

## Annex B: Somalia Environmental Analysis<sup>1</sup> : Tropical Forestry, Biodiversity & Environmental Management

### 1.0 Introduction

This annex addresses several requirements of operating unit Strategy Statements as they relate to the Foreign Assistance Act (FAA) sections 118 (tropical forest conservation) and FAA section 119 (conservation of biodiversity). Sections 118(e) and 119(d) of the Foreign Assistance Act require that each country strategic plan analyze (1) the actions in that country necessary to achieve conservation and sustainable management of tropical forests and biodiversity, respectively, and (2) the extent to which the actions proposed for the supported by the Strategy meet the need thus identified. The specific requirements of FAA sections 118(e) and 119(d) are summarized herein.

To address the requirements, REDSO assisted USAID/Somalia to prepare this brief Environmental Analysis, including a review of the condition and framework of forest and biodiversity conservation in Somalia, and the likely opportunities for engagement by the Mission's 2006-2008 Strategy The Strategy Statement includes two SOs: SO 1 - Reinforce Conflict Mitigation Capacity, and SO 2 - Improve Access to Essential Services. The analysis is designed to support the priority-setting process for the development of Somalia Strategy statement and operational plan.

Somalia is situated in the Greater Horn of Africa (GHA), covering a land area of 637,660 square kilometers, with an extensive coastline of 3,300 km (See Figure 1).

Figure 1.



<sup>1</sup> Prepared by Ephantus Wahome, Environmental Procedures and Policies Specialist, USAID/REDSO

The climate is arid and semi-arid, with an erratic mean annual rainfall that is higher in the south (300 – 500 mm), and is 500 mm in the western highlands. It is hot and humid at the coast and dry in the interior. There are two rainy seasons, March – June and September – December, but the rains are unreliable and drought periods are relatively frequent. The country has an extensive coastline of 2,000 km facing the Indian Ocean, and 1,300 km along the Gulf of Aden. Most of the coastline consists of a series of sandy beaches and bays with occasional rocky cliffs and headlands.

The country is currently in a serious political crisis, and there has been no functional, central government for over ten years, especially in the south of the country, where different clans are still fighting. The human population is estimated as 8,592,00, with a rate of natural increase estimated as 2.9% (Population Reference Bureau, Mid-2005). The effects of the continuing political crisis, has created large numbers of refugees, who have mainly settled in Ethiopia and Kenya. There is no reliable estimate for the resident population in the country. As a result of the political crisis, natural resource conservation recommendations for Somalia may appear irrelevant, but any predictions for the future of the country, need to recognize an eventual return to some form of stability and, at such a time, the country can rebuild itself (Fishpool and Evans, 2001). It is therefore, essential that recommendations should exist, identifying key areas for sustainable utilization and conservation of tropical forestry and biodiversity resources in the country.

## **2.0 Biodiversity Threats in Somalia**

The Somali people are traditionally pastoralists nomads, who move from place to place with their livestock while looking for good pasture and watering points. During the dry season the most arid parts of the country are generally deserted by pastoralists, who move to cooler more vegetated areas in the higher grounds. These areas receive sufficient rainfall that supports agricultural practices for growing sorghum, and also provides pastoralist dry-season grazing and watering areas. Further south there is a dry bushed grassland region that covers a large part of the country, where there are no permanent water sources. The area between Shabelle and Jubba rivers is the most arable part of the country, where major agricultural crops are grown (i.e. sorghum, sesame, beans, squashes and cassava), including fruits and sugar-cane that are mainly grown for export. An estimated 13% of the total land area of the country (i.e. 81,500 square kilometers) is suitable for cultivation, with only 10,000 square kilometers being farmed on a regular basis.

Somalia has been having problems with conflicts among different factions since 1998, that have mainly been centered on the unequal distribution of resources among the Somali people (ACTS, 2002). The environmental problems occurring in Somalia are mainly due to conflict and land-use change caused by change of local communities' nomadic pastoralist lifestyle to agro-pastoralism with permanent settlements, mainly in wetter parts of the country. In both cases land is completely cleared for farming, sometimes in areas which are, at best, marginal for cultivation, causing serious land degradation due to increased soil erosion. The forest cover is limited, but in 1983 it was estimated that there were 40,000 hectares of *Juniperus* forest, in the northern mountain chain, and 60,000 hectares of riverine forest, along the Jubba and Shabele rivers. The forests are being increasingly cleared for making charcoal for export, which was burned during the military rule period (1969 – 1991), when the import of chainsaws was prohibited. These types of saws are now being imported and forests and woodlands are as a result being indiscriminately cleared for charcoal production. There is a growing danger of deterioration of the environment and personal health in the country, due to economic crisis, high population pressure, competition over limited resources and poverty, which are the root causes leading to thousands of Somali people destroying the fragile ecosystems and misusing natural resources that they depend on for their survival and well-being (UNEP, 2005).

