Environmental Threats and Opportunities Assessment (ETOA) with Special Focus on Biological Diversity and Tropical Forestry

1. Background

Environmental Requirements: The core environmental requirements of USAID operating unit strategic plans are spelled out in ADS 201.5.10g, and are derived from provisions of the Foreign Assistance Act (FAA). USAID/Ghana recognizes that protection of the environment and wise management of the natural resources base are absolute requirements of any successful development program. Per Section 117 of the FAA "Environment and Natural Resources," it is mandatory for operating units to implement their programs with an aim to maintain (and restore) natural resources upon which economic growth depends, and to consider the impact of their activities on the environment. The legal requirements of the FAA are reflected in USAID's ADS Chapter 204 "Environmental Procedures," which provides essential procedures and policy on the application of 22 CFR Part 216. This regulation codifies the Agency's procedures "to ensure that environmental factors and values are integrated into the A.I.D. decision making process." Thus, USAID conducts assessments that help to ensure that its environmental priorities are incorporated into program planning, implementation and monitoring. The best opportunity to ensure that such issues are considered is at the planning stage.

Sections 118 "Tropical Forests" and 119 "Endangered Species" of the FAA codify the more specific U.S. interests in forests and biological diversity. These two provisions require that all country plans include: 1) an analysis of the actions necessary in that country to conserve biological diversity and tropical forests; and 2) the extent to which current or proposed USAID actions meet those needs. Section 118/119 analyses are specific legal requirements of all USAID operating unit strategic plans. Further, 22 CFR 216.5 requires USAID operating units to conduct their assistance programs in ways that are sensitive to the protection of endangered or threatened species and their critical habitats.

Translating the intent of the above legal requirements into a practical strategic planning approach, the ADS provides a priority-setting framework for missions to use in determining environmental threats and opportunities (See 201.5.8; and Supplementary References, Joint Planning and Guidelines for Strategic Plans, and Technical Annex B Environment, dated February 1995). The priority-setting process is intended to guide the setting of environmental strategic objectives, as well as to inform strategic objectives in other sectors.

Based on information from a general assessment of Ghana's environmental treats and opportunities by Development Alternatives Inc. the Mission analyzed its entire portfolio in relation to impacts on the environment, forests and biodiversity as specified in sections FAA 117, 118 and 119.

Ghana's Ecosystem: The ecosystem types in Ghana have been well documented (see Wilcock et al, 2003). The two major biomes represented in Ghana are the tropical high forests (comprised of various associations) and the savannas. The southern half of the country supports the closed forest whereas the northern half supports savanna and woodland vegetation. The northern savanna is mainly of the Guinea type but an area of Sudan savanna occupies the north-easternmost corner of the country. These major vegetation types are by no means uniform or homogeneous; many variants occur in each type. Thus, there are, for instance, swamp forests where the ground is waterlogged in the forest zone and gallery forests along the edges of rivers in the savanna zone.

In addition, other minor vegetation types found in the southern part of the country are: (1) the coastal savanna, in the south-eastern part of the country; (2) the strand or coastline vegetation along the seashore; and (3) the mangrove vegetation of the lagoons and estuaries distributed all along the coasts of Ghana, from Cape Three Points in the south-western part of the country to Denu in the south-eastern corner of the country. The only natural lake system is the Lake Bosomtwi which covers an area approximately 50 square kilometers and has eleven (11) fish species. The Volta Lake inundating some 4,840 square kilometers of pristine natural forest and the two dams on the Volta river at Akosombo and Kpong have indisputably altered the biodiversity and ecology of the river and adjacent areas. Other freshwater ecosystems include the major rivers such as the White Volta, Black Volta, Lower Volta and Oti. It is estimated conservatively

that about 124 fish species from 62 genera and 26 families inhabit the major rivers. The coastline of Ghana is lined with about 90 lagoons, several estuaries and rocky shore habitats that exhibit distinct array of biological diversities.

Potential Threats to Ghana's Forests and Biodiversity: The two key natural resource management issues in Ghana are deforestation and land degradation linked particularly to inappropriate farming practices and unsustainable harvesting of agricultural crops. Past policies in Ghana have led to the conversion of forested lands to other land use forms, including agriculture, leading to serious degradation and loss of biological diversity. The biological diversity of the country is under threat through human encroachment, land degradation, hunting and loss of habitat. Ghana loses annually over 22,000 ha of its forests turning healthy forest lands into "wastelands" resulting in a loss of biodiversity and leading to only short term gains in agricultural production. Environmental legislation in Ghana is fragmented, much of it has been initiated in an ad hoc manner due to the lack of coherence in environmental planning and policy process.

