % of the GDP

Politics

A new democratic constitution was approved by the population in a constitutional referendum in 2006.

Thereafter Mauritania became an Islamic presidential republic. Islam is the state religion and it is governed by Islamic law (Sharia) complemented by modern laws. The parliament is composed of the National Assembly whose 95 members are elected every five years and the Senate whose 56

members (three representatives for the Mauritians abroad) are elected indirectly every six years. The head of state is elected directly by the people every five years. It nominates and disbands the government. From the age of 18 men and women possess the voting right.

A first round of parliamentary elections took place at the end of 2006. The members of the military government in power at that time declared prior to the elections that they would not be candidates for public office. Almost half of the seats were won by independent candidates. Election observers declared the election to be free and fair. At the beginning of 2007 the Senate was appointed through indirect elections by the 3,688 local councils.

In the presidential elections in March 2007 none of the 20 candidates initially achieved the necessary absolute majority. In the ensuing run-off vote Sidi Mohamed Ould Cheikh Abdallahi, the candidate of the military government and former minister of finance, won. In August 2008, he was thrown out of office by a bloodless military coup.

Mauritania is a member of the United Nations (UN), the African Union (AU), the Organization of The Islamic Conference (IC), the Arab League, the Arab Maghreb Union, the Permanent Inter-State Committee for the Struggle against Deser-



tification in the Sahel (CILSS) and the Senegal River Basin Development Authority (OMVS). After the coup of 2008 Mauritania was temporarily excluded from the African Union (AU) until the restoration of the constitutional order.

At the suggestion of the World Bank and the IWF a debt relief initiative for heavily indebted poor countries was agreed on by the G 7 states (HPIC-Initiative). Mauritania is participating in this programme. The administration set up the requisite plan to fight poverty (CLSP-1) in 2000 and added to it in 2006. The CLSP-2 (2006 to 2010) was passed by the Supervisory Board of the World Bank in January 2007. With this the formal conditions for debt relief have been fulfilled.

In environmental policy Mauritania has initiated important basic approaches. Until recently environmental issues were part of the Department of Agriculture's portfolio. With the government reorganization in 2007 a new Department of the Environment was created which reports directly to the prime minister. For large-scale infrastructure projects, especially for the oil industry, environmental compatibility reviews are required. With the support of international donors a national environmental activity plan has been designed and approved (Programme d'Action National pour l'Environnement, PANE).

Economy

The leading sectors of the Mauritanian economy are agriculture, mining (iron ore, copper and gold) and fishing. Additionally, crude oil investment will play a big role in future, although the original expectations of the oil productivity potential have not yet been fulfilled.

In the whole area only 0.5 million hectares is arable. Out of the potential 140,000 hectares of irrigable surfaces, mainly on the north bank of the Senegal River, just 18,000 hectares are used as irrigated agricultural land. In a narrow strip of 220,000 acres connecting in the north, rainfall agriculture is practiced. The strong annual rain fluctuation provides only a small yield. Only 30 % of the grain requirements are domestically produced.

Over a half of the economically active employment force (52 %) are employed in the agricultural sector, where the most important branch is animal husbandry. In 2006 it accounted for 15 % of the GDP (Agriculture 2 %). Production consists mainly of sheep, goats, cattle and camels. Mauritania is self-sufficient in its meat production; cattle and sheep are exported "on hoof" to neighbouring African countries, camels to Morocco and Algeria.

The coastal waters of Mauritania are considered among the richest fishing grounds in the world.

Sparse meadows are ideal for grazing camels.



Adjustment mechanisms of camels

Camels (Camelidae) are mammals from the order of the cloven hoofed animals. They are divided into two groups: old world camels (dromedary, or one-humped camel, and Bactrian, or two-humped camel) and the new-world camels (with the genera llamas and vicuñas). Camels are big animals, characterised by their long thin necks, small heads and relatively long, slim legs. They can weigh between 300 and 700 kg and can live till they are 40 to 50 years old.

Camels are herbivores who feed primarily on grass. They are also able to digest thorny or salty plants.

Because camels live in predominantly dry regions they have developed a range of characteristics to economise with water. Strong extended 'Henlesche looping' in their kidneys provides for a high concentration of urine; also their faeces are thicker in comparison

to other mammals. Another feature is their red blood corpuscles, which are not round but oval. This form enables the camel to take in a great deal of water in a very short time (it has been reported about 200 litres in 15 minutes) without the danger of water intoxication (over-watering the body). The camel's body temperature is more variable than other mammals and can fluctuate between 6 and 8 degrees which considerably reduces their temperature. The camel's hump doesn't retain water but fat – up to 50 litres of fat can be stored there. During the week-long journeys through the forest, the camel finds hardly any food; the bulging full hump gradually changes into a limp bag. While the camel is carrying his fat supply on its back, unlike other animals where it is distributed over their bodies, the hump also protects the camel against the blistering midday sun.

Source: <http://de.wikipedia.org/wiki/Kamel>

Fishing and fish processing are the biggest employer in the industrial sector (over 30,000 employees). This however only contributes to 4% of the GDP. Approximately 90% of the catch is exported which accounts for a quarter of export revenue.

Facts about the economy of Mauritania

After successful exploration during the previous years, extraction of offshore oil reserves was begun in March 2006. Volatile changes in the economic figures, especially in GDP and growth rates, account for this, but also the increase in inflation between 2005 and 2006. Exports have almost

doubled due to demand for oil.

Imports, which counted for 115 million US-\$ for fuel and energy in 2005, have decreased by 8%. The import of food still remains a high priority. Within the sectors of the economic structure, crude oil production has resulted in an increase in the industrial and mining sectors while at the same time has resulted in a decrease in the agriculture and service sectors.

In 2005 money transfers into the country from Mauritanians working abroad to their families reached 2 million US-\$. The economic policies of Mauritania have been characterised in recent

Mauritania's Economy	2005	2006
Gross Domestic Product (Billion US-\$)	1.8	2.3
Growth rate (%)	5.4	11.7
Inflation rate (%)	18.0	29.8
Sector share of GDP:		
Agriculture (%)	23.7	17.0
Industry and Mining (%)	29.3	43.9
Service Industry (%)	47.0	39.1
Imports (million US-\$)	1,723	1,596
Imports (%GDP)	95.7	59.1
Exports (million US-\$)	646	1,474
Exports (%GDP)	35.9	54.6

Source: Worldbank. Data Profile

years by its liberalisation and opening-up to foreign trade. Significant reforms have involved the removal of price restrictions, the abolishment of non-tariff trading restrictions, the partial freeing of currency exchange rates and the progressive privatisation of public companies.

Guidimakha

Geography, Population, Ecology, Economy

Measuring 10,300 km² (50 % of the area of Hesse or Saxony-Anhalt) Guidimakha has, after the capital Nouakchott, the smallest land area of the 13 regions of Mauritania. Covering only 1 % of the area of the country it lies in the south on the border to Senegal and Mali. With an average rainfall of 500 mm per year it is the wettest region of Mauritania. Due to its geography, which features numerous dry valleys, it is extremely exposed to erosion. With regard to transport, the area is poorly accessible.

The population is comprised of around 200,000 people. Over 300 villages belong to 18 municipal areas. Its inhabitants are made up of Moors (Arabic pastoralists), Peuls (black African pastoralists and field farmers) and Soninke (black African field farmers). 54 % of the population lives under the poverty line. There is significant migration from the rural areas to west and central Africa, to the lands of the Maghreb and partly to Europe. The transfer of money from family members living abroad constitutes a large part of the income. The region Guidimakha subdivides into two large ecological zones: in the north the Sahara-Sahel zone (61 % of the area) with gravel-



Pastoralism is the most important economic sector in the region Guidimakha: livestock is estimated 1.1 million.

In only a few areas of Mauritania is the tree and bush vegetation still in this condition.



based, sandy earth that basically only allows grazing; in the south, laterite and lime sandy earth, ideal arable farming conditions. Economic activities include arable farming, livestock farming and collective husbandry. Approximately 60,000 hectares offer ideal conditions for agriculture. They are situated mainly in the Senegal valley. Successful cultures provide yields of 300 to 400 kg/hectare, in particularly good years, considerably more. Ear-millet, truss-millet (Sorghum), peanuts, corn and black-eyed peas (Niébé) are grown primarily in 12,000 to 15,000 hectares of rain-fed farming land. As post-tide cultures, sorghum and rice are the main crops. 200 acres of irrigation cultivation plays a secondary role as does tree-cultivation.

Livestock farming is the central element in the region. It is carried out not only by the sedentary population together with arable farming but also by the roaming herdsmen from neighbouring regions who migrate with their animals to Mali. All together the whole animal stock is estimated at more than 1.1 million animals, of which 800,000 are small ruminants, 200,000 cattle and about 100,000 camels. The number of animals grows annually 3.4%. The major part of the region's net value results from livestock farming. Another important role is played by collective husbandry. In the acantha savannah this stretches to acacia species, especially *Acacia Senegal* which is used for the extraction of gum arabic. Temporarily flooded areas show gal-

lery forests with palms (Ronier and Gonakier).

Palm leaves are collected for the gaining of fibre, leaflets of the doum palm, fruits of the baobab and of jujube. Branches are used for fencing and trunks for the charcoal extraction. Although the rainfalls took up again after the dry periods in the 70s and 80s, the vegetation suffers from a heavy degradation. This is the result of growth in population, urbanisation, and with it a strengthened commercialisation of the tree populations (for the production of charcoal) in conjunction with the tradition of free access to areas with tree and bush vegetation. Efforts by the government to protect these stretches of forest have had little effect. It is estimated that the deforestation is progressing at an annual rate of 2.9%.