Pastoralism is the major land-use type in Somalia, where pastoralists nomads move from place to place with their livestock while looking for good pasture and watering points. Resource degradation is

contributing to decrease in the sustainability of existing production systems (e.g. livestock, fisheries, agriculture, wildlife conservation, honey and gum Arabic tree production), and further improvement of pastoralist, farmers, and fishermen, who already live at or below subsistence level. The greatest threat to tropical forests and biodiversity resources is the loss of habitat as humans extend land for agriculture, grazing livestock, causing the draining of wetlands and unwise use of pesticides. The most drastic environmental degradation is occurring in the wetter areas in the highlands, formerly used as grazing areas in the Golis and Ogo mountains. These areas receive more rainfall, permitting poorly regulated land-use change from grazing to agriculture, resulting to clearing of forests and woodlands for agriculture. The more recent problem of cutting trees for making charcoal for export is contributing to increased clearing of forests and woodlands, especially the very large area close to Kismayu Township, which is now totally devoid of trees.

The problem of soil erosion, which is mainly associated with overgrazing, is contributing to the occurrence of desertification that is caused by periodic droughts and increased human population, compounded by lack of traditional regulation of pastoralist grazing. Overgrazing is a particular threat to the relatively fragile arid-bushland communities which cover much of Somalia, and is especially severe around refugee camps and watering points. In many areas the presence of numerous watering points has led to overstocking and consequently to overgrazing. Also, the few areas of wetland in the country, which serve as dry-season grazing areas, attract intense cultivation pressure.

The on-going forest and woodland clearing for agriculture and charcoal production, including soil erosion due to overgrazing, will have major implications on Somalia's ability to conserve its natural resources. In addition to unsustainable land management practices, there are also a number of institutional constraints which are reducing the effectiveness of biodiversity and tropical forestry protection in Somalia. For example, there is poor coordination among various organizations (e.g. NGOs, and international organizations) that are involved in natural resources management, due to the previous civil war and the current political instability.

## **2. Analysis of Potential Environmental Impact of Somalia Strategy Statement**

The Somalia Strategy Statement will be implemented under two SOs that include: (1) SO1: Reinforce Conflict-mitigation Capacity; and, (2) SO2: Improve Access to Essential Services, including humanitarian and social needs. This includes activities for "Cross-Cutting Themes", for Gender and HIV/AIDS. The analysis of potential environmental impacts of the Strategy statement is as follows:

### **2.1 Strategic Objective 1: Reinforce conflict-mitigation capacity**

Land, human settlement issues, and natural resources-based disputes are perceived by many informed sources to be the most likely sources of potential conflict in Somalia. This SO will reinforce the capacity of Somali civil society to promote peace and mitigate conflict. Civil society activities that support local peace and reconciliation initiatives, such as local community dialogue workshops and events, will be strengthened and possibly expanded if sufficient resources be made available. USAID will support civil society networks across regions and efforts to bolster civil society's collaboration with existing local authorities. The support will aim to bolster confidence in the transitional federal institutions and reduce the influence of violent extremism. USAID will aim to work with moderate Islamic organizations that target women and youth groups in its programming and will provide support for peace media.

Most of the activities for this SO will not have potential to cause significant direct or indirect biophysical changes in the environment. But activities for establishment or rehabilitation of physical facilities may involve construction of buildings or other physical facilities, and this will need to be associated with mitigation action and good management practices.

As appropriate, and to the extent possible, USAID will promote environmental awareness messages in conflict mitigation activities surrounding natural resource management. USAID will not invest directly in tropical forestry and bio-diversity programming because there is no funding available for this in Somalia.