Conservation Efforts: Ghana is considered to have favorable environmental policies. However, in spite of the existence of a number of institutions and departments, biodiversity management and conservation has been far from satisfactory. A major constraint has been the lack of coordination, collaboration and networking between and among policy developing institutions on one side and policy-implementing institutions on the other side. The consequences have been overlaps, duplications, conflicts, unhealthy competitions, disharmony, etc. Furthermore, there are undeniable weaknesses in the capacities and capabilities of some institutions and deficiencies in information management.

The role played by local community participation and traditional knowledge in resource use and biodiversity conservation, are recognized as a first step towards ensuring the implementation of policies and programs. Another innovative step that has been taken by the Government of Ghana is the development of an environmental education strategy being implemented under the leadership of the Environmental Protection Agency. Ghana also works with the convention secretariats and the multilateral and bilateral development institutions such as the World Bank, International Monetary Fund and the African Development Bank in various programs aimed at the sustainable development of the county's natural resources.

There are well over 100 indigenous and community based organizations engaged in natural resource management activities. While they are not well-established to receive direct USAID support some of these organizations do work in partnership with PVOs receiving direct support. Through the P.L. 480 Title II program, improved agricultural practices have been introduced throughout the country and especially in the Northern Regions. ADRA,s Collaborative Community Forestry Initiative has resulted in remarkable growth in agro-forestry plots and food production, increased protection of water bodies, increased access to fuel wood, and a fight against desertification.

USAID/Ghana provided support to the Government of Ghana for the protection of 370square kilometers of Tropical Forest as nature reserve which resulted in the establishment of the Kakum National park.

The focus of this analysis is to address the following questions: (1) what actions in Ghana are necessary for conserving biological diversity and tropical forests; (2) to what extent do current and proposed SO activities address those needs; (3) to what extent do the proposed activities impact the environment, and (4) why might an SO team opt not to incorporate environmental activity.

2. How USAID/Ghana's New Strategic Objectives relate to the Forests and Biodiversity

Democratic Governance (SO 5)

This strategic objective is to support Ghana's effort to consolidate democracy by supporting the civic participation in the democratic process and ensure that local and national governments are responsive to the interest of the citizens. Activities under the strategy will consist of technical assistance, training and the procurement of commodities in support of strengthening local organizations and GOG institutions to foster

greater civic involvement and better governance. There is no activity that focuses explicitly on the environment.

IR 5.1 Enhanced responsiveness of key governance institutions to citizens

Activities under this IR focus on building the capacity of parliament to become more receptive and responsive to civic input. However, the SO team will work at building more permanent linkages between parliament and civil society organization (CSO) to encourage their input into legislation with the intent of impacting Mission programming in education, health, and economic growth at the national, district and sub-district levels. Given the demand-driven approach the SO team has used in the past and will continue to use, the chances of dealing with environmental issues are open.

IR 5.2 Strengthened District Assembly Capacity for Democratic Governance

USAID's efforts at the local level to date have focused on enhancing CSOs' and CBOs' abilities and opportunities to engage local government in policy discussions. The USAID program, which works on a demand basis, has helped communities to leverage their assets and to establish district development plans through democratic, consultative processes. Some examples of tangible improvements include increased tax revenues, cleaner more functional markets, community reforestation, traffic and safety control, and urban sanitation. Similar environment related benefit could be expected under the new strategy, especially as there are well over 100 indigenous and community based organizations engaged in natural resource management activities and are becoming increasingly strong at lobbying politicians.

The Democracy and governance team has not focused explicitly on sustaining the environment because having laid the democratic foundation Ghana has a strong desire to consolidate its gains given the political turmoil in the sub-region. Besides, dealing with environmental issue is not in SO 5's comparative advantage. Nevertheless, the demand-driven approach makes it possible to address environmental needs when communities identified them as being pertinent.

Private Sector Competitiveness (SO 6)

The purpose of the economic growth strategy is to increase employment opportunities and income levels for poor Ghanaians which in turn require an accelerated rate of economic growth. The focus of the SO will be to increase private sector competitiveness to compete in the world markets. Exports are emphasized because domestic markets are too small to kick start rapid growth. Ghana's economy being predominantly agricultural based suggests that this SO has inherent linkages to natural resource management. Key development challenges include degradation of land linked to inappropriate farming practices and deforestation linked to unsustainable harvesting of timber. Inappropriate use of agro-chemicals and fertilizer and poor pest management are also reported to have significant adverse impact on the environment and exports.

