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Côte d'Ivoire Biodiversity and Tropical Forests: 118/119 Assessment



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Côte d'Ivoire Biodiversity and Tropical Forests:

118/119 Assessment

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ON THE COVER: “Threatened Rainforest in Côte d'Ivoire,” from www.decideforyourself.wordpress.com

CONTENTS

Acronyms	4
Executive Summary	6
A. Introduction.....	9
A1. Environmental and Natural Resource Management Context in Côte d’Ivoire	9
A1a. Political Environment.....	9
A1b. Economic Environment.....	11
A2. Current U.S. Government Programming Efforts in Côte d’Ivoire.....	11
A3. Background on USAID Activities in Côte d’Ivoire.....	11
A4. Rationale for a 118/119 Assessment in Côte d’Ivoire	13
B. Legislative and Institutional Structures Affecting Biodiversity and Forestry.....	14
B1. Environmental Policies, Legislation, and Treaties.....	14
B1a. Legislation	15
B1b. Treaties	15
B2. Principal Institutions of Côte d’Ivoire Involved with the Environment	18
B3. The Local and International NGO Community.....	19
B4. Donor Organizations	22
B5. Multilateral Organizations.....	24
C. Status and Management of Natural Resources.....	28
C1. Côte d’Ivoire’s Natural Resources	28
C1a. Status and Management of Protected Areas.....	29
C1b. Threats to Protected Areas	31
C2. Status and Protection of Endangered Species	33
C3. Status and Protection of Forest Resources	34
C4. Conservation Outside of Protected Areas	34
D. Major Threats to Biodiversity and Tropical Forest Conservation	34
D1. Political Instability	35
D2. Unsustainable Land-Use Practices/Overexploitation of Resources.....	35
D3. Increased Industrialization	37
D3a. Extractive Industries.....	38
D4. Population Density/Poverty	39
E. Actions Necessary to Conserve Biodiversity and Tropical Forests	41
E1. Political Instability.....	41
E2. Unsustainable Land-Use Practices/Overexploitation of Resources	41
E3. Increased Industrialization.....	42
E3a. Extractive Industries	43
E4. Population Density/Poverty.....	43
F. Program Recommendations for USAID.....	43
F1. Peace and Security Recommendations	43
F2. Investing in People Recommendations.....	45
G. Conclusion	46
Annex A – References	48
Annex B – Environmental Issues and Relevant Government Organization.....	53
Annex C – List of Sites.....	54
Annex D – Individuals Contacted For This Assessment	56

ACRONYMS

ADB	African Development Bank
ANDE	L'agence National de l' Environnement
BI	BirdLife International
CBD	Convention on Biological Diversity
CBJ	Congressional Budget Justification
CEPF	Critical Ecosystem Partnership Fund
CI	Conservation International
CIAPOL	le Centre Ivoirien Anti Pollution
CSRS	Le Centre Suisse de Recherches Scientifiques en Côte d'Ivoire
DEFRA	Department for Environment, Food and Rural Affairs (United Kingdom)
DFID	Department for International Development (United Kingdom)
DFRC	la Direction de la Faune et des Ressources Cynégétiques
DITE	la Direction des Infrastructures et des Technologies Environnementales
DPEC	la Direction des Politiques Environnementales et de la Coopération
DPFC	la Direction de la Police Forestière et du Contentieux
DPN	la Direction de la Protection de la Nature
DQE	la Direction de la Qualité de l'Environnement
DRCF	la Direction du Reboisement et du Cadastre Forestier
DRE	la Direction des Ressources en Eau
ECOWAS	Economic Community of West African States
ERAIFT	Ecole régionale post-universitaire d'aménagement et de gestion intégrés des forêts et territoires tropicaux
EITI	Extractive Industries Transparency Initiative
EU	European Union
FAO	UN Food and Agriculture Organization
FN	Forces Nouvelles
FPI	Front Populaire Ivoirien
GAWA	Green Actors of West Africa
GECI	Groupe Ecologique Ivoirien
GEF	Global Environment Facility
GOCI	Government of Côte'Ivoire
GRASP	Great Apes Survival Project (UNESCO and UNEP)
GIZ	Gesellschaft für Internationale Zusammenarbeit
IBA	Important Bird Area (BI)
IGE	l'Inspection Générale de l'Environnement
IGEEF	L'Inspection Générale des Eaux et Forêts
IRIN	Integrated Regional Information Network
IMPACT	Implementing AIDS Prevention and CARE
IUCN	World Conservation Union
KfW	Kreditanstalt für Wiederaufbau
MAB	Man and the Biosphere Programme
MRU	Mano River Union
MINEEF	le Ministère de l'Environnement, des Eaux et Forêts
NGO	Non-governmental organization

OIPR	l'Office Ivoirien des Parcs Nationaux et Réserves
OPA	Ouagadougou Political Accord
PACPNT	Project Autonome de Conservation du Parc National (GIZ)
PAPACO	Programme Aires Protégées d'Afrique du Centre et de l'Ouest (IUCN)
PCGAP	Projet Cadre de Gestion des Aires Protégées (WB)
PEACE	Population, Equity, AIDS, and Coastal Ecosystems Initiative (USAID)
PEPFAR	President's Emergency Plan for AIDS Relief
PRS	Poverty Reduction Strategy
RA	Rainforest Alliance
RAP	Rapid Assessment Program
SODEFOR	la Société de Développement des Forêts
STABEX	Système de Stabilisation des Recettes d'Exportation (EU)
STCP	Sustainable Tree Crops Program
STEWARD	Sustaining and Thriving Environment for West African Development
TNP	Taï National Park
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNEP	United Nations Environment Programme
WB	World Bank
WCF	Wild Chimpanzee Foundation
WCS	Wildlife Conservation Society
WRI	World Resources Institute
WAPP	West Africa Power Pool
WWF	World Wildlife Fund / World Wide Fund for Nature

EXECUTIVE SUMMARY

This 118/119 Biodiversity and Tropical Forest Assessment for Côte d'Ivoire is the result of desk research based primarily on readily available documents including the Biodiversity Analysis and Technical Support for the Sustaining and Thriving Environment for West African Development Program (STEWARD) from March 2008 and the STEWARD 118/119 concept assessment (June 2008). To date, no 118/119 assessment has been conducted for Côte d'Ivoire.

Threats to biodiversity and forests. A multitude of interwoven factors — with political instability at the core — threatens Côte d'Ivoire's biodiversity and forests. Intensifying the situation is the country's agricultural estate crop centered economy. Côte d'Ivoire is the world's largest cocoa producer, accounting for about 40 percent of global supply. The large-scale cocoa and coffee plantations, and, increasingly, palm oil plantations, that made Côte d'Ivoire the most economically stable country in the region until 1999 is also a major cause for the country's continued environmental decline, including the dramatic loss of forest resources. Even before the start of political unrest in 1999, Côte d'Ivoire had one of the highest rates of deforestation in West Africa.

Côte d'Ivoire is host to 3,660 plant species, including 105 threatened species; 229 mammal species, including 23 threatened species; 702 bird species, including 11 threatened species; 131 reptile species, including two threatened species; 54 amphibian species, including 14 threatened species; and, 111 fish species, including 11 threatened species¹. Primary threats to endangered species include deforestation, poaching, illegal felling, expansion of agricultural lands, and flexible immigration policies. Fragmentation of natural habitats is particularly detrimental for threatened species found throughout the region. According to the World Resources Institute (WRI), Côte d'Ivoire lost 27 percent of its total forest cover and 28 percent of natural forest cover from 1990 to 2000.² In 2005, less than 2 percent of the country was covered in primary forest. In addition, depleted soils have led to a decline in productivity.

Over-exploitation of fisheries resources and destruction of marine resources by industrial effluent pollution and unregulated sewage dumping also cause significant loss of biodiversity.

While extractive industries—especially oil pipelines, diamond mining, and natural gas exploration—provide a means to diversify the agriculturally centered economy, they also pose significant threats. Job opportunities that develop from the growing industrial center will lead to urban migration, creating more pollution.

Key factors to blame for Côte d'Ivoire's environmentally precarious state are unsustainable agricultural and forestry practices, increased industrialization, growing population density and poverty. The overexploited environment has forced communities to migrate either to uninhabited rural areas in search of land or to urban centers for economic alternatives to subsistence

¹ UNEP World Conservation Monitoring Center and IUCN, 2004 data; WRI: <http://earthtrends.wri.org/text/biodiversity-protected/data-tables.html>

² WRI: <http://earthtrends.wri.org/text/forests-grasslands-drylands/country-profile-44.html>

agriculture. Conflict within and from other neighboring countries has caused Côte d'Ivoire's displaced population to soar. In early 2011, there were approximately 26,000 refugees and 515,000 displaced people living within Côte d'Ivoire.³ These populations put pressure on the already endangered resource base.

Applicable government agencies. Responsibilities for Côte d'Ivoire's environmental issues are divided among at least nine government ministries (see Annex C for a complete breakdown). The Ministry of Environment, Water and Forests (MINEEF) serves as the authority for environmental conservation. Among other roles, the MINEEF implements and regulates environmental legislation and delegates authority to the appropriate agencies. The Government of Côte d'Ivoire (GOCI) also formulated a "National Action Plan for the Environment" in 1995, which began implementation in 1998.⁴ With respect to forestry, the "Forest Master Plan" is intended as a strategic and general policy document to cover the period 1988-2015, defining the various fields of intervention and the tools to be used to rehabilitate the forestry sector by involving the rural population more fully (with rural forestry committees).⁵

Donor support. A number of international NGOs and donor organizations have contributed to the advancement of sustainable natural resources management in Côte d'Ivoire. The World Conservation Union (IUCN) and Gesellschaft für Internationale Zusammenarbeit (GIZ) have long maintained a presence in the country, as have the United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP), World Bank (WB), and Global Environment Facility (GEF). Although not an exhaustive list of donors and implementers, these organizations represent those most visibly active in issues related to the management and conservation of Côte d'Ivoire's natural resources.

U.S. programming. The largest component of the U.S. assistance program in Côte d'Ivoire is support through the President's Emergency Plan for AIDS Relief (PEPFAR). In FY 2010, the country received \$103.6 million in PEPFAR funds and \$6.6 million in food aid. . After the 1999 coup d'état, section 7008 sanctions prevented most forms of non-humanitarian U.S. assistance to the country. The installation of a democratically elected government in May 2011 opened new assistance opportunities for the U.S. Government in Côte d'Ivoire; USAID and the Department of State are collaborating to design activities in support of national reconciliation, democracy and governance, and education.

In October 2011, benefits from the African Growth and Opportunity Act were reinstated for Côte d'Ivoire; these benefits provide opportunities to increase mutually beneficial trade and investment between Côte d'Ivoire and the United States.

With the FY 2012 Congressional Budget Justification (CBJ), the U.S. Government proposes continued assistance in the health and security sectors, as well as budget and planning performance. The goals of the United States foreign assistance program in Côte d'Ivoire are to enhance the capacity of Ivorian military institutions to ensure human rights and democratic

³ UN High Commissioner for Refugees: <http://www.unhcr.org/cgi-bin/texis/vtx/page?page=49e484016>

⁴ International Monetary Fund: <http://www.imf.org/external/np/pfp/cote/cdtab.htm>

⁵ Food and Agricultural Organization of the United Nations: <http://www.fao.org/forestry/country/57479/en/civ/>

values are respected while order is maintained, as well as to help stem the country's HIV/AIDS epidemic.

- *Peace and security.* As President Ouattara gains control over the elements of government, maintaining a unified and cohesive security sector will be one of the most critical tasks. Programs funded under the Peace and Security Objective will be managed by the U.S. Department of State, and focus on professional development in the security sector. A focus is to ensure that border security is maintained with the goal of deterring and reducing cross-border trafficking of weapons, people, and valuable raw materials, such as diamonds and cocoa. International Military Education and Training funding will support the development and professionalization of the new army, which will need to be established once Ouattara has gained control over the military per the Ouagadougou Political Accord. Activities will have a particular focus on respect for human rights and improved military justice systems.
- *Investing in People.* Despite the severe political and humanitarian challenges facing the country, HIV/AIDS is still a major issue that requires significant, sustained attention and support. The main objective of this funding will be to reduce the transmission and impact of HIV/AIDS through support for prevention, care, and treatment programs. Assistance provided through the Global Health and Child Survival account will support the principles of the Global Health Initiative, improving health outcomes by working with partner countries to build a sustainable response to investing in health systems and promoting innovation. In addition, through the President's Emergency Plan for AIDS Relief (PEPFAR), Cote d'Ivoire will receive significant support to build partnerships to provide integrated prevention, care, and treatment programs throughout the country and support vulnerable orphans and children.

On May 21, 2011, Ouattara was inaugurated as president, and the Department of State subsequently notified Congress that section 7008 of State Foreign Operations Act sanctions were no longer needed due to Côte d'Ivoire's establishment of a democratically elected government. At that time, the additional priorities of conflict mitigation and reconciliation and governing justly and democratically, particularly in the areas of rule of law and good governance, were identified.

Emphasizing the importance of biodiversity conservation in the midst of unstable political and economic times may appear out of context and inappropriate to some. Since Côte d'Ivoire's economy is so closely tied to the land, however, it is prudent for the country to make natural resource management a priority. Continued support of current programming where community members have a vested interest in conservation efforts is bound to sustain Côte d'Ivoire through its current fragile state and beyond.

A. INTRODUCTION

Bordered on the west by Liberia and Guinea, the north by Mali and Burkina Faso, the east by Ghana, and the south by the Atlantic Ocean, Côte d'Ivoire has a land area of 322,460 square kilometers and an estimated population of 21.5 million.⁶ The equatorial climate in the north is made up of four seasons: a long dry season (December through March/April), a long wet season (May through July), a short dry season (August and September), and a short wet season (October and November). Moving further south, the climate becomes tropical, experiencing only one long dry and long wet season. Forest zones change gradually from wet evergreen in the south to drier semi-deciduous to a savanna zone in the extreme north. Annual rainfall for the country ranges from 2,500 millimeters in the southwest to 900 millimeters in the northeast.

A1. Environmental and Natural Resource Management Context in Côte d'Ivoire

Côte d'Ivoire has the highest level of biodiversity in West Africa.⁷ It also has had one of the world's highest rates of deforestation. Large-scale clearing of natural forest land for cocoa, coffee, and palm oil plantations, and subsistence farming by both Ivoirian displaced persons and refugees from neighboring countries has left less than two percent of the country covered in primary forest.⁸ For agriculturally dependent rural communities living in or on the periphery of protected land, the daily necessity of securing shelter, food, and fuel overshadows conserving the biodiversity-rich natural environment. International organizations aim to protect biodiversity by fostering transparent relationships between the government and resource-dependent communities.

Conserving Côte d'Ivoire's biodiversity involves linking local communities to income-generating activities and increasing their capacity to manage their natural resources.

A1a. Political Environment

The political collapse in 1999 degenerated into civil war in September 2002. In January 2003, the main parties in the conflict, the southern-based government and the northern-based rebels, signed the Linas-Marcoussis peace agreement. Two months later, a national reconciliation government was installed. At the end of October 2005, the scheduled presidential election had to be postponed because little of the accord had been implemented, reflecting disagreements over the interpretation of the reform agenda. In response, the UN

Map of Côte d'Ivoire



Source:

<https://www.cia.gov/library/publications/the-world-factbook/geos/iv.html>

⁶ The World Factbook, 2011: <https://www.cia.gov/library/publications/the-world-factbook/geos/iv.html>

⁷ Mongabay.com: <http://rainforests.mongabay.com/20cotedivoire.htm>

⁸ Ibid

Security Council extended the mandate of the president, Laurent Gbagbo, and appointed Guillaume Soro, , as prime minister with extensive executive authority. The new national unity government's inability to meet its mission of holding elections by October 2006 has forced the international community to extend the transition period multiple times.

The signing of the Ouagadougou Political Accord (OPA) in 2007 was a turning point for the country. As part of the agreement, a coalition transitional government headed by President Laurent Gbagbo and Prime Minister Guillaume Soro was established to, among other things, organize free and fair elections, unify the armed forces into one national military, and reunify the country under one public administration.

Elections were delayed repeatedly since 2005. Arrangements were nearly finalized for elections to be held in March 2010 when a political crisis stalled the process in February 2010.

After several years of delays, the first round of presidential elections was held on October 31, 2010. The election was hailed by all candidates and observers as peaceful and fair, with nearly 80% voter turnout and no significant irregularities reported. The November 28 runoff between Alassane Ouattara and incumbent President Gbagbo was again characterized by high voter turnout and largely peaceful participation by the Ivoirian people, and Ouattara was declared the winner. A period of fighting ensued after Gbagbo refused to cede power; in May 2011, Ouattara was formally inaugurated. The elections followed 11 years of intermittent violent unrest and sustained international engagement aimed at creating lasting peace and democratic processes in Cote d'Ivoire.

Looking toward the country's future, the fundamental issue is whether its political system following the upheavals of recent years will provide for enduring stability, which is critical for investor confidence and further economic development, as well as sustainable natural resources management.

1. The government prepared long-term sector programs and plans before the political situation deteriorated. In 1997, it developed a long-term vision, Côte d'Ivoire 2025. Building on Côte d'Ivoire 2025, the government started developing medium-term sector strategies such as a National Population Action Program for 2002-06. More recently, the GOCI completed its first Poverty Reduction Strategy (PRS) in January 2009, covering the period 2009-2015.⁹ The PRS calls for an ambitious program to consolidate peace and transform Côte d'Ivoire into an emerging economy in which poverty falls from the current 49 percent to 33 percent by 2013 and to 16 percent by 2015, supported by average annual GDP growth of approximately 6 percent. The six PRS strategic themes for poverty reduction are consolidated peace, protection of life and property, and promotion of good governance; stabilized macro-economic framework; newly created jobs and wealth through support and promotion of the rural and private sectors; improved accessibility and quality of social services, preservation of the environment, promotion of gender equality and social security; decentralized

⁹ World Bank: <http://go.worldbank.org/G6R837K000>

popular participation in the development process and reduced regional disparities; and, increased capacity to integrate into the regional and international contexts.

2.

A1b. Economic Environment

3. Agriculture dominates the Ivoirian economy, accounting for 28 percent of GDP and employing 68 percent of the labor force.¹⁰ In addition to providing 40 percent of the world's cocoa, Côte d'Ivoire ranks fifth in the world as a provider of Robusta coffee. The other principal cash crops include palm oil, coconuts, bananas, and rubber; these tree crops are all grown in the resource-rich soils of the southern half of the country. The dry savannah lands in the north produce cotton, sugar, millet, sorghum, groundnuts, and maize, primarily for local and regional consumption. Timber, marine fish, diamonds, petroleum, and electricity are other important exports. Two gas-fired electricity plants have turned the country into a regional exporter of electricity.

A2. Current U.S. Government Programming Efforts in Côte d'Ivoire

U.S. government assistance to Côte d'Ivoire continues to invest in three objectives, "peace and security," "governing justly and democratically," and "investing in people." The FY 2012 CBJ identified the stability of the Ivoirian political system as a pressing problem, and critical to further economic development. To support the peace and security, the United States will dedicate \$25,000 to the development and training of the new army, with a particular focus on human rights and democratic process. The President's Plan for AIDS Relief (PEPFAR) will receive \$142.5 million under the "investing in people" objective. As a PEPFAR-focused country, Côte d'Ivoire is expected to benefit from funds invested in partnerships to help the nation build its capacity for a sustainable response to the health epidemic.

A3. Background on USAID Activities in Côte d'Ivoire

USAID began its development assistance to Côte d'Ivoire in 1961 and assistance continues to reach Ivoirians. The FY 2012 CBJ request totals \$142.5 million in foreign assistance. While USAID's primary focus in Côte d'Ivoire is HIV/AIDS prevention and treatment, other activity areas include security, democracy and governance.

Past bilateral assistance has included funding for the National Democratic Institute (NDI) to negotiate a code of conduct for Ivoirian political parties. Given the history of the failed elections, the signed document signifies the parties' commitment to "resolve political and electoral disputes through dialogue and the rule of law rather than violence."¹¹ NDI has also provided technical assistance to Ivoirian political parties as they identified, trained, and deployed monitors to observe the voter identification process. NDI and Ivoirian political parties produced a party

¹⁰ The World Factbook, United States Central Intelligence Agency, June 2010 data: <https://www.cia.gov/library/publications/the-world-factbook/geos/iv.html>

¹¹ NDI: http://www.ndi.org/files/2310_ci_release_050208.pdf

agent monitor guide as a systematic reference for monitoring and reporting on the identification process.¹²

Under regional programming, USAID has funded health and natural resource management projects. Health projects have included the John Snow International-managed DELIVER (2000-2007), a West Africa regional project that helped developing countries establish an efficient supply chain for AIDS/HIV-related medications.¹³ Family Health International managed the Implementing AIDS Prevention project and CARE the IMPACT project from 2004 to 2007, helping Ivoirians create and implement a training curricula for an improved national response to AIDS.¹⁴

USAID's regional natural resource management assistance to Cote d'Ivoire includes the Sustainable Tree Crops Program (STCP) and West African Power Pool (WAPP). STCP is concerned with environmental sustainability of tree crop systems, while WAPP concentrates on the creation of legal, regulatory, and institutional rules governing trade in electricity.

A series of STCP pilot projects have been identified in Côte d'Ivoire with the objective to compare, test, and validate different approaches and interventions to develop sustainable and integrated cocoa production systems.¹⁵ Family Health International and the World Cocoa Foundation have joined the team to address cocoa farming communities' education and health issues. The goal of these pilot activities is to improve the rural livelihood of West African cocoa producers by improving their ability to respond to the demands of global markets.¹⁶

In 2004, the Rainforest Alliance — an organization focused on creating responsibly produced global goods and services — teamed up with USAID, GTZ, Kraft, and an Ivoirian cocoa trader, the Armajaro Group, to engage farmers across the country to produce Rainforest Alliance-certified cocoa. The local partners in the initiative are STCP and the government agency, Agence Nationale de l'Environnement (ANDE). Training included teaching farmers how to grow cocoa within the rainforest to curb deforestation, use fewer agrochemicals, protect wildlife, support community projects, improve cocoa quality, and produce small batches of a fine native cocoa variety instead of a hybrid variety in bulk. Cocoa farmers face a host of additional constraints, including poor soils, aging cocoa trees, inefficient management practices, low productivity, and lack of marketing information. The project focused on meeting comprehensive environmental and social standards that include conserving natural resources, protecting the welfare of workers, and putting into place more efficient management.¹⁷

¹² National Democratic Institute: http://www.ndi.org/content/cote_divoire

¹³ John Snow International: <http://www.jsi.com/JSIInternet/Projects/ListProjects.cfm?Select=Country&ID=74>

¹⁴ Family Health International:

http://www.fhi.org/en/HIVAIDS/pub/res_IMPACT_Final_Report_CotedIvoire.htm

¹⁵ http://www.worldcocoafoundation.org/what-we-do/current-programs/STCPCotedIvoire_Summary.asp

¹⁶ Family Health International:

http://www.fhi.org/en/CountryProfiles/CotedIvoire/res_CocoaFarmers.htm

¹⁷ Rainforest Alliance: <http://www.rainforest-alliance.org/agriculture.cfm?id=cocoa>

WAPP technical assistance helps the Economic Community of West African States (ECOWAS) and multi-government steering and implementation committees in their negotiations and development of the WAPP program. WAPP is a framework for establishing legal, regulatory, and institutional rules governing trade in electricity practices across the region. The vision of WAPP is to integrate the national power system operations into a unified regional electricity market, to ensure that citizens of ECOWAS Member States are provided stable, reliable electricity at affordable costs.¹⁸

More recently, the USAID West Africa Regional Program has funded the Trans-boundary Area Natural Resource Management Initiative for Ghana/Cote d'Ivoire, which seeks to promote sustainable management of natural resources in the trans-boundary region between Ghana and Cote d'Ivoire, with a focus on biodiversity conservation, promotion and protection. One major component is the Trans-boundary Natural Resource Initiative for Ghana and Cote d'Ivoire, (TBA Forest & Biodiversity), which began in 2008 and is funded through 2010. TBA Forest & Biodiversity aims to conserve Globally Significant Biodiversity Areas in the Trans-boundary Area between Western Region of Ghana and the Aboisso prefecture of Cote d'Ivoire. Objectives include improving forest management through community-based enterprise development initiatives and active participation in management responsibilities; building local government and civil society capacity in natural resource management, enterprise development and conflict management; and, establishing a system in the TBA to effectively monitor the flow and value of natural resources.

A4. Rationale for a 118/119 Assessment in Côte d'Ivoire

ADS 201.3.9.2 — Environmental Analysis—Biodiversity and Tropical Forests — contains the environmental requirements of USAID country strategic plans. These requirements were derived from the Foreign Assistance Act and 22 CFR 216, which set forth the guidelines for the performance of Section 117 (environmental sustainability), Sections 118 and 119 (tropical forestry and biological diversity, respectively), and 22 CFR 216 (agency environmental procedures). Sections 118 and 119 assessments are required by law for all USAID country strategic plans, and they are conducted or updated before development of new strategic plans.

Sections 118 and 119 specifically require that USAID country plans include: 1) an analysis of the actions necessary in that country to conserve biological diversity of tropical forests as well as freshwater and marine resources, and 2) the extent to which current or proposed USAID actions meet those needs.

These assessments identify biodiversity and forestry assets in the country, review threats, discuss the impact of planned USAID activities, and identify actions within current and future programs where USAID could promote conservation. More than a legal requirement, a current 118/119 analysis can provide important advice to help guide proposed programs toward a more sustainable use of the country's renewable natural resources. To date, USAID has not conducted or commissioned a 118 or 119 assessment for Côte d'Ivoire, and this combined 118/119 assessment was developed to fulfill the requirements.

¹⁸ WAPP: <http://www.ecowapp.org/>

B. LEGISLATIVE AND INSTITUTIONAL STRUCTURES AFFECTING BIODIVERSITY AND FORESTRY

Côte d'Ivoire remains in a state of political and economic uncertainty. With the end of post-election violence in 2010-2011 and President Alassane Ouattara sworn into office, Côte d'Ivoire is in the midst of a full-scale political transition. The daunting challenge is to quickly secure peace and ensure all Ivoirians that representative and functional governance will replace 10 years of distrust.

Before environmental laws and policies can be adhered to, the GOCI needs to re-establish its credibility as a functioning institution.

Forestry legislation currently in place predates the dispute and includes the following aspects:

- An integrated approach to forest management, conservation, and development (including sustainability concerns, ecological values, and social interests).
- Management to sustain multiple forest uses and benefits (including timber, fuel, food, and other forest products, as well as biological diversity and resources, protection of ecosystems and watersheds, recreation and tourism, and other environmental services such as carbon sequestration).
- The development of adequate planning tools (in particular management plans).
- The existence of environmental and social impact assessments/audits (such as certification schemes).
- Transparent forest concessions and other contractual arrangements, with provisions for accountability.
- Community-based arrangements, decentralization of responsibilities, and devolution of powers to local actors.¹⁹

B1. Environmental Policies, Legislation, and Treaties

With respect to the environment, the “Forest Master Plan” is intended as a strategic and general policy document, defining the various fields of intervention and the tools to be used to rehabilitate the forestry sector by involving the rural population more fully (with rural forestry committees).²⁰ The plan was adopted in April 1998 and remains valid through 2015. The objectives are as follows:

- Implement a policy with the long-term aim of re-establishing forest production potential at an annual level of at least 4 million cubic meters of logs.
- Manage the state's forests on a wide scale while pursuing industrial reforestation efforts.
- Extend tree planting into savannah zones and degraded forest lands.
- Rationalize harvesting while respecting the possibilities of sustainable forest production.
- Promote an efficient forest industry supported by a strategy encouraging development of the wood sector.
- Perform conservation and protection operations for national parks and reserves.

¹⁹ Food and Agricultural Organization of the United Nations: <http://www.fao.org/forestry/country/18315/en/civ/>

²⁰ *ibid*

As part of the plan, the GOCI has instituted a program that involves resettling farmers who have illegally settled in reserved forests. Other aspects of the program involve improving yields and promoting natural gas to replace charcoal as a source of domestic energy.

B1a. Legislation

Table 1 provides information on laws relating to the environment. Most information comes from the Japan International Cooperation Agency's country profile report conducted in November 1999, the most recent and readily available resource found at the time of this assessment.

B1b. Treaties

Côte d'Ivoire is party to a number of international treaties on environmental issues, either by signature or by accession. Of primary importance for the purposes of this report, Côte d'Ivoire ratified the Convention on Biological Diversity (CBD) on November 29, 1994, thereby committing itself to promoting sustainable development and recognizing that biological diversity is composed not only of flora and fauna, but that human actors also play an active role in conserving the environment in which they live. Côte d'Ivoire's first, third, and fourth national reports are also available via the country's CBD clearinghouse website (<http://ci.chm-cbd.net>)

Côte d'Ivoire has also ratified several other international treaties related to conservation and natural resource management, including:

- The African Convention on the Conservation of Nature and Natural Resources, signed on September 15, 1968, with subsequent ratification of successor agreement in 2003.²¹ This convention provides a classification of protected areas and guidance on Class A and B wildlife and the regulation of activities related to each.
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, ratified in 1972.
- The Convention on World Cultural and Natural Patrimony, ratified by Côte d'Ivoire on January 9, 1981. Côte d'Ivoire has three Natural World Heritage sites: Comoé National Park, Mt. Nimba Strict Nature Reserve, and Tai National Park.
- The Convention for the Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention), ratified January 15, 1982.
- International Tropical Timber Agreement, first ratified in 1983, with subsequent ratifications of successor agreements in 1994 and 2008.
- The Convention on Wetlands of International Importance (Ramsar Convention), ratified in 1983. Côte d'Ivoire is home to six Ramsar sites; Complexe Sassandra - Dagbego, Fresco, Grand Bassam, Îles Ehotilé - Essouman, N'Ganda - N'Ganda, and Parc national d'Azagny.
- Montreal Protocol on Substances That Deplete the Ozone Layer, ratified April 5, 1993.
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora, ratified on November 21, 1994.

²¹ Africa Union: http://www.africa-union.org/root/au/Documents/Treaties/Text/Convention_Nature%20&%20Natural_Resources.pdf

- Convention on Biological Diversity, ratified November 29, 1994.
- United Nations Framework Convention on Climate Change ratified on November 29, 1994. Signatories committed to consider approaches to reducing global warming. Côte d'Ivoire also signed the Kyoto Protocol, the related legally binding requirements of the convention, on July 23, 1997. The Protocol went into effect on October 20, 2005.
- The Convention to Combat Desertification, ratified on March 4, 1997.
- Convention on the Conservation of Migratory Species of Wild [Animals](#), as related to marine turtles, African elephants, and West African cetaceans and manatees, ratified on January 7, 2003.
- International Treaty on Plant Genetic Resources for Food and Agriculture, ratified June 25, 2003.

Table 1. Legislation Related to the Environment

Laws and Relevant Regulation	Description	Authority
Environment Code	Law No. 96-766, adopted on October 3, 1996. Decree No.96-849 under this law was also adopted November 8, 1996 to set up the rules and procedures regarding the impact of development activities on the environment.	Ministry of Environment and Construction
Forest Code	Law No. 65-425 of December 20, 1965. Partly updated by the law on the Environment Code.	Ministry of Agriculture and Animal Resources
Laws on Protected Area	Law No.66-433 of September 15, 1966, defining the procedure of Natural Integral of Partial National Parks and Reserves.	Ministry of Agriculture and Animal Resources
Water Code	Law No. 98-755 of December 12, 1998	Ministry of Infrastructures
Regulation on Classified Installations	Decree of October 20, 1926, related to classified and hazardous installations. Regulation of June 28, 1989, related to the list of these installations.	Ministry of Environment and Construction
Hunting Code	Law No. 66-424 of September 15, 1966, on hunting license.	Ministry of Environment and Construction
Wildlife Code	Law No. 65-255 of August 4, 1965, related to fauna protection and hunting practice. Partly updated by the law on the Code on the Environment, and Law No. 94-442 of August 16, 1994	Ministry of Environment and Construction
Oil Code	Law No. 70-528 of September 2, 1970. Law No. 92-499 of July 30, 1992, related to oil products safety.	Ministry of Mines and Energy
Mining Code	Law No. 95-553 of July 18, 1995.	Ministry of Mine and Energy
National Parks and Reserves Code	Law No. 2002-102 of February 11, 2002 related to the creation, management and funding of national parks and nature reserves	Ministry of Environment, Water, and Forests

Sources: Japan International Cooperation Agency,

GOCI: <http://www.environnement.gouv.ci/>

FAO: <http://faolex.fao.org/>

In 1994 the GOCI developed its National Biodiversity Strategy and Action Plan, which was adopted in 2002. According to the CBD's "Status of National Strategies and Action Plans," Côte d'Ivoire aims to have biological diversity managed in a sustainable manner by 2025 and improved quality of life and heritage preservation for current populations and future generations, while taking into consideration sub regional dynamics and regional and global dimensions.²² Specific objectives include: 1) in situ terrestrial biodiversity preservation in areas of high density within protected areas; 2) developing an ex situ conservation system for threatened, vulnerable species or components of biological diversity that contain genetic resources necessary for the development of agriculture and livestock breeding; 3) create a management system for biological resources to preserve ecosystems and populations' indispensable resource needs; 4) raise awareness about the importance of biodiversity conservation resulting in daily conservation practices and collective attitudes compatible with sustainable use; 5) assign responsibility to local populations to implement biodiversity conservation measures; and 6) associate population with products generated from conserved components of biodiversity.

The GOCI has put in place a number of policies to address constraints to sustainable management of natural resources and progress in the rural sector. A listing of the relevant documents includes:

- Party to the National Biodiversity Strategy (1994)
- National Environmental Action Plan (1995)²³
- Forest Master Plan for 1988-2015²⁴
- Poverty Reduction Strategy Paper (PRSP) for 2009-2015²⁵

B2. Principal Institutions of Côte d'Ivoire Involved with the Environment

There are a number of government ministries and sub-organizations involved in research, management, training, and enforcement of environmental matters. The Ministry of Environment, Water, and Forests (MINEEF) is responsible for implementation and monitoring of government policy on forest protection, as specified by Decree No. 2007-458, issued in 2007²⁶. MINEEF includes of the following sub-organizations:

- Inspectorate General of the Environment (IGE)
 - Directorate of Environmental Policy and Cooperation (DPEC);
 - Directorate of Nature Protection (DPN);
 - Directorate of Environmental Quality (DQE); and,
 - Directorate of Infrastructure and Environmental Technologies (DITE)
- Inspectore General of Waters and Forests (IGEEF)

²² Convention on Biological Diversity. "Status of National Strategies and Action Plans" 7 July 2008. pg. 8

²³ Japan International Cooperation Agency: pg. 6

²⁴ Food and Agricultural Organization of the United Nations: <http://www.fao.org/forestry/country/57479/en/civ/>

²⁵ World Bank: <http://go.worldbank.org/G6R837K000>

²⁶ GOCI, MINEEF: <http://www.environnement.gouv.ci>

- Directorate of Reforestation and Forest Mapping (DRCF);
- Department of Wildlife and Resources Cynegeticon (DFRC);
- Directorate of Forest Police and Litigation (DPFC); and,
- Directorate of Water Resources (DRE)

MINEEF also consists of the following related groups:

- Structural trusts:
 - Ivorian Anti-Pollution Centre (CIAPOL);
 - National Environment Agency (ANDE);
 - Ivorian Office of National Parks and Reserves (OIPR); and,
 - Corporation of Forest Development (SODEFOR).

See Annex C for a complete breakdown of GOCI organization's responsibilities.

B3. The Local and International NGO Community

A number of local and international organizations are presently working on issues related to biodiversity conservation and forestry management in Côte d'Ivoire.

Several local environmental groups have condemned the overexploitation of Côte d'Ivoire's forests. The Ivorian Ecological Group (*Groupe Ecologique Ivoirien*, GECI) is a non-governmental organization (NGO) based in the financial hub of Abidjan that specializes in the protection of nature. In March 2007, GECI, with other NGOs, organized a protest to denounce the Minister of the Environment's complicity with logging outfits in the illegal felling of protected forests. *SOS Forêts*, another national NGO, focuses on biodiversity conservation and environmental education. *SOS Forêts* has a project southeast of Abidjan that is helping communities successfully replant and restore mangroves on sites where they have been lost to overexploitation. *SOS Forêts* and Conservation International organized a workshop in Abidjan in 2009 to identify Key Biodiversity Areas in Côte d'Ivoire.

International aid activity supplements Ivorian NGO efforts. *Birdlife International* (BI) is a consortium of global conservation organizations dedicated to protecting birds, their habitats and biodiversity. There are numerous endemic bird areas in the Upper Guinean Forest and BI has done extensive work since the 1999 Conservation Priority-Setting Workshop to identify critical bird sites and designate additional endemic bird areas in the region.²⁷ Currently there are 14 Important Bird Area (IBA) sites within Côte d'Ivoire.²⁸ BI is collaborating with the GOCI to dedicate Mt. Peko National Park as a biodiversity conservation land and improve natural resource management for local communities. BI has been actively designing initiatives on the Côte d'Ivoire side of Mt. Nimba and participating in the *Projet Cadre de Gestion des Aires*

²⁷ STEWARD, pg. 18

²⁸ Bird Life International: http://www.birdlife.info/docs/AfricaCntryPDFs/Côte_dIvoire.pdf

Protégées (PCGAP)²⁹ consortium. In addition, BI is leading a project to further develop BI programs designed to protect migratory bird flyways in West Africa.³⁰

The *Wild Chimpanzee Foundation* (WCF) is a multi-national foundation with a mission to preserve as many as possible of the remaining wild chimpanzee populations and their natural habitat throughout their range in Africa. WCF projects focus on monitoring, education and outreach, and sustainable management. WCF began working in Côte d'Ivoire in 2004, and currently has programs in Marahoué National Park; Taï National Park; Comoé National Park; Banco National Park; Azagny National Park; Mt. Nimba Strict Nature Reserve; and, Cavally and Goin-Débé classified forests.³¹ At these locations, WCF provides technical expertise in monitoring to OIPR for projects in national parks, and to SODEFOR for projects in classified forests. WCF is also engaged in a feasibility study on the potential of establishing a northern and southern wildlife transboundary corridor linking Taï National Park with Grebo National Forest in Liberia that will likely be completed in 2010. WCF is also working with teachers from nearly 200 schools east of Taï National Park to incorporate environmental education into their curriculum.

Conservation International (CI). As part of its Rapid Assessment Program (RAP), CI collaborated with its West African program and partner organizations to train West African scientists in biodiversity assessment techniques. The RAP team conducted a biological survey in 1998 of the Marahoué National Park, and in 2002 of the Haute Dodo and Cavally Classified Forests, to document the biodiversity, including endemic species.³² Identifying areas to be protected or managed sustainably provided the basis for the design of a biodiversity corridor between Taï National Park in Côte d'Ivoire and Sapo National Park in Liberia. Taï and Sapo National Parks are part of the Upper Guinean Forest — an area identified by CI as a biodiversity hotspot.³³ Discovering the new endemic species inspired SODEFOR to use the RAP data to develop management plans and expand conservation efforts. Establishing biodiversity corridors between neighboring countries is critical as the remaining forests extend across existing political boundaries. CI plans to update their evaluations of biodiversity hotspots.

Fauna & Flora International (FFI). FFI is an international organization with a mission to conserve threatened species and ecosystems worldwide, choosing solutions that are sustainable, based on sound science and taking into account human needs. FFI began leading a DEFRA-funded project in 2009 to strengthen collaboration between stakeholders in the Mt. Nimba

²⁹ See section B7 for more information

³⁰ Bird Life International:

http://www.birdlife.org/regional/africa/pdfs/Factsheet_Flyways_West_Africa.pdf

³¹ WCF: <http://www.wildchimps.org/index.htm>

³² Conservation International RAP reports:

http://www.conservation.org/Documents/RAP_Reports/RAP13_Marahoue_Cote_dIvoire_Dec-1999.pdf and

http://www.conservation.org/Documents/RAP_Reports/RAP34_Forests_SW_Cote_dIvoire_Mar-2002.pdf

³³ Conservation International:

http://www.conservation.org/explore/priority_areas/hotspots/africa/Guinean-Forests-of-West-Africa/Pages/default.aspx

transboundary area that includes Liberia, Guinea, and Côte d'Ivoire, as a way to reduce threats to biodiversity and livelihoods from subsistence pressures and large-scale, multinational mining operations. Project activities include a regional atlas and database; a strategic environmental assessment; a collaborative management plan; and, work to build capacity.³⁴ Project partners include CI and Arcelor Mittal mining company.

Rainforest Alliance (RA). RA promotes sustainable farming and forest management methods. In 2004 RA teamed up with USAID, GIZ, Kraft, and the Ivoirian cocoa trader, the Armajaro Group, to engage farmers across the country to produce Rainforest Alliance-certified cocoa. The coalition spent three years providing guidance and technical assistance to approximately 4,000 farmers in six cooperatives across two regions. Training included teaching farmers how to grow cocoa within the rainforest to curb deforestation, use fewer agrochemicals, protect wildlife, support community projects, improve cocoa quality, and produce small batches of a fine native cocoa variety instead of a hybrid variety in bulk. In February 2007, Rainforest Alliance certified 358 cocoa producers across the two regions that produced a volume of 297.2 metric tons of certified cocoa.³⁵ RA is also evaluating large forest concessions and working with small communities to explore certification possibilities.

World Conservation Society (WCS). WCS, a conservation NGO based in New York, has been collaborating with the Ivoirian MINEEF since 1986 on manatee conservation in the coastal lagoons extending from Grand-Lahou to Fresco through their Coastal Wetland and Biodiversity Conservation Project. The program was expanded to include protection of native land cover within the Azagny National Park and Port Gauthier classified forest. It surveyed elephants, pygmy hippo, buffaloes, chimpanzees, and rare monkeys in these areas. This project closed with the death of the senior Ivoirian WCS scientist in 2009.

World Wildlife Fund (WWF). WWF's primary activity in Côte d'Ivoire was related to its *Vie et Forêt* program, which began in 1992 in Taï National Park. The mission of the program is to conserve national parks and protected areas by collaborating with communities in sustainable development of periphery areas. *Vie et Forêt* works primarily with women's groups because of their experience working within community organizations and ability to manage funds.³⁶ WWF has withdrawn from Côte d'Ivoire because of political instability.

The *Swiss Center of Scientific Research (CSRS)* was founded in 1951 and is now overseen by the Swiss Academy of Sciences. CSRS aims to promote scientific and technical partnership in Côte d'Ivoire and throughout West Africa; to ensure the wide distribution of research results; to assist in training of researchers; strengthen technical and scientific facilities; and, to facilitate cooperation and scientific exchange throughout West Africa. Research emphasis areas include the natural environment and biodiversity, and most projects within this area focus on mammalian studies within Taï National Park. In 2007-08 CSRS organized a successful international campaign to prevent the conversion of a Key Biodiversity Area in Côte d'Ivoire, the 12,000 ha

³⁴ Darwin Nimba project: <http://www.nimbadarwin.org/index.html>

³⁵ <http://www.rainforest-alliance.org/agriculture/crops/cocoa>

³⁶ Principles in Practice, pp. 90-91: <http://www.worldwildlife.org/bsp/publications/africa/biome/AMCFE.pdf>

Tanoé Swamps Forest³⁷ located in the south-eastern corner of Côte d'Ivoire, to a palm oil plantation.³⁸ Current efforts for the Tanoé Swamps Forest are focused on securing official status as a community-managed forest; increasing local capacity, outreach and education; and supporting local development projects and research. Another emphasis of CSRS is environment and health, in which efforts have focused on environmental pollution, water and sanitation, malaria, and HIV/AIDS.³⁹

B4. Donor Organizations

In addition to local and international NGOs, the international donor community has also contributed to protecting Côte d'Ivoire's natural resources.

The African Development Bank (ADB). There is one multinational ADB project ongoing in the region: Campaign against HIV/AIDS in the Mano River Basin. Project participants include ADB, Ivoirian, Guinean, Liberian, and Sierra Leonean government representatives as well as refugee representatives, internally displaced people, the Mano River Union (MRU), and other international partners — all brought together through dialogues or consultations. Despite the challenge of managing and coordinating activities in a post-conflict environment of multiple and varied constituents, more than 60 percent of the project has been implemented since 2004. As the fragile political state in Côte d'Ivoire affects the security of each of the protected areas involved, the project requires continuous supervision and concerted support.⁴⁰

The World Bank. The *Projet Cadre de Gestion des Aires Protégées (PCGAP)*, Côte d'Ivoire's protected areas management program, began in 1995, was first funded by the WB in 2002, and most recently renewed in 2009. The project aims to enhance the country's protected area management capacity by broadening the array of partners and improving the relationship between people and protected areas. The primary goals are to provide the GOCI with the capacity to achieve the following: 1) effectively manage protected areas over the long term; 2) develop and implement sustainable resource management strategies that enhance NGO, private sector, and community involvement; and 3) restore most protected areas to ecologically acceptable levels. Multiple donors will participate because implementation of the strategy entails important legal and institutional reforms as well as major capacity-building efforts. The expected benefits of the project are to ensure that staff are adequately equipped and trained to manage protected areas; incorporate pilot community based approaches to protected area management thereby improving the effectiveness of parks management; and, improve the financing mechanisms for parks and reserves management in Côte d'Ivoire.⁴¹ A now closed World Bank project was an Economic Governance and Recovery Grant, which was dedicated to clearing the

³⁷ Tanoé Swamps Forest: <http://www.manifeste-fmt.org/>

³⁸ Mongabay: http://news.mongabay.com/2009/0425-cote_d_ivoire_palm_oil.html

³⁹ CSRS: <http://www.csrs.ch/>

⁴⁰ African Development Bank: <http://www.afdb.org/en/projects-operations/project-portfolio/project/p-z1-ibz-001/>

⁴¹ World Bank:

<http://web.worldbank.org/external/projects/main?pagePK=64283627&piPK=73230&theSitePK=382607&menuPK=382639&Projectid=P111290>

country's arrears, thereby improving the capacity of the government to implement the budget and enhance transparency.⁴²

In 2009, the World Bank funded a four-year project to improve the sustainable management of the fauna and habitat of the Comoé National Park. Project components include: strengthening institutional, financial, and technical mechanisms for protected area management and oversight; management planning and implementation for the Comoé National Park, to be implemented by the OIPR with the assistance from local communities and key stakeholders; building support for parks among the 200,000 people living on the park fringes, through public awareness campaigns, biodiversity training, land management contracts, and alternative livelihoods; and, project management and results monitoring.⁴³

Department for International Development (DFID). This UK agency does not currently have a bilateral development program with Côte d'Ivoire. However, from 2002 to 2006, it provided more than 42 million pounds (\$84 million) to Côte d'Ivoire for humanitarian assistance needs, specifically the provision of basic public health, shelter, and more extensive needs warranted by deteriorated security.

Department for Environment, Food, and Rural Affairs (DEFRA). DEFRA has funded the transboundary Mt. Nimba project through 2012. This project, led by FFI, aims to increase environmental governance and conservation, while at the same time engaging local communities to reduce subsistence pressures, and working with mining companies to reduce environmental contamination.⁴⁴

Gesellschaft für Technische Zusammenarbeit (GIZ). GIZ's *Projet Autonome de Conservation du Parc National (PACPNT)* was designed in 1992 in part from the knowledge generated by WWF's *Vie et Forêt* project. PACPNT is also supported by USAID and the GOCI and aims to encourage sustainable development among the communities bordering Taï National Park while preventing any increase in pressure on the area's natural resources.⁴⁵ PACPNT's microprojects include income-generating activities such as fish breeding, rice farming in lagoons, and pig and chicken farming. Health centers with specially trained health agents have developed as an extension program of PACPNT. The health centers and regular visits of WWF's forest manager with school teachers, administrators, and students have helped disseminate environmental information to the local level. Armed with such knowledge, local communities feel more invested in cooperating with PACPNT counterparts to achieve conservation goals. GIZ has also

⁴² World Bank:

<http://web.worldbank.org/external/projects/main?pagePK=64312881&piPK=64302848&theSitePK=40941&Projectid=P083583>

⁴³ World Bank, Côte d'Ivoire Protected Area Project:

<http://web.worldbank.org/external/projects/main?pagePK=64283627&piPK=73230&theSitePK=382607&menuPK=382639&Projectid=P111290>

⁴⁴ DEFRA, Nimba project: <http://darwin.defra.gov.uk/project/17014/>

⁴⁵ GTZ: <http://www.gtz.de/en/dokumente/fr-ci-parc-de-Taï-info.pdf>

funded a two-year forest management certification project, in partnership with the GOCI/MINEEF and SODEFOR.⁴⁶

B5. Multilateral Organizations

In addition to specific donor organizations, there are several multilateral organizations present in Côte d'Ivoire.

Green Actors of West Africa Network (GAWA). Côte d'Ivoire is a member of the multiparty network, GAWA. The network was recently created by organizations involved in the environmental and conservation movements, and is supported by IUCN Netherlands and the Critical Ecosystem Partnership Fund. The GAWA goal is to develop ways of enhancing cooperation and coordination between and among the various donors and environmental actors in Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, and Togo. Main priorities for the GAWA network include strengthening of the network membership base and its governance structure; producing State Of The Environment films for advocacy and awareness purposes; establishing more links and agreements with regional and international institutions; advocating and lobbying in local, national and regional contexts; building technical and financial capacities of NGOs to meet the challenges and threats to the natural environment; involving local populations in biodiversity conservation and forest restoration; monitoring endangered and flagship species, and promoting protected area management; improving environmental awareness/education at local, national and regional levels; expanding the availability of current information on threatened species and habitats; and facilitating conflict management related to biodiversity conservation.⁴⁷

The European Union (EU). The EU is comprised of the European Commission and the member states. European Commission Humanitarian Aid Office (ECHO) has assisted Ivoirians since 2002. In June 2007 ECHO withdrew from the country in response to the shift toward reconstruction and development. Projects funded by the commission and implemented by ECHO focused on providing protection, shelter and emergency supplies, water and drainage, health and nutrition (including support to the United Nations Children Fund for polio eradication), food security, and coordination.⁴⁸

United Nations (UN). The UN is present in Côte d'Ivoire through the United Nations Development Program (UNDP), United Nations Environment Program (UNEP), and United Nations Educational, Scientific and Cultural Organization (UNESCO).

UNDP - GEF - UNEP is funding a National Biodiversity Strategy to assist Côte d'Ivoire in formulating and managing sectoral and cross-sectoral programs it outlined in its first national report to the Convention. The UNEP-funded action plan adopts a cost effective approach within the context of national sustainable development efforts, and instructs the GOCI to report to the

⁴⁶ GTZ: <http://www.gtz.de/en/dokumente/fr-ci-PPP-Certification-Foret-Classee-Besso.pdf>

⁴⁷ GAWA: <http://www.greenactorswestafrica.org/>

⁴⁸ European Commission: http://ec.europa.eu/echo/aid/sub_saharian/west_africa_en.htm

Convention on progress achieved in implementing agreed commitments.⁴⁹ The UNEP has also funded the clearinghouse mechanism (CHM) enabling activity, which helped GOCI meet its obligations under the CBD. UNEP assisted GOCI in assessing the capacity-building needs for biodiversity, participation in the CHM, and its preparation of a second national report to the Convention.⁵⁰

Projet Cadre de Gestion des Aires Protégées (PCGAP) resources come from GOCI, GEF Block C, the EU's *Système de Stabilisation des Recettes d'Exportation (STABEX)* funds, WB, WWF, and CI (see further explanation of PCGAP in World Bank description above). In addition, a new national institution for protected area management and the stabilization of three protected areas (Marahoué, Comoé, and Mt. Peko) is underway under the *Programme Transitoire*. Financial supporters include the following: International Development Association (\$15 million); GOCI (\$12 million); and a consortium including the European Development Fund, *Fonds d'Aide et de Coopération, Agence Française de Développement*, GEF, Kreditanstalt Für Wiederaufbau (KfW), and the WWF, which will collectively donate \$41 million. Funds will be targeted toward deforestation, biodiversity protection, land tenure, and land management.

Programme Aires Protégées d'Afrique du Centre et de l'Ouest (PAPACO) is the IUCN Central and West Africa Protected Areas Program, in collaboration with a number of partners including the World Commission on Protected Areas (WCPA), the African Fund for World Heritage; the UNEP World Conservation Monitoring Center; and, French Fund for Global Environment (FFEM). PAPACO consists of several program elements: evaluating site management; funding small local initiatives; providing training for protected area managers; supporting World Heritage sites; assessing the vulnerability of protected areas to climate change; and facilitating sustainable funding for protected areas.⁵¹

The Global Environmental Facility (GEF). The GEF finances projects to address critical threats to the global environment and serves as the financial mechanism for Convention on Biological Diversity (CBD), the UN Framework Convention on Climate Change, and the Stockholm Convention on Persistent Organic Pollutants. Through the GEF mechanism, UNEP has funded many projects in Côte d'Ivoire. In addition to the regional West Africa Conservation Priority-Setting meeting for the Upper Guinea Forest Ecosystems, led by CI, UNEP has funded many efforts to help Côte d'Ivoire meet the 16 objectives of the **CBD**.

UNESCO. The ERAIFT School (*Ecole régionale post-universitaire d'aménagement et de gestion intégrés des forêts et territoires tropicaux*), located at the University of Kinshasa in the Democratic Republic of the Congo, was created in 1999 by UNESCO. Each year, ERAIFT trains some 30 African specialists from more than 20 countries, including Côte d'Ivoire, about sustainable resource management of tropical forests. The aim is to "Africanize" forest management by training local specialists to take over from their expatriate counterparts.⁵² The

⁴⁹ Global Environment Facility: <http://www.gefonline.org/projectDetails.cfm?projID=150>

⁵⁰ Global Environment Facility: <http://www.gefonline.org/projectDetails.cfm?projID=479> and <http://www.gefonline.org/projectDetailsSQL.cfm?projID=992>

⁵¹ PAPACO: <http://www.papaco.org/index.php>

⁵² <http://www.eraift.org/>

course addresses the specific challenge of how to curb local communities' unsustainable dependence upon firewood as energy.

UNESCO launched the Man and the Biosphere (MAB) program in the early 1970s and uses UNESCO's World Network of Biosphere Reserves to engage people with their environment. The MAB program focuses on the effects of human interference within the natural forest ecosystem.⁵³ In 2001, UNESCO set up the UNEP-GEF regional MAB project, called "Building Scientific and Technical Capacity for Effective Management and Sustainable Use of Dryland Biodiversity in West African Biosphere Reserves" in Comoé National Park.⁵⁴ Taï National Park is the other MAB biosphere reserve in Côte d'Ivoire.⁵⁵

In 2001, UNESCO and UNEP launched the Great Apes Survival Project (GRASP) to protect great apes and their habitat. GRASP fills a unique, complementary role in great ape conservation by facilitating intergovernmental dialogue, policy making, and conservation planning initiatives; providing technical and scientific support; supporting flagship field projects; and raising both funds and awareness in donor countries.⁵⁶

In 2010, OIPR received a small Rapid Response Facility grant from UNESCO to assess the status of poaching threat and to eliminate that threat through the reinforcement of the authority of OIPR within Comoé National Park.⁵⁷

ECOWAS. Formed in 1975, ECOWAS is a regional organization of 15 West African nations. ECOWAS was formed to achieve economic integration and shared development by creating a unified economic zone in West Africa. Sociopolitical interactions and mutual development in related spheres were subsequently incorporated into the scope. ECOWAS is involved in issues of governance, peace, and security. It now includes environmental degradation and monitoring among its goals. The members of ECOWAS are committed to reducing economic barriers across national lines, and consider environmental and resource management essential strategic components of a strengthened regional economy.⁵⁸

The Mano River Union (MRU). MRU is an international association named for the Mano River, which begins in the Guinea highlands and forms the border between Liberia and Sierra Leone. It was originally established in 1973 between Liberia and Sierra Leone; Guinea joined the union in 1980. The goal of the Union is to foster economic cooperation among the countries. Due to conflicts involving these countries, the objectives of the Union were delayed. However, on May 20, 2004, the Union was reactivated at a summit of the three leaders of the Mano River Union states. Most recently in May 2007, the MRU heads of state met in Conakry to reaffirm the Union and approve the admission of Côte d'Ivoire as a member.

⁵³ MAB: http://portal.unesco.org/science/en/ev.php-URL_ID=6393&URL_DO=DO_TOPIC&URL_SECTION=201.html

⁵⁴ <http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?mode=all&code=IVC+02>

⁵⁵ UNESCO, Taï:

<http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=IVC+01&mode=all>

⁵⁶ GRASP: <http://www.unep.org/grasp/index.asp>

⁵⁷ UNESCO: <http://whc.unesco.org/en/news/621>

⁵⁸ ECOWAS: <http://www.ecowas.info/>

The MRU represents an ideal forum for the exploration of transboundary conservation issues because of its focus on cooperation among the member countries and because it already supports a process of collaboration on economic and political development. As an example, with the help of USAID and political support of MRU, the Koindu International Market in Sierra Leone was rebuilt and reopened in 2005 after being destroyed during the civil war. The reopening of the market has revitalized commercial activity in this former trading hub and is considered an important first step in cross-border peace building and cooperation within the sub-region.⁵⁹ In June 2007, MRU representatives met with bilateral and multilateral donors, local and international NGOs and other stakeholders to reaffirm the dedication of all member countries to explore cross-border initiatives to protect the natural environment in this region (JGI 2007).

The Critical Ecosystem Partnership Fund (CEPF). The fund finances projects located in biodiversity hotspots and was one of the first transboundary financial mechanisms used in West Africa. CEPF is a joint initiative of the French Development Agency, CI, GEF, the Government of Japan, the MacArthur Foundation, and the World Bank. CEPF has supported many projects in Côte d'Ivoire through the Guinean Forests of West Africa Program,⁶⁰ which concluded in December 2005. In response to an evaluation of these projects, the Guinean Forests of West Africa Program was consolidated in 2008, and revised investment priorities and outcomes were identified to promote sustainable, long-term forest management.⁶¹

⁵⁹ www.usaid.gov/sl/news/2005/050420_kissisinkoindu/index.htm

⁶⁰ CEPF:

http://www.cepf.net/grants/project_database/guinean_forests_of_west_africa/Pages/default.aspx

⁶¹ CEPF:

http://www.cepf.net/where_we_work/regions/africa/guinean_forests/Pages/consolidation.aspx

C. STATUS AND MANAGEMENT OF NATURAL RESOURCES

Côte d'Ivoire's residual natural resources are in peril. With an economy built on cocoa and cash crops, the country is experiencing the delayed effects of natural resource exhaustion.

Exacerbating the fragile situation is the continuing political instability. Limited or ineffective enforcement of environmental regulation contributes to the precarious state of the country's natural resources on which the country has come to depend.

One positive example of Ivoirian resource management is the plantation oversight by SODEFOR, which uses a centralized system of silvicultural treatments to regenerate. SODEFOR also makes provisions for minimizing waste, and improving utilization of different wood dimensions and the production of charcoal and fuel wood. In addition, SODEFOR has a history of strong community involvement: fire control and management, site preparation, inventory, cleaning, thinning, harvesting, and production of charcoal and firewood are all sub-contracted to locally constituted groups who are paid on the basis of work completed, or as a share of the value of the product produced.⁶²

C1. Côte d'Ivoire's Natural Resources

As mentioned previously, the GOCI developed its National Biodiversity Strategy and Action Plan in 1994. The plan identified 18 areas of intervention, and outlined current and proposed activities for the conservation and sustainable use of biodiversity. The plan itemized the following components: key threats to protected areas, threatened species, ex-situ conservation, wildlife, marine and coastal waters, forest resources, agriculture, livestock and pastures, energy, minerals, land management, biotechnology, interior waters, environmental emergencies, civil participation, environmental evaluations, awareness and education, incentives, institutions, and traditional practices and knowledge. Within these categories, the GOCI identified 25 sub-areas of high, medium, and low priority (Table 3).

A monograph of Ivoirian biodiversity was produced by MINEEF and UNEP in 1999, and the fourth national CBD report was produced in March 2009.⁶³

⁶² STEWARD 118/119 concept assessment, June 2008

⁶³ CBD, Côte d'Ivoire: <http://ci.chm-cbd.net/>

Table 3. GOCI's Priorities for National Biodiversity Strategy

HIGH PRIORITY	MEDIUM PