

Appendix A. Djibouti Environmental Analysis¹: Tropical Forests, Biodiversity and Environmental Management (12/2/05 update)

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/Djibouti to prepare this brief Environmental Analysis, including a review of the condition and framework of forest and biodiversity conservation in Djibouti and the likely opportunities for engagement through the Mission's 2006-2010 Strategy Statement. Djibouti's new 2006 Strategy Statement includes two SOs: SO 1 Education, and SO 2 Health. The analysis is designed to support the priority-setting process for the development of Djibouti Strategy statement and operational plan.

Djibouti is a small country of 23,200 square kilometers that is situated in the Greater Horn of Africa (GHA) at the southern entrance to the Red Sea, bordered by Eritrea to the north, Ethiopia to the north-west, west and south, and Somalia to the south-east (See Figure 1).

Figure 1.



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The country has a harsh climate and lack of natural resources, making its economy highly dependent upon the tertiary sector (i.e. trade, financial and other services), with primary and secondary sectors making up just 13% of the gross national product (Emerton 1998). Djibouti City is a busy port that is linked by rail and road to Ethiopia, and the port activities play a major role in the national economy. Djibouti is generally hot and dry country, with two distinct seasons: cold season that runs from October – April, with high relative humidity (60-85%), temperatures ranges of 23 – 30 degrees Celsius; and hot season extending from June – September, with lower relative humidity (35 – 60%) and temperature ranges of 30 – 40°C. Rainfall is generally low and erratic throughout the country, with an average of 130 – 250 mm per year, with most of the rain falling from March – April and October – November.

The main vegetation types are categorized by altitude, with the highest mountain areas supporting woodland and bushland, and wooded grassland; mid-altitude regions (all plateaus, hills and plain edges) supporting bushed herbaceous grassland of various densities; and, plains and depressions where vegetation is mainly composed of sparsely scattered herbs, and low-density shrub or tree cover. There are several areas with mangrove forests along some parts of the coast and the off-shore islands. The natural vegetation in the south-east of the country is composed of shrubs and sparse grass cover, dominated by the recently introduced exotic *Prosopis chilensis* evergreen trees, that are highly invasive, with a potential to suppress the growth of natural vegetation in the area, if not properly controlled. These trees have a potential for providing a quick source of wood fuel for domestic use, but their leaves are not suitable for consumption by livestock as fodder.

The human population is estimated at 793,000 (Population Reference Bureau, Mid-2005) of which 65% live in Djibouti City. Population growth is estimated at 6% per annum, of which 3% is due to natural growth and 3% results from immigration (Direction de l'Environnement, 1999). Administratively, the country is divided into five districts: Djibouti, Ali-Sabieh, Dilkil, Tadjoura and Obock. The country is essentially volcanic in origin and largely desert, with a landscape that is composed of plateaus of medium elevation (500 – 1,000 m), that are interspersed with plains or depressions of low altitude (below 500 m), a number of mountain ranges or peaks, and a coastline of approximately 372 kilometers.

2.0 Biodiversity Threats in Djibouti

Majority of the rural population are subsistence pastoralists, and almost all livestock products traded in the cash economy of the country are imported. The land available for arable agriculture is minimal, with about 6,000 hectares being potentially suitable for irrigated cultivation, but only a fraction is actually under cultivation. The potentially rich marine resources are relatively under-utilized and efforts are being made to promote the fishing industry in the country (Emerton, 1998). Poverty levels are high, with 45% of the population classified as poor (World Bank, 1997).

The present vegetation cover is significantly less than in the past, partly due to climate change (it has become hotter and drier), and also due to the impact of human activities. Pastoralist overgrazing is occurring in much of the country, especially in the woodlands, where good grazing pastures are found. The overgrazing problem is mainly due to the increase in human and livestock populations, and the development of watering points that are encouraging the pastoralist nomads to establish permanent settlements with their livestock close to the watering points. Indiscriminate deforestation is a serious problem in Djibouti. The most important forested (wooded) area, known as Foret de Day Forest, has been reduced in size from 7,500 ha. of 200 years ago, to 2,300 ha. in 1949, and more recently to 900 ha. (Comite' National pour l'Environnement, 1991). The remaining part of the forested area is extremely degraded, since a large proportion of the trees are either dead or dying, and there are serious concerns over the future of this forest site. The felling of trees for firewood and wood for charcoal production is also a significant activity in the more wooded areas, including the mangroves near Djibouti City (Said 1999).