These environmental issues and others will be addressed through policy reforms, institutional building and enterprise development. It is expected that a number of the activities from the current Trade and Investment Reform Program (TIRP) will be continued, most of which involve the provision of technical assistance and training. To date it has not been possible to directly attribute to the TIRP any adverse environmental impacts.

IR 6.1 Enabling environment supportive of private sector competitiveness strengthened

Given the market focus of SO6 support to policy reforms in its core program will be directed at macroeconomic management, financial intermediation and improvements in the trade regime. However, should the Mission receive additional funding under IEHA, the SO intends to provide analytical resources for forestry policy because the future availability of logs for the wood products industry depends on a sustainable forestry policy effectively implemented and enforced.

IR 6.2 Capacity of private sector Enterprises to compete in selected product categories strengthened

The program for enterprise development will aim at strengthening firms to compete profitably in world, regional and domestic markets. While IR 6.2.1 will deals with the problem of accessing overseas markets IR 6.2.2 will focus on assisting Ghanaian enterprise to improve the quality, volume and timely delivery of their production so that their products conform to the requirements of markets they want to supply. A review of proposed activities indicate increased risk of significant adverse environmental impacts if activities result in increased agricultural production without corresponding investments in sustainable natural resource use.

In order to harmonize its program with the Agency's sustainable development goals, the SO team has decided to fund activities that are economically, socially and environmentally sustainable. One activity planned for and has received increased attention from the Mission over the years is the promotion of environmentally sustainable agricultural practices, e.g. integrated pest management and appropriate application of fertilizer and agro-chemicals as well as how to meet increasingly stringent standards for entry into the EU and American markets. The activity reduces the risk of adverse environmental impact as well as improves the chances of marketing Ghanaian produce globally. Support to eco-tourism is another investment that will continue to contribute to efforts at reducing the depletion of forest and biodiversity.

Another environment related activity that will be supported by SO 6 with additional funding from IEHA is providing technical assistance and training to private sector suppliers of agricultural inputs – seeds, fertilizer and agro-chemicals – to make them better providers of agricultural extension information. The import of this activity is to assure the proper use of agricultural inputs in order to make production by small holders efficient and environmentally sustainable.

Health (SO7)

The new Health program builds on USAID/Ghana's comparative advantage and leadership in the areas of community health service provision, child survival and reproductive health, social marketing, health insurance and HIV/AIDS prevention. The new Health Strategic Objective includes a focus on the health needs of the urban poor, emphasizes private sector involvement, strengthens newborn care, expands HIV/AIDS activities beyond prevention to care and support, addresses key GOG organizational constraints, such as personnel performance management, and enhances decentralized local capacity development.

Health status in Ghana has improved in many ways in recent decades, although many health challenges remain. Much progress is still needed in the areas of maternal and child health, addressing urban issues and chronic illness concerns. Ghana has a young age structure, with children under 15 years old comprising about 45% of its population. Life expectancy is 59.2 years old for women and 55.5 years old for men. At a population growth rate of 2.7% per annum, the population will double in 24 years, placing enormous pressures on Ghana's economy and environment.

Ghana's infant and under-five mortality have declined from 66 and 119 per 1,000 live births in 1993, to 57 and 108 (1998 Demographic and Health Survey), respectively. While under-five mortality is less than half of what it was at the time of independence in 1957, more than 100,000 Ghanaian children under five still die each year, accounting for more than half of all deaths in Ghana. The maternal mortality rate, considered to be Ghana's biggest health challenge, is extremely high at 590 per 100,000 (Population Reference Bureau, 2002).

HIV/AIDS: According to UN terminology, Ghana has a low level generalized epidemic, with an estimated prevalence (2002) at 4.1% among adults, expected to rise to 7% in 2009. This is still lower than in

neighboring countries (Ivory Coast, Burkina Faso, and Togo), all of which have prevalence rates close to or beyond 10%. Nevertheless, rates in certain bridging populations underscore the necessity of maintaining a strong focus on HIV prevention. For example, according to data from Canadian International Development Agency-supported clinics in Kumasi and Accra, rates among a sub-group of commercial sex workers are as high as 82%. An estimated 400,000 Ghanaians are living with HIV/AIDS, with 200 new infections occurring every day. Mother to child transmission is thought to account for 15% of new infections. AIDS-related orphans were estimated at 50,000 in 2000 and are on the rise; the social fabric in high-prevalence areas is increasingly unable to cater to their needs.