## **2.2 Strategic Objective 2: Improve access to essential services**

This SO aims to improve access to basic health, water and education services to serve the dual purpose to help boost confidence in the TFG and local authorities in Somaliland and Puntland, and to close the vulnerable spaces where extremist elements might otherwise penetrate with inputs and ideology. Emphasis will be placed on visible and quick-impact, community-based projects that can provide immediate tangible benefits to some of the most vulnerable members of society while laying the foundations for longer term benefits. USAID will sequence assistance to ensure the development of service systems while meeting immediate needs in a manner that will promote equity and good governance, and where possible will leverage services being provided by local authorities. Through its civil society program, USAID will build capacity of service institutions, promote community participation, and increase access of marginalized groups. To the extent that limited resources will sustain, USAID will achieve short-term, people-level results by helping expand access to education, food security and emergency health and water services with the aim of contributing to stability and recovery, and making the environment less hospitable for extremist influences.

*Education program:* The focus for USAID support to basic education during this transitional period will be to develop and implement innovative high quality education programs, via radio, for primary school students and teachers throughout Somalia. USAID will increase the use of radio programming to broadcast primary school education to all parts of Somalia and undertake teacher training, curriculum work and programs to encourage Muslim girls to attend school. The program will work with the public, private, non-governmental organizations and moderate Islamic groups to expand access and improve the quality of education for Somali children.

*Food security program:* The USAID Food for Peace office will support food-for-work activities that promote livelihoods and asset creation. Activities will focus on rehabilitation of agricultural infrastructure such as irrigation canals, earthen flood-control dams, and farm-to-market feeder roads to promote increased agricultural production, as well as vocational training, school feeding, food towards maternal and child health clinics and support to TB and HIV patients. USAID's Office of Food for Peace will continue to support food security programs in southern and central Somalia to respond to food needs created by drought and civil conflict.

*Humanitarian program:* Providing essential services in a country as fragile as Somalia is paramount in keeping it from further sliding into chronic crisis. The Office of Foreign Disaster Assistance will fill urgent service gaps while at the same time endeavoring to build local capacity. USAID humanitarian programs during this strategy period will focus on health and nutrition, asset and livelihood recovery, and water and sanitation.

*Water and Sanitation program:* USAID's Office of Foreign Disaster Assistance will rehabilitate traditional water points and provide health education on sanitation practices in Puntland, Bay, Bakool and eastern Gedo Regions of Somalia. They will help increase the availability of safe water to persons living in drought-affected areas and improve the environmental sanitation and personal hygiene of targeted communities. Support will be provided to community water, environment and sanitation committees to strength their capacity to maintain and manage water points.

*Health and Nutrition program inputs:* Emergency health and nutrition activities will be supported throughout the country by USAID’s Office of Foreign Disaster Assistance. Support will be provided to generate relevant nutrition information while developing local capacity in Somalia. Key activities include establishment of sentinel alert sites, conducting nutritional assessments, training organizations and analyzing data.

Some of the activities for the above three sub-programs may have a direct effect in the environment. These activities include: Implementation of projects on health, education, water, sanitation, food security and agriculture, and labor-intensive reconstruction efforts; repairing or building key public assets, such as markets, bridges, and roads; promotion of livelihoods and asset creation; rehabilitation of irrigation canals, earthen flood-control dams, and farm-to-market feeder roads for promote increased agricultural production.

**Potential Environmental Impacts of Cross-Cutting Activities:** The “Cross-Cutting” activities include Gender and HIV/AIDS. The proposed activities will not have a direct effect on the environment. .

### **3.0 USAID’s Response to Tropical Forestry and Biodiversity Conservation Needs**

#### **3.1 Cross-sectoral programmatic recommendations**

- **Help build local capacity for integrating environmental reviews** into program design and management, including environmental screening in grants funds and small and medium enterprise promotion.

USAID will develop its partners’ capacity for conducting environmental review by supporting training programs and making these assessments a requirement and integral part of project design and development.

- **Promote a balanced, transparent, and accountable system of governance** which can facilitate decentralized management of natural resources and private initiatives, and to proactively engage government, CBOs and civil society in resource allocation decisionmaking informed by environmental values.

If adequate DA resources are available, the Mission’s programs will support activities that build capacity of local governments to internalize the environmental review process and build capacity for environmental management and protection at the decentralized levels. Likewise, civil society organizations may be strengthened to promote environmental management, such as local NGOs active in environmental education, community conservation, and other environmental initiatives, to empower communities to effectively manage natural resources and become stronger advocates for environmental issues.

#### **3.2 Potential Linkages between the Environment and the USAID/Somalia Strategy**

While the USAID/Somalia Strategy does not have an SO addressing environment/natural resources management, where possible, the Mission will address tropical forestry, biodiversity and environmental management opportunities in its two Fragile States-oriented SOs. Herein are identified those activities that (i) might be adapted to meet significant forestry, biodiversity conservation needs, (ii) promote synergy between its SOs, and (iii) integrate environmental management into its programs, beyond tropical forestry and biodiversity conservation. Integrating biodiversity and forestry issues into the Mission’s general programs is a potential approach to establishing the essential conditions for conservation while meeting the objectives of social and economic stability.

In addition, should additional resources be made available for these purposes, USAID/Somalia would consider funding additional activities (with appropriate dialogue and agreements), some of which are identified below.

### **3.2.1 Avoiding and Mitigating Adverse Environmental Impacts**

The greatest threat to tropical forests and biodiversity resource conservation is mainly due to the loss of habitat caused by activities that involve land-use change for agricultural land expansion and production practices (i.e. bush clearing, draining of wetlands, unwise use of pesticides, small-scale irrigation, etc.), and overgrazing by livestock, especially around watering points. The most drastic damage on tropical forests and biodiversity resources in Somalia has been caused by indiscriminate clearing of natural forests that are found in the high altitudes, and mangrove forests along the coastline and the off-shore islands, which are still undergoing increased exploitation. The resulting deforestation and soil erosion due to overgrazing by livestock and poorly regulated agricultural practices will have major implications on Somalia's ability to conserve tropical forests and biodiversity resources, and the improvement of ability to become food secure. The extent to which USAID support will influence actions in these will be limited by available funding.

To the extent that development assistance is provided for the implementation of activities that have a potential to cause bio-physical changes in the environment direct, the activities will be small-scale with minimal environmental risks. In all cases, program activity implementers and grant administrators will have at their disposal an environmental screening tool and guidelines to enable them to screen all the activities that have a potential to cause bio-physical changes in the environment. The aim is to identify appropriate adverse impact mitigation and monitoring measures, and to promote "best practices" for preventing or minimizing the occurrence of adverse impacts, so that the activities can be environmentally-sound.

REDSO's environment team will provide tools and support to program implementers for activity environmental screening, and environmental guidelines, so as to promote "best practices for achieving environmentally-sound activity design, to prevent or minimize possible to the environment.

### **3.2.2 SO Entry Points and Opportunities for Integrating Environmental Management:**

The specific planned actions for the Mission's two SOs identified in this document has the potential of contributing to the conservation of tropical forests and biodiversity resources, as well as foster environmental management. The following actions are recommended to the Mission as having the potential of helping to address some of the identified key threats to Tropical Forests and Biodiversity conservation needs. In addition, should additional resources be made available for these purposes, USAID/Somalia would consider funding additional activities (with agreement of the TFG), some of which are identified below. The proposed actions by SO include the following:

#### **3.2.2.1 SO 1 Reinforce conflict-mitigation capacity**

Simple information, education and communications messages about day-to-day environmental awareness considerations could be built into educational curricula, and into programs addressing mitigation of conflict. Programming to address land and natural resource management will be cross-sectoral

#### **3.2.2.2 SO 2: Improve access to essential services**

This includes program components in Education, Food security, Humanitarian services, Water and Sanitation, Health and Nutrition.

*Environmental Review & Mitigation:* For this SO, certain activities, such as for rehabilitation of running water and sanitation facilities present in all rehabilitated health clinics (e.g. rehabilitation of boreholes and water pipelines and repairs of water pumps and engines), routine immunization (e.g. disposal of immunization materials), improvement of disease control programs (e.g. use of ITNs for prevention of malaria infection, disposal of tested blood for malaria, blood testing for HIV/AIDS, and increased use of condoms), HIV/AIDS testing (e.g. disposal of tested blood, syringes, and plastic containers), and TB testing and treatment (e.g. disposal of testing equipment and drug containers), will have a potential for causing bio-physical changes on the environment.

The SO team may will address malaria, and long-lasting insecticide treated nets(LLITNs) will be preferred, as they are safe for household use. Pesticides for retreatment should be phased out as long-lasting nets are introduced. Should the need for interior residual spraying arise, appropriate environmental assessments will be conducted. Hazardous healthcare waste management should be dealt with proactively through the National HIV/AIDS Quality Assurance Program. Incinerators should be installed at health posts and hospitals in Somalia when possible.

