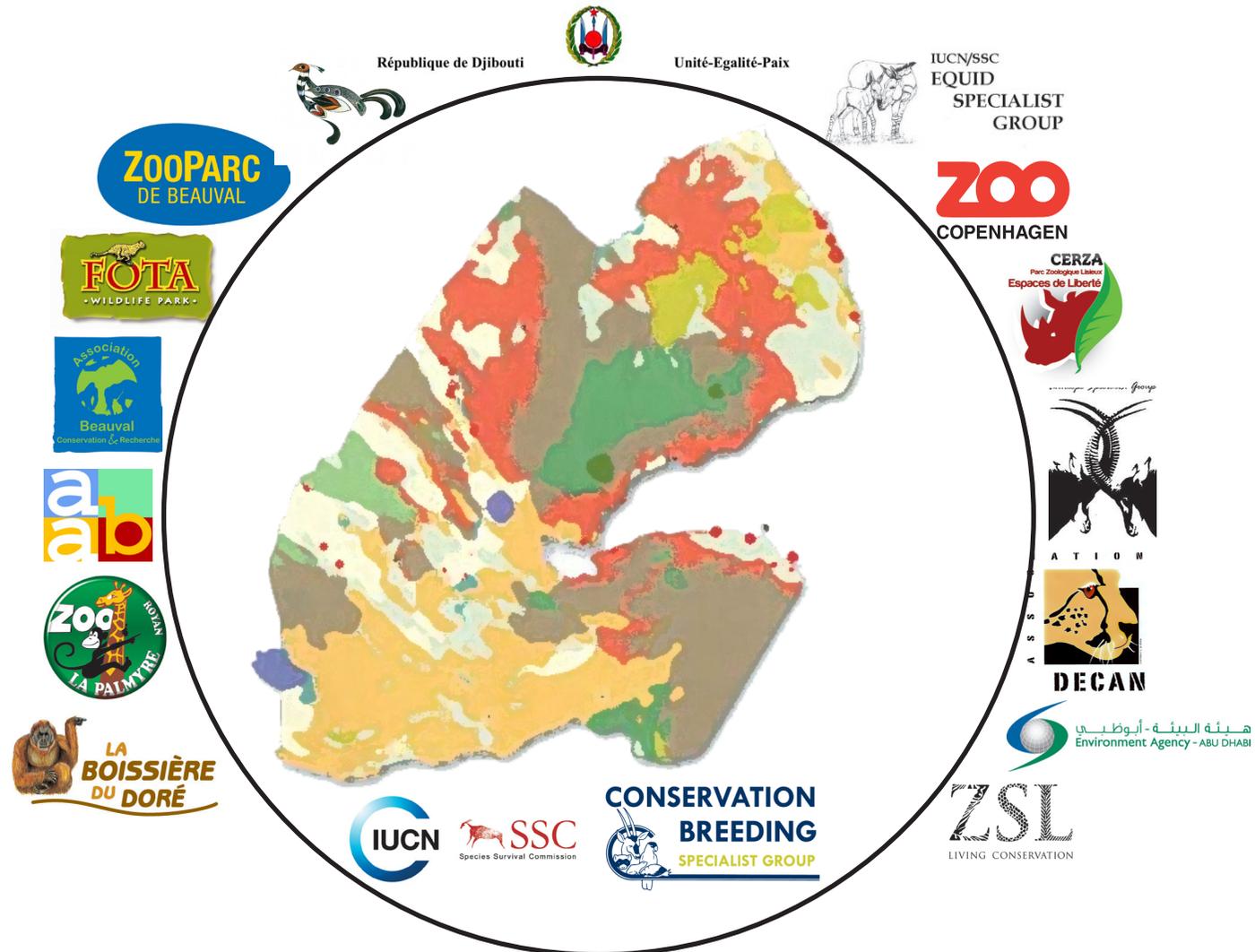


CONSERVING DJIBOUTI'S PRIORITY LAND ANIMALS

A SEMINAR AND CONSERVATION WORKSHOP

CERD, DJIBOUTI, 25-29 March 2012

FINAL REPORT



Report editor group

Abdirahman Ahmed, HOAREC
Abdoulkader Ahmed Aouled, MHUE
Ahmed Ali Mohamed, EVA
Alain Laurent, TER-RES
Aman Mohamed Aman, MHUE
Arnaud Desbiez, CBSG Brasil
Baptiste Mulot, ZooParc de Beauval and Association ABCR
Bertrand Lafrance, DECAN
Bengt Holst, CBSG Europe
Cathy Gibault, Parc Zoologique de Thoiry
David Mallon, IUCN SSC Antelope Specialist Group
Eric Ruivo, ZooParc de Beauval and Association ABCR
Houssein A. Rayaleh, Djibouti Nature
Kristin Leus, CBSG Europe
Patricia Moehlman, IUCN SSC Equid Specialist Group
Phil McGowan, IUCN SSC Galliform Specialist Group, WPA

Layout and cover graphic:

Mikkel Stelvig, Copenhagen Zoo

A contribution of the IUCN SSC Conservation Breeding Specialist Group.

IUCN encourages meetings, workshops and other fora for the consideration and analysis of issues related to conservation, and believes that reports of these meetings are most useful when broadly disseminated. The opinions and views expressed by the authors may not necessarily reflect the formal policies of IUCN, its Commissions, its Secretariat or its members.

The designation of geographical entities in this book, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Holst, B., A. Ahmed, A. A. Aouled, A. A. Mohamed, A. Laurent, A. M. Aman, A. Desbiez, B. Mulot, B. Lafrance, C. Gibault, D. Mallon, E. Ruivo, H. A. Rayaleh, K. Leus, P. Moehlmann, P. McGowan (eds.). 2013: *Conserving Djibouti's Priority Land Animals – a Seminar and Conservation Workshop*. Final Report. IUCN SSC.

CONSERVING DJIBOUTI'S PRIORITY LAND ANIMALS

A SEMINAR AND CONSERVATION WORKSHOP

CERD, DJIBOUTI, 25-29 March 2012

FINAL REPORT

CONTENTS

Executive summary	6
<i>Invitation Letter</i>	
Introduction and organisation	9
<i>Introduction</i>	
<i>Strategic planning process</i>	
Strategic Planning Results	17
<i>The workshop and the preceding seminar</i>	
<i>Vision and long term goals per Species</i>	
<i>Status of selected species</i>	
<i>Threats and obstacles for selected taxa</i>	
Objectives and actions	27
<i>Rural land use</i>	
<i>Legislation</i>	
<i>Research</i>	
<i>Education</i>	
<i>Species specific actions</i>	
References	53
Appendix	57
<i>Appendix 1 - Seminar programme</i>	
<i>Appendix 2 - Workshop organisation</i>	
<i>Appendix 3 - Workshop programme</i>	
<i>Appendix 4 - GIS maps for selected species</i>	
<i>Appendix 5 - List of participants</i>	
<i>Appendix 6 - List of acronyms</i>	

EXECUTIVE SUMMARY

The conservation planning workshop was conducted on invitation from the Minister of Housing, Urbanism and Environment of Djibouti with the overall purpose of developing a conservation action plan for selected land animals of Djibouti as well as generating awareness of the need for nature conservation in Djibouti in general. The workshop was preceded by a one-day seminar which served to provide an overview of conservation issues for Djibouti and the Horn of Africa in general, and of the conservation status of, and threats to, the Djiboutian land animals that were the subject of the workshop in particular: Djibouti francolin, Somali wild ass, Grevy zebra, gerenuk, beira, beisa oryx, Soemmering's and Pelzeln's gazelles, Salt's dik-dik, leopard and cheetah. Furthermore the workshop format was adapted to fit the format described in the "IUCN Strategic Planning for Species Conservation Handbook" (2008).

The main organization behind the workshop was a partnership between the government of Djibouti represented by the Ministry of Housing, Urbanism and Environment, CBSG (Europe and Brasil networks), the IUCN SSC Species Conservation Planning Sub-committee, The IUCN Eastern and Southern Africa Regional Office (ESARO), the IUCN SSC Equid, Antelope and Galliform Specialist Groups, Association DECAN (DECouvrir et Aider la Nature), The World Pheasant Association, Association Beauval Conservation et Recherche, and ZooParc de Beauval. The main goal of the workshop was to gather, systematize and discuss all available data and information relevant for the conservation of land animals of Djibouti (status in the wild, distribution, threats, available habitat, ecological factors, socioeconomic aspects etc.), to refer this information to existing conservation action plans and use this information to establish research, management and conservation priorities for the area with a focus on the selected land animal species listed above.

In accordance with the approach described in the SSC handbook for Strategic Planning for Species Conservation the workshop started by developing a vision for Djibouti's natural heritage as a whole, and long term general goals were developed in species specific working groups per taxon or species of interest. The identified working groups were:

- Birds
- Predators
- Antelopes
- Equids

Each of these groups, started by discussing the list of species to be included or removed from their group. They then brainstormed about the existing threats to the respective taxa. Threats were then presented in plenary session and were then grouped into themes resulting in four main areas:

- Rural land use
- Legislation and protected areas
- Research
- Education and awareness

Working groups were formed based on these themes, and each of these working groups developed objectives and actions for their respective fields. These were then finally listed in four tables, and responsibilities, time frames, criteria of success and estimated costs were added where possible. The identified objectives within the four themes were:

Rural land use:

Objective 1 : Land use planning : through the populations' vision of their territory, plan the use and accessibility of land by involving other stakeholders (participatory approach)

Objective 2: Water: increase the amount of water available for humans and natural resources and manage water wisely

Objective 3: Plant Resources: Combat deforestation and work for reforestation

Objective 4: Competition between wildlife and livestock / disease transmission / hybridisation: Control livestock movement, if necessary by creating protected areas and establish epidemiological monitoring of livestock

Objective 5: Erosion: strengthen the actions of restoration and protection of plant resources by vigorous actions (e.g. selection of appropriate local plant species, soil surface management)

Objective 6: Pollution: Improve waste management and control pollution due to human activities through the enforcement of existing laws.

Objective 7: Stray dogs: elimination of stray dogs by appropriate means without risk for wildlife and livestock (sterilization + elimination)

Legislation and protected areas:

Objective 1 : To implement the status of existing protected areas

Objective 2 : Mobilization of financial and human resources to manage the network of protected area

Objective 3 : To create a network of protected areas representative of Djibouti's ecosystems

Objective 4 : To address illegal logging of fauna and flora

Objective 5 : Review and update the laws relating to biodiversity

Research:

Objective 1: Establish a sub-department of ecology at the university

Objective 2: Establish a governmental department of ecology for terrestrial ecosystems.

Objective 3: To prioritise and organise research on important

species and their ecosystems.

Objective 4: Provide basic training in ecology for the field workers.

Objective 5: There is need for funds to support ecological research and data collection.

Objective 6: To finance the establishment of training and professionalization in Ecology (University, Department of Ecology of terrestrial ecosystems, basic training, etc.).

Education and awareness:

Objective 1: the population is aware of the ecological and economic values of the Djiboutian biodiversity +

Objective 2: the population is aware of its role for the preservation of the ecological balance

Objective 3: The people are aware of the environmental legislation

Objective 4: The environmental awareness is integrated in an adequate way and put into practice in school curricula

Objective 5: There is an initial training of teachers in environmental education field

Objective 6: The iconic species of Djibouti are valued and a source of pride, the predators are tolerated

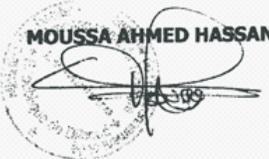
Objective 7: People adopt sustainable good practices

Objective 8: The population has information and opportunities to set up economic alternatives in the traffic

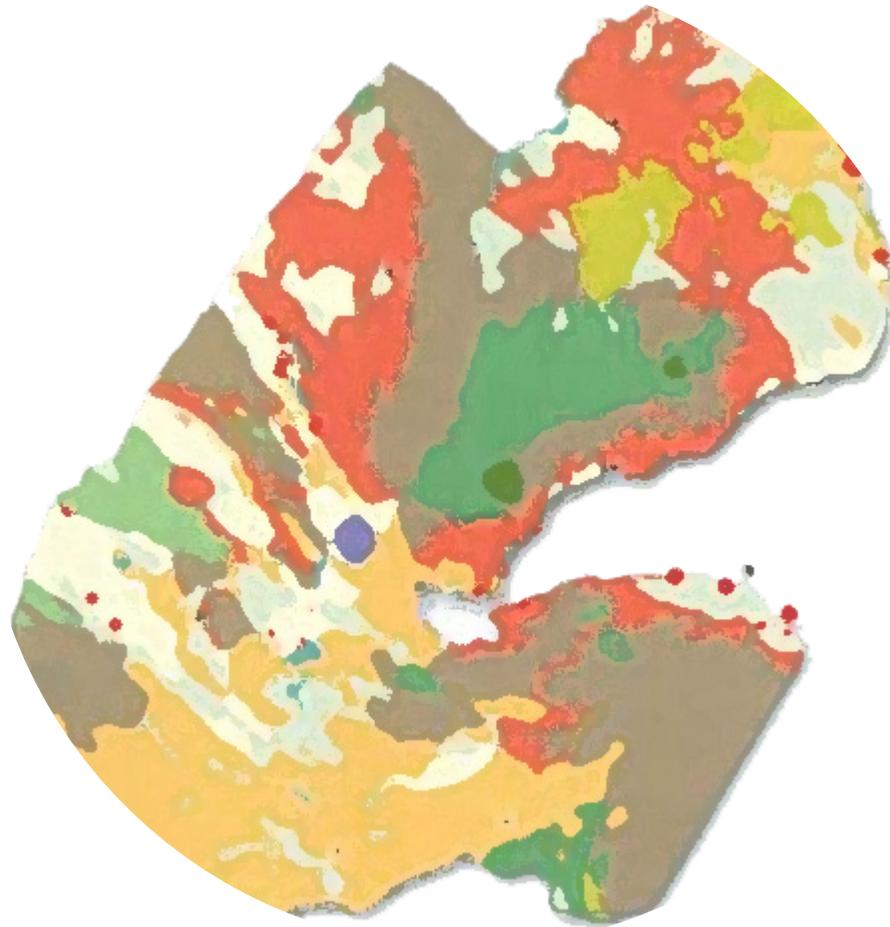
Each step of the process was presented in plenary so that all participants had the chance to provide insight in groups where they were not present. Finally on the last day the participants regrouped into taxon specific groups to ensure that any taxon specific priorities that were not yet covered would not be overlooked. During the closing session participants had a lively discussion on ways to move forward and implement the action plan. Alongside with the various workshops the participants also developed updated GIS species distribution maps.

The workshop was extremely successful thanks to the incredibly hard work and dedication of all the participants, the sizeable commitment of all the relevant ministries and the impeccable hosting and organisation. The results of the workshop can be expected to indeed provide a good basis for achieving the vision that was identified during the workshop, namely that “*Djibouti’s rich natural heritage, particularly species of global, regional and national importance and their ecosystems, are conserved and their resilience enhanced, thus serving as a model for sustainable development in the Horn of Africa*”.

Invitation Letter

<p>REPUBLIQUE DE DJIBOUTI UNITE – ÉGALITE – PAIX</p> <p>MINISTÈRE DE L'HABITAT, DE L'URBANISME, DE L'ENVIRONNEMENT ET DE L'AMÉNAGEMENT DU TERRITOIRE</p> <p>LE MINISTRE</p> <p>N° 284 Djibouti, le 02 OCT 2011</p>	<p>بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ</p>	<p>جمهورية جيبوتي الوحدة - المساواة - السلام</p> <p>وزارة الإسكان والتعمير والبيئة والتهيئة الترابية</p> <p>الوزير</p> <p>رقم جيبوتي في</p>
<p>To Chairman of IUCN/SSC/CBSG Europe</p>		
<p>Subject: Invitation for to the international meeting</p>		
<p>Dear Mr. Bengt Holst,</p>		
<p>I, undersigned, H.E. Moussa Ahmed Hassan, Ministry in charge of Environment of the Djiboutian Republic, would like to invite IUCN/SSC/CBSG to organise an international meeting regarding the conservation of equids and antelopes in Djibouti in march 2012.</p>		
<p>The purpose of the meeting will be to prepare efficient conservation action plans for Djibouti with focus on the mentioned taxa.</p>		
<p>The Government of Djibouti would be honoured if CBSG Europe could accept this task which is, in our view, fundamental for the conservation of the high biodiversity of our country and help us to improve our management plans for these species.</p>		
<p>With my best regards</p>		
<p>MOUSSA AHMED HASSAN</p> 		
<p>+253 35-00-06</p>	<p>+253 35-16-18</p>	<p>BP 11</p>
<p>تلفون: 350006-351618-3511</p>		

INTRODUCTION AND ORGANISATION



Introduction

The conservation planning workshop was conducted on invitation from the Minister of Housing, Urbanism and Environment of Djibouti with the overall purpose of developing a conservation action plan for selected land animals of Djibouti as well as generating awareness of the need for nature conservation in Djibouti in general. The workshop was preceded by a one-day seminar which served to provide an overview of conservation issues for Djibouti and the Horn of Africa in general, and of the conservation status of, and threats to, the Djiboutian land animals that were the subject of the workshop in particular: Djibouti francolin (*Francolinus ochropectus*), Somali wild ass (*Equus africanus somaliensis*), Grevy zebra (*Equus grevyi*), gerenuk (*Litocranius walleri*), beira (*Dorcatragus megalotis*), beisa oryx (*Oryx beisa*), Soemmering's (*Nanger soemmerringii*) and Pelzeln's gazelles (*Gazella dorcas pelzelni*), Salt's dik-dik (*Madoqua saltiana*), leopard (*Panthera pardus*) and cheetah (*Acinonyx jubatus*). The criteria used for the selection of these species were the following :

- The existence of a conservation, education or research program in Djibouti for the species (Somali Wild Ass, Grevy Zebra, Beisa oryx, Cheetah, Leopard, Djiboutian Francolin)
- The existence of protected areas for the species (Gerenuk, Beira antelope, Pelzen's gazelle, Salt's dick-dik)
- The cultural, economical, political or social impact of the species for Djibouti (Soemmering gazelle, Beira antelope, Djiboutian Francolin, Grevy zebra)

Furthermore the workshop format was adapted to fit the format described in the "IUCN Strategic Planning for Species Conservation Handbook" (2008).

The main organization behind the workshop was a partnership between the government of Djibouti represented by the Ministry of Housing, Urbanism and Environment, CBSG (Europe and Brasil networks), the IUCN SSC Species Conservation Planning Sub-committee, The IUCN Eastern and Southern Africa Regional Office (ESARO), the IUCN SSC Equid, Antelope and Galliform Specialist Groups, Association DECAN (DECouvrir et Aider la Nature), The World Pheasant Association, Association Beauval Conservation et Recherche, and ZooParc de Beauval. Facilitators from CBSG Europe, CBSG Brasil and HOAREC were responsible for the facilitation of the workshop, and CBSG Europe was together with CBSG Brasil responsible for the production of the workshop materials, mostly based on the book of Alain Laurent "Djibouti, Les mammifères d'hier à aujourd'hui pour demain", as well as the final workshop report, following review and sign-off by the relevant Djiboutian authorities, the SSC Species Conservation Planning Sub-Committee, and the SSC Specialist Groups that were involved: Equid, Antelope and Galliform, as well as the World Pheasant Association.