Under-Five Mortality: Malaria is the single most important cause of morbidity and mortality among children in Ghana, accounting for 40% of all outpatient visits and 25% of deaths among under-fives. These deaths are mainly due to insufficient prevention efforts and lack of early and effective treatment. Although child mortality has decreased, the proportion of neonatal deaths is increasing, representing a quarter of under-five deaths, or 50% of infant mortality. The majority of these deaths are caused by infection, pre-maturity, and complicated deliveries. Other main child killers include diarrhea, pneumonia, and measles.

Maternal Mortality: Antenatal care is high, although attendance at delivery by a skilled attendant is low at 44%. This contributes to trends in neonatal deaths (as noted above), as well as to risks of maternal mortality and morbidity. Other contributing factors include lack of a functioning emergency obstetric system, unsafe abortions and poor quality post abortion care.

Family Planning: Knowledge of contraception is high, yet modern-method contraceptive use remains low: only 13% of married women were using a modern method in 1998 due to fears of side effects and lack of easy and affordable access to services and/or commodities. Women continue to have more children than they desire and suffer from many problems related to pregnancy and childbirth. Unmet need (defined as those who want to space or limit their family size and are not currently using a method of family planning) is 34%, thus the gap between intentions and use is large.

With limited resource the health team has decided to address health issues that impede Ghana's economic growth efforts in areas where they have a comparative advantage. The team has no activity that is explicitly focused on environmental issues in spite of the fact that the health status of the country has a direct relationship with the environmental conditions. SO 7 evidently does not have the resources for direct management of the environmental causes of the reported health condition. However, assistance to reduce fertility would directly address rapid population growth, a fundamental threat to the environment and thereby contribute to environmental sustainability.

The SO is responsive to potential environmental health risks the proposed activities might pose. The team takes cognizance of the fact support for HIV testing has a potential for generating bio-hazardous waste. Under the strategy for FY1997-2004 four (4) Public Health Reference Laboratories (PHRLs), at which the specimens are tested, have been established. With funding from USAID the PHRLs have developed and disseminated through annual training courses their own guidelines on "Basic Infection Control for Laboratory Professionals." Site visits to these centers confirm that they are complying with the guidelines. For instance all sharps are collected in puncture-proof plastic or metal containers; all materials (e.g. gauze, rubber gloves) contaminated during collection of blood samples are collected in leak-proof plastic bags; all disposable materials used for testing are disinfected with a liquid disinfectant before being collected in plastic bags; finally, all disposable materials are periodically burned with diesel fuel and wood in a specially designed, perforated drums before being buried at a landfill.

Support for the use of insecticide-treated bednets and their re-treatment with insecticides create some modest risks to human health and the environment throughout the life cycle of the insecticide products. In order to minimize the risks associated with the use of insecticide-treated materials (ITMs), USAID/Ghana will ensure that a Pesticide Evaluation Report and Safe Use Action Plan (PERSUAP) is developed to guide proper pesticide product selection, appropriate labeling, and user educational campaigns. In addition, the program will monitor for adverse health and environmental effects, to make certain that risks are adequately understood and appropriate and timely interventions put in place to reduce risks.

Basic Education (SO 8)

The Basic Education Strategic Objective focuses on improving the quality of and access to basic education. Intermediate Results expect to achieve the strategic objective are: (a) increased educational opportunities for girls in underserved areas; (b) improved instructional system; (c) improved management accountability; (d) increased community advocacy for and contribution to quality education; and (e) improved HIV/AIDS prevention program in the education sector. All of these IRs are sector specific and IR 8.2, combined with IR 8.3 and IR 8.4 represent a collective strategy for addressing this critical issue. The objective is to assure that the majority of children who enter and complete primary school are able to read with understanding. This is not to suggest that only reading is important, but it is the key requisite for children to be able to learn basic life skills and to gain knowledge in other subject areas. With such specificity it is difficult to incorporate activities with environmental focus.

The SO will finance long and short term technical assistance; training, workshops and seminars; commodities; instructional materials; research, studies and surveys; institutional strengthening grants to districts and nongovernmental organizations. These activities are not likely to adversely affect the environment. Nevertheless, it could be expected that increased literacy would increase awareness about environmental issues.