The coastal zone around the City of Djibouti is under increasing development pressure, and the mangrove forests along the coast and offshore islands are being heavily utilized for grazing, firewood and timber for construction. The continuing increase of soil salinization and soil erosion by water due to overgrazing by livestock herds, are also becoming major environmental concerns. In the marine environment, the collection of souvenirs (e.g. coral and shells) for personal use and for sale to tourists may be causing a major impact in some areas, although other marine resources are under-utilized in Djibouti. Spear fishing on the reefs, though illegal, is fairly common, and is mainly practiced by tourists. The sea water pollution by oil leaks from ships using the port of Djibouti is a major chronic problem, and there is a potential for large-scale oil spill incident in the port. There is a problem of indiscriminate refuse dumping, which is widespread around the City of Djibouti, due to poor handling, management and disposal of solid waste. While game hunting is illegal, some killing or live capture of animals does occur from time to time. Djibouti is also a center for trade in wild animal products that originate from outside the country, and products such as leopard skins and ivory are, sometimes openly on sale in the market. Djibouti is signatory to the convention on international trade in endangered species of wild Fauna and Flora (CITES).

3.0 Analysis of Potential Environmental Impacts of Djibouti Strategy Statement

The Strategy Statement will be implemented under two SOs that include: (1) SO1: Equitable Access to Quality Basic Education Achieved; and (2) SO2: Foster a Healthier Society. The program also includes activities for “Cross-cutting Themes”, for Gender, HIV/AIDS, And Youth. The analysis of potential environmental impacts of the Strategy statement is as follows:

3.1 SO1: Equitable Access to Quality Basic Education Achieved

The ongoing basic education improvement program mainly focuses on increasing access to education, improving quality teaching, learning and increasing opportunities for girls schooling, non-formal education and community participation, and improvement of water and sanitation facilities in the schools. The activities of the structure of the basic education support program for the next three years will focus on supporting GORD reform efforts and needs, to:

- Improve strategic planning and decision-making in the MOE;
- Increase equitable access to basic education by improving the availability and use of education infrastructure, learning materials and school management. USAID will assist the MOE in developing and implementing strategies that effectively utilize school dormitories and other educational facilities. Community mobilization focused on strengthening PTAs will contribute to increased access, retention and performance of rural children. Additional activities will focus on literacy and non-formal vocational training. Vocational training schools will be linked to needs and demands of the employment market. Linking education to employment will likely diminish the consumption of khat and provide economic opportunities to students, youth and girls. In collaboration with health and HIV/AIDS programming, USAID will develop and implement a school health component that focuses on HIV/AIDS, hygiene, drug abuse awareness, and other relevant health issues.
- Improve the quality of teaching and learning through the development of a teacher training policy for pre-service and in-service teacher training. Interventions will include pre-service and in-service training, teacher support services and development of low-cost teaching and student manuals, and the like. None have biophysical implications.

- Improve opportunities for girls' education through support for decentralized school systems. Support will include supplying water to schools that will further support girls' enrollment and retention. For this SO the activities for achieving increased educational infrastructure (e.g. new construction and rehabilitation of school building structures) and for improvement of water supply and sanitation facilities in the schools (e.g. rehabilitation of boreholes, construction and rehabilitation of water supply pipelines, construction of latrines, and operations and maintenance of water pumps and pipelines) will have a potential for causing bio-physical changes on the environment.

3.2 SO 2: Foster a Healthier Society:

The Djibouti health strategy faces many challenges, due to lack of qualified and sufficient numbers of health personnel within the MOH, at all levels, and a history of poor planning and management that make strengthening of health systems difficult. This activities for this SO will focus on three main areas: a) strengthening health systems, b) access to and promotion of primary health care and, c) enhancing local capacity. Specifically, those with potential biophysical aspects are:

- Providing improved primary health services to all women of reproductive age and all children under the age of five, for improvement of disease control programs, particularly in the area of HIV/AIDS and TB to all urban populations;
- Helping to reduce vulnerability of all youth, particularly in urban areas;
- Building the capacity of all health personnel in Djibouti in management and supervision, so that at the end of the project community associations would be engaged in HIV/AIDS prevention activities and health facilities would be routinely immunizing children with DPT3, disease surveillance, providing TB treatment services and health centers will routinely provide completed data forms each quarter; and,
- Rehabilitation of running water and sanitation facilities present in all rehabilitated health clinics to ensure adequate supply of running potable water in all the health clinics.

For this SO the activities 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.

3.3 Potential Environmental Impacts of Cross-Cutting Activities: The Cross-Cutting activities include Gender, HIV/AIDS and Youth. Most of the indicated activities will not have a direct effect on the environment. The activities that have a potential to cause bio-physical changes on the environment identifies as follows:

- For Gender – activities for making certain that all health facilities contain a maternity ward and antenatal service (e.g. rehabilitation or construction of new building structures, and water and sanitation facilities.), and disposal of medical waste from the wards;

- For HIV/AIDS – activities include cross-country HIV mitigation program (e.g. blood testing and disposal of tested blood, used syringes and containers);
- For Youth – activities include youth livelihood programs (e.g. pastoralism, mixed agriculture, and small-scale irrigation), and lobbying for micro-credit for youth organizations (e.g. support for natural resource based micro-enterprises).

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.

4.0 USAID’s Response to Tropical Forestry and Biodiversity Conservation Needs

4.1 Potential Linkages between the Environment and the USAID/Djibouti Strategy

While the USAID/Djibouti 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 three proposed 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 the most promising 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/Djibouti would consider funding additional activities (with agreement of the GORD), some of which are identified below.

4.1.1 Avoiding and Mitigating Adverse Environmental Impacts

The greatest threat to tropical 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 (e.g. bush clearing, draining of wetlands, unwise use of pesticides, and small-scale irrigation), and overgrazing by livestock, especially around watering points. The most drastic damage on tropical forests and biodiversity resources in Djibouti 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 Djibouti’s ability to conserve tropical forests and biodiversity resources, and improvement of ability to become food secure.

USAID/Djibouti Mission has a responsibility to carry out environmental reviews and decision-making for all the activities that have a potential to cause bio-physical changes on the environment so as to conserve tropical forests and biodiversity resources. The emphasis is on screening of all activities, using the Africa Bureau environmental screening form (ESF) so that all activities that have a potential for causing adverse environmental impacts affecting natural resources can be identified to permit the incorporation of appropriate adverse impact mitigation and monitoring measures in the activity design before

implementation by the implementing partners. REDSO will assist the Mission and implementing partners in capacity building for environmental assessment through training, and in designing activities that are environmentally-sound. This will include periodic field visits and consultations with mission staff and partners to assess the success of the implementation and performance of recommended adverse environmental impact mitigation and monitoring measures.

One important example of how this responsibility for sound environmental management was taken seriously is in the environmental assessment and technical reviews (hydrological, livestock waste, etc.) that took place over several months time to undergird the development of the Djibouti Livestock Export Facility.

4.2 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 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** across SOs to allow 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, a good governance initiative might support decentralization program activities that build capacity of local governments to internalize the environmental review process and build capacity for environmental management and protection at the district, sector, and cell levels. Civil society organizations that promote environmental management, such as Djibouti NGOs active in environmental education, community conservation, and other environmental initiatives, could be strengthened to empower communities to effectively manage natural resources and become stronger advocates for environmental issues.

4.3 SO Entry Points and Opportunities for Integrating Environmental Management:

The specific planned actions for the Mission's two Strategic Objectives (SOs) identified in this document will contribute to the conservation of tropical forests and biodiversity resources, as well as foster environmental management. The following actions are particularly recommended to the Mission and GORD, which will likely help address some of the identified key threats to Tropical Forests (FAA Section 118 e) and Biodiversity (FAA 119 d) conservation needs. In addition, should additional resources be made available for these purposes, USAID/Djibouti would consider funding additional activities (with agreement for the Djibouti Government), some of which are identified below. The proposed actions by SO include the following:

4.3.1 SO1: Equitable Access to Quality Basic Education Achieved

Simple information, education and communications messages about day-to-day environmental awareness considerations could be built into curricula.

4.3.2 SO 2: Foster a Healthier Society

Environmental Review & Mitigation: For this SO the activities 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 2 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 Djibouti.

Additional Opportunities for Health SO

Should additional resources become available USAID/Djibouti could consider (after discussions with the GORD) 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.

5.0 Extent to which USAID's proposed program meets the expectations of the FAA 118/119 Tropical Forestry and Biodiversity Conservation.

Djibouti is not accorded priority for biodiversity conservation funding in Sub-Saharan Africa, based mainly on an assessment of USAID's opportunity to make progress in biodiversity conservation, including assessment of synergy with other USAID programs. Nevertheless, USAID/Djibouti recognizes that Djibouti's tropical forest, biodiversity and environmental management needs are intertwined as the maintenance of biodiversity and ecosystem services depends on the preservation and conservation of vegetative and forest cover, watersheds and wetlands. Although Natural Resource Management is not one of USAID/Djibouti's strategic focus areas, USAID SO Teams are seeking 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 4.

As discussed above, the Mission plans to undertake an integrated approach to foster a better educated and more productive population, increase the effectiveness of African 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 GORD Ministries and other International Donors (e.g. World Bank, FAO, and GTZ) and non-governmental organizations (NGOs) working in Djibouti, during the design and implementation of the SOs' programs.

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