Hodh el Gharbi

The region of Hodh el Gharbi, in eastern Mauritania on the border to Mali, has an area of 53,400 km² (5.3% of the land area). It is the eighth of thirteen administrative areas in the country. It is crossed in an east-western direction by the so-called "Street of Hope". It has one of the highest rainfall areas of Mauritania, more than 450 mm in the south but less than 200 mm in the north. The region is crossed by three major, north-south arteries of nomadic herding trails.

Landscape Units

On the basis of their geomorphology, availability of water and precipitation for major units can be determined:

- 1 The grazing zones of the Aouker cover the northern part of the region. They consist of remnants of the huge sand deserts of the Aouker and belong climatically to the Saharan-Sahelian zone with rainfall less than 200 mm. Despite the extremely low rainfall the sand-masses of the Aoukar hold substantial supplies of water. Generally, water is found at a depth of 19 to 20 m. There are numerous wells. Animal keepers therefore prefer these zones.
- 2 The arable and grazing zones of the Affole Heights cover the western centre of the region and play an important role in the supply of the local waterways. Arable land is scarce. During the colonial years law makers established a sanctuary for animals to escape the permanently hostile environment created by human activity. Today there are villages near the reserve dam and Wadis where agricultural use is possible.
- 3 The central forest and grazing zone is formed by sandy plains and flooded troughs. Rainfall varies between 200 and 250 mm which makes rain-fed farming impossible. Moist earth in the lowlands and the construction of low earth-walls enable post-tidal culture and permanent settlement. Only in crevices is there a limited access to ground water. For this reason surface water collection has a high priority.
- 4 The arable, forest and grazing economic zones of the south barely differ in geomorphology from zone 3 but, because of its higher rainfall of 250 to 400 mm, rain-fed farming is possible. Thus these zones are the most densely populated. Nevertheless livestock-keeping is of high importance – whether it be settled or transhumant. The keeping of animals is linked to the cultivation of the land.



Dry valleys or Wadis only contain water after heavy rainfall.

The region had 212,156 inhabitants in 2000. It sub-divides into 28 municipalities. The population is growing at 2.35 % per annum and there is extensive poverty with 57.9 % of the population living below the poverty line.

The main economic activity is the livestock raising, based on the extensive grazing lands and numerous wetlands (151 in total). They are vital watering places for the livestock and, during the dry period, provide a means of grazing. The keeping of large herds of livestock is extensive. There are roughly 41,000 animal husbandmen who make up about 40 % of the workforce. About three quarters of the net product stems from animal husbandry. Between 1995 and 2005 the total head of cattle increased from 244,000 to 328,000, the amount of small ruminants increased from 1,759,000 to 2,866,000 and the number of camels from 149,000 to 181,000.

The percentage of the nomadic population fell from 70 % in 1962 to about 5 % in 1995. The process of becoming settled encompasses all the important localities, but is seen mostly all along the 'Street of Hope' (axis Kiffa-Tintane-Aioun) where countless villages have sprung up spontaneously and without planning. The same development is happening along the new north-south connection between Aioun and Nioro (the border to Mali) with significant effects on the fragile environment. The increasing pressure on local resources antagonizes even more when local authorities fail to perform their control functions. Neither, for some considerable time now, have they been performing those functions which were

based on the tribal organization's usage system.

Apart from some post-flooding culture or rain-fed farming areas in the south, arable farming is reflecting new trends in the region. The tilled areas highlight large scale fluctuation from year to year depending on the amount of rainfall, the condition of the pastures and the water level of the Wadis. The yields from arable farming are generally small. For sorghum in rain-fed farming 500 kg/hectare is calculated on, in post-flood culture, 650 kg/hectare. The yield of black-eyed peas lies at 400 kg/hectare. A feature of the region's field farming is fences all over, mostly of wood, to keep out stray cattle.

The Wetlands – shape, significance, hazards

Hodh el Gharbi in the Hassaniya language means "great watering place of the east" compared to Hodh el Chargui, the "great watering place of the west". Here three different types of wetlands are distinguished: the Tamourts the Gäats and the Wadis.

Tamourts

Deeper, water bearing depressions of different, at times considerable, extent. They are of special interest for livestock farming since they retain water longer in the dry season. The tree groves of Nile acacia (*Acacia nilotica*) provide animals with shade for rest. Tamours are distinguished by their high biodiversity.

Tamourts (deep, water-bearing, low-lands) are exceptionally important for pastoralism, because they retain water longer during dry periods.



Gäats

Shallow lowlands which dry out quickly at the end of the rainy season. The rapid lowering of the water level allows arable farming at the beginning of the season. This guarantees an early harvest before the Harmattan (hot desert wind) and the onset of the hot season. Traditional farming methods with irregular cultivation of the soil benefit biological diversity and allow the natural resources to regenerate. The Gäats play host to large numbers of water birds. An intensifying of the post-tide culture would have a strong effect on the fauna and flora, would reduce access to the grazing land resources and would decrease the wood supply.

Wadis

Valleys which are water-filled only in the rainy season and whose embankments are used for general purpose farming. They are especially found in the south where rainfall is more plentiful and a settled population have been farming for a long time. The not so abundant water-filled wadis of the north are more widely used for the growing of vegetables than for post-tide culture. Often the embankments are planted with date palms.

Wadis offer a habitat for water birds and reptiles. Spreading of the date palm groves or a further intensification of land cultivation would narrow free access to the grazing grounds.

The most often found type of wetlands is the Tamourts. Beyond their main function as cattle watering places they are subjected to many other uses: post-tide culture, market gardening, logging, the harvesting of different fruits and produce from grass and tree species. They enable pasturing in areas where there are no wells. The resources which they hold are traditional, freely accessible and often abundant. This leads to a strong appreciation of the Tamourts by the local populace. They stand for social harmony, tranquillity, well-being and health and are meeting places between the cultures of the north and south.

Fish encountered in the Tamourts varies. Some hold several kinds, others hold none. The represented species are African lung fish (*Protopterus* sp.) Zilles cichlid (*Tilapia zill*), Senegal catfish (*Clarias anguillaris*) and Probeguins barbel (*Barbus probeguini*). The most important fish is the catfish. Only the African lung fish has the possi-



Tamourts do not only provide a habitat for spectacular birds or reptiles – also butterflies feel very comfortable here.

The following animals belong to the species-rich fauna of the Tamourts:

Birds

Garganay ducks (*Anas querquedula*), the endangered species dabchicks (*Tachybaptus ruficollis*), wadrap (*Plegadis falcinellus*), reed harrier (*Circus aeruginosus*), coot (*Gallinula chloropus*), purple moorhen (*Porphyrio porphyrio*), white winged stilt (*Himantopus himantopus*), small plover (*Charadrius dubius*), lapwing (*Hoplopterus spinosus*), snipe (*Calidris minuta*), gamecock (*Philomachus pugnax*), along with several beach comber species (*Tringa erythropus*, *Tringa nebularia*, *Tringa glareola*, *Tringa hypoleucos*, *Tringa stagnatilis*)

Mammals

Desert cat (*Felis silyetis*), brown hare (*Lepus capensis*), pale fox (*Vulpes pallida*), genet (*Genetta genetta*), golden jackal (*Canis aurens*), musk cat (*Crivettictis crivett*), western ground squirrel (*Xerus erythropus*), Nile grass rat (*Avicantis niloticus*), gerbil (*Gerbillus*), desert hedgehog (*Paraechinus aetiopic*)

Reptiles

Siedleragame (*Agama agama*), bouetagame (*Agama boueti*), Muellers sand boa (*Eryx muelleri*), monitor lizard (*Varanus niloticus*), saddle gecko (*Tarentola ephippiata*), Nile crocodile (*Crocodilus niloticus*), rock python (*Python sebea*), dwarf gecko (*Tropicolotes tripolitanus*), spiny-footed lizard (*Acantodactylus* sp)

Amphibians

African tiger frog (*Hoplobatrachus occipitalis*), desert toad (*Bufo xeros*)

Further information:
 Secrétariat d'État
 auprès du Premier
 Ministre chargé de
 l'Environnement / GTZ /
 Programme
 Gestion des Ressources:
 Conservation et utilisation
 des zones humides
 dans le Hodh el Gharbi
 Mauritania, Nouakchott,
 février 2007.

**Location of the National
 Park Banc d'Arguin**
 Source: Moritz, V.,
 B. Ziesmer und K.
 Wonneberger.

bility to survive when the Tamourts dry out.

The Wetlands International Controlled Bird-Census has included the wetlands of east Mauritania since January 2000. It has shown that the wetlands of east Mauritania are even richer in species than the longer known areas in the west or the coastal area.

Threats to the wetlands

The wetlands are threatened by natural dangers and also those caused by humans.

Natural dangers

- 1 **Climate warming:** Rising evaporation (evapotranspiration) and shortage of water have resulted in a change in the fragile ecological system.
- 2 **Drought and Sanding up:** Due to the droughts of the 70s and 80s several species declined and since then have not recovered. The decrease in size of the surface water areas by the penetration of the dunes is an irreversible process which means: the desert is constantly advancing; once dehydrated, these areas never recuperate.