The main goal of the workshop was to gather, systematize and discuss all available data and information relevant for the conservation of land animals of Djibouti (status in the wild, distribution, threats, available habitat, ecological factors, socioeconomic aspects etc.), to refer this information to existing conservation action plans and use this information to establish research, management and conservation priorities for the area with a focus on the selected land animal species listed above. No species action plans were developed during the workshop. But elements of such action plans can be extracted from the present theme based action plan.

Simultaneous translation (French – English) was available at the seminar and sequential translation during the plenary sessions of the workshop. In the working groups we relied on local translation (bi-lingual participants translating where

necessary). Three of the facilitators were French and English speaking.

Full details of the workshop organization and organizing partners can be found in Appendix 2. The workshop programme is presented in Appendix 3.

Strategic planning process

IUCN SSC Species Conservation Strategies:

In 2008 the Species Survival Commission (SSC) of IUCN published the document *Strategic Planning for Species Conservation: A Handbook* (IUCN SSC 2008). This document provides guidance to IUCN SSC Specialist Groups and other conservation actors on when and how to prepare and promote Species Conservation Strategies (SCSs) (be it range-wide, regional, or national; single or multiple species) that are inclusive of all relevant parties and result in rigorously tested and realistic actions that can be monitored, evaluated and adapted. This guidance includes advice on how to conduct a thorough status review; how to develop, through broad consultation with stakeholders, a vision and goals for the conservation of a species or species group; how to set objectives to help achieve the vision and goals; and how to address those objectives through geographically and thematically specific actions.

The general IUCN SSC SCS process was adapted for the purpose of this workshop in order to take into account the specific situation of planning for a larger number of species, of different taxonomic groups, living in partially different habitats and affected by partially different threats, whereby some species were not or no longer present in Djibouti. The adapted SCS step process used for this workshop can be found in Figure 2.

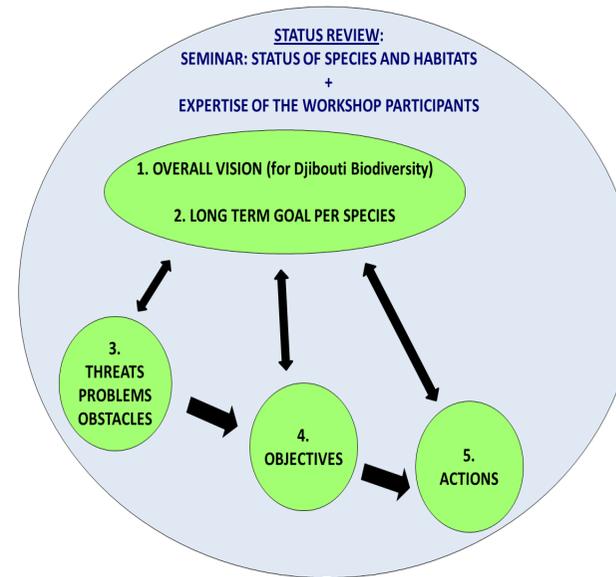


Figure 2: Components and process used during the workshop

Status review based on the seminar and the expertise of the participants:

On the day prior to the workshop a one day seminar was held at the University of Djibouti, open to not only the workshop participants but also the press and other stakeholders and interested parties.. The main goal of the seminar was to provide an update and overview of the status and importance of the biodiversity of Djibouti in a national as well as regional and global context, of the current and proposed protected areas in Djibouti, the drivers of change in the status of Djibouti land animals, environmental education initiatives in the Horn of Africa, and the conservation status of those land animal species selected for special focus during the workshop. Together with published material in the briefing book available as a pdf, this served to give all participants a general overview of the “state of affairs” at the beginning of the workshop.

Throughout the workshop, participants were asked to contribute knowledge on the current distribution of the species

by drawing on printed maps (Figure 3) and liaising with a GIS expert in order to digitise the maps (Appendix 4).



Figure 3: Gathering information on the current distribution of the selected species in Djibouti
The full programme of the seminar can be found in Appendix 1, and the status of the selected species is described in the chapter Strategic Planning Results.

Vision:

The vision development was one for the conservation of biodiversity in Djibouti in general. Following a brief presentation to explain the definition and purpose of a vision, the participants were divided in three arbitrary groups. With the help of a facilitator, they were asked to brainstorm elements they felt should be included in a vision statement for biodiversity conservation in Djibouti. The work of the three groups was presented in plenary and discussed, following

which a small drafting group produced a first draft of the vision statement, which was again presented in plenary until adopted. The adopted vision can be found in the chapter: Strategic Planning Results.

Long term goals:

For this part of the workshop the participants were divided in four taxon specific groups:

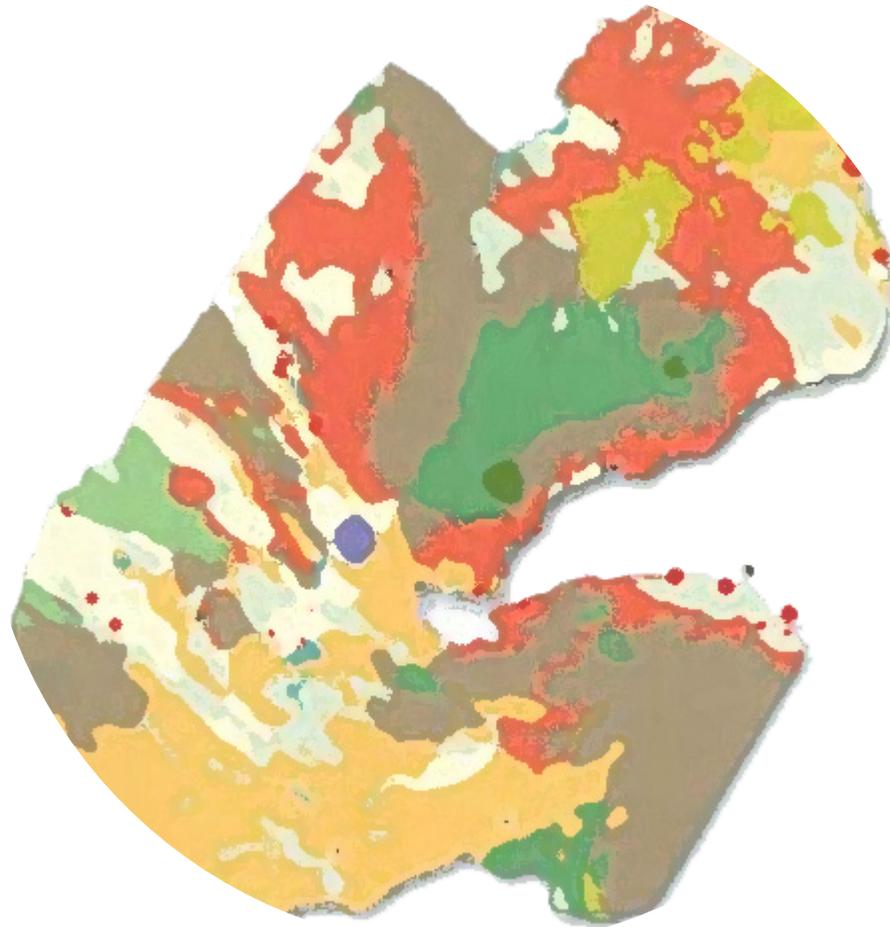
- Birds
- Predators
- Antelopes
- Equids

Each group was asked to:

1. Revise the list of species within their group and decide if changes or additions should be made to the initial species selection for this workshop.
2. Develop a long term goal for each species.
 - Keeping the vision in mind, the participants were asked to “translate” this vision into a long term goal for each species. This goal needed to be a short statement that is more specific, measurable and operational than a vision. It needed to describe the desired future state for that species in Djibouti, taking into account the role of the Djiboutian population(s) for the species as a whole,
 - the importance (ecological, cultural, socio-economic etc) of the species for Djibouti
 - and any visions or goals that may have already been established for some of the species in previous conservation strategies (for Djibouti or range wide).

This was felt to be an important component of the workshop, particularly because the situations differed

STRATEGIC PLANNING RESULTS



The workshop and the preceding seminar

The participation and commitment of Djiboutians in the meeting was remarkable, not only concerning funding for several activities, but also concerning the provision of necessary logistics, and notably the presence of four ministers at the opening ceremony, and two ministers at the closing session. The workshop was attended by more than 60 people (35 of them from Djibouti) and the preceding seminar was attended by around 150 people. A full list of workshop participants is presented in appendix 6.

Vision and long term goals per Species

Vision

Le riche patrimoine naturel de Djibouti, particulièrement les espèces d'importance globale, régionale et nationale et leurs écosystèmes, sont conservés et leurs résiliences (capacités d'adaptation) renforcées, servant ainsi de modèle de développement durable pour la Corne de l'Afrique.

Djibouti's rich natural heritage, particularly species of global, regional and national importance and their ecosystems, are conserved and their resilience enhanced, thus serving as a model for sustainable development in the Horn of Africa.

Long term goals

Djibouti francolin (*Francolinus ochropectus*):

(based on Djibouti francolin conservation strategy, World Pheasant Association and Djibouti Nature. 2010)

The Djibouti francolin's future is secure in its native range and it is valued in Djibouti as a source of national pride.

Notes from workshop:

The bird working group discussed the potential need to include other species (in addition to the Djibouti francolin) in the workshop process. There is very variable knowledge about Djibouti's bird species, and what is known is not easily accessible. Available information includes Directory of Important Bird Areas, 4th National Report to CBD and The Djibouti Francolin Action Plan. There are two candidates that stand out as avian priorities: there is one endemic species, the Djibouti Francolin, that is Critically Endangered on the IUCN Red List and the species is on the priority list in Djibouti's 4th national report to CBD and is an Important Bird Area trigger species. A broad suite of migratory species is also listed, including four national priority species: Steppe Eagle *Aquila clanga*, Imperial Eagle *Aquila heliaca*, Pallid Harrier *Circus macrourus* and Lesser Kestrel *Falco naumanni*, which are all listed in 4th national report). Djibouti is home to one of the most important migration bottlenecks in Africa: Welch and Welch 1992, cited in Important Bird Area directory (BirdLife International 2001). The final priority is a Near-threatened Red Sea endemic (White-eyed Gull *Ichthyaetus leucophthalmus*) for which Djibouti holds about 5% of the global breeding population. No specific long term goal was set for this latter species, but the most important threats for this species were included in the threat analysis.

Migratory birds:

Flyway maintained.

Notes from workshop:

See notes for the Francolin.

Predators:

In Djibouti, the rural communities tolerate the presence of predators.

Notes from workshop:

The group first listed the emblematic species of predators in Djibouti and discussed the meaning of the word “predator”. The level of priority of each species was then debated, based on the level of conflicts with humans, the distribution area and the status of the population (endangered or not).

Four species were identified as top priority species: leopard / cheetah / serval, as threatened species and hyenas as a threatening taxon.

The two species of hyenas (striped and spotted) are included in the term “hyenas”: same distribution, same behaviours.

The status of cheetah and serval will need to be investigated as some participants consider both species to be extinct in Djibouti and others assert that there still is a small population.

A first long term goal was identified as: To rehabilitate the criteria of usefulness of predators, to strive for a harmonious coexistence, source of equitable development. This goal was later on transformed into a more general one that also became the final goal: “In Djibouti, the rural communities tolerate the presence of predators.”

Based on this, one vision per species could then be defined as follows:

Cheetah (Acinonyx jubatus):

The conditions that are needed to ensure the return and survival of the cheetah are fulfilled.

Leopard (Panthera pardus):

The Leopard status is acknowledged, its habitat and population are improved.

Serval (Leptailurus serval):

The information on the serval population is available, its status is determined, conservation actions are identified.

Striped Hyena (Hyena hyena) and spotted Hyena (Crocuta

crocuta):

The status of the population of the 2 species of Hyenas is stabilized and in balance with its environment.

Equids :

Notes from workshop:

The discussion started with a debate about the Grevy’s zebra and whether or not it should be included on the list of important species for Djibouti.

Some participants wanted the Grevy’s zebra to be included in the discussions because they considered it a model species for environmental and social development. They stated that there were historic observations of Grevy’s Zebra in Djibouti and that Grevy’s zebra is a symbolic species for local communities for the return of the grass and that it would thus be an appropriate ‘catalyst’ for environmental conservation

Other participants stated that there is no scientific documentation/hard evidence that the Grevy’s zebra occurred historically in Djibouti and that it could thus not be a model for environmental and social development in Djibouti. They stated that it has been extinct for a long time (~3000 years) and the nearest current and historic populations are located in Ethiopia approximately 400 km to the southwest of Djibouti. Furthermore they stated that the Grevy’s zebra is not adapted to the climate and the geography of Djibouti. Hence, it should be removed from the list of priority species for conservation in Djibouti .

There was agreement on the following:

The priority for action needs to be given to a species that has a long-term and possibly current presence in Djibouti and realistically could be conserved, especially when considering the energy, time and money spent as well as the chance of survival. The African wild ass serves this purpose and should thus be the

priority equid for the conservation of biodiversity in Djibouti. It has a historic and current presence in Djibouti, is well adapted to the habitat and climate, and realistically its population in Djibouti can be conserved and enhanced. It exists in Djibouti or just across the border in Ethiopia. It may exist with the Beisa oryx on the Gamarre Plateau and hence it would be an optimum conservation opportunity to create a protected area between Ethiopia and Djibouti.

Once the African wild ass has an improved conservation status and its habitat has been restored, then the case of the Grevy's zebra might be considered. Some of the participants thought that it was unlikely that the Grevy's zebra could survive in the wild in Djibouti due to its biological, physiological and ecological requirements whereas others thought it would be possible after a thorough restoration of the potential habitat.

In conclusion, the African wild ass is considered the priority equid for the conservation of biodiversity in Djibouti. It is well adapted to the habitat and climate and realistically its population in Djibouti can be conserved and enhanced. The former status of the Grevy's Zebra in Djibouti is uncertain, and further research is needed to establish whether or not this species was ever present in Djibouti. Based on the results of this further research it should be considered whether or not to develop plans for the reintroduction of the species.

Based on these initial thoughts the following long term goals for the two species were identified:

Wild Ass (Equus africanus somaliensis):

Restoration of natural habitat with local community participation to sustain a viable population of African Wild Ass that will benefit other wild species, local people and provide an ecological and economic benefit for Djibouti.

Grevy's zebra (Equus grevyi):

Restoration of natural habitat and promotion of sustainable

management of critical resources (water, forage) by the local communities which in the long term could facilitate the restoration of Grevy's zebra if deemed appropriate.

Antelopes:

Overall, except for beisa oryx, the status of gazelles and antelopes is not satisfactory, without being critical at present. Populations are maintained, but one can see everywhere a reduction in range and numbers. This reduction is marked in the case of dik-diks gerenuk, and beira.

The beisa oryx population is in permanent danger of disappearing from the national territory, due to disturbance and regular poaching.

The survival of the Djiboutian population of beira is also threatened is also threatened but in the medium-term. The causes are deforestation and overgrazing.

Only Pelzeln's gazelle, and to a lesser extent Soemmerring's gazelle, have widely distributed populations and significant numbers, in the order of a thousand individuals for the first species and several hundred for the second.

Beisa oryx (Oryx beisa):

A population of Beisa oryx protected where it currently exists and consider the restoration of the species in its former range if possible.

Notes from workshop:

The Beisa Oryx is very rare in Djibouti (no more than 30 specimens), occurring mainly in the Plateau du Gammaré, and crossing the border to Ethiopia very frequently. The species was considered very important by all the Djiboutians present at the workshop. It was found that it was too expensive and too difficult to reintroduce or translocate additional specimens but, as the species is declining in almost its range, Djibouti could play an important role in its protection providing that a protected area is created in the Plateau du Gammaré. This will

also enable the natural return of more specimens from Ethiopia. This protected area would also be important for other species such as Somali wild ass and Rüppell vultures.

Beira (Dorcatragus megalotis):

Halt the decline and restore the populations and the ecosystem of Beira with benefit to the local communities.

Notes from workshop:

This species is endemic to the Horn of Africa. There is a local population of 150 to 200 specimens in Djibouti in the region of Ali Sabieh. Most of what is known about this rare species in recent years comes from studies in Djibouti by Nina Giotto, and the Djiboutian population has obviously an important potential for research. There is already a protected area for the species near Assamo in the South of Djibouti. This protected area should be increased and local communities should benefit from this through eco-tourism activities.

Klippspringer (Oreotragus oreotragus):

Maintain and where possible to improve the status of the various sub-populations of klippspringer.

Notes from workshop:

Klippspringers occur North of Tadjoura and Adailou. The number of specimens in Djibouti is not known. They coexist with domestic cattle without real problems.

Soemmerring's Gazelle (Nanger soemmerringii):

Ensure protection of existing populations.

Notes from workshop:

The Soemmerring's Gazelle is a very important species for Djibouti as it is endemic to the Horn of Africa and with a very little distribution: East of Ethiopia, Somaliland at the border with Djibouti and still common in Djibouti especially in the

Grand Bara, the Petit Bara, and also in the North. This species is in conflict with human interests because it uproots the grass.

Gerenuk (Litocranius walleri):

Maintain and improve the status of the current populations and use these for development of ecotourism and conservation awareness.

Notes from workshop:

There is a protected area for the species in Djibouti (Djalelo). The number of specimens in Djibouti is not known but the species seems quite common. This species has a strong impact on tourism and conservation education due to the fact that it occurs near the big capital city of Djibouti, and also because it has unique biological and adaptation features.

Pelzeln Gazelle (Gazella dorcas pelzelni):

Maintain the current status of the populations.

Notes from workshop:

Very common species in Djibouti. Occurs almost everywhere.

Salt's Dik-dik (Madoqua saltiana):

Maintain the current status of the populations.

Notes from workshop:

Very common species in Djibouti. Occurs almost everywhere.

Greater Kudu (Tragelaphus strepsiceros chora):

Create the necessary conditions for its return to Djibouti

Notes from workshop:

Probably extinct from Djibouti. It is necessary to verify its

present status in the country.

Lesser Kudu (*Ammelaphus imberbis imberbis*) :

Create the necessary conditions for its return to Djibouti

Notes from workshop:

Probably extinct from Djibouti. It is necessary to verify its present status in the country.

Status of selected species

Based on the presentations at the preceding seminar and the participant input during the workshop the status of the selected species can be summarised as shown below. The distribution maps produced during the workshop can be found in Appendix 4, and the participants volunteering for being the species contact persons are listed in appendix 7.

Antelopes:

Beisa Oryx (*Oryx beisa*) :

The beisa Oryx is very rare in Djibouti (no more than 30 specimens), occurring mainly in the Plateau du Gammaré, and crossing the border to Ethiopia very frequently.

Beira (*Dorcatragus megalotis*) :

IUCN Status : VU (C1). Survival under threat.

This classification is perfectly appropriate to Djibouti. In its current area of distribution (1990s), a mountain zone of about 400 km² south of the town of Ali-Sabieh, 7 out of 13 massifs are certainly occupied. 4 massifs near to Ali-Sabieh, Ali-Adde and Assamo are no longer occupied.

The population in Djibouti is estimated at 100-150, with a

density 100 times less than that of small livestock, principally goats. The main threat is large scale cutting down of acacias for charcoal . Acacias (*A. etbaica*) are essential for the beira population.

Klippspringer (*Oreotragus oreotragus*)

This species is limited to the mountain massifs of the north of the country : Goda, Dadar, Mabla. The population overall is being maintained, but long-term survival of the species is conditional on the permanent availability of food resources which are subject to strong human pressure in the higher altitude zones : wood, branches, roots, fruit, bark, flowers (acacias) etc.

Soemmering's Gazelle (*Nanger soemmeringii*) :

It is a very important species for Djibouti as it is endemic to the horn of Africa and with a very restricted distribution: East of Ethiopia, Somaliland at the border with Djibouti and still common in Djibouti especially in the Grand Bara, the Petit Bara, and also in the North. This species is in conflict with local human interests because it uproots the grass.

Gerenuk (*Litocranius walleri*) :

There is a protected area for the species in Djibouti (Djalelo). The number of specimens in Djibouti is not known but the species seems to be quite common. This species has a strong impact on tourism and conservation education due to the fact that it occurs near the big capital city of Djibouti, and also because it has unique biological and adaptation features.

Pelzeln's Gazelle (*Gazella dorcas pelzelni*):

Very common species in Djibouti. Occurs almost everywhere.

Salt's Dik-Dik (*Madoqua saltiana*):

Very common species in Djibouti. Occurs almost everywhere.

Greater Kudu (*Tragelaphus strepsiceros chora*):
Probably extinct from Djibouti.

Lesser Kudu (*Ammelaphus imberbis imberbis*):
Probably extinct from Djibouti.

Equids :

Somali wild ass (*Equus africanus somaliensis*):
Red List Assessment: Critically Endangered (CR) Red List
Criteria:C2a(i)

The historical distribution of the wild ass, based on documented specimens and scientific observations collected in the 19th and 20th centuries, was along the northeast coast of Djibouti and near Lake Abbe in the south-western part of Djibouti.

The distribution of the African wild ass indicates that the physiological adaptations of this species to arid conditions, including a labile body temperature, an ability to reduce evaporative water loss when dehydrated and a tolerance for a loss of 30% of its body weight are critical factors in this species ability to exist in very hot arid environments (Bauer et al 1994)

Recent surveys indicate that the Somali wild ass may still be present in the Gamarre Plateau area and definitely exists in this area on the Ethiopian side of the border.

Grevy's Zebra (*Equus grevyi*):
Red List Assessment: Endangered (EN) Red List Criteria: A2ac;
C2a(i)

The Grevy's zebra is not present in Djibouti today. A possible earlier presence of Grevy's zebra was reported by three observations of 'zebras' from the same author, Jules Borelli, during his geographical, meteorological, ethnographic and linguistic surveys in 1886. Borelli's observations alone are vague and do not specifically refer to Grevy's zebra. Other historic records (Yalden et al 1996) indicate that the closest



occurrence of Grevy's zebra was in Ethiopia near the Awash River at least 150 km from the border of Djibouti. Furthermore numerous reliable expeditions in Djibouti did not report the presence of Grevy's zebra. Research on the ecological, climatic and historic geographical distribution of the African wild ass and the Grevy's zebra documented significant differences in their resource requirements and historic ranges. Essentially, Grevy's zebra ranges had significantly higher rainfall and NDVI (primary productivity) and lower temperatures than the African wild ass ranges (Bauer et al 1994). This could indicate a low probability of a former or present existence of the Grevy's Zebra in Djibouti today taking the resource requirements, tolerance of high temperatures and availability of water into consideration. However, research is continuing to identify other observations and references of Grevy's zebra presence in Djibouti in the past.

Threats and obstacles for selected taxa

Listed below are the main threats to the species or their habitat as well as other problems or obstacles that might impede reaching the goal set for each taxa. The identified threats/obstacles were written on differently coloured paper sheets taxa by taxa in order to be able to refer them to the relevant taxa after having been reorganised into thematic groups. The colours of the cards on the photographs thus indicate which taxon based working group identified the threat/obstacle:

- Birds (pink)
- Predators (yellow)
- Antelopes (orange)
- Equids (blue)

Rural land use

- Overgrazing
- Competition with livestock

- Disease transmission by livestock
- Unbalancing of ecosystems
- Lack of access to water
- Deforestation, wood collection
- Sedentarisation – conflict between pastoral practices and sedentarisation
- Migration of domestic animals under human control
- Habitat degradation (water, grazing)
- Stray dogs around settlements
- Pollution (garbage) around settlements and roads

Legislation, law enforcement and protected areas

- Lack of protected areas for the Somali wild ass
- Weak law legislation and law enforcement for protected areas and for environmental laws in general)
- Poor coordination between government and other agencies and local communities
- Lack of eco activities
- Increase in roads
- Modernisation; progress; urbanisation

Research

- Lack of scientific studies
- Lack of knowledge about livelihoods and culture in key areas
- Lack of ecological data
- Lack of suitably trained people
- Limited capacity

Education and awareness

- Lack of awareness of the richness / importance / value – economic and ecological – of biodiversity (certain species are unknown)
 - o destabilisation of the food chain
 - o disturbance of the ecological balance
- Lack of awareness of the impact of human actions on the environment and the ecological processes
 - o wood cutting
 - o overgrazing
 - o sand collection
 - o pollution
- Lack of access to information about good practices
- Poaching
- Snaring / poisoning
- Diabolisation of predators
- Animal traffic and trade
- Lack of integration of environmental awareness in the School curricula
- Lack of training of teachers
- Lack of accept of predators
- Insufficient value of emblematic species
- Traditions that are harmful to biodiversity

Issues very specific to one taxon

- Sand extraction in the wadis and plains (on specific sites)
- Disease of Juniper trees (important for the Francolin) [dealt with in the specific action plan for the Francolin]
- Activities of refugies (around refugee camps) (particularly affects the Beisa)
- Military manoeuvres in the areas concerned
- Human disturbance (of island nesting birds)
- Introduced predators (of island nesting birds)
- Hybridisation (of Somali wild ass with domestic

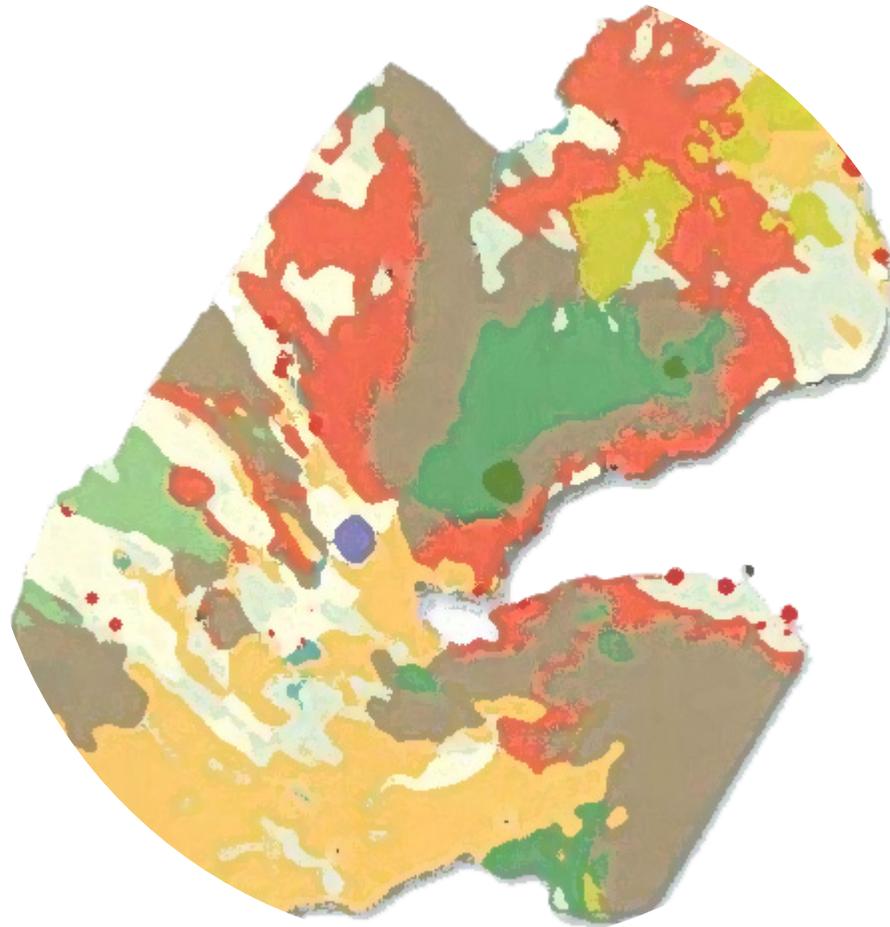


donkeys)

General issues and issues outside of the scope of this workshop

- Climate change
- Drought
- Erosion
- Lack of finances

OBJECTIVES AND ACTIONS



OBJECTIVES AND ACTIONS

The threats and obstacles listed above were used by the theme based working groups to develop objectives (i.e. solutions) and actions (to reach the objectives). In the following table the identified objectives and actions are listed for the selected themes, but unprioritised. Due to time pressure no prioritisation of the actions was done during the workshop. It will thus be a first action of the implementing part before implementing this action plan to make this prioritisation. The actions, however, give an idea of how to achieve the objectives. Furthermore it should be noted that some actions need to be elaborated further in order to become operational. This goes especially for actions relating to specific species where the development of more specific species conservation action plans are recommended.

Rural land use

Overall objective: re-balance sedentary way of life with sustainable use and fair distribution of natural resources.

Points to be taken into consideration:

The action plan defined by the group is complex and difficult to implement. It is not realistic to envisage it for the whole country. The group proposes to select three to five sites representing major types of agriculture, forestry and pastoralism in the country.

In all activities, taking into account the specific requirements of the conservation of the key species involved is a constant and a methodological imperative.

The identification of income-generating activities is also a methodological imperative. It is important that a governmental budget is guaranteed for the duration of the plan. A cross-disciplinary fund is proposed.

Prosopis is considered here as an important factor in the of loss of plant and animal biodiversity .

The issue of hybridization of the wild ass with domestic ass is a critical for the conservation of the wild ass. It justifies the creation of a specific protected area (Gamarré / Dakka).

Objective 1 : Land use planning : through the populations' vision of their territory, plan the use and accessibility of land by involving other stakeholders (participatory approach)

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
--------	------------	---------------------	---------------	----------------------	-------

1.1 - Identify selection criteria (flagship species, existence of protected area, etc.) for the identification of the 3-5 sites mentioned in 1.2.	2012	Ministry of Environment	Multidisciplinary workshop identified by the Ministry of Environment	Criteria selected	500
1.2 - Selection of 3 to 5 driver sites to implement the Action Plan - North, Central, Southern	2012	National and regional authorities	Opinion of the Panel: importance of consulting with CSOs	Sites are selected	0
1.3 - Analyse and evaluate the Francolin project in Goda	2013	National and regional authorities,	CSOs, NGOs, international experts	Project has been analysed and evaluated and results have been published	Included in Action 1.4
1.4 - Develop a specific action plan for each of the selected sites, taking account of: analyses of other existing and past projects, consultations, agreements, inventoris, problems, income generating activities, organisation, indicators of success, budget, etc..	2013	National and regional authorities	CSOs, NGOs, international experts	Action Plan available and valid. The action plan includes all sub-objectives and takes into account conservation requirements related to the key species considered.	Min 100.000
1.5 - Implementation of action plans	2020	National and regional authorities,	CSOs, NGOs, international experts	Evaluation-monitoring according to criteria of Action 1.3	10 - 15 million according to Action 1.3
1.6 - Evaluation, capitalisation and national and international distribution of action plan achievements	2020	National and regional authorities,	CSOs, NGOs, international experts	An international conference organized	50 000

Objective 2:Water: increase the amount of water available for humans and natural resources and manage water wisely

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
2.1 - Develop inventory of existing water resources	2013	Ministry of Energy and Water, CERD		Inventory published	Included in the global budget
2.2 - Identify existing problems through a participatory approach	2013	Ministry of Energy and Water, CERD	Local authorities and local community representatives	Minutes of meetings are produced, and problems are identified	Idem

2.3 - Identify potentially additional studies	2013-2014	Ministry of Energy and Water, CERD	National expertise (CERD) and / or external	Additional studies are identified and project proposals approved	Idem
2.4 - Develop a specific action plan, including evaluation criteria, on the management of water resources , taking into account the behaviour of the predators	2014	Ministry of Energy and Water	CERD	A water management action plan approved by the Ministry. This plan is a component of the general action plan (Objective 1)	Idem
2.5 - Implement the action plan and evaluate its implementation	2020	National and regional authorities,	CSOs, NGOs, international experts	The plan has been implemented and evaluated according to Action 2.4 criteria	Idem

Objective 3: Plant Resources: Combat deforestation and work for reforestation

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
3.1 - Update the existing inventory of plant resources (pastures, woods) and analyse ongoing and completed projects related to plant resources	2012	Ministry of Agriculture and Environment	CERD, University	Inventory published and approved by the relevant ministries?	Idem
3.2 - Identify existing problems in forest conservation through a participatory approach	2012	Ministry of Agriculture and Environment	Local authorities and local community representatives	Minutes of meetings are produced, and problems are identified	Idem
3.3 - Identify potentially additional studies required	2013	Ministry of Agriculture and Environment	National or international experts	Additional studies are identified and described as project proposals	Idem
3.4 - Develop a specific action plan, including evaluation criteria, on the management of plant resources: grazing, timber, firewood /charcoal, sustainable local customs etc.	2013	Ministry of Agriculture and Environment, Home Office		An action plan has been developed	Idem
3.5 - Eradicate and / or prevent the establishment of Prosopis in selected areas	2013-2020	Ministry of Environment	Local communities and local authorities	Absence of Prosopis confirmed	Idem
3.6 - Implement the action plan and evaluate after the implementation	2013-2020	Ministry Agriculture ADDS		Evaluation-monitoring according to Action Plan criteria	Idem

Objective 4: Competition between wildlife and livestock /disease transmission/_ hybridisation: Control livestock movement, if necessary by creating protected areas and establish epidemiological monitoring of livestock

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
4.1 - Identify competition problems between livestock and wildlife and develop an action plan of how to decrease these problems (issues of herd mobility and settlement)	2013	Directorate of Livestock	CERD, University, local and international expertise	Action plan is produced	Idem
4.2 - Create a protected area in the region of Gamarré for wild ass and beisa oryx (community protected area issue)	2013	Ministry of Environment ,	Local authorities	Government decree published	Idem
4.3 - Develop training courses for local people in intensive agropastoralism (Livestock issue) and conduct training sessions	2015	Ministry Agriculture, Directorate of Livestock	Local expertise, international expertise	Traing course is developed, and at least one training session has been conducted. Evaluation report available.	Idem
4.4 – Conduct basic veterinary monitoring of livestock herds and conduct in situ training of veterinary assistants.	2013	Directorate of Livestock,	Sub-regional offices	the training esssions are developed, and at least one session has been conducted	Idem
4.5 – Organise an interactive workshop to find a solution to the loss of cattle and camels due to predation by leopards.	2013	Ministry of Environment	DECAN, Regional authorities	Consensus on one or different methods to protect the livestock and one their experimentation	1.500 to 2.000 €

Goal 5: Erosion: strengthen the actions of restoration and protection of plant resources by vigorous actions (e.g. selection of appropriate local plant species, soil surface management)

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
5.1 –Establish current state of affairs and identify and analyse current and completed projects of relevance for the goal	2013	Ministry of Environment, Ministry of Universities and Research	CERD, University, local expertise, international expertise	Technical report produced and approved by the Ministry of Environment	Idem
5.2 - Conduct specific studies on the native plants most effective in terms of erosion control (linked to the mapping project of CERD)	2013	Ministry of Environment.,	CERD, University, local expertise, international expertise	Technical report produced and approved by the Ministry of Environment	Idem

5.3 - Develop an action plan, including evaluation criteria	2013	Agriculture Ministry, Ministry of Environment	CERD, University, local expertise, international expertise	Action plan produced and approved by the Ministry of Environment/Ministry of Agriculture	Idem
5.4 - Implement the action plan and evaluate the implementation	2013-2020	Ministry of Agriculture, Ministry of Environment	Local communities	Soils restored with vegetation	Idem

Objective 6: Pollution: Improve waste management and control pollution due to human activities through the enforcement of existing laws.

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
6.1 – Establish the state of affairs and identify and analyse current and completed projects of relevance for the goal	2014	Ministry of Environment.,	CERD, University, Home Office, international expertise, trade Ministry	Technical report produced and approved by the Ministry of Environment	Idem
6.2 - Develop an action plan, including criteria of evaluation	2014	Ministry of Environment	Home Office, local populations, trade Ministry	Action plan produced and validated	Idem
6.3 - Implement the action plan and evaluate the implementation	2014-2020	Ministry of Environment,	Home Office, local populations, trade Ministry	Environment healthy and waste treated	Idem
Sub-Action: Provide information to local communities about the existing legislation and its application; strengthen and train agencies (police, justice, technical departments).	2015	Ministry of Env,	Home Office, local associations, local authorities	People informed, training conducted and evaluation report available	Idem
<i>Sub-Action: Recycling and waste separation</i>	<i>2020</i>	<i>Ministry of Environment,</i>	<i>CERD, Home Office, trade Ministry</i>	<i>No more waste dumping</i>	<i>Idem</i>

Objective 7: Stray dogs: elimination of stray dogs by appropriate means without risk for wildlife and livestock (sterilization + elimination)

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
7.1 -Analyse current situation and make use of international experiences	2015	Directorate of livestock		Technical report produced and approved by the Directorate of Livestock	Idem

7.2 - Define and implement the most appropriate measures (analysis of the issue of dog importation)	2016	Directorate of livestock,	Home Office, local authorities	No more stray dogs	idem
-----------------------------------------------------------------------------------------------------	------	---------------------------	--------------------------------	--------------------	------

Legislation

Protected Areas and Legislation

Preamble:

- The time parameter is closely related to finance. In this table, the dates of implementation are given assuming that funds are acquired.
- Priority sites for existing critical species: Forest Day and Mabla (francolin, panther, oréotrague) Assamo (beira, Panther), Djallelo (Gerenuk)
- The priority levels are highlighted in yellow.

Objective 1 : To implement the status of existing protected areas (Level 1)					
ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
1.1 - Organize consultation workshops with local communities affected by each protected area in order to ensure local influence		Department of Environment, Ministry of Agriculture, regional prefects, Regional Council,	Local NGOs, National Union of Women	Workshops conducted and reports published	
1.2 - Define the boundaries of each protected area	2012 -2013	Department of Environment, regional prefects, Regional Council	NGOs	Limits defined and published, and maps produced	
1.3 - Put up signs to indicate borders of protected areas	2013 - 2014	Department of Environment, Ministry of Research		Signs in place and borders clearly indicated	
1.4 - To develop management plans for each PA	2013 -2014	Department of Environment	NOGs	Management plans developed and published	
1.5 - Identify and recruit necessary staff for each PA	2013	Department of Environment, regional prefects,	Local communities	Necessary staff positions identified and recruited	

1.6 - Restore sensitive ecosystems in existing PAs (eg Day)	2012 - 2016	Department of Environment, Ministry of Agriculture,	Research Department, NGOs	Sensitive ecosystems defined, and plans for possible restoration developed and implemented	
1.7 - Optimize the local benefit of each protected area	2012 - 2016	Department of Environment, Ministry of Agriculture,	Research Department, NGOs		

Objective 2 : Mobilization of financial and human resources to manage the network of protected area (Level 1)

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
2.1 - Create an institution at ministerial level responsible for protected areas	2012 - 2016	Department of Environment			
2.2 - Make funds available for the running of PAs	2012 - 2016	Department of Environment			
2.3 - Apply for external funding (WB, FFEM, EU) for ???	2012 - 2016	Department of Environment			

Objective 3 : To create a network of protected areas representative of Djibouti's ecosystems (Level 2)

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
3.1 - Update the National Monograph * t	2012 - 2016	Department of environment and Ministry of Agriculture	National and international NGOs, CERD?		
3.2 - Select potential PA sites according to ecosystem criteria and priority species (Gamarré: oryx, wild ass, Soemmering's gazelle, Rüppell's vulture, serval?)	2012 - 2016	Department of environment and Ministry of Agriculture	National and international NGOs, CERD?		
3.3 - Develop management plans for each protected area	2012 - 2016	Department of environment and Ministry of Agriculture	National and international NGOs		
3.4 - Include the selected PAs in the IUCN list of Protected Areas	2012 - 2016	Department of environment			

Objective 4 : To address illegal logging of fauna and flora (Level 1)

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
4.1 – Establish an environmental police force to control wildlife trafficking	2012 - 2016	Ministry of Agriculture, Ministry of Defense, Finance Ministry	National and international NGOs		
4.2 – Enforce existing environmental laws and educate local communities in order to stop poaching on all fauna and flora, in particular the key species, on sites where this occurs	2012 - 2016	Department of environment and Agriculture Ministry	Regional prefects, regional councils.		
4.3 – Develop and conduct training opportunities for police, customs officers, veterinarians, ecoguards of Forêt du Day etc. in legislation, animal care and species identification	2012 - 2016	Department of environment and Agriculture Ministry, Home Office, Ministry of Defense,	National and international NGOs		
4.4 – Raise awareness about the consequences of illegal off-take through media, direct education, community structures etc.	2012 - 2016	Department of environment and Agriculture Ministry, Ministry of Education,	National and international NGOs, local communities		

Objective 5 : Review and update the laws relating to biodiversity (Level 2)

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
5.1 – Organize a national workshop for the harmonization of national and international laws	2012 - 2016	Department of environment and Agriculture Ministry, Ministry of Justice	National and international NGOs		
5.2 - Harmonize national legislation with international conventions (CITES, CMS, Ramsar, AEWA, Jeddah Convention, OIE)	2012 - 2016	Department of environment and Agriculture Ministry, Ministry of Justice,			

5.3 – Prepare and publish a manual for all stakeholders (police, ecoguards ...) on regulations relating to biodiversity conservation and	2012 - 2016	Department of environment and Agriculture Ministry, Ministry of Justice	National and international NGOs		
------------------------------------------------------------------------------------------------------------------------------------------	-------------	-------------------------------------------------------------------------	---------------------------------	--	--

* Published in 2000 and developed during development of the National Strategy for Biodiversity

Research

Objective 1: Establish a sub-department of ecology at the university					
ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
1.1 - Regulation for the creation of a sub-department of ecology	2012-2014	Ministry of Higher education and research		Gazetting of the establishment of the sub-department in the “Journal Officiel”	Hours worked
1.2 - Hire 2 resource persons (2 Phd lecturers, animal ecology and plant ecology)	2012-2014	Ministry of higher education and research, Ministry of finance, Ministry of employment.		Persons are identified and contracts are signed by the parties	50000\$/year
1.3 - Identify and purchase necessary equipment for field work	2012-2014	Ministry of Higher education and research	Subdepartment of Ecology?	The identified equipment is purchased and made available	300000\$
1.4 - Identify and purchase necessary equipment for teaching	2012-2014	Ministry of Higher education and research	Sub-department of Ecology?	The identified equipment is purchased and made available	100000\$
1.5 - Provide funds for field work identified in objective 3.	2012-2014	Ministry of Higher education and research			5000\$

1.6 - Provide funding for students to be involved in the field work by the ministry of environment	2012-	Ministry of environment and/or Ministry of Higher education and research		X number of paid students are active in the field	15000\$/year
1.7 - Provide tuition fee awards to encourage students to enroll in ecology	2012-	Ministry of Higher education and research		Scholarships have been established	1000\$

Objective 2: Establish a department of ecology for terrestrial ecosystems in the Ministry.

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
2.1 - Regulation for the creation of a department of ecology in the Ministry	2012-2014	Ministry of environment and/or Ministry of Higher education and research		Gazetting of the establishment of the sub-department in official journal	Travel time
2.2 - Hire 2 resources persons (2 Phd lecturers, animal ecologist and ecosystems ecologist)	2012-2014	Ministry of environment and/or Ministry of Higher education and research, Ministry of finances, Ministry of employment		Persons are identified and contracts are signed by the parties	50000\$/year
2.3 - Identify and purchase necessary equipment for field work	2012-2014	Ministry of environment and/or Ministry of Higher education and research	Sub-department of terrestrial Ecosystems?	The identified equipment is purchased and made available	300000\$
2.4 - Provide funds for field work identified in objective 3	2012-2014	Ministry of environment and/or Ministry of Higher education and research			20000\$

Objective 3: To prioritise and organise research on important species and their ecosystems.

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
3.1 - Analyse all ecosystems in Djibouti to determine presence/absence of endemic and/or threatened plant and animal species in order to prioritize where protected areas are needed.	2012-2015?	Ministry of environment, Ministry of agriculture, Ministry of water and energy, Ministry of higher education and research, Ministry of economy,	Home Office, NGOs	Report with findings, including maps, is prepared.	300000\$
3.2 - Ecosystem analysis of priority areas for protection in order to provide information for the development of management plans, this will include soil, vegetation, herbivores, birds, predators and socio-economic status of local people	2 years each	Ministry of environment, Ministry of agriculture, Ministry of water and energy, Ministry of higher education and research, Ministry of economy,	Home Office, NGOs	Priority areas are analysed and reports are available???	100000\$
3.3 - Prepare and conduct action planning workshops for all stakeholders involved in/ affected by the development of action plans for endemic and/or threatened plant and animal- species	After having conducted 3.2 (4 days per Action Plan)	Ministry of Environment	Ministry of agriculture, Ministry of water and energy, Ministry of higher education and research, Ministry of economy	Workshops are conducted and workshop reports are published	15000\$/WS
3.4 - Analyse alternative sources of livelihood and income for local communities in designated protected areas	1 year each after implementation of action step 3.2	Ministry of environment, Ministry of agriculture, Ministry of water and energy, Ministry of higher education and research, Ministry of economy	Home Office, NGOs	Report with identification and prioritisation of alternative sources of income is published	50000\$
3.5 - Conduct a feasibility study for a transboundary protected area in Gamari for the restoration of the Beisa Oryx and African Wild Ass and to contribute to the conservation of vultures and migratory birds	2013	Ministry of Environment + Ethiopian Wildlife Conservation Authority	Relevant research personel	The study is carried out and the results are published in a report approved by the authorities on both sides of the border	40000\$

3.6 - Create a central data base and library for all information on ecosystems, protected areas, GIS mapping, population census, historical and research documents.	2012	Ministry of environment		The database and the library are established and made available to relevant parties	100000\$
---------------------------------------------------------------------------------------------------------------------------------------------------------------------	------	-------------------------	--	-------------------------------------------------------------------------------------	----------

Objective 4: Provide basic training in ecology for the field workers.

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
4.1 - Develop and conduct on an annual basis short intensive practical training courses for rangers and ecoscouts. Duration: 1 month	2013	Ministry of environment and/or Ministry of Higher education and research		The training courses are developed and made available to rangers and ecoscouts	15000\$/course
4.2 - Develop and conduct on an annual basis open training courses for specialists and local people in land use management. Duration: 2 weeks.	2013	Ministry of agriculture, Ministry of environment		The training courses are developed and made available to specialists and local people	
4.3 - Finance one year of diploma courses in wildlife ecology and management	1 year	Ministry of higher Education?	University	10 Students graduates	10000\$/student
4.4 - Develop and conduct a one week short basic training course on an annual basis for customs, police and veterinarians in the identification and apprehension of illegal wildlife trade, CITES etc..	2013	Home office, Ministry of finances, Ministry of agriculture, Ministry of environment		The training course is made available to customs police and veterinarians	

Objective 5: There is need for funds to support ecological research and data collection.

Objective 6: To finance the establishment of training and professionalization in Ecology (University, Department of Ecology of terrestrial ecosystems, basic training, etc..).

Education

PRIORITY 1 : INFORMATION

Objective 1: the population is aware of the ecological and economic values of the Djiboutian biodiversity +

Objective 2: the population is aware of its role for the preservation of the ecological balance

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS	THEME(S) ADDRESSED	TARGET AUDIENCE(S)
1.1 - Formalize a national annual week of environment	2012 - ...	Ministry of Environment	financial Partners experts civil society	Week formalized and held at least once		Ecological and economic values of biodiversity; consequences of human activities on nature; environmental laws	Civil society
1.2 - Distribute the movie about the francolin in 4 languages (French, Affar, Somali, Arabic)	2012-2013	Djibouti Nature; Zoo Landau		Movie shown in villages, schools, on TV	~ 8.000 €	Francolin protection	Everyone that has access to TV
1.3 - Work with the religious leaders in order to get the biodiversity theme included in the sermons on Friday	2012	Ministry of Environment Ministry of Religious affairs	Religious leaders?	Theme of biodiversity discussed in the sermons at least one Friday every month	None	Ecological and economic values of biodiversity; Consequences of human activities on nature environmental laws	Everyone participating in the sermon
1.4 - Integrate ecology into the culture of the rural communities through songs, poems, sketches	2013	Ministry of Environment	Regional authorities, Local community leaders?	Ecology is mentioned in the communities communication and cultural expression		Ecological and economic values of biodiversity Consequences of human activities on nature environmental laws	Rural communities
1.5 - Organize round tables on the ecological and economic values of biodiversity	2013	Ministry of Environment	Ministry of University Education and Research ONGs, DECAN	Round tables have been conducted in at least x communities		Ecological and economic values of biodiversity	Civil society

1.6 - Organize a expert platform to raise awareness among the decision makers (men and women)	2013	Ministry of Environment	NGOs, DECAN	A platform is established and awareness activities have been started	Low : cost included in the expertise missions costs	Ecological and economic values of biodiversity; Consequences of human activities on nature; environmental laws	Politicians, religious leaders, traditional leaders, local authorities, leaders of associations, uniformed men
1.7 - Develop a TV and radio spot of on ecology in 4 languages (French, Affar, Somali, Arabic) to be broadcast interspersed between the daily television news, and/or into the show “religion and society”.	2014	Ministry of Environement	NGOs, medias (RTD, La Nation, ...)	The TV spot has been developed and has been sent at least once	8.000 €	Ecological and economic values of biodiversity; Consequences of human activities on nature; environmental laws	Everyone that has access to TV or radio
1.8 - Produce television documentaries as a series on the symbolic species of Djibouti in 4 languages (French, Affar, Somali, Arabic), based on the example of the francolin movie	2015	Ministry of Environment	NGOs, medias (RTD, La Nation, ...)	The documentaries have been produced and have been shown on a known TV channel at least once	20.000 €	Information about the status of flagship species	Everyone that has access to TV

PRIORITY 1 : INFORMATION

Objective 3: The people are aware of the environmental legislation

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS	THEME(S) ADDRESSED	TARGET AUDIENCE(S)
3.1 - Mobilize the students in faculty of law to raise awareness with regard to environmental legislation	2013	Ministry of Environment	Ministry of University Education and Research, Ministry of Justice	At least 2 students in Law commit themselves to this objective	None	Environmental Laws	Students in law, possibly advocates

PRIORITY 2 : TRAINING (EDUCATION)**Objective 4: The environmental awareness is integrated in an adequate way and put into practice in school curricula**

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS	THEME(S) ADDRESSED	TARGET AUDIENCE(S)
4.1 - Promote environmental education to the Ministries of Education and Higher Education and Research	2013-2014	Ministry of Environment	NGO activist for environmental causes	Awareness meetings / workshops are held with the Ministry of Education and the participation of the faculty	None	Integration of environmental issues in the school programmes	Students in law, possibly advocates
4.2 - Develop a list with already existing environmental education materials	2012	Ministry of Education	CRIPEN CFPEN Experts	A list of materials is produced and a sample of each material is available for evaluation	None	Ecological and economic values of biodiversity; Consequences of human activities on nature; environmental laws	Schools
4.3 - Identify the essential (main) needs regarding environmental education materials for the different regions of Djibouti	2012-2013	Ministry of Education	Inspectorate of the Ministry of Education, CRIPEN CFPEN Experts	A list of requirements is in place	2.000 €	Ecological and economic values of biodiversity; Consequences of human activities on nature; environmental laws	Schools
4.4 - Identify resources persons / institutions to help with the production of the necessary environmental education materials	2012-2013	Ministry of Education	Regional Inspectorate of the Ministry of Education CRIPEN CFPEN Experts	People are identified and have accepted to participate	None	Ecological and economic values of biodiversity; Consequences of human activities on nature; environmental laws	
4.5 - Prepare textbooks and media adapted for ecology and environmental education	2013-2014	Ministry of Education	CRIPEN	Textbooks have been produced and are spread in schools	>100.000 €		Schools

4.6 - Develop and implement the concept of environmental clubs in schools	2013-2014	Ministry of Environment	Already existing environmental clubs, NGOs, Teachers, Parents	At least x environmental clubs have been developed and are active	5.000 €	Ecological and economic values of biodiversity; Consequences of human activities on nature	Schools
4.7 - Organize school outings / excursions, for example to DECAN, to learn about conservation	2012	Ministry of Education	DECAN, other NGOs	At least 30 excursions with focus on environmental issues are conducted on a yearly basis	<15.000 €	Ecological and economic values of biodiversity; Consequences of human activities on nature	Schools
4.8 - Organize competitions, games, extracurricular events on the themes of environment and biodiversity	2013	Ministry of Environment	Environmental clubs DECAN, other NGOs, Schools	At least 5 different kinds of events have been developed and conducted during the academic year	10.000 €	Ecological and economic values of biodiversity; Consequences of human activities on nature	Schools

PRIORITY 2 : TRAINING (EDUCATION)

Objective 5: There is an initial professional training of teachers in environmental education field

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS	THEME(S) ADDRESSED	TARGET AUDIENCE(S)
5.1 - Organise practical training sessions for the managers of the Ministry of Environment and Ministry of Education	2013-2014	DECAN	Experts NGOs	The officials of the two departments have internship	2.000 € per session	Ecological and economic values of biodiversity; Consequences of human activities on nature environmental laws	Officials from the Ministry of Environment and Ministry of Education
5.2 - Include modules on environment and biodiversity in the training of the trainers	2014-2015	Ministry of Education		Modules are created and added		Ecological and economic values of biodiversity; Consequences of human activities on nature; environmental laws	Teachers + others to define

5.3 - Train and strengthen the conservation capacities of the organizations of the civil society, the veterinarian technicians and assistants in the regions	2013	Ministry of Environment	Ministry of Agriculture Experts NGOs	2 training courses have been held for each target audience with a positive evaluation		Ecological and economic values of biodiversity; Consequences of human activities on nature; environmental laws	Associations, local communities, local government, community structures, regional technicians and veterinary assistants ...
--------------------------------------------------------------------------------------------------------------------------------------------------------------	------	-------------------------	--------------------------------------------	---------------------------------------------------------------------------------------	--	----------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------

PRIORITY 3: SPECIES PROMOTION

Objective 6: The iconic species of Djibouti are valued and a source of pride, the predators are tolerated

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS	THEME(S) ADDRESSED	TARGET AUDIENCE(S)
6.1 - Produce postcards, postage stamps, huge posters, leaflets, notebooks and stickers of symbolic species, to post in tourist offices, travel agencies abroad, the airport, military posts, embassies and consulates, socio-professional centres etc	2012-2013	Ministry of Environment	Tourist offices	Communication media are produced and widely distributed	50.000 €	Flagship species of Djibouti	Djiboutians and tourists
6.2 - Organize workshops to raise awareness on the role of predators for biodiversity	2013-2014	DECAN	Experts NGOs Environment and Agriculture	At least 2 workshops have been conducted in the different regions	5.000 €	Role of predator in the ecological balance	Breeders Teachers
6.3 - Create a regional logo / flag with the image of an iconic animal, reflecting the region (Assamo – Beira / Adaïlou – Klipspringer / Day - Francolin...)	2013	Ministry of Environment	Prefectures Regional authorities Tourist Offices DECAN experts	Each region has developed and adopted its logo	10.000 €	Flagship species of Djibouti	Djiboutians, Tourists

6.4 - Develop partnerships with private companies for the promotion of one of the Djiboutian symbolic species	2014	Ministry of Environment	Chamber of Commerce NGOs	At least one partnership per iconic species has been developed		Flagship species of Djibouti	Private companies
6.5 - Initiate showings of documentaries on the symbolic species of the country in each region and in hotels	2015	Ministry of Environment	Regional authorities, Tourist offices NGOs Hotels	Each region shows the documentary at least once a year in each of its schools and at least 2 hotels of Djibouti (town) show it	Low	Flagship species of Djibouti	Civil society and tourists
6.6 - Develop opportunities for eco-tourism (see also 8.4)	2014	Ministry of Environment	Regional authorities, Tourist offices NGOs	One éco-tourism activity is provided in each region and is available by tourist offices	5.000 € per activity	Flagship species of Djibouti	Tourists (foreigners)

PRIORITY 4: BEHAVIOURAL CHANGE

Objective 7: People adopt sustainable good practices

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS	THEME(S) ADDRESSED	TARGET AUDIENCE(S)
7.1 - Organize practical activities of environmental protection in close collaboration with the local communities (protection of shrubs, fights anti-erosion...)	2012-2014	Ministry of Environment	NGOs	At least 4 practical activities have been developed and implemented	Low	Good sustainable practices	Local communities
7.2 – Revive and revise the traditional and ancestral practices in sustainable land use, ...	2012-2014	Ministry of Environment	Ministry of Agriculture NGOs	The emergence of at least one traditional practice is noticed	Low	Good ancestral practices	Local communities
7.3 - Develop a system of recognition (/award) of the community having the best practices (annual or biannual “competition”)	2015	Ministry of Environment	NGOs	Award(s) have been established and granted at least once		Good sustainable practices	Local communities

PRIORITY 4: BEHAVIOURAL CHANGE

Objective 8: The population has information and opportunities to set up economic alternatives in the traffic

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS	THEME(S) ADDRESSED	TARGET AUDIENCE(S)
8.1 - Promote development of a variety of alternative income activities via meetings and trainings in villages (agro-pastoralism, agriculture, handicrafts, ecotourism)	2013-2017...	Ministry of Environment	Ministry of Agriculture NGOs	The sources of income are diversified in rural societies, the over-grazing phenomenon decreases and the vegetal cover increases	5.000 €	Alternative activities	Local communities
8.2 - Develop an array of best practices via inter-regional or inter-villages meetings (model EVA/Djibouti Nature)	2013-2017...	EVA and DECAN	Ministries Regional authorities NGOs	Inter-village meetings are held	500 € per meeting	Alternative activities	Local communities
8.3 - Support and supervise new initiatives (see 8.1)	2015-...	Ministry of Environment	Financial Partners	Funds are available for new initiatives		Alternative activities	Local communities
8.4 - Make the villages aware of the potential benefits of eco-tourism activities	2015-...	Ministry of Environment	Tourist offices NGOs	More villages get involved in eco-tourist activities		Ecotourism	Local communities

Species specific actions

In the following table the species specific action points extracted from the tables above are listed taxa by taxa and with reference to the objectives listed above:

Birds:

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
1.3 - Analyse and evaluate the Francolin project in Goda	2013	National and regional authorities,	CSOs, NGOs, international experts	Project has been analysed and evaluated and results have been published	Included in Action 1.4
1.3 - Analyse and evaluate the Francolin project in Goda	2013	National and regional authorities,	CSOs, NGOs, international experts	Project has been analysed and evaluated and results have been published	Included in Action 1.4
3.2 - Select potential PA sites according to ecosystem criteria and priority species (Gamarré: oryx, wild ass, Soemmering's gazelle, Rüppell's vulture, serval?)	2012 - 2016	Department of environment and Ministry of Agriculture	National and international NGOs, CERD?		
3.5 - Conduct a feasibility study for a transboundary protected area in Gamari for the restoration of the Beisa Oryx and African Wild Ass and to contribute to the conservation of vultures and migratory birds	2013	Ministry of Environment + Ethiopian Wildlife Conservation Authority	Relevant research personnel	The study is carried out and the results are published in a report approved by the authorities on both sides of the border	40000\$

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS	THEME(S) ADDRESSED	TARGET AUDIENCE(S)
1.2 - Distribute the movie about the francolin in 4 languages (French, Affar, Somali, Arabic)	2012-2013	Djibouti Nature; Zoo Landau		Movie shown in villages, schools, on TV	~ 8.000 €	Francolin protection	Everyone that has access to TV
6.3 - Create a regional logo / flag with the image of an iconic animal, reflecting the region (Assamo – Beira / Adailou – Klipspringer / Day - Francolin...)	2013	Ministry of Environment	Prefectures Regional authorities Tourist Offices DECAN experts	Each region has developed and adopted its logo	10.000 €	Flagship species of Djibouti	Djiboutians, Tourists

6.4 - Develop partnerships with private companies for the promotion of one of the Djiboutian symbolic species	2014	Ministry of Environment	Chamber of Commerce NGOs	At least one partnership per iconic species has been developed		Flagship species of Djibouti	Private companies
6.5 - Initiate showings of documentaries on the symbolic species of the country in each region and in hotels	2015	Ministry of Environment	Regional authorities, Tourist offices NGOs Hotels	Each region shows the documentary at least once a year in each of its schools and at least 2 hotels of Djibouti (town) show it	Low	Flagship species of Djibouti	Civil society and tourists

Antelopes:

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
3.5 - Conduct a feasibility study for a transboundary protected area in Gamari for the restoration of the Beisa Oryx and African Wild Ass and to contribute to the conservation of vultures and migratory birds	2013	Ministry of Environment + Ethiopian Wildlife Conservation Authority	Relevant research personnel	The study is carried out and the results are published in a report approved by the authorities on both sides of the border	40000\$
4.2 - Create a protected area in the region of Gamarré for wild ass and beisa oryx (community protected area issue)	2013	Ministry of Environment ,	Local authorities	Government decree published	Idem
1.6 - Restore sensitive ecosystems in existing PAs (eg Day)	2012 - 2016	Department of Environment, Ministry of Agriculture,	Research Department, NGOs	Sensitive ecosystems defined, and plans for possible restoration developed and implemented	
3.2 - Select potential PA sites according to ecosystem criteria and priority species (Gamarré: oryx, wild ass, Soemmering's gazelle, Rüppell's vulture, serval?)	2012 - 2016	Department of environment and Ministry of Agriculture	National and international NGOs, CERD?		
3.5 - Conduct a feasibility study for a transboundary protected area in Gamari for the restoration of the Beisa Oryx and African Wild Ass and to contribute to the conservation of vultures and migratory birds	2013	Ministry of Environment + Ethiopian Wildlife Conservation Authority	Relevant research personnel	The study is carried out and the results are published in a report approved by the authorities on both sides of the border	40000\$

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS	THEME(S) ADDRESSED	TARGET AUDIENCE(S)
1.8 - Produce television documentaries as a series on the symbolic species of Djibouti in 4 languages (French, Affar, Somali, Arabic), based on the example of the francolin movie	2015	Ministry of Environment	NGOs, medias (RTD, La Nation, ...)	The documentaries have been produced and have been shown on a known TV channel at least once	20.000 €	Information about the status of flagship species	Everyone that has access to TV
6.3 - Create a regional logo / flag with the image of an iconic animal, reflecting the region (Assamo – Beira / Adailou – Klipspringer / Day - Francolin...)	2013	Ministry of Environment	Prefectures Regional authorities Tourist Offices DECAN experts	Each region has developed and adopted its logo	10.000 €	Flagship species of Djibouti	Djiboutians, Tourists
6.4 - Develop partnerships with private companies for the promotion of one of the Djiboutian symbolic species	2014	Ministry of Environment	Chamber of Commerce NGOs	At least one partnership per iconic species has been developed		Flagship species of Djibouti	Private companies
6.5 - Initiate showings of documentaries on the symbolic species of the country in each region and in hotels	2015	Ministry of Environment	Regional authorities, Tourist offices NGOs Hotels	Each region shows the documentary at least once a year in each of its schools and at least 2 hotels of Djibouti (town) show it	Low	Flagship species of Djibouti	Civil society and tourists

Equids:

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
3.5 - Conduct a feasibility study for a transboundary protected area in Gamari for the restoration of the Beisa Oryx and African Wild Ass and to contribute to the conservation of vultures and migratory birds	2013	Ministry of Environment + Ethiopian Wildlife Conservation Authority	Relevant research personnel	The study is carried out and the results are published in a report approved by the authorities on both sides of the border	40000\$
1.6 - Restore sensitive ecosystems in existing PAs (eg Day)	2012 - 2016	Department of Environment, Ministry of Agriculture,	Research Department, NGOs	Sensitive ecosystems defined, and plans for possible restoration developed and implemented	

3.2 - Select potential PA sites according to ecosystem criteria and priority species (Gamarré: oryx, wild ass, Soemmering's gazelle, Rüppell's vulture, serval?)	2012 - 2016	Department of environment and Ministry of Agriculture	National and international NGOs, CERD?		
3.5 - Conduct a feasibility study for a transboundary protected area in Gamari for the restoration of the Beisa Oryx and African Wild Ass and to contribute to the conservation of vultures and migratory birds	2013	Ministry of Environment + Ethiopian Wildlife Conservation Authority	Relevant research personnel	The study is carried out and the results are published in a report approved by the authorities on both sides of the border	40000\$
3.6 - To continue research on the historical occurrence of Grevy's zebra in Djibouti, and if confirmed, consider the feasibility of a reintroduction'.	2013 onward	Ministry of Environment	Relevant research personnel IUCN SSC Equid Specialist Group	Research is conducted and analysed with regard to a potential reintroduction of Grevy's zebra.	

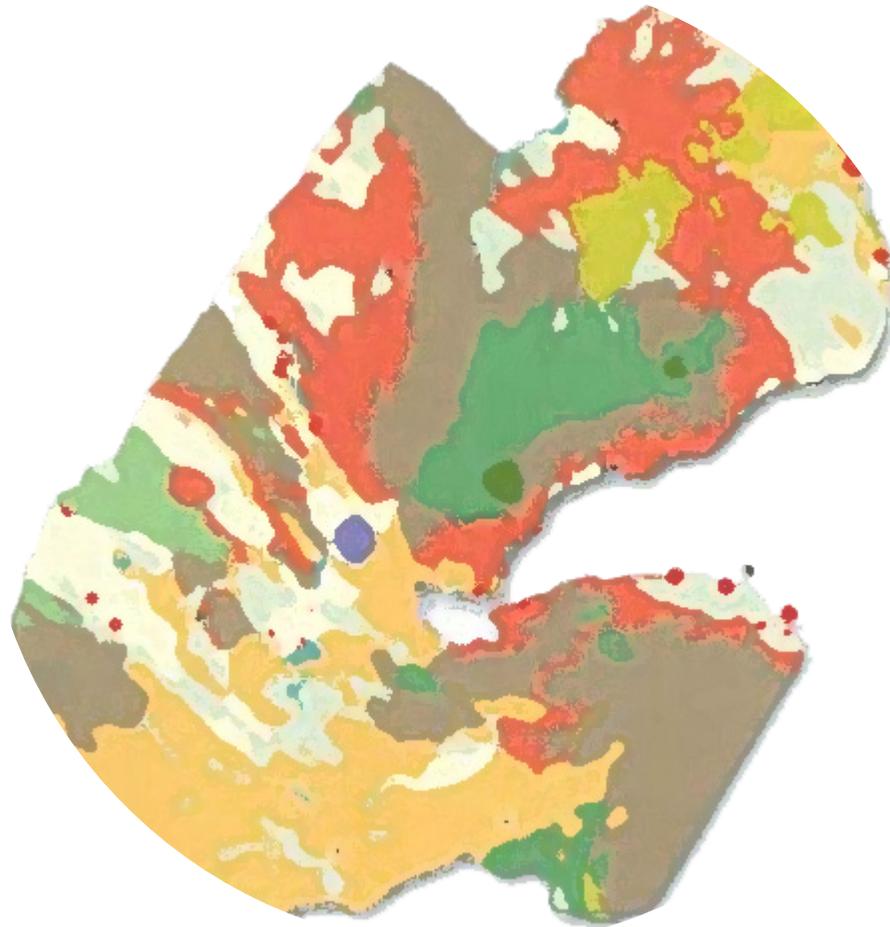
ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS	THEME(S) ADDRESSED	TARGET AUDIENCE(S)
1.8 - Produce television documentaries as a series on the symbolic species of Djibouti in 4 languages (French, Affar, Somali, Arabic), based on the example of the francolin movie	2015	Ministry of Environment	NGOs, medias (RTD, La Nation, ...)	The documentaries have been produced and have been shown on a known TV channel at least once	20.000 €	Information about the status of flagship species	Everyone that has access to TV
6.4 - Develop partnerships with private companies for the promotion of one of the Djiboutian symbolic species	2014	Ministry of Environment	Chamber of Commerce NGOs	At least one partnership per iconic species has been developed		Flagship species of Djibouti	Private companies
6.5 - Initiate showings of documentaries on the symbolic species of the country in each region and in hotels	2015	Ministry of Environment	Regional authorities, Tourist offices NGOs Hotels	Each region shows the documentary at least once a year in each of its schools and at least 2 hotels of Djibouti (town) show it	Low	Flagship species of Djibouti	Civil society and tourists

Predators:

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS
1.6 - Restore sensitive ecosystems in existing PAs (eg Day)	2012 - 2016	Department of Environment, Ministry of Agriculture,	Research Department, NGOs	Sensitive ecosystems defined, and plans for possible restoration developed and implemented	
3.2 - Select potential PA sites according to ecosystem criteria and priority species (Gamarré: oryx, wild ass, Soemmering's gazelle, Rüppell's vulture, serval?)	2012 - 2016	Department of environment and Ministry of Agriculture	National and international NGOs, CERD?		

ACTION	TIME FRAME	RESPONSIBLE PARTIES	COLLABORATORS	INDICATOR OF SUCCESS	COSTS	THEME(S) ADDRESSED	TARGET AUDIENCE(S)
1.8 - Produce television documentaries as a series on the symbolic species of Djibouti in 4 languages (French, Affar, Somali, Arabic), based on the example of the francolin movie	2015	Ministry of Environment	NGOs, medias (RTD, La Nation, ...)	The documentaries have been produced and have been shown on a known TV channel at least once	20.000 €	Information about the status of flagship species	Everyone that has access to TV
6.2 - Organize workshops to raise awareness on the role of predators for biodiversity	2013-2014	DECAN	Experts NGOs Environment and Agriculture	At least 2 workshops have been conducted in the different regions	5.000 €	Role of predator in the ecological balance	Breeders Teachers
6.3 - Create a regional logo / flag with the image of an iconic animal, reflecting the region (Assamo - Beira / Adailou - Klipspringer / Day - Francolin...)	2013	Ministry of Environment	Prefectures Regional authorities Tourist Offices DECAN experts	Each region has developed and adopted its logo	10.000 €	Flagship species of Djibouti	Djiboutians, Tourists
6.4 - Develop partnerships with private companies for the promotion of one of the Djiboutian symbolic species	2014	Ministry of Environment	Chamber of Commerce NGOs	At least one partnership per iconic species has been developed		Flagship species of Djibouti	Private companies
6.5 - Initiate showings of documentaries on the symbolic species of the country in each region and in hotels	2015	Ministry of Environment	Regional authorities, Tourist offices NGOs Hotels	Each region shows the documentary at least once a year in each of its schools and at least 2 hotels of Djibouti (town) show it	Low	Flagship species of Djibouti	Civil society and tourists

REFERENCES



REFERENCES

Bauer, I. E., McMorrow, J. and Yalden, D.W. 1994. The Historic Ranges of Three Equid Species in North-East Africa: A Quantitative Comparison of Environmental Tolerances. *Journal of Biogeography* 21: 169-182.

CBSG (IUCN SSC). 2012. Conserving Djibouti's Priority Land Animals: Briefing Book

Gentry, A. 2006. *Mammal Species of the World. A taxonomic and geographic reference.* 2005. D.E. Wilson & D.M. Reeder (Eds.), Ed. 3, 2 vols., 2142 pp. Johns Hopkins University Press, Baltimore. ISBN 0-8018-8221-4. A nomenclatural review., *Bulletin of Zoological Nomenclature* 3, 215-219

Gouvernement de Djibouti. 2000. Monographie Nationale de la Diversité Biologique de Djibouti. Direction de l'Environnement, Ministère de l'Habitat, de l'Urbanisme, de l'Environnement et de l'Aménagement du Territoire, Djibouti, 265 pages.

Gouvernement de Djibouti. 2000. STRATÉGIE ET PROGRAMME D'ACTION NATIONAL POUR LA DIVERSITÉ BIOLOGIQUE. Direction de l'Environnement, Ministère de l'Habitat, de l'Urbanisme, de l'Environnement et de l'Aménagement du Territoire, Djibouti.

Groves, C.P., 2002, Taxonomy of the Living Equidae, *Equids: Zebras, Asses and Horses. Status Survey and Conservation Action Plan*, Patricia D. Moehlman, 108-112, IUCN, Gland

Grubb, P. 2005. Order Perissodactyla, *Mammal Species of the World*, D.E. Wilson; D.M. Reeder, 629-636, The Johns Hopkins University Press, Baltimore

IUCN SSC. 2008. *Strategic Planning for Species Conservation: A Handbook. Version 1.0.* Gland, Switzerland: IUCN Species Survival Commission. 104pp.

http://cmsdata.iucn.org/downloads/scshandbook_2_12_08_compressed.pdf

Kebede, F. 1999. Ecology and conservation of the African wild ass (*Equus africanus*) in the Danakil, Ethiopia, , M.Sc. thesis, University of Kent, Canterbury, UK

Kebede, F., Berhanu, L. and Moehlman, P. D. 2007. Distribution and Population Status of the African Wild Ass (*Equus africanus*) in Ethiopia. Report to Saint Louis Zoo

Klingel, H. 1974. Social Organization and behaviour of the Grevy's zebra, *Z. fur Tierpsychologie* 36, 36-70

Klingel, H. 1977. Observations on social organization and behavior of African and Asiatic wild asses (*Equus africanus* and *E.*

hemionus), Z. Tierpsychol.44, 323-331

Laurent, A. & Laurent, D. 2002. Djibouti au rythme du vivant : les mammifères d'hier à aujourd'hui pour demain, édition Beira. CFP, Toulouse, 240 pp.

Moehlman, P.D. 2002. Status and action plan for the African wild ass (*Equus africanus*), Equids: Zebras, Asses and Horses. Status Survey and Conservation Action Plan, Patricia D. Moehlman, 2-10, IUCN, Gland

Moehlman, P.D., Kebede, F. and Yohannes, H. 1998. The African wild ass (*Equus africanus*): Conservation status in the Horn of Africa, Applied Animal Behavior Science 60 (2,3), 115-124

Moehlman, P.D., Kebede, F. and Yohannes, H. in press. *Equus africanus*, The Mammals of Africa. Volume 5. Carnivores, Pangolins, Rhinos and Equids, Kingdon, J.S. and Hoffmann, M., Academic Press, Amsterdam

Oakenfull, A., Yohannes, H., Kebede, F., Swinburne, J., Binns, M. and Moehlman, P.D. 2002. Conservation Genetics of African Wild Asses. Final report for the Zoological Societies of Chicago and San Diego. November 2002

Rowen, M. and Ginsberg, J.R. 1992. Grevy's zebra (*Equus grevyi* Oustalet), Zebras, Asses, and Horses: an Action Plan for the Conservation of Wild Equids, Duncan, P., 10-12, IUCN, Gland, Switzerland

Rubenstein, D.I. 1986. Life history and social organization in arid adapted ungulates, Ecological Aspects of social evolution, D.I. Rubenstein and R.W. Wrangham, 282-302, Princeton University Press, Princeton

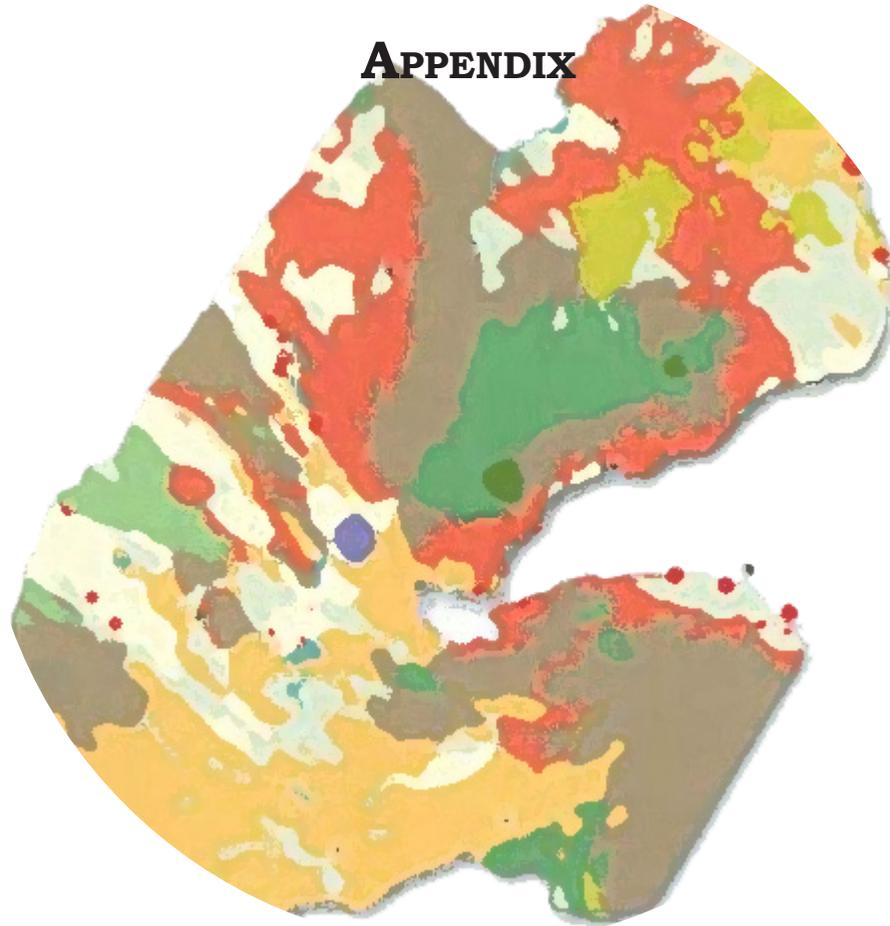
Teclai, R. 2006. Conservation of the African wild Ass (*Equus africanus*) on Messir Plateau (Asa-ila), Eritrea: The role of forage availability and diurnal activity pattern during the wet season and beginning of the dry season. MSc thesis, University of Kent.

Williams, S.D. 2002. Status and Action Plan for Grevy's Zebra (*Equus grevyi*), Equids: Zebras, Asses, and Horses. Status Survey and Conservation Action Plan, Moehlman, P.D., 11-27, IUCN, Gland

World Pheasant Association and Djibouti Nature. 2010. Djibouti francolin conservation strategy. Unpublished report of the World Pheasant Association, Newcastle upon Tyne, UK and Djibouti Nature, Djibouti.

Yalden, D. W., M. J. Largen, D. Kock, and J. C. Hillman. 1996. Catalogue of the mammals of Ethiopia and Eritrea. 7. Revised checklist, zoogeography and conservation, Tropical Zoology1, 73-164

APPENDIX



Appendix 1 - Seminar programme



Ministère de l'Habitat,
de l'Urbanisme, et de
l'Environnement



« Réunion internationale pour la conservation de la faune terrestre en République de Djibouti »



Ministère
de l'Enseignement Supérieur
et de la Recherche



Le but du séminaire est d'accroître la prise de conscience sur les menaces qui pèsent sur la biodiversité et plus particulièrement sur certaines espèces sauvages terrestres. Les problèmes seront posés et les solutions seront envisagées. Le séminaire précède l'atelier de travail de 4 jours au CERD.

Programme des conférences du séminaire

25 mars 2012-Université de Djibouti

7h30-8h. Accueil des invités / Registration

8h-8h10. Mot de bienvenue / Welcome speech *Bertrand Lafrance, Association Décan*

8h10-8h20. Les bases conceptuelles de la Réunion Internationale pour la Conservation de la faune terrestre de Djibouti / The seminar and workshop concepts, the origins . *Eric Bairrao Ruivo, Directeur Sciences et Conservation. Responsable de la Conservation pour l'Association Beauval Conservation et Recherche (ABCR)*

8h20-8h30. Allocution de S.E. Nabil Mohamed Ahmed

Ministre de l'Enseignement Supérieur et de la Recherche

8h30-8h45h. Allocution de S.E. Hassan Omar Mohamed.

Ministre de l'Habitat, de l'Urbanisme et de l'Environnement

8h45-9h Pause-café

09h00-9h20. La biodiversité de Djibouti dans un contexte global / Djiboutian biodiversity in a global context

Leo Niskanen, UICN, Bureau Régional d'Afrique de l'Est et du Sud

09h20-09h40. Panorama de la biodiversité à Djibouti / Overview of djiboutian biodiversity

Alain Laurent, Président de l'Association TER_RES

Dini Abdallah Omar, Secrétaire Général du Ministère de l'Habitat, de l'Urbanisme et de l'Environnement (MHUE)

Houssein Rirache Robleh, Directeur de l'Aménagement du Territoire et de l'Environnement, DATE, MHUE

09h40-10h. Les aires protégées existantes, à venir et nécessaires / Djiboutian protected areas – today and tomorrow

Mohamed Ahmed Djibril, Aman Mohamed Aman, Coordinateurs des projets des Aires protégées, DATE, MHUE

10h-10h30. Les facteurs d'évolution du statut des mammifères terrestres à Djibouti / Drivers of change in status of Djibouti' land mammals

Alain Laurent, Président de l'Association TER_RES

Ahmed Ali Mohamed, Président de l'Association EVA

10h30-11h. Le terrain face aux priorités en matière de conservation / Rationale for focus on priority land animals.

Bertrand Lafrance, Association Décan

11h-11h30. Film : « l'éducation à l'environnement dans la Corne de l'Afrique »

Jens Ove Heckel, IUCN, Groupe Spécialiste des antilopes

11h30-12h. Débat et fin de la matinée

12h-14h Pause-Déjeuner

12h-14h Pause-Déjeuner

14h-14h20. Statut de l'Ane sauvage de Somalie et du Zèbre de Grévy / Conservation status of the Somali wild Ass and the Grevy Zebra

Patricia Moehlman, IUCN, SSC, Groupe spécialiste des équidés.

14h20-14h40. Statut de l'antilope Beira / Conservation status of the Beira antelope

Alain Laurent, Président de l'Association TER_RES et Nina Giotta, biologiste spécialiste du beira

14h40-15h00. Statuts des gazelles de Pelzeln, de Soemmering et de Waller / Conservation status of Pelzeln, Soemmering and Waller gazelles

David Mallon et Jens Ove Heckel, IUCN, Groupe Spécialiste des antilopes

15h00-15h20. Statuts de l'Oryx Beisa, du Dik-Dik de Salt et de l'Oréotrague / Conservation status of the Beisa Oryx, Salt's Dik-Dik and Klipspringer

David Mallon et Jens Ove Heckel, IUCN, Groupe Spécialiste des antilopes

15h20-15h50. Pause café

15h50-16h10. Statuts du Léopard et du Guépard / Conservation status of the Leopard and Cheetah

Bertrand Lafrance, Association Décan

Christine Breitmöser, IUCN, Groupe spécialiste des félins

16h10-16h30. Statut du Francolin de Djibouti / Conservation status of the Djibouti Francolin

Philip Mc Gowan, World Pheasant Association

Houssein Abdillahi Rayaleh, Association Djibouti Nature

16h30-16h50. La transition entre le séminaire et l'atelier, comment utiliser les données / Link between seminar and workshop, how to use the data (short introduction to workshop)

Benat Holst, Kristin Leus, UICN CBSG Europe et Arnaud Desbiez, UICN CBSG Brazil

16h50-17h30. Débat et fin du séminaire

Tous les participants du workshop, ainsi que les invités à la cérémonie d'ouverture, sont invités à se rendre vers 20h au Refuge de l'association Décan (entre Douda et Damerjog) . Un « Ice-Breaker » sera servi dans un cadre exceptionnel.



Sandrine T.

Appendix 2 - Workshop organisation

Host

Ministry of Housing, Urbanism and Environment, Djibouti

Planning Committee

Eric Bairrão Ruivo, ZooParc de Beauval and Association ABCR

Bertrand Lafrance, (Association DECAN)

Bengt Holst, IUCN SSC CBSG Europe

Kristin Leus, IUCN SSC CBSG Europe

Mark Stanley Price, IUCN SSC Species Conservation Planning Sub-committee (SCPSC)

IUCN SSC Antelope Specialist Group

IUCN SSC Equid Specialist Group

IUCN SSC Galliform Specialist Group

World Pheasant Organisation (WPA)

Workshop Design and Report

Bengt Holst, IUCN SSC CBSG Europe

Kristin Leus, IUCN SSC CBSG Europe

Arnaud Desbiez, IUCN SSC CBSG Brasil

Eric Bairrão Ruivo, ZooParc de Beauval and Association ABCR

Mark Stanley Price, IUCN SSC Species Conservation Planning Sub-committee (SCPSC)

Equid, Antelope and Galliform Specialist Groups

World Pheasant Association

Report editor group

Abdirahman Ahmed, HOAREC

Abdoulkader Ahmed Aouled, MHUE

Ahmed Ali Mohamed, EVA

Alain Laurent, TER-RES

Aman Mohamed Aman, MHUE

Arnaud Desbiez, CBSG Brasil

Baptiste Mulot, ZooParc de Beauval and Association ABCR

Bertrand Lafrance, DECAN

Bengt Holst, CBSG Europe

Cathy Gibault, Parc Zoologique de Thoiry
David Mallon, IUCN SSC Antelope Specialist Group
Eric Ruivo, ZooParc de Beauval and Association ABCR
Houssein A. Rayaleh, Djibouti Nature
Kristin Leus, CBSG Europe
Patricia Moehlman, IUCN SSC Equid Specialist Group
Phil McGowan, IUCN SSC Galliform Specialist Group, WPA

Sponsors

Ministry of Housing, Urbanism and Environment, Djibouti
ZooParc de Beauval
Association Beauval Conservation & Recherche
Fota Wildlife Park
Zoo La Palmyre
La Boissière du Doré
Zoological Society of London
Parc Zoologique CERZA
Copenhagen Zoo
AAB (Atelier Artistique du Béton)
Association DECAN
Antelope Specialist group
Equid Specialist group
Galliform Specialist Group
IUCN SSC Species Conservation Planning Sub-committee (SCPSC)

Ministry of Housing, Urbanism and Environment of Djibouti

The Ministry was created about ten years ago and employs several biologists. The Ministry has published a number of documents about Djiboutian biodiversity and has produced several conservation action plans. The present Minister is M. Hassan Omar Mohamed with Secretary General M. Dini Omar and Director of Environment M. Houssein Rirache Robleh.

ZooParc de Beauval

ZooParc de Beauval is one of the most important zoos in France, not only by the richness, rarity and diversity of its animal collection (5,000 animals from 500 different species) but also for its commitment towards conservation and research and for its strong cooperation within the global zoo community and with other conservation organisations.

Association Beauval Conservation and Recherche

To better perform its role in favour of sustainable development of human populations, the conservation and protection of species and ecosystems, as well as in the field of research, ZooParc de Beauval in 2008 created a non-profit Association - Beauval Conservation and Recherche (ABCR) - exclusively dedicated to the development, management and support of conservation and research programmes all over the world. In 2009 ABCR developed a conservation education programme in Djibouti named “Back to Africa” with the purpose of re-establishing populations of antelope and Equid species that are native to Djiboutian wildlife, but now more or less extinct in Djibouti. The success of this programme led to the development of a new broader integrated conservation programme named PICODE (Integrated Conservation Programme for Development) which is now the main programme of ABCR.

Association DECAN

This local association was created in 2001. DECAN means DECOuvrir et Aider la Nature (Discover and Help Nature). The association is concerned with protection of nature and was initially created to stop animal traffic, especially cheetahs. DECAN has developed educational and breeding programmes for a number of species saved from trafficking and animals donated by European zoos thanks to ABCR. Each year, DECAN teaches ecology to thousands of pupils coming from Djiboutian schools. DECAN is now in charge of 2 protected areas in the countryside and a third one near the capital. DECAN’s activities are based on volunteers only. DECAN receives 10-15 students from Europe every year and has generated several paid jobs for the local people.

CBSG – Conservation Breeding Specialist Group

With 550 volunteer members, the IUCN SSC Conservation Breeding Specialist Group (CBSG) is one of the largest Specialist Groups comprising the Species Survival Commission (SSC). CBSG has over 15 years of experience developing, testing and applying scientifically based tools and processes for risk assessment and decision-making in the context of species management. These tools, based on small populations and conservation biology, human demography, and the dynamics of social learning are used in intensive, problem-solving workshops to produce realistic and achievable recommendations for both in-situ and ex-situ population management. CBSG’s workshop processes provide an objective environment, expert knowledge, and neutral facilitation to support the exchange of information across diverse stakeholder groups in order to reach some agreement on the important issues facing both humans and wildlife. With this understanding, meaningful and practical management recommendations can be made.

IUCN SSC Species Conservation Planning Sub-committee (SCPSC)

This sub-committee exists to promote effective planning for the conservation of species. It does this through encouraging and assisting development of species planning events, while promoting the use and adaptation of the methods in the SSC Handbook for Strategic Planning for Species Conservation. It works mainly with the family of 120 SSC Specialist Groups and aims to gather as much experience as possible of planning across the full range of plant and animal taxa. The subcommittee works closely with CBSG, in the development of tools for cost-effective species planning.

ASG - IUCN SSC Antelope Specialist Group

The Antelope Specialist Group has lead responsibility within IUCN for 98 species of antelopes and closely-related species. It provides technical advice to IUCN on all aspects of antelope conservation, liaises with CITES and CMS and compiles regular assessments of species status for the IUCN Red List. ASG has been involved in strategic planning for antelopes for more than 25 years.

ESG – IUCN SSC Equid Specialist Group

The IUCN SSC Equid Specialist Group is a world-wide, science based network of experts on equid behaviour, ecology, physiology, population dynamics, population genetics, management and conservation. The ESG actively supports and initiates programmes for research, training, monitoring, management and conservation of the world's seven wild equid species and their habitats. It is responsible for providing species assessments for the IUCN Red list of Threatened Species. The ESG facilitates strategic planning for wild equid conservation, produces action plans and policy guidelines and provides information to CITES.

GSG – IUCN SSC Galliform Specialist Group

WPA – World Pheasant Organisation

The World Pheasant Association (WPA) is a registered charity (271203) founded in 1975 which aims to develop and promote the conservation of all the species within the order of the Galliformes, otherwise known as the gamebirds of the world. Apart from pheasants, this also includes partridges, grouse, quail, francolins, megapodes and cracids, some of which are the most beautiful, yet threatened, birds in the world.

Appendix 3 - Workshop programme

26 MAR	MORNING	Registration for the workshop at CERD Welcome to the workshop Presentation of participants Introduction to workshop format Development of vision for biodiversity conservation in Djibouti Grouping of prioritized taxa LUNCH
	AFTERNOON	Taxonomic based working groups: Develop long term goals per species Plenary: working group reports
27 MAR	MORNING	Taxonomic based working groups: Identify and prioritize problems/threats to conservation of the taxa Plenary: working group reports LUNCH + Development of theme based working groups
	AFTERNOON	Theme based working groups: Develop and prioritise objectives to address problems/threats and achieve the vision
28 MAR	MORNING	Plenum: working group reports Working Groups: develop actions to accomplish goals/objectives LUNCH
	AFTERNOON	Theme based working Groups: Develop actions

Plenary: Working Group reports

29 MAR MORNING

Plenary: Working Group reports

Taxon based working groups: check if any taxon specific objectives and actions are missing
Final presentation and closing ceremony

LUNCH

AFTERNOON

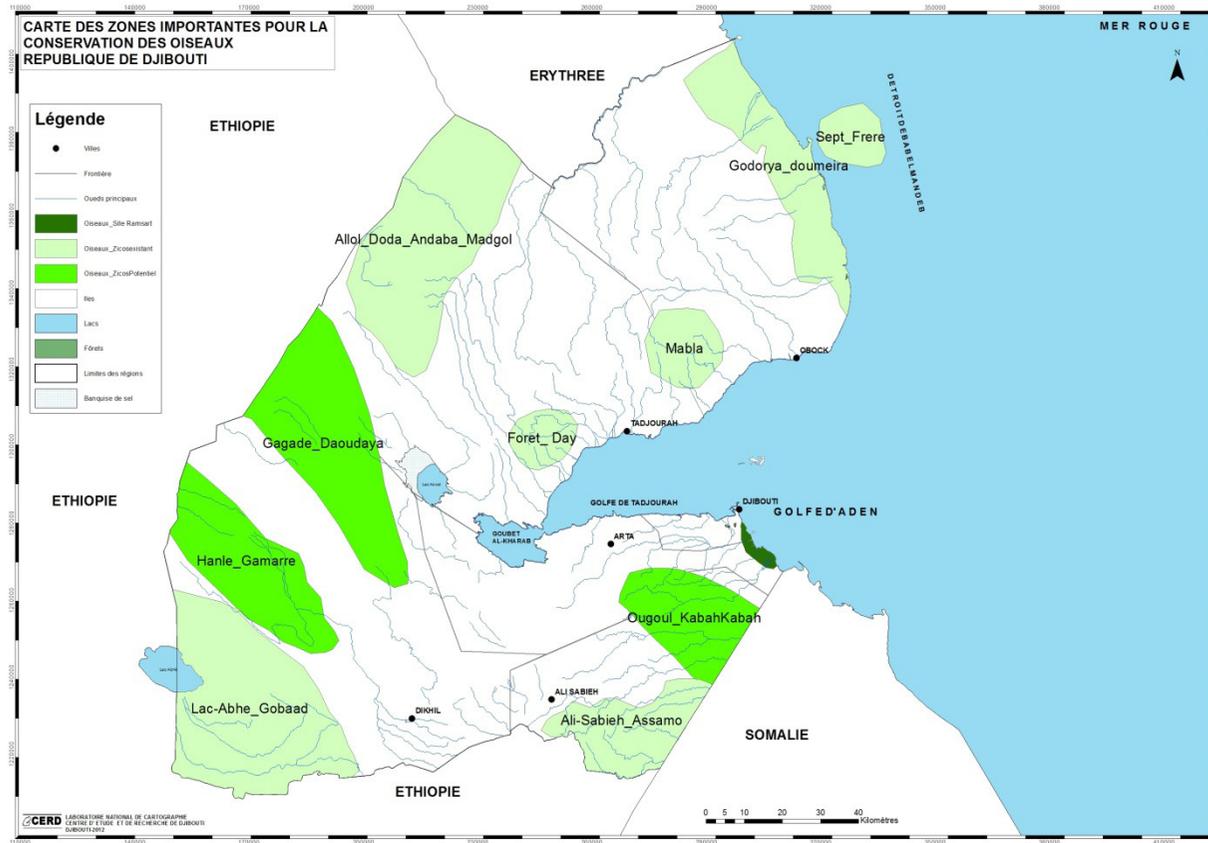
Visit to DECAN

EVENING

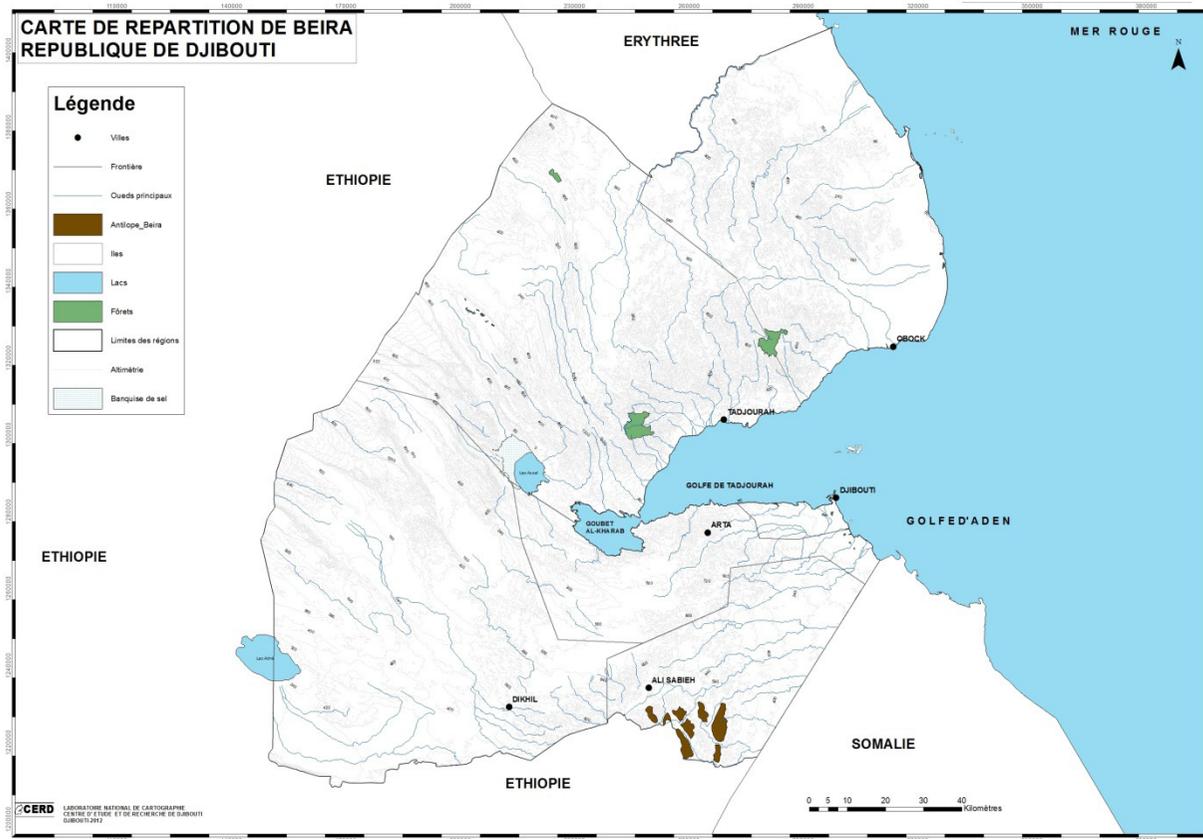
Farewell dinner and social evening at Sheraton Hotel

Appendix 4 - GIS maps for selected species

Important Bird Areas in Djibouti

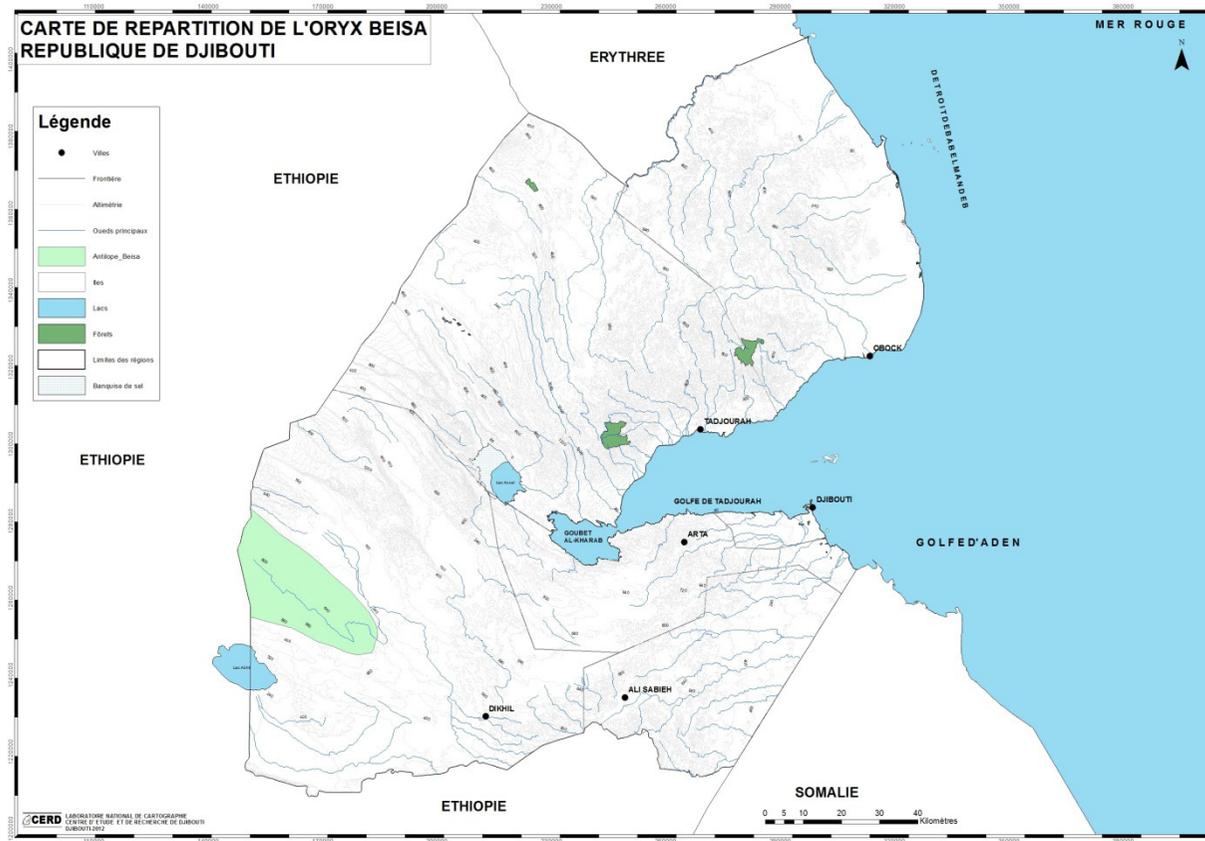


Beira



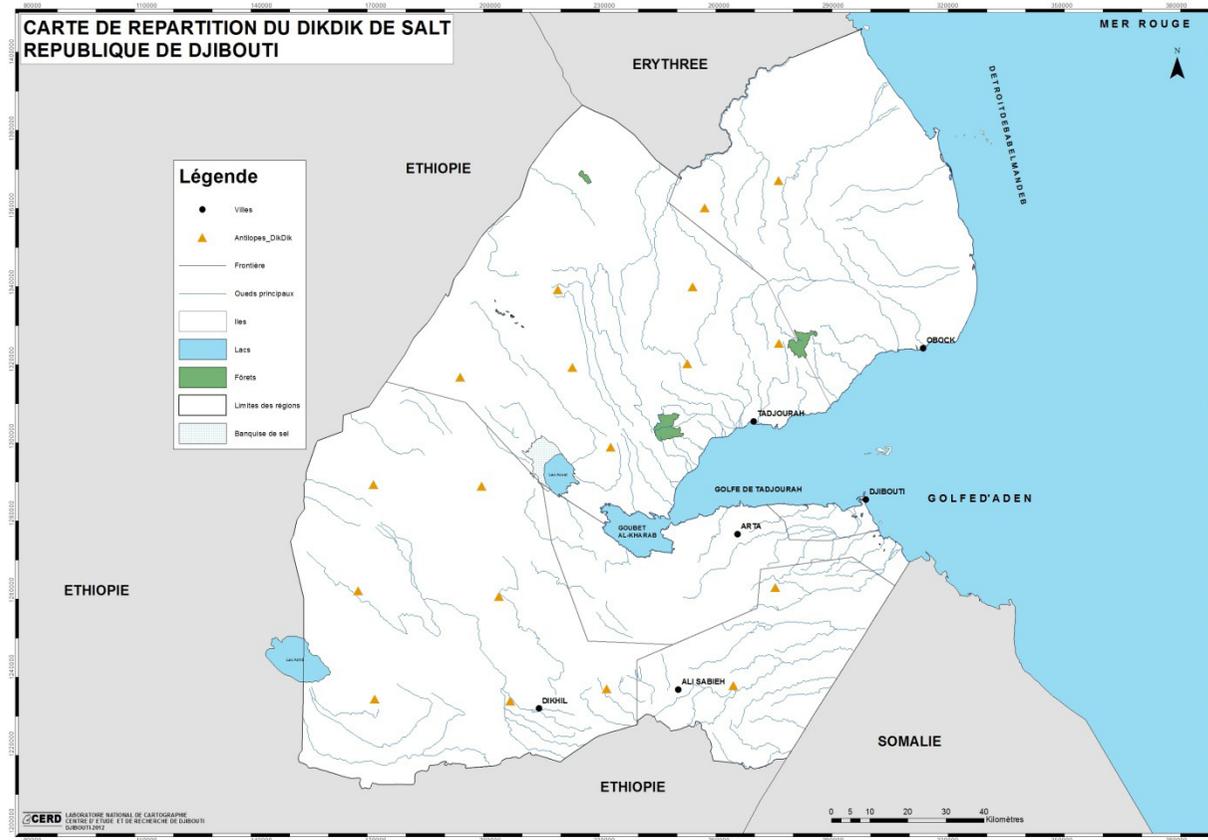
The current distribution of the beira population is limited to the mountainous region south of Ali-Sabieh. Because of pressure from wood-cutting and grazing density and presence itself fluctuate. The Djibouti population is continuous with that in Ethiopia in the Aysha region.

Beisa Oryx



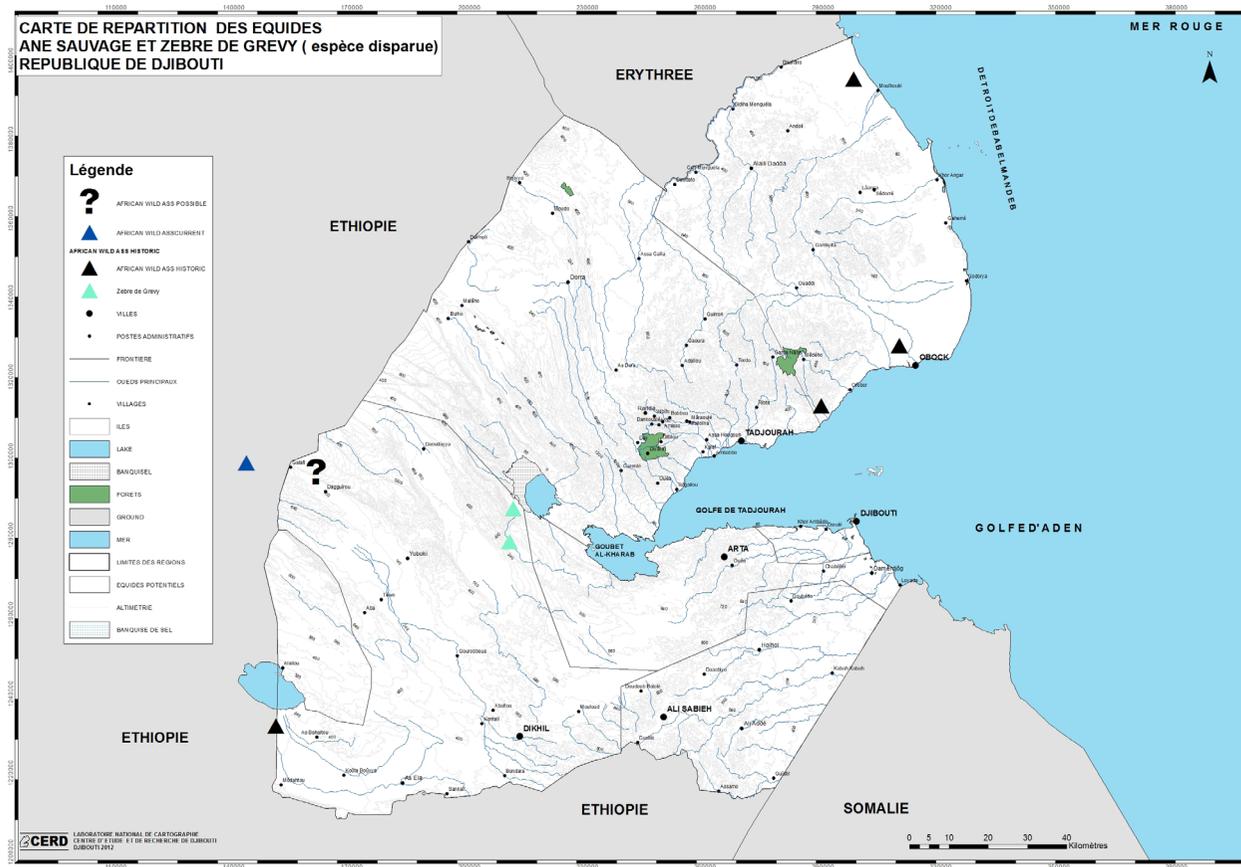
The beisa oryx population in Djibouti is limited to the border area with Ethiopia, principally the Gammaré Plateau). This population has survived for decades despite regular poaching and disturbance, including in the region close to the Somali border. Occasional occurrence in other border areas is not excluded.

Salt's Dikdik



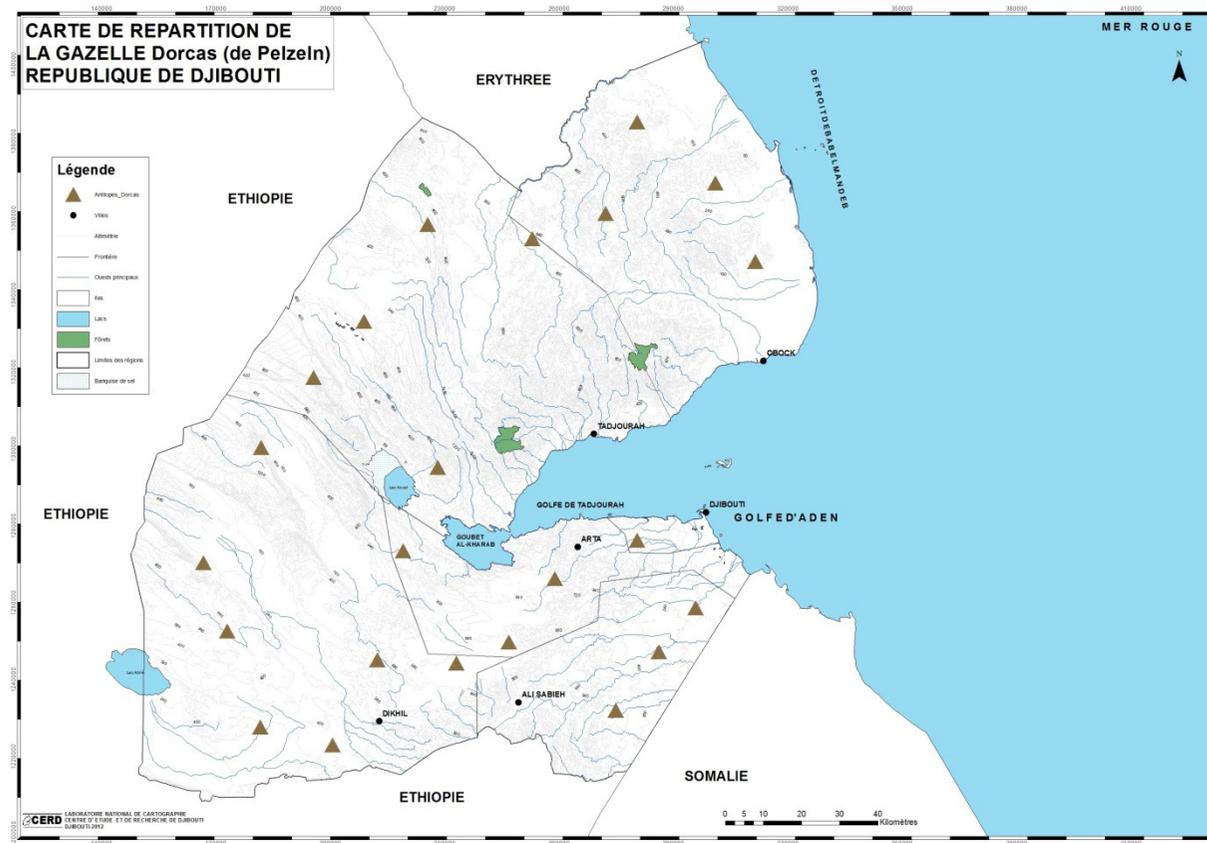
The distribution of Salt's dik-dik is geographically very wide, but restricted to wadi edges, drainage lines and valleys on one hand, and vegetated massifs on the other (Goda, Mabla). The population is certainly declining in numerous areas that are overgrazed or invaded by *Prosopis*.

Somali Wild Ass and Grevy's Zebra



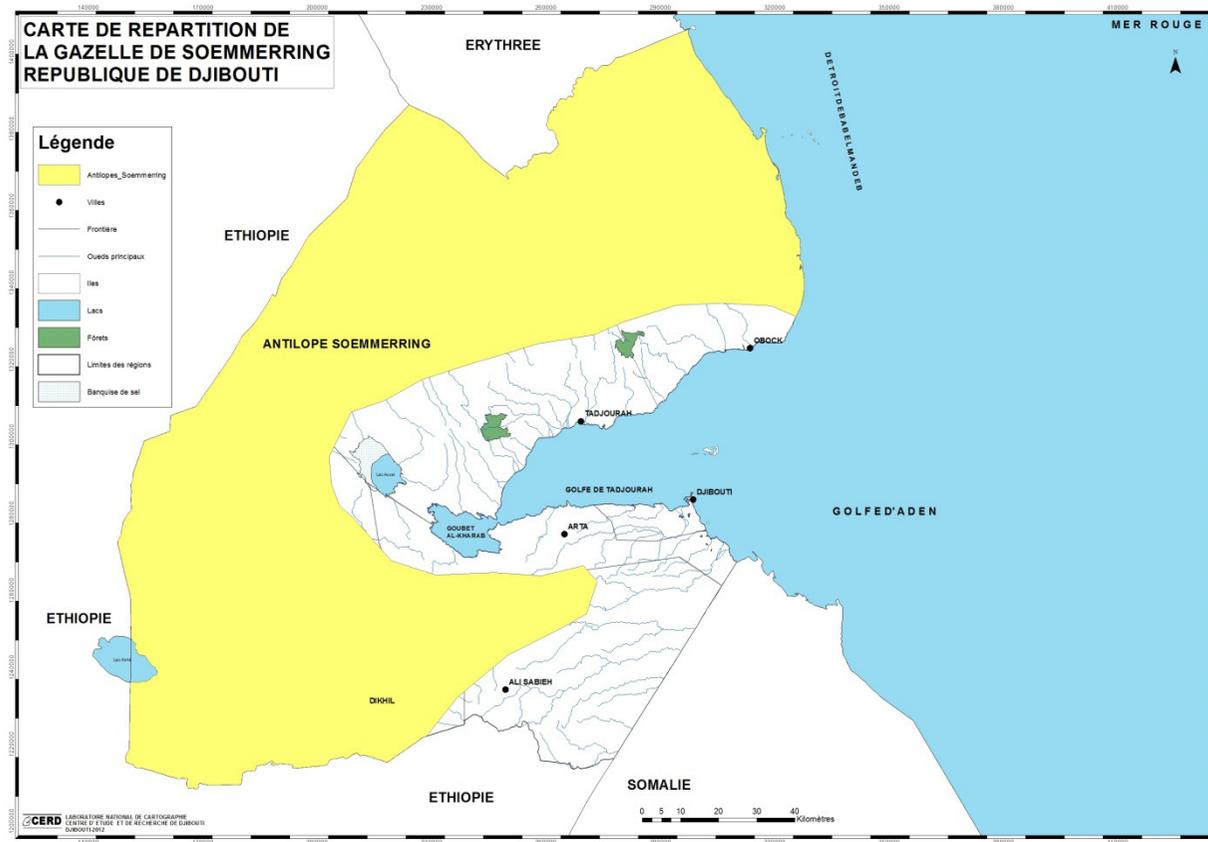
Recent surveys indicate that the Somali wild ass may still be present in the Gamarre Plateau area and definitely exists in this area on the Ethiopian side of the border. The shown observations of the Grevy's zebra are anecdotal and are discussed further in the text.

Pelzeln's Gazelle



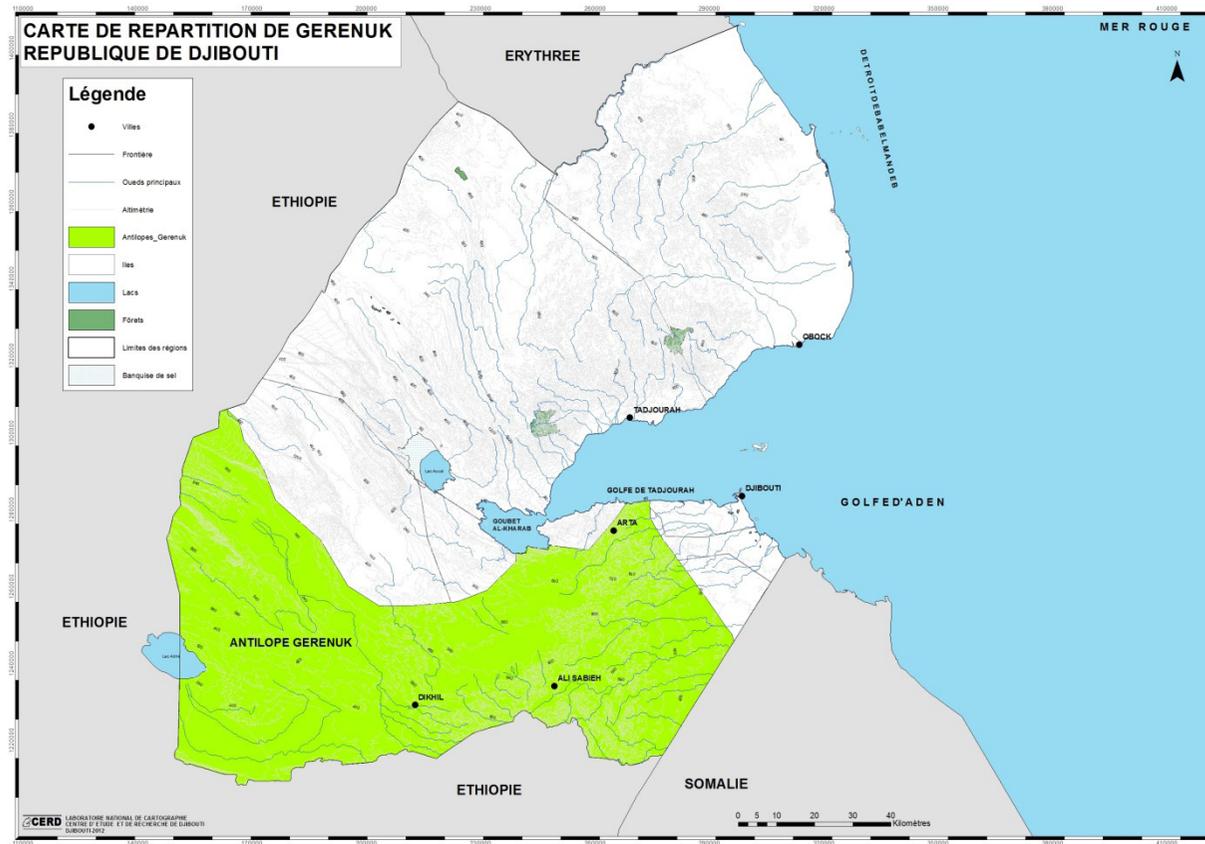
Pelzeln's gazelle is very widely distributed in Djibouti in all habitats and at all altitudes. It is regularly poached but without real impact on the overall population.

Soemmerring's Gazelle



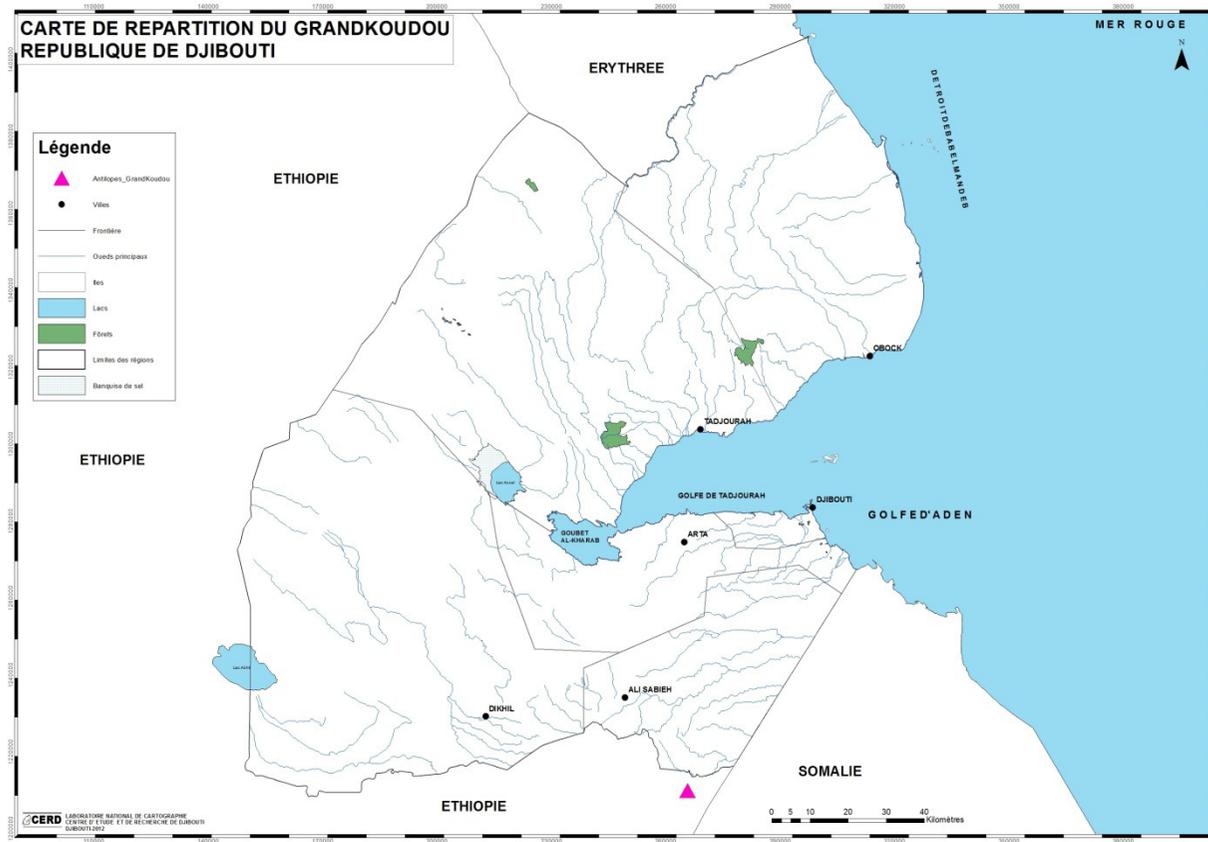
The distribution of Soemmerring's gazelle is still to be precisely defined, taking into account the mobility of groups. The species seems to be in a slow decline in certain sectors (Grand Bara and Petit Bara).

Gerenuk



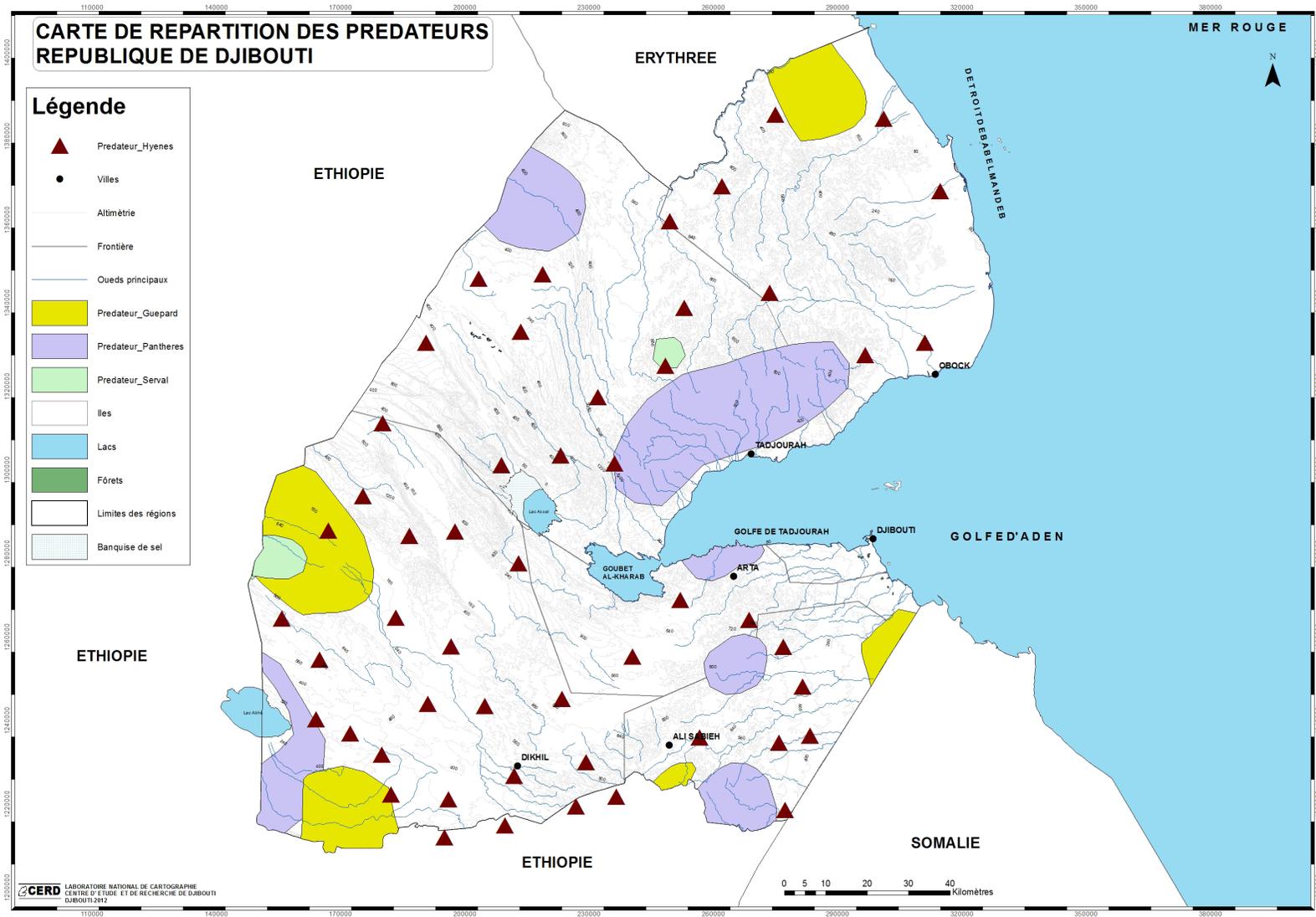
The gerenuk is confined to the southern part of Djibouti. The north-west extent of its range remains to be confirmed. It is the gazelle with the lowest numbers and moreover it seems sensitive to repeated disturbance and especially, deforestation.

Greater Kudu



It seems that greater kudu has been formally absent from Djibouti for several decades, even if it is sporadically present near the southern border. In the first half of the 20th century it was noted in Goda, on Mount Arrey, and maybe on Mabla.

Predators



Appendix 5 - List of participants

Name	Institution	Email
Abdi Daher Halas	Ministère de l'Éducation - CRIPEN	/
Abdisalam Ahmed Hassan	Conseil Régional d'Ali-Sabieh	abdisalam_basra@yahoo.fr abdisalam_basra@hotmail.fr
Abdirahman Ahmed	HOAREC	abdirahmana@hoarec.org
Abdoulkader Ahmed Aouled	MHUE	sahalamed1@yahoo.fr
Abdoulkader Guelleh Miguil	Conseil Régional d'Arta	bachinguelleh@live.fr
Abdoulkader Oudoum Abdallah	MHUE	gueddan@hotmail.com
Abdoulkader Youssouf	ADIM	ong_adim@yahoo.fr
Abdourahman Ahmed Farah	DECAN	/
Aboubaker Mohamed Hida	Préfecture d'Arta	/
Aden Ali Mahamade	Ministère des Affaires Etrangères et de la Coopération	mouqulla@yahoo.fr
Ahmed Ali Mohamed	EVA	kabirhamad@yahoo.fr
Aïcha Hassan Check-Moussa	Ministère de la Promotion de la Femme	brg_as@yahoo.fr
Alain Laurent	TER_RES	territoiresresponsables@orange.fr
Ali Dabale Mohamed	ADPED	alidabale3@yahoo.fr
Ali Mahoumed Maki	Préfecture d'Obocq	/
Ali Mohamed Ali	Conseil Régional d'Obocq	/
Ali Mouhoumed Darar	INTRE-AID	mouhoumed.ali@hotmail.com
Ali Omar Ali	Association des Jeunes Marins Civils	/
Aloïta Amid Aloïta	Association des éleveurs du Goda (Day)	/
Aman Mohamed Aman	MHUE	medaman.aman@gmail.com
Arnaud Desbiez	CBSG Brasil	adesbiez@hotmail.com
Aude Desmoulins	ZooParc de Beauval/ABCR	aude.desmoulins@zoobeauval.com
Baptiste Mulot	ZooParc de Beauval	baptiste.mulot@zoobeauval.com
Bengt Holst	CBSG Europe/Copenhagen Zoo	beh@zoo.dk
Bertrand Lafrance	DECAN	b.lafrance@intnet.dj
Cathy Gibault	Parc Zoologique de Thoiry	cathy.gibault@thoiry.net
Charlène Jaffrezic	DECAN	miss-kenjo@hotmail.fr
Claude Barreau	Société Ornithologique de France	barrauclaude@orange.fr
Choukri Osman	Ministère de l'Enseignement Supérieur et de la Recherche – CERD	chou272002@gmail.com
Daher Obsieh Aouled	Personne ressource Assamo/Jardinier	/

David Mallon	IUCN Antelope Specialist Group	d.mallon@zoo.co.uk
Eric Bairraõ Ruivo	ZooParc de Beauval/ABCR	eric@zoob Beauval.com
Fanuel Kebede	IUCN – Equid Specialist Group	fanuelkg@yahoo.com
Guedda Mohamed Ahmed	Ministère de l'Intérieur et de la Décentralisation	guedmah@yahoo.fr
Hassan Omar Abdillahi	Ministère de l'Education – CFPEN	stokyhas@gmail.com
Hassan Houmed Hamadou	ADIM	ong_adim@yahoo.fr
Houmed Ali Houmed	DECAN	ahoumed.ali@gmail.com
Houmed Mohamed Omar	Conseil Régional de Tadjoura	/
Houssein A. Rayaleh	Djibouti Nature	naturedjibouti@gmail.com
Houssein Rirache Robleh	MHUE	housseinrirach@yahoo.fr
Ibrahim Djama Ismaël	Ministère de l'Agriculture, Pêche, Elevage et Ressources Halieutiques	ibrahim.dj@hotmail.fr
Idriss Bexi	Ministère de l'Enseignement Supérieur et de la Recherche – Université	bexidriss@yahoo.fr
Idriss Ismael Nour	MHUE	distri_play@yahoo.fr
Jean-Michel Roux	Ministère de l'Energie, Eau et chargé des Ressources Naturelles	jm.roux@djiboutiexplore.com
Jens-Ove Heckel	IUCN – Antelope Specialist Group/ZooLandau	jens-ove.heckel@landau.de
Kristin Leus	CBSG Europe/Copenhagen Zoo	kristin@cbsgeurope
Leo Niskanen	IUCN - ESARO	Leo.niskanen@uicn.org
Mahamade Houmed	Personne ressource Adaïlou/Enseignant	mahamadehoumed@yahoo.fr
Masso Houmed Ahmed	ACVA	ossamafar@yahoo.fr
Michel Clouet	Société Ornithologique de France	Dr.clouet@wanadoo.fr
Mohamed Ali Houmed	Préfecture de Tadjoura	/
Mohamed Houmed Abass	Préfecture d'Ali-Sabieh	godabas@hotmail.fr
Mohamed Ibrahim Abdillahi	Personne ressource Djalelo/Directeur d'école	/
Mohamed Taher Abdallah	MHUE	raceena7@hotmail.com
Nabil A. Dorani	DECAN	na.dorani@hotmail.com
Nagat Salem Mohamed	Ministère de l'Energie, Eau et chargé des Ressources Naturelles	nagatsalem1@gmail.com
Patricia Moehlmann	IUCN – Equid Specialist Group	pdmhbhf@aol.com tan.guides@habari.co.tz
Philip McGowan	IUCN – Galliforme Specialist Group/World Pheasant Association	director@pheasant.org.uk
Saada Ali Abdi	Personne ressource Hol-hol/Institutrice	coteleman2@yahoo.fr
Yonis Mahamoud Adar	Ministère de l'Agriculture, Pêche, Elevage et Ressources Halieutiques	yonisadar@yahoo.fr

Appendix 6 - List of acronyms

ABCR: Association Beauval Conservation et Recherche

ACVA: Association Communautaire du Village d'Ardo

ADIM: Association Développement Intégré Mablas-Tadjourah

ADPED: Association de Protection de l'Environnement du Day

ASG: IUCN SSC Antelope Specialist Group

CBSG: IUCN SSC Conservation Breeding Specialist group

CERD : Centre d'Etude et de Recherche de Djibouti

CFPEN : Centre de Formation des Personnels de l'Education Nationale

CRIPEN : Centre de Recherche, d'Information et de Production de l'Éducation Nationale

DECAN: DECouvrir et Aider la Nature

ESARO: IUCN Eastern and Southern Africa Regional Office

ESG: IUCN SSC Equid Specialist Group

EVA: Ecologie du Village Association

GIS: Geographic Information System

GSG: IUCN SSC Galliform Specialist group

HOAREC: Horn of Africa Regional Environment Centre

IUCN: The International Union for Conservation of Nature

MAECI: Ministère des affaires étrangères et de la coopération internationale

MEERN: Ministère de l'énergie et de l'eau chargé des ressources naturelles

MHUE: Ministère de l'habitat, de l'urbanisme et de l'environnement

NGO: Non-governmental organisation

SCPSC: IUCN SSC Species Conservation Planning Sub Committee

SSC: Species Survival Commission

TER_RES: Territoires Responsables

WPA: World Pheasant Association

MAF: Ministry of agriculture and Fisheries