*Additional Opportunities for Health component of SO 2*

Should additional resources become available USAID/Somalia could consider (with appropriate agreements), including some of the following activities into its program:

- Improvements in women and children's health and reductions in fertility overall in REDSO countries can only reflect positively on the country's environmental future, both in relation to USAID programs, and more broadly. Likewise, programs intended to stem the tide of HIV/AIDS will have a salutary effect on the countries' health and economy.
- Any activity related to environmental health, such as NRM interventions in CBOs which may benefit by environmental sanitation and health services, could potentially include components of health programs' child survival, malaria, maternal health and HIV/AIDS services, and the like.
- Through interventions in a range of strategic sectors and through regional partners operating in those sectors (i.e., health, food security, education, democracy and governance, conflict mitigation), SO 2 could seize opportunities for expansion of successful HIV/AIDS interventions in prevention, care, treatment and support. This also lends itself to appropriate integration of environmental quality and infection prevention considerations.

*Additional Opportunities for SO 2*

Should additional resources become available, USAID/Somalia could consider (with appropriate discussion and agreements with TFG) folding some of the following sorts of activities into its program:

Reforming Somalia's institutions and policies could affect the exploitation and conservation of tropical forests and biodiversity, including providing resource users with legal ownership of their land and trees, which is an important step towards the creation of enabling conditions necessary for resource users to adopt sustainable land resource management practices. At the local level, activities should build capacity to manage natural resources in a socially and ecologically sustainable manner through activities that bring ethnically mixed communities together to share improved inputs and environmentally sound practices that will improve economic and food security.

*Here are some opportunities that might be further developed if the resources become available:*

- Encouraging the local communities to establish nurseries for multiplication of indigenous and suitable exotic trees, and other local plants for reforestation activities in areas where forests have been cleared in the past, and to collect grass and legume seeds for rangeland reseeding for rehabilitation of denuded areas caused by overgrazing (especially in areas surrounding watering points) and poorly regulated agricultural land management practices.

- Establish appropriately distributed boreholes and wells in Somalia for local communities and schools (including health centers) water supply, so as to minimize the potential for occurrence of high concentrations of livestock numbers near the watering points, and to prevent or minimize land degradation due to soil erosion caused by overgrazing and trampling by hooved animals.
- Providing communities with access to improved grazing and rangeland improvement practices (e.g. rotational grazing, ecto-parasite control, introduction of high yielding livestock breeds, bush clearing methods for range improvement, regulation of seasonal stocking rates, establishment of grazing area carrying capacity, proper management of watering points and regulation of establishment of settlements in adjacent areas, livestock disease control, and encouraging increased destocking) for prevention of soil erosion occurrence due to overgrazing.
- Providing communities with access to improved agricultural production technologies and practices (i.e. introduction of high yielding seeds and improved cultivation methods, design of effective soil conservation measures, integrated pest management, etc.) to reduce agricultural expansion into forests and bushlands, wetlands and grazing areas, so as to minimize or prevent the direct impact on natural resources , through intensification of agricultural production practices.

#### **4.0 Extent to which USAID’s proposed program meets the expectations of the FAA 118/119 Tropical Forestry and Biodiversity Conservation.**

USAID/Somalia’s opportunity to make progress in biodiversity conservation is judged to be minimal. Nevertheless, USAID/Somalia recognizes that Somalia’s tropical forest, biodiversity and environmental management needs are intertwined as the maintenance of important ecosystem services, and coping with natural resources conflicts, depends on the conservation and restoration of vegetative and forest cover and watersheds. Although Natural Resource Management is not one of USAID/Somalia’s strategic focus areas, USAID/Somalia’s SO Teams will seek to integrate biodiversity and environmental management issues into their programs to the extent feasible and that resources allow. This is described in the discussion above in Section 3.

The Mission plans to undertake an integrated approach to foster a better educated and more productive population, increase the effectiveness of institutions in promoting a vibrant private sector and democracy and governance, economic growth, environment and natural resources management, and agriculture. These activities will likely have specific positive impacts on the conservation of biodiversity and tropical forests. The Mission does not have a comparative advantage to address all of the threats and necessary actions to conserve tropical forests and biodiversity by itself, but the integrated approach to resource conservation can be easily achieved by ensuring that all program activities are environmentally-sound before implementation. There is also opportunity for the Mission to address many of the actions that are necessary to conserve tropical forests and biodiversity resources more effectively, if it works collaboratively with relevant Somali authorities and other International Donors and non-governmental organizations (NGOs) working in Somalia, during the design and implementation of the SOs’ programs.

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