Human dangers

- 1 **The expansion of arable farming in fragile areas** increases ground erosion and upsets the hydrological system. In addition to this there is logging for the enclosure of fields. The production of further irrigation fields by small barrages has, in the past, resulted in disruption to the ground water stream which is supplied by Tamuourts.
- 2 **Planting of habitat-unsuitable species** (e.g. *Prosopis juliflora*) for dune-fusing: deep rooted plants secure their own survival but lead to reduction in the ground-water level.
- 3 **Overgrazing:** In eastern Mauritania 88 % of the 244 recorded wetlands are used as livestock watering places by the settled and nomadic population. Over-stocking and destruction of the vegetation around the watering points can easily take place.
- 4 **The production of charcoal** when excessively practised, leads to destruction of the tree population.

- 5 **Extensive removal of water**, especially in connection with large infrastructure projects (road construction) can lead to sinking of the water level.
- 6 **Population growth** in conjunction with settling: the population of Mauritania is growing at the rate of 2.7 % per annum – 9 % in the urbanized centres. In the past when the aim of settling of nomadic folk was a political development, the rate of growth was actually higher. Increasing water usage for settlements and the intensification of agriculture are the consequence.
- 7 **Conflict over use of land** is a result of privatisation related to the development of agriculture. Conflicts arise mostly out of: the concurrence of inherited rights of land use, access rights to the wetlands and an increasing use of the wetlands for agriculture in connection with clearing, the building of retention reservoirs and the erecting of fencing and wells.

Banc D'Arguin National Park

Placing the area under protection serves the conservation of an internationally significant ecological region. The Banc d'Arguin:

- Is one of the most important world-wide hibernation and breeding habitats for birds.





The large, 20 cm sanderling not only overwinters in the temperate latitudes, but tracks further on to South Africa.

- Harbours one of the world's largest monk-seal populations.
- Includes spawning and rearing grounds for the principal seacoast fish species of West Africa.

These things, on the other hand, form the livelihood for the majority of Mauritania's coastal inhabitants. The fisheries industry is one of Mauritania's most important branches of the economy.



Winter habitat for millions of migrating birds and a nursery for fish

The Banc d'Arguin is a region of high ecological significance. This 180 km long strip takes in the northern third of the Atlantic coast of Mauritania. With an area of 12,000 sq km it is almost as big as Schleswig-Holstein. It consists of one half land and the other water. Every year roughly 2 million waders spend the months of late autumn, winter, and early spring there. Many of the hundreds of different species have their breeding grounds in the Scandinavian and Siberian Tundra, or even in Greenland, Iceland and North America. With this, the Banc d'Arguin accommodates more than a quarter of all waders hibernating during the winter on the European and West African coasts. It is one of the richest bird-regions on earth. On the long journey from their breeding grounds in the extreme north, many of the birds which hibernate on the Banc d'Arguin, rest in our country. They stay on the North Sea mud flats for varying periods of time before moving on.

The area of the National Park of Banc d'Arguin takes in territory between the Bai de Levrier in the north and Cap Timirs in the south,

Further information:
 WWF: Banc d'Arguin,
www.wwf.de/regionen/westafrikanische-meeresregion-wamer/meeresschutzgebiete/banc-d-arguin

Bar-tailed godwit of the Arctic Tundra are also accommodated in Banc d'Arguin for winter.

within which several groups of islands lie, some of them in a very flat sea region directly in front of the coast. Tidra, the principal island of a group situated in the south of the Banc d'Arguin, is of great ornithological importance.

In the Mauritanian National Park, the dunlin is the most common type of bird followed by the black-tailed godwit which has in the meantime become rare in Germany.

The Banc D'Arguin is not only a winter hibernating ground for Eurasian migrating birds; over 15 various water bird species also breed here. With approximately 45,000 pairs the Banc d'Arguin features the most extensive breeding sea-bird colony in West Africa. Among the breeding birds are some which are found in north-west central Europe, e.g., the gray heron, the spoonbill or the common tern. Mostly, however, species are encountered that are predominantly or solely native to Africa.

The following summary conveys an overview of the most important winter hibernating birds on the Banc d'Arguin:

Abundance of Fish

As in other buoyant coasts of the earth, cold, mineral-rich, deep water wells up to the surface on the edge of the Continental Shelf in front of the Banc D'Arguin ("upwelling"). The effect of light on the nutrient-rich water, leads to an enormous photo-plankton-production. Upon this a dense population of zoo plankton is built (primarily crustacean), which form the food basis for large populations of fish. Principally, young fish grow-up in the Banc d'Arguin. This important reproduction area for the fish population in front of the Mauritanian coast is one of the richest in West Africa. On the low-tide mudflats a further system is established for the primary production of extensive seaweed stocks.

"Sebkha" and Land Zones

The "Sebkha" is formed by transitions between mudflats and sand islands and on the mainland between mudflats and desert. These are flat, occasionally flooded stretches of beach. In the narrow land areas, vegetation is sparse, which allows a

Bird Species	Breeding Ground
Dunlin, <i>Calidris a. alpina</i>	Scandinavia, north-west Russia, Siberia
Oyster catcher, <i>Haematopus ostralegus</i>	Scandinavia, Kola Peninsula, north-west Russia
Large curlew, <i>Numenius arquata</i>	Scandinavia, Baltic States, Russia
Greenshank, <i>Tringa nebularia</i>	Scandinavia, north-west Russia
Gray plover, <i>Pluvialis squatarola</i>	Tundra, north-west Russia North Siberia
Knot, <i>Calidris canutua</i>	Swernaja Semija, north Siberian Islands
Whimbrel, <i>Numenius phaeopus</i>	Scandinavia, north Siberian Islands
Redshank, <i>Tringa totanus</i>	Iceland, Scandinavia, Central Europe
Sanderling, <i>Calidris Alba</i>	Iceland, Spitsbergen, north Siberia
Common ringed plover, <i>Chadrius hiaticula</i>	Scandinavia, Spitsbergen, north-west Russia
Snowy plover, <i>Chadrius alexandrimus</i>	north-west central-, west- and south-west Europe
Curlew sandpiper, <i>Calidris ferriginea</i>	north-west Russia, Siberia
Turnstone, <i>Areneria intepres</i>	Scandinavia, Norwalja Semlja, north Siberia
Black-tailed godwit, <i>Limosa limosa</i>	central west and east Europe
Little stint, <i>Calidris minuta</i>	north Norway, Kola Peninsula, north-west and north-east Russia

Source: Moritz, V., B. Ziesmer and K. Wonneberger (1999)



The abundance of fish in front of the Mauritanian shore is the foundation for an important economic sector and a livelihood for the fishing people of the Imragues.

mobile pastoralism dependent on rainfall.

Only a few animals live in the land areas: many have fallen victim to desertification and over-hunting. Between the years of 1950 and 1965 damagazelles and scimitar oryx disappeared, prior to the leopard. The last ostriches were seen at the end of the 1960s. Today only around 80 dorka gazelles and quite a few golden eagles live on land and on the island of Tidra. They feed on crabs and particularly on fish-remains which are discarded into the sea by huge fish trawlers and then washed up on the beaches. Golden jackals also regularly swim to the bird colonies on the islands. There they cause considerable damage to the breeding birds.

Population, economy and infrastructure

About 1,500 Imragues live traditionally in the area of the National Park. On the thin strip between the Sahara Desert and the Atlantic Ocean lies the economic and administrative centre Mamghar. Located at the south border of the National Park with about 600 inhabitants, the municipal area begins directly to north of the capital Nouakchott and spreads up north right up to the border of the municipal area and province capital Nouadhibou.

It completely surrounds the 13 villages of Mamghar, of which 9 are within the National Park and 4 outside it. The livelihood is fishing and nomadic herding.

Fishing

Fishing concentrates mainly on mullets. The Imragues have developed various fishing methods adapted to natural conditions in the course of generations. Thus the fishermen know for example when the mullets, which are especially fat before spawning, pass by the coast to reach the spawning areas in the Gulf of Guinea.

Two men at a time then swim out and tension a net that cuts off the way for a part of the fish school. One swims in an arc back to the coast, while his partner pulls the net tightly. In this way the fish have no chance to escape. Fishing is also done by nets or harpoons from shallow-draft sailboats. This type of boat first reached the Imragues, who do not have their own boat building tradition, via the Canary Islands through Portuguese fishermen. Fish is the Imragues' sole object of trade and main source of nutrition. The mullets' roe is salted and dried and then sold as a variety of caviar, the meat as dried fish. In earlier

Fishermen from the Canary Islands firstly brought sailing boats fit for shallow water to the Imragues, who did not have a boat building tradition at their disposal.



times shark and ray fishing was practiced; the fins were exported and the meat was processed and sold regionally.

There are 132 powerboats for fishing in the locality of Mamghar (of which only 72 were usable in 2007) and 111 sailing boats (of which 89 were usable). The sailing boats are used in the park region, 65 power boats account for the use outside the park and 47 for the Mamghar. The number of fishermen in the park area is said to be 548, of which 379 are from the villages of the park region and 169 migrants. The total annual fishing catch in the National Park amounts to about 3,000 t (mostly mullets, but also other similar sorts such as gilthead bream, cephalopods and meager). Although the concentrated fishing on sharks and rays is not pursued anymore, in 2006, 486 t sharks and 171 t rays were weighed in the nets as by-catch. Fish selling takes place mainly through cooperatives. These have simple cooling containers at their disposal. Sales are mostly made to intermediaries. Part of the fish catch is also transported directly on the cooperatives' vehicles to the capital Nouakchott. Upon their return the cooperative traders bring ice for the cooling containers and drinking water. If the fish is processed on spot, this is done by groups of women, who have been pre-financed by the cooperatives. On occasion the cooperatives have built the rooms needed for processing the catches.

Livestock

Many of Imragues families practice transhumant herding, to which at least one family member dedicates himself.

Grazing takes place especially in the zone transitioning to the desert which is not affected by sea water and where the eastern border of the National Park runs. Vegetation is meagre and changes with the rainfall. As soon as it rains, the landscape changes within a few days to meadows and provides the animals with nutrition for some time. First and foremost livestock farming is dependent on the availability of drinking water.

Infrastructure

In the entire region of Mamghar there are 8 schools with 14 teachers educating 330 children required to attend school. Four villages are located inside the National Park area. A further village lies outside the National Park, however, which does not have a school. Generally speaking, the school supply is unsatisfactory. There are high drop-out rates and there are no secondary schools. Families valuing the education of their children send these either to relatives in Nouakchott or Nouadhibou, or the mother leaves the family to live in Nouadhibou temporarily while the child attends school.

Health care is similarly unsatisfactory. Only the main village Mamghar has a health station at its disposal with a trained nurse constantly on site.



The Imragues also keep small domestic animals at the fishing villages.

Inside the National Park the regional health service conducts visits to the villages with irregular frequency with the support of the park administration. The aides stationed there do not enjoy the trust of the population. There is only one midwife in one of the National Park's villages.

A special problem of the area is the drinking water supply. Suitable groundwater does not exist at all on the coast. In the grazing areas of the National Park's eastern region it is seldom reached at greater depths in any abundance. The villages located on the coast thus rely on the supply of drinking water from Nouakchott. Some of the National Park's villages have simple sea water desalination plants, generated with diesel engines. In some villages these were set up through donations from Spain but their productivity is low (about 1 m³/day) whenever they function. The majority of the drinking water is transported to the villages by the vehicles of the cooperatives or of the fish traders. Water is sold generally at the price of 100 UM per 20 l (1.5 Eurocents/l).

Each cooperative has a shop of its own offering goods for day-to-day necessities.

Tourism

The development of tourism, which from the start stressed ecological values, essentially started in 2000. Tents equipped with mattresses and carpets are offered on camping grounds located on beauti-

ful landscapes. Occasionally meals are included by the organizers as part of the offer. In 2005/06 there were about 90 tents divided equally between small and large tents. 2,300 overnight stays were registered and revenues of 13 million UM (local currency Ouguiya, 1 Euro = 340 UM, this means 13 million UM equal 38,000 Euro). The service for the visitors (cleaning of the tents, preparation of meals and production of new tents) are carried out by groups of women. Only the pitching of the tents is mostly the work of the men. A part of the revenues goes to the cooperative and the larger remainder goes to the women. Up to now only a few villages dedicate themselves towards the eco tourism to a degree worth mentioning, notably the village Arkeiss which collects more than the half of such revenues alone.



A special attraction to tourists is the offer of sailing boat cruises to the bird colonies.

The National Park Legislation

The core of the Banc d'Arguin National Park legislation is the sustainable use and conservation of all natural resources in conjunction with the economic and social development of the population. Chapter 1 of the law defines the National Park's goals – it should:

- a Contribute to sustainable national development.
- b Favour the harmonious development of the population residing in the area based on the use of natural resources.
- c Conserve the productivity of all resources in the National Park area.
- d Protect and preserve terrestrial, insular and maritime ecological systems and enable their sustainable use.
- e Contribute to the protection of endangered species and migrating animals, which find grazing areas, resting spots and habitation space in the area of the National Park.
- f Preserve sites which have archaeological, scientific or aesthetic value.
- g Contribute to environmental research, especially in the area of marine ecology, and encourage environmental education.
- h Ensure the creation of a protected marine area of ecological and biological significance within the greater region.

In chapter 2 of the law the boundaries are laid out and in chapter 3 the regulation for the use, conservation and the management of the park are set up. For this purpose a public organization is created led by one decision-making body, an administrative board and an executive body.

The administration of the National Park is under control of the Ministries of Environment and Finance. The administrative board takes all decisions and passes a regularly updated plan for park area management. In this it is supported by an independent scientific board, composed of competent personalities, independent of their nationalities. Representatives of the population located in the park area are also on the administrative board (Article 6).

All plans and documents which are created for the use and conservation of the National Park, successively pass through the steps of strategic planning, goal oriented implementation, and collaborative evaluation. These involve:

- Projects of village and community development.
- Research programmes.
- User regulations for fishing allowed within the park, including the number of sailing boats permitted for fishing and zoning.

For all use and infrastructure investments the National Park legislation stipulates an evaluation of the impact on human life, flora and fauna, ecological systems, and locations of exceptional interest. This especially applies to roads, settlements, wells, dams or other infrastructure installations involving cultivation of land, management of pasture, tourism or fishing (Article 8).

The goals of the law basically should be achieved through a **double principle**:

- 1 Prohibitions for damaging actions.
- 2 Exception permits for the local population for ecologically compatible use of resources.

"It shouldn't look like this."





Fishing is strictly regulated. The total yearly haul is about 3,000 t.

Prohibitions, among other things, extend to:

- Fishing as far as it is not regulated in the legislation.
- Agricultural, forestry or pastoral management activities.
- Trespassing on the islands (apart from certain exceptions).
- Hunting, killing, catching or injuring of animals.
- Erecting buildings without the park administration's agreement.
- Carrying of ammunition or weapons.
- Erecting camping sites or the lighting of fires outside the settlements.
- Collecting or tearing out plants, cutting trees, branches and bushes.
- Destruction of the sites of historical interest.
- Introducing non domestic species of plants and animals.
- Dumping of waste.
- Leaving tracks and ways.
- Flying over islands and other park areas below a certain minimum altitude (Art. 10).

Chapter 4 regulates the **surveillance and punishment of violations**. Alongside the National Park law the customary laws for sustainable resource usage also pertain which are in force throughout the entire sovereign territory of Mauritania. To

these belong the environmental framework legislation of 2000, the pastoral legislation of 2000, the fisheries legislation of 2000 and the forestry legislation in its new version of 2007. The park administration and the local population monitor the observance of the regulations. For the monitoring of the nationwide, government fishing regulations, the body responsible in particular is the Department for Fishing Surveillance and Maritime Monitoring ("Délégation à la Surveillance de Pêche et au Contrôle au Mer", DSPCM). This government agency has also been supported by German development cooperation since the 1990s. Radar stations, patrol boats and a satellite-supported surveillance system are employed successfully against illegal fishing. Thus industrial trawlers are checked as well as the boats of the fishermen working by hand or the fishing methods of the traditional fishermen, operating from the shore.

The **penalties** generally include the confiscation of illegally used objects. Imposed fines rise in the case of recurrence. Illegally caught fish are distributed to the population after confiscation. Boats which were used illegally for fishing (e.g. especially in the protected areas or outside the permitted fishing times) can be ransomed after a set time with the payment of a fine by the owner. Severe violations can result in a prison sentence.

German-Mauritanian development cooperation

The development cooperation of the Federal Republic of Germany is executed under the overall control of the Federal Ministry for Economic Cooperation and Development (BMZ). The cooperation with the Islamic Republic of Mauritania began with the creation of the state printing company and the National Society for Rural Development shortly after the country's independence in 1960. It has spread during in the past 40 years into nearly all important sectors of Mauritanian society and the national economy. Areas of emphasis were rural development, irrigation agriculture, town and municipal development, the health sector and fishing.

Since the beginning of the cooperation, Mauritania has been supplied with 320 million Euros for development projects by the German Federal Government. In the period between 2006-2007 alone the programmes and projects implemented technically by the GTZ and in financial collaboration with the KfW Entwicklungsbank received 16 million Euros.

In agreement with the Mauritanian Government Germany's support since 2005 concentrates on two core areas:

- Support of the democratization process, Good Governance.

- Rural development or, in fact, resource management.

Additionally the GTZ and the KfW carry out projects in the fishing sector. In collaboration with the private sector (Private Public Partnership) the areas of professional training, sustainable cultivation and the export of gum arabic as well as the introduction of mussel cultivation in Mauritania are supported.

The organizations of German Development Cooperation orient themselves in their measures to the Mauritanian strategy for combating poverty. They especially foster the process of change in Mauritanian politics, which is guided on the principles of subsidiary, transparency and self responsibility of the partners.

Focus 1: Good Governance Programme

Since the passing of the presidential constitution of 1991, Mauritania finds itself on the way to gradual democratization, which has been characterised by frequent setbacks. The executive and legislative bodies at a national level but also municipal organizations and civic bodies are characterized by their lack of effectiveness. Mostly they still have an insufficient understanding of their current role and function in the context of a democratic system. After the coup in August 2005, the provisional government gave new impe-

Development Cooperation in Figures

Official development cooperation received in Mauritania (2005)

Total	190.4 million US-\$
Per capita	61.4 US-\$
In % of the GDP	10.6
Long-term foreign indebtedness	2.0 billion US-\$
Cash value of the foreign indebtedness in % of GDP	115.0

Development cooperation provided by Germany worldwide (2006)

Total public development cooperation	8,323 million EUR
Of which bilateral	5,604 million EUR
Multilateral	2,709 million EUR
Development cooperation per capita	101 EUR
Development cooperation in % of GNP	0.36
Proportion of the least developed countries from the complete development cooperation (2004)	25.2 %



For a good 40 years the German development cooperation has been working with Mauritania. A particular focal point is the management of natural resources.

tus to the democratization and development of the country. After the first democratically elected government took office in 2007, these are being pursued.

Central elements of the “Programme Good Governance” are the support of the national assembly and the General Auditor’s Office, strengthening the social and legal position of women (Gender Policy), as well as the fostering of rural communities as part of the decentralisation process. Financial help is provided for an extension to the parliament building and for social and economic infrastructure (water supply, markets and roads) to midsize and large county seats. Thereby it should be achieved that alongside obtaining human rights, democratic principles such as the separation of powers, civic participation as well as the equal participation of women are taken seriously and implemented in Mauritanian society.

Focus 2: Resource Management

Special emphasis is placed on the management of natural resources in cooperation with Mauritania. The context for this is provided by the national environment action plan (PANE) and by the implementation of international environmental conventions. The traditional regulation system for the use of natural resources has lost its effective-

ness due to social change. Adaptation to the new conditions of a largely sedentary population breaks down on legal and institutional grounds and due to the lack of a support system for diverse resource users.

Not until 2006 was an environmental government body put in place. On the occasion of the government’s restructuring it was transformed into a state ministry for the environment. The performance capability of the official departments is inadequate for the basic reasons of lack of qualified personnel and official experience. As a result the state cannot fulfil its regulating and supporting obligations.

Maritime and coastal fishing faces big challenges: due to the intense use of the country’s economically attractive fish resources by international trawlers, traditional fishing sees itself confronted not only with the question of better control, but also with the intensified protection of the stock. The goal is in fact to upkeep a long-term, sustainable and productive cultivation of Mauritania’s very important resource. For this a GTZ-project advises the Ministry of Fishing in the creation and implementation of exploitation plans for the most endangered and economically attractive fish species (Prawns and Squid). Complementary to political, professional and organizational consultancy, GTZ also takes care of the technical prerequisites. The management of the fishing resources is sup-

ported by the installation of a sector data base and its link to existing data sets. The GTZ consultancy is complemented by the “fishery surveillance” project of the KfW Entwicklungsbank. Investments in a satellite-supported surveillance system, patrol boats and landside radar stations help to see that the observance of the agreed management measurements can be managed in timely fashion. The fishing surveillance also protects the Banc d’Arguin National Park.

Management of Natural Resources Programme (ProGRN)

Goal of the programme is the sustainable use of natural resources in the significant ecological systems of Mauritania. This is meant to be effected by the collaboration of the population and the state administration. For this goal agreed upon by the two countries GTZ has made about 15 million Euros available from 2005 until 2010.

The programme is based on the national environment action plan PANE whose implementation takes place in the individual components of the programme. On a case by case basis, the cooperation takes place with multi- and bilateral donors in Mauritania (World Bank, UNDP, France, Spain) and directly as a cooperation plan of the KfW Entwicklungsbank.

The different components of ProGRN apply to

- Political consulting on a national level.
- The empowerment of the population to become more aware of their sphere of action in local usage regulations.
- Improving the competence of the authorities and of the consulting organizations which are necessary for this.

Mauritania established a department of environment for the first time with support of the programme. The department has already composed the regulations of environmental compatibility and amended the forestry laws.

Agreements at a local level between all resource users have shown themselves to be an effective instrument for more sustainable management. The programme accompanies the negotiation processes and the legal recognition of these agreements. The programme’s approach to local user agreements was called for by third parties and was the basis for the amendment of the forestry legislation. With its being set in law, this approach

of decentralised resource management (developed in West Africa by German technical cooperation in the 1990s) was elevated to the national level.

The management plan for the Banc d’Arguin National Park is the basis for all activities in the area, including the support measures of all donors. The business plans and joint working programmes as well as the financial management tools derived from it are exemplary for the administration of protected reserves and increase the responsibility of the national partners for achieving results.

Besides the supported reconsideration of the regulation for environmental compatibility and appropriate schoolings by the ProGRN was an important step to make this instrument operative for the Mauritanian administration. New and booming sectors, such as crude oil and mining are considered for the first time in the reformulation

International conventions for protecting biological diversity and combating desertification

Convention on the Conservation of Migratory Species of Wild Animals, CMS

The treaty was negotiated and signed in 1979 in Bonn and is therefore called the **Bonn Convention**.

The secretariat is also located in Bonn. On November 1st 1983 it came into effect. Signed and ratified by 108 states (as at March 2008) it is one of the global environmental treaties. Mauritania acceded to this treaty in 1998.

Goals and instruments

The treaty obliges the contracting states to meet worldwide measurements for the conservation of Migratory Species of Wild Animals, including their sustainable use. This is meant to be achieved especially on the basis of existing instruments or those to be created according to international law, or as well on internationally agreed prevention measures in the overall migration space of the concerned species. Migratory species number about 8,000 – 10,000 worldwide. About 1,200 species or regionally defined populations which are critically endangered or whose population is exposed to danger are taken up by the protection volume of the treaty.

Regional treaties

For single species or groups which are threatened but not necessarily endangered, the creation of regional treaties plays a role in which legally binding protection, prevention and sustainable use of these species along the whole range of the migration area is regulated and the cooperation of the concerned countries is coordinated.

The following regional treaties have already been finalized:

- Regional treaties for the protection of the European bat populations.
- Treaties for the prevention of small whales in the Baltic- and North Sea.
- African-and Eurasian water birds treaties.
- Treaty for the protection of the small whales in the Black Sea, Mediterranean Sea and the areas bordering the Atlantic Ocean.
- Treaty for the protection of petrels and shearwaters and albatrosses.

The African-Eurasian Water Bird Agreement (AEWA)

The regional treaty is subordinated to the Convention on the Conservation of Migratory Species of Wild Animals. The treaty was passed in 1996 according to international law and has as signatories 54 of the 117 riparian states in Africa, Europe and Central Asia (including Germany and Mauritania), protecting 235 water birds species in an area covering 40 % of the world's surface. The contracting states oblige themselves to take measures for the protection of migrating water birds and their habitats. To this belong the control of human activity, scientific investigations and observations as well as environment education and information.

The Ramsar Convention

The convention for wetlands, especially for the habitat of water birds and waders is a treaty of international significance according to international law and was passed on February 2nd 1971 on UNESCO's initiative. The designation Ramsar leads back to the corresponding city in Iran where the treaty negotiation took place. The convention came into effect in 1975 and 158 countries have joined (as at February 2008). The contracting parties oblige themselves to realize 4 main issues:

- 1 Protection of wetlands.

- 2 Fostering of international collaboration in the protection of wetlands.
- 3 Fostering of the information exchange about wetlands.
- 4 Support of the convention's work.

Prior to this conference large volume and super-regional water bird counting was done in the 1960's which showed a massive decrease of bird species. The treaty obliges the accession states to take adequate measures to sustain biodiversity in the designated areas. A complete ban on use is not focused on. Instead the principle of the sustainable ecologic balanced use ("wise use") is meant to be realized.

Germany entered the convention in 1976 and identifies 31 Ramsar areas at present (e.g. the Wadden Sea of Schleswig-Holstein and Lower Saxony, meadows of Elbe and Danube, Müritz east bank, Lake Chiemsee, Lake Ammersee, Haveniederungen, Sea of Gulpen, Rieselfelder Münster). World wide in August 2007, 1675 areas of more than 1.5 million km² in 155 states were under protection following the guidelines of the convention.

Mauritania joined the convention in 1983. Since then 3 areas were taken onto the Ramsar list (Banc d'Arguin National Park and Diawling, as well as the area Chad 'Tboul).

The World Heritage Convention

The convention for the protection of cultural and natural heritage was passed by the general conference of the United Nations for Educational, Scientific and Cultural Organization in its 17th congress in Paris 1972 and came into effect in 1975. In the meantime it numbers 156 states. The central theme of the convention is the consideration that parts of the cultural and natural heritage are of extraordinary value and therefore need to be preserved as an element of world heritage for the whole of humanity (Preamble).

In the sense of the Convention, **cultural heritages** are goods of exceptional value for historical, esthetical, ethnological or anthropological reasons. This can involve memorials (objects of architecture, of large sculptures, monumental painting or archaeological remains), ensembles (estate groups) or sites created both by the human hand and nature (Article 1).

For the classification as a **nature heritage** an extraordinary universal value of scientific or aes-

Further Information:
www.cms.int

Further Information:
www.ramsar.org

Further Information:
www.unep-aewa.org

thetic reason is required. These can be of biological or physical appearance forms or appearance groups of natural creations and areas serving as a habitat for endangered plants and species or nature areas of outstanding beauty (Article 2).

Until 2005 the criteria for culture and nature heritage were conducted separately; later each object was checked together. Recently 851 world heritage sites number 660 culture sites, 166 nature sites, of which 25 count as both cultural and natural heritage sites.

The contracting states commit themselves to registration, protection and management of the world heritage sites located in their sovereign territory and also to their passing on to future generations (Article 4.). They also commit themselves to mutual international cooperation (Article 6). The approval as a world heritage site and the retraction of this status is executed by a cross national committee – the World Heritage Committee, for the protection of natural and cultural heritage of outstanding and universal value, to which 21 members belong who have been elected by the contracted countries conference. At this election a balanced representation of the different regions and cultures must be secured (Article 8). The committee is responsible for the list of the world's heritage, in which goods are registered as endan-

gered by serious and specific threats, e.g. danger of collapse through accelerated deterioration, public or private large scale projects, change in the use of property, armed conflicts, catastrophes or change in sea level (Article 11).

With the approval no immediate protection measures are binding. This happens through the establishment of protected status based on national laws. Nevertheless, the recognition as a world heritage has high prestige and supports the fund rising of financial resources. The retraction of this status or the threat of inscription on the list of endangered heritages has profound political impact. The large public interest supported by reports in the media can cause public state agencies to act to avoid damaging encroachments and enforce maintenance obligations.

Especially for developing countries, this provision is important so that every contracting state can apply for international support for the world heritage site located in their sovereign area. The World Heritage Committee regulates the procedure and reviews the technical measures, the expected costs, the necessity and the reasons why a state's own resources are insufficient. Such support can take the form of scientific investigations, supply of surveyors, training, material deliveries, credits or subsidies.

Further Information:
www.unesco.de/welterbekonvention.html?&L=0
<http://whc.unesco.org>

Old Baobab trees are markers in the dry savannah, but their natural regeneration is endangered.



Convention on Biological Diversity, CBD

The CBD originated in 1992 during the United Nations Earth Summit in Rio de Janeiro. In the convention the genetic diversity, the diversity of species and the diversity of ecologic systems are understood as comprising biological diversity.

The agreement principally lies on three main pillars which are regarded as equivalent concerns:

- 1 Protection of the biological diversity.
- 2 Sustainable use of its components.
- 3 The fair sharing of benefits resulting from the use of genetic resources.

All three pillars are integrated with each other and dependent on each other; one cannot be followed as a single goal.

German contribution to the CBD

The obligations of the ratification of the CBD in December 1993 involve measures in Germany and also those of development cooperation. Primarily the Federal Environment Ministry (BMU) is in charge, along with the Ministry for Food, Agriculture and Consumer Protection, and lastly the Federal Ministry for Economic Cooperation and Development.

Measures in Germany involve designation of protected areas, measures for the creation of environmentally friendly agriculture as well as a national forestry programme. The new framing of the Federal Environment Protection law of 2002 announced the protection and development of biological diversity as an explicit goal, formulated a tighter relation to agriculture and mandated the Federal States to provide at least 10% of their states' surfaces for biologically linked systems. In November 2007 the Federal Government presented the national strategy, formulating about 330 goals and 430 measures, as is required in Article 6 of the CBD. In the development cooperation of the mid 1980's the protection of biological diversity, in the context of emphasizing sustainability, had already received high priority, with 540 programmes and projects worldwide. From the mid 90s to the beginning of 2000 annually, approximately 20 new BMZ financed projects were launched by the GTZ and KfW. The agreed financing levels from 1992–1998 reached the annual sum of 50–80 million EUR. Although the financing levels for new projects are decreasing, the total expenditures of the German development cooperation for the protection of biodiversity peaked at 86 million EUR in 2007. In the projects for financial and technical cooperation carried out by KfW and GTZ professionals from the German

Development Service DED (Deutscher Entwicklungsdienst) or from the Centre for International Migration and Development (CIM, Centrum für international Entwicklung und Migration) are often integrated. Various projects are realized in cooperation with international organizations such as the World Wide Fund for Nature (WWF) or the IUCN (International Union for Conservation of Nature). Furthermore Germany participates in "Debt for Nature Swaps" (debt relief for financing measurements of biodiversity) and in the Conservation Finance Alliance, which supports the cooperation of institutions concerned with the financing of nature protection measurements. Within the framework of the programme launched in 1994, "Implementing the Biodiversity Convention" the GTZ, on the behalf of the BMZ, supports the further development of the Convention for Biodiversity and the realization in developing or transformation countries.

Besides the direct financing through bilateral or multilateral donors, the Global Environment Facility (GEF), which was set up for the financing of environmentally based additional charges, enforces biodiversity prevention measurements. The donors provided 9.9 billion US-\$ among whom was Germany in third place of the donor rankings with 11.2 billion US-\$ (11%), between 1991 and 2010. About 36% of the GEF resources account for the issue biological diversity. In total the German contribution to the prevention of biodiversity in the framework of development cooperation amounted to 464 million US-\$ for the period of 1991–2010.

Source: GTZ (2008): Biodiversity in German Development Cooperation. Prepared by GTZ commissioned by BMZ. 7th, revised edition. – Kasperek Verlag, Heidelberg

Further Information:
www.cbd.int
www.gtz.de/biodiversity

Germany also supports the Convention to Combat Desertification on international level and in the affected countries.

Financing

All contracting partners commit themselves to providing the resources within the frame of their capacities, which are domestically necessary to realize the convention's goals. Furthermore, the developed country member states oblige themselves to provide the resources for the developing countries which are necessary, to enable them to sustain increased costs resulting from the conventions and to obtain benefit from its regulations (Article 20).

For the financing additional resources of the Global Environment Facility are used (GEF: a financing instrument provided by the World Bank, the UN development programme and the UN environment programme, constantly replenished through contributions of the members).

United Nations Convention to Combat Desertification, UNCCD

Foundation

The United Nations Convention to Combat Desertification is among those whose origins are owed to the United Nations Earth Summit in Rio de Janeiro in 1992, although its ratification did not take place until 1994 in Paris. In 1977 the United Nations had already convened a conference on desertification, which adopted an action plan for combating desertification, whose impact was limited. The topic remained on the international

agenda due to African initiatives. With the passage of the convention in 1994, the community of states committed itself according to international law to use natural resources (land, water, and vegetation) gently and sustainably in the regions threatened by desertification and thus to avoid its degradation.

The convention came into effect with its ratification by 50 states on December 26th in 1996 and has now been ratified by 193 states (as at March 2008).

Goal, methods, obligations

The goal of the convention is to combat desertification and to contribute to sustainable development through effective action on all levels. Supported by international cooperation and collaboration the effects of desertification are meant to be mitigated by an integrated attempt in countries suffering from grave drought or desertification, especially those in Africa (Article 2).

The most important instruments of the convention are national activity programmes (NPAs) to combat desertification, which create the framework for measures for implementing the convention in the affected countries. NAPs are broadly formulated and among other things involve:

- Measures to improve the economic environment with the goal of tackling poverty (e.g. fostering agriculture diversification, improved use of drought resistant cultivated



plants, improved inducements for productive investments).

- Measures for the conservation of natural resources (e.g., agro forestry, creation of environmental issue awareness and education, opening up and use of alternative energy resources).
- Creating institutions (e.g., fostering a policy of an active decentralisation).
- Measures to improve knowledge of land degradation (e.g. research funding, creation of national research capacities, support of medium-term and long-term investigations, Article 3).

The convention obligates the countries threatened by desertification to develop the action programmes set up by the international community and to also mobilize their own financial resources for their implementation. It also requires a link between measures to combat desertification and efforts to reduce poverty.

Financing

The convention has no financial mechanism of its own. Financial resources are intended to be supplied primarily through existing bi- or multilateral development cooperation. Furthermore the implementation on the convention is fostered by two independent financing mechanisms. The affected countries are supported with information about existing possibilities and innovative mechanisms for financing through the “Global Mechanism” which is affiliated to the International Fund of Agriculture Development (IFAD) in Rome, and also facilitates their access to appropriate funds. Direct access to the Global Environment Facility (GEF) has also been in existence since 2002. A new support focus was established there and the programme “Sustainable Land Management” was passed.

Thus the possibility to co-finance programmes for sustainable land management remains available to countries affected by desertification.

Source: BMZ (2005) Desertifikationsbekämpfung

The German contribution to the UNCCD

As a member country, the Federal Government has committed itself to intensified efforts in the support of the convention and the combating of desertification. The BMZ has the overall responsibility for the UNCCD inside the Federal Government and thus also for the managing, the cooperation and the dialogue with the Convention Secretariat situated in Bonn. The Federal Government fulfils these obligations by making contributions in support of the Secretariat, in the formulation of the convention's regulations, and in the direct implementation in the affected countries.

Support in implementing the Convention in developing countries

Combating desertification has been at the core of German bilateral development cooperation since the 1980's and it will continue to remain an important area for the cooperation efforts of the Federal Government. Especially for the support for the convention's processes, the BMZ has undertaken some innovative steps. Thus the GTZ launched the convention project “support for the Convention to Combat Desertification”

in 1999. The project supports the implementation of the convention in selected development countries. Additionally, a network of German scientists was created (www.desertnet.de) informing the German public about the problem of desertification. The project also advises the Convention Secretariat in strategic and organizational matters. Germany provides resources for regional goals in Africa, Asia and Central America as well. The special value of these regional intents lies in the fostering of very important trans-border exchanges of experience and in allowing new experiences in the implementation of the UNCCD, e.g., through pilot projects and best practices.

In 2005, 679 plans, financed by BMZ resources, were being executed to combat desertification with commitments for the total duration amounting to 1.8 billion EUR. Of these 330 plans with a value of 928 million EUR were running in Africa.

Source: BMZ/GTZ: Report by the Federal Republic of Germany on Measures Taken to Assist Implementation of the United Nations Convention to Combat Desertification in Affected Countries in Asia and Latin America, May 2006.

Further information:

www.unccd.int

www.gtz.de/desertification

Glossary

Bilateral Development Cooperation

Based on agreements between two states, e.g. Germany and the Mauritanian Government.

Biodiversity

The term “biological diversity” encompasses the variety of life on earth, from the genetic diversity to the variety of species culminating in the variety of the ecosystems.

BMZ

The Federal Ministry for Economic Cooperation and Development (BMZ) is responsible for the planning and implementation of government development policies. It commissions different independent organizations to conduct concrete projects and programmes for the German Development Cooperation, or enables their execution through financial contribution.

www.bmz.de/en

Desertification

The transformation of arable or habitable land to desert, as by a change in climate or destructive land use.

Disengagement

Withdrawal by the state from functions which are not high ranking functions but rather offers of service such as agricultural advice, the provision of production facilities and the marketing of agricultural products. Behind all this is the pressure to cut costs the realization that the state in the perception that such functions were mostly unsuccessful and that the private sector, if given the opportunity, is better equipped to perform these functions.

Financial Cooperation (FC)

Is conducted by the federally owned KfW Entwicklungsbank. It focuses on financing investment in social and economic infrastructure, in environmental protection and the conservation of natural resources, in strengthening the financial sector, as well as by providing support for macroeconomic reform programmes. Partner countries receive FC funds from the German national budget, in particular from the budget of the Federal Ministry for Economic Cooperation and Development (BMZ), either in the form of non-repayable grants or as loans. The focus of FC is on investment rather than consultancy services. Unlike Technical Cooperation, Financial Cooperation is all about financing rather than direct contributions.

GTZ

As an international cooperation enterprise for sustainable development with worldwide operations, the federally owned Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH supports the German Government in achieving its development-policy objectives. It aims at providing solutions for political, economic, ecological and social development in a globalised world. Working under difficult conditions, GTZ promotes complex reforms and change processes. Its corporate objective is to improve people’s living conditions on a sustainable basis.

www.gtz.de/en

Human Development Index (HDI)

An indicator to compare the level of social development. Life expectancy, the rate of literacy and the actual spending capacity per person flow into the HDI. The HDI can lie between 1 at its highest and 0 at its lowest.

IUCN-Categories

The IUCN (International Union for Conservation of Nature) has developed a system of management categories for the various conservation objectives and recommendations of use for nature protection areas. This classification system is a world-wide reference framework and serves several national legislatures as orientation.

www.iucn.org

KfW – Entwicklungsbank

Credit Institute for Reconstruction: The KfW is responsible for the financial cooperation with the state institutions. It finances and advises in chosen focal regions and countries, the rebuilding of social and economic infrastructures, the business economy and environment and resource protection.

www.kfw.de/en_home

Least Developed Countries (LDC)

This socio-economic term is used collectively by the United Nations for the group of 50 “least developed countries” of the world. Mauritania, together with 33 further African states, is included in this group (Position 30).

www.un.org/special-rep/ohrlls/ldc/list

Multilateral Development Cooperation

Realised by international institutions, such as UN organizations and programmes, regional development banks or the World Bank. Here contributions are made by the Federal Republic of Germany.

National Park

Protected area managed mainly for ecosystem protection and recreation (Management Category II area). Definition according to IUCN: Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.

www.iucn.org

www.euoparc.org

Protected Areas

As defined by the International Union for Conservation of Nature (IUCN): “An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.” (EUOPARC / IUCN 2000)

Resources

Collective name for all aids, which people require to operate. One differentiates between natural and man-made resources (infrastructure, buildings, machines, human knowledge). Natural resources are distinguished into renewable (plants, animals, water within the framework of natural circulation) or non-renewables (mineral sources, coal, oil, for practical consideration also soil). In general terms, natural resources are often only understood as regenerative. The non-regenerative resources are finite and so exhaustible. Solar energy occupies an exceptional position as it is virtually inexhaustible.

Sustainability

Sustainable development is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but in the indefinite future. The term was coined by the Brundtland Commission. Sustainability should be the basis of all political decisions regarding the handling of common and technical resources. Since the UN Earth Summit in Rio in 1992, Sustainable Development has been accepted as a global directive.

Technical Cooperation (TC)

The goal of Technical Cooperation is to enable people and organizations in partner countries to improve their living conditions on their own responsibility and through their own efforts. To this end, technical, economic and organizational skills and expertise are transferred. German inputs are understood as contributions to development measures in the partner countries. They are therefore offered on the understanding that the partner countries are willing to provide their own contributions, and to continue doing so after completion of German assistance.

List of abbreviations

AGLC	Association de Gestion Locale Collective (local user agreements)
AOF	French West Africa
AU	African Union
BMZ	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (German Federal Ministry for Economic Cooperation and Development)
CBD	Convention on Biological Diversity
CILSS	Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (Permanent Inter-State Committee for the Struggle against Desertification in the Sahel)
CMJD	Conseil Militaire pour la Justice et la Démocratie (Military Council for Justice and Democracy)
CSLP	Cadre Stratégique de Lutte contre la Pauvreté (Strategic Framework for the Fight Against Poverty)
DED	Deutscher Entwicklungsdienst (German Development Service)
EU	European Union
FAO	Food and Agriculture Organization
FC	Financial Cooperation
FCCC	(United Nations) Framework Convention on Climate Change
FIBA	Fondation Internationale du Banc d'Arguin (International Fund for Banc d'Arguin)
GDP	Gross Domestic Product
GEF	Global Environment Facility
GTZ	Deutsche Gesellschaft für technische Zusammenarbeit
HDI	Human Development Index
IFAD	(United Nations) International Fund for Agricultural Development
IMROP	Institut Mauritanien pour la Recherche Océanographique et des Pêches (Mauritanian Institute for Oceanographic Research and Fishing)
IUCN	International Union for Conservation of Nature
KfW	KfW - Entwicklungsbank (Credit Institute for Reconstruction)
LDC	Least Developed Countries
MAED	Ministère des Affaires Economiques et du Développement (Ministry of Economy and Development)
MDG	Millennium Development Goals
MDRE	Ministère du Développement Rural et de l'Environnement (Ministry of Rural Development and Environment)
NGO	Non-Governmental Organization
OIC	Organisation of the Islamic Conference (Organization of the Islamic Conference)
OMVS	Organisation pour la mise en valeur du fleuve Sénégal (Senegal River Basin Development Authority)
PANE	Plan d'Action Nationale pour l'Environnement (National Environmental Action Plan)
PNBA	Parc National du Banc d'Arguin (Banc d'Arguin National Park)
PNUD	Programme des Nations Unies pour le Développement (United Nations Development Programme)
SEE	Sécrtariat d'Etat auprès du Premier Ministre chargé de l'Environnement (Prime Minister's State Secretariat of Environment)
TC	Technical Cooperation
UMA	Union du Maghreb Arabe (Arab Maghreb Union)
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNO	United Nations Organization
WWF	World Wide Fund for Nature

Links and Literature

Development cooperation and Mauritania

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BMZ

Federal Ministry for Economic Cooperation and Development

www.bmz.de

- Aims and principles
www.bmz.de/en/principles
- Programme of action
www.bmz.de/en/principles/aims/programme2015/index.html
- Millennium Development Goals (MDG)
www.bmz.de/en/issues/MDG/Entwicklung/dokument04/index.html
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www.bmz.de/en/countries
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FAO

www.fao.org

- country overviews and statistics:
www.fao.org/countryprofiles/index.asp?lang=en&iso3=MRT

Globalis

an interactive world atlas with maps, graphics and statistics of Mauritania:


<http://globalis.gvu.unu.edu/country.cfm?country=MR>

GTZ

Deutsche Gesellschaft für Technische Zusammenarbeit

www.gtz.de/en

- general overview of the GTZ
www.gtz.de/en/unternehmen/689.htm
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www.inwent.org

- Entwicklungspolitisches Lernprogramm auf dem Globalen Campus 21 (Anmeldung mit Kennung "guest" und Passwort "guest")
www.gc21.de/ibt/modules/gc21/ol-epol/start.html

KfW

Entwicklungsbank

www.kfw.de

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www.kfw-entwicklungsbank.de/EN_Home

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UNDP

www.undp.org

- interactive statistics and country comparisons
<http://hdr.undp.org/statistics/data>
- Human Development Report 2007/2008
<http://hdr.undp.org/en/reports/global/hdr2007-2008>
- Country Fact Sheets – Mauritania
http://hdrstats.undp.org/countries/country_fact_sheets/cty_fs_MRT.html
- UNDP in Mauritania
www.undp.mr

UNEP

www.unep.org

- Global Environmental Outlook 4
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Worldbank

www.worldbank.org

- Mauritania Country Brief
<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/MAURITANIAEXTN/0,,menuPK:362350~page PK:141132~piPK:141107~theSitePK:362340,00.html>
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<http://devdata.worldbank.org/external/CPProfile.asp?PTYPE=CP&CCODE=MRT>

Biodiversity, Nature conservation & Protected Areas

BfN

Federal Agency for Nature Conservation

www.bfn.de

BMU

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

www.bmu.de/english

- Agenda 21
www.bmu.de/de/800/js/download/b_agenda21/

IUCN

International Union for Conservation of Nature

www.iucn.org

- EUROPARC & IUCN: Richtlinien für Managementkategorien von Schutzgebieten – Interpretation und Anwendung der Managementkategorien in Europa. EUROPARC und WCPA, Grafenau, 2000.

Material Relating to Nature Conservation and Development Issues

A page with material for environmental education and expert information relating to development cooperation and nature conservation, with the series "Sustainability Has Many Faces"

www.conservation-development.net

WCMC

World Conservation Monitoring Centre

www.unep-wcmc.org

World Database on Protected Areas

Jointly used page of UNEP and WCMC with a list of all reserves worldwide, many maps and statistics, further links

<http://sea.unep-wcmc.org/wdbpa>

World Resources Institute (WRI)

www.wri.org

- Earth Trends – The Environmental Information Portal – offers data to reserves and biodiversity
http://earthtrends.wri.org/searchable_db/index.php?action=select_variable&theme=7

WWF – The Conservation Organization

www.panda.org

- Living Planet Report
www.panda.org/news_facts/publications/living_planet_report/index.cfm
-  The condition of our planet. German summary of The 6th Living Planet Report.
<http://assets.panda.org/downloads/lpr2006austriansummary.pdf>

International treaties on protecting biological diversity and combating desertification

African-Eurasian Waterbird Agreement (AEWA)

www.unep-awea.org

Convention on Biological Diversity (CBD)

- Convention's homepage
www.cbd.int
- introduction to CBD
www.biodiv-chm.de/konvention/fo112005
- Text of CBD with explanations
www.cbd.int/convention
- GTZ's programme "implementation of the CBD"
www.gtz.de/biodiversity

Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals

www.cms.int

CITES

Convention on International Trade in Endangered Species of Wild Fauna and Flora

www.cites.org

Convention to combat Desertification

www.unccd.int

- Explanation of the convention to combat Desertification
www.auswaertiges-amt.de/diplo/de/Aussenpolitik/InternatOrgane/VereinteNationen/VN-Engagements/VN-Wueste.html
- Activities of GTZ to combat desertification
www.gtz.de/desertification
- Desertifikationsbekämpfung 2005, BMZ Materialien Nr. 10
http://iydd2006.de/uploads/media/Desertifikationsbekaempfung_2005.pdf

Ramsar Convention

www.ramsar.org

- Text of the convention
www.ramsar.org/key_conv_g.htm

World Heritage Convention

<http://whc.unesco.org>

and

www.unesco.de/welterbekonvention0.html?&L=0

- Text of the convention
www.unesco.de/welterbekonvention.html?&L=0

Nature and Resource conservation in Mauritania

World Resource Institute

Earth Trends: Biodiversity and Protected Areas
Mauritania

http://earthtrends.wri.org/pdf_library/country_profiles/bio_cou_478.pdf

Protected Areas in Mauritania, an Overview

www.parks.it/world/MR/Gindex.html




Parc National du Banc d'Arguin





www.mauritania.mr/pnba

- World Heritage Areas
<http://whc.unesco.org/en/list/506/documents>
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www.wwf.de/regionen/westafrikanische-meeresregion-wamer/meeresschutzgebiete/banc-d-arguin
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-  Kirsch-Jung, K.P. und Banzhaf, M. (2005): Les impacts socio-économiques de la gestion décentralisée des ressources naturelles – La contribution des conventions locales à la lutte contre la pauvreté. GTZ-Réseau Sectoriel Développement Rural Afrique, Eschborn. www.gtz.de/de/dokumente/fr-conventionslocales-contre-pauvrete-2005.pdf
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-  Secrétariat d'Etat auprès du Premier Ministre chargé de l'Environnement / GTZ / Programme Gestion des Ressources Naturelles (2007): Conservation et utilisation des zones humides dans le Hodh el Gharbi Mauretani, Nouakchott.
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Parc National du Diawling

www.mauritania.mr/pnd/Acceuil.htm

République Islamique de Maurétanie

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- Loi no 2000-024 du 19 Janvier relative au Parc National du Banc d'Arguin.

Contents of the DVD

“User Rights for Pastoralists and Fishermen”

Film

The Banc d'Arguin National Park: Environment and Sustainable Development

The 16 minute film was produced in French (with English subtitles) in 2000 as part of the public relations work of the Banc d'Arguin National Park by the Belgian production company Cultures & Communications-Production. They also produced the German language version for this brochure on behalf of GTZ in 2008.

Film

Open Access or Common Property Rules - Community Based Natural Resource Management in Mauritania

The 31 minute film was produced in 2007 on behalf of GTZ by the German filmmaker Ulrike Jung for use at international conferences, in continuing education and for public relations (in German, French and English). Local language versions (Arabic, Poular, Soniké) are used for education purposes in Mauritania.

Contents of the CD

“Sustainability has Many Faces”

5 Innovative cooking stoves and ancient spirits

The brochure (pdf file, French/German)
Material presented
Madagascar-Memory (flash format computer game)
Photo gallery
Links und literature as well as selected topical pdf files

6 User Rights for Pastoralists and Fishermen

The brochure (pdf file, English/German)
The new pastoral code (Code pastoral) in fable and poetic format (pdf, Arabic)
Photo gallery
Links und literature as well as selected topical pdf files

7 Who Protects What for Whom?

The brochure (pdf-file)
Exhibitions
Placards about the millennium development goals
Amazon River – Memory (flash format computer game)
Photo gallery
Links and literature as well as selected topical pdf files

8 Nature and Mankind facing Climate Change

The brochure (pdf-file)
Country profiles of Benin, Brazil, Chile, Germany, Madagascar, Mongolia, Russia, Czech Republic, USA, Venezuela, Vietnam
Traditional accommodation in the international wilderness camp / Bavarian Forest National Park
Collected didactic suggestions, ideas and activities to the topic week on climate change
Statements from climate change witnesses in their respective languages and in German
Educational materials on the topics of climate change and biodiversity
Environmental Memoirs
Links and literature as well as selected topical pdf files

9 Energy is Life

The brochure (pdf-file)
Material presented
Photo gallery
Links and literature as well as selected topical pdf files

All material of CD1 (brochures 1 to 4) and CD2 (brochures 5 to 9) can also be found on the web: www.conservation-development.net/Projekte/Nachhaltigkeit

Exclusion of liability

With its ruling of 12 May 1998 - 312 O 85/98 - "liability for links" Hamburg Regional Court held that anyone including a link may also share liability for the content of the linked page. This can only be avoided by explicitly disclaiming responsibility for the content in question. We hereby disclaim responsibility for the content of all the web pages mentioned or linked in the present text, and of any further links included there, which we do not adopt as our own.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every receipt, invoice, and bill should be properly filed and indexed for easy retrieval. This is particularly crucial for businesses that operate in highly regulated industries where compliance is a top priority.

In addition to record-keeping, the document also addresses the need for regular audits. These audits should not only verify the accuracy of the financial records but also ensure that all transactions are properly documented and supported by appropriate evidence. This process helps to identify any discrepancies or potential areas of fraud, allowing for prompt investigation and correction.

Furthermore, the document highlights the significance of maintaining up-to-date financial statements. These statements provide a clear and concise overview of the company's financial health, including its assets, liabilities, and equity. By reviewing these statements regularly, management can gain valuable insights into the company's performance and make informed decisions about its future operations.

Finally, the document stresses the importance of transparency and accountability in financial reporting. This involves providing accurate and timely information to all stakeholders, including investors, creditors, and regulatory authorities. By fostering a culture of transparency, companies can build trust and credibility, which are essential for long-term success.

Development Needs Diversity

People, natural resources and international cooperation
Contributions from the countries of the south

Nature Conservation Is Fun

Protected area management and environmental communication
Contributions from Panama

Use It or Lose It

Hunter tourism and game breeding for conservation and development
Contributions from Benin

Land Rights Are Human Rights

Win-win strategies for sustainable nature conservation
Contributions from South Africa

Innovative cooking stoves and ancient spirits

Conserving nature at the interface between energy efficiency and traditional customs
Contributions from Madagascar

User Rights for Pastoralists and Fishermen

Agreements based on traditional and modern law
Contributions from Mauritania

Who Protects What for Whom?

Participation and governance for nature conservation and development
Contributions from the Brazilian Amazon region

Nature and Mankind facing Climate Change

One planet with many people – what's the future?
Contributions from around the world in the international wilderness camp

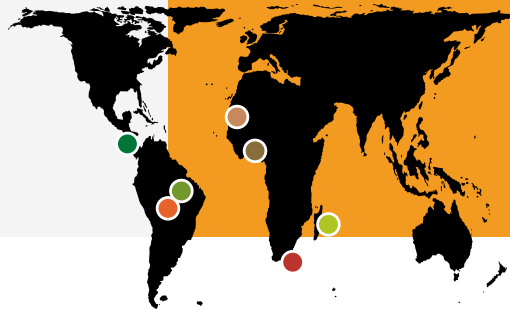
Energy is Life

Sustainable development and poverty alleviation need energy
Contributions from Bolivia

SUSTAINABILITY HAS MANY FACES

A brochure series with accompanying materials on development cooperation for the UN Decade of Education for Sustainable Development

Conserving biological and cultural diversity prepares the ground for human development. The examples included in this series present various "faces" of sustainability, offering ideas, contributions and suggestions on education for sustainable development both in and out of school (UN Decade 2005-2014). They show how people in countries with which we are less familiar find ways of improving their living conditions, while at the same time learning to protect their environment. In these settings, development cooperation means helping facilitate difficult economic and social change processes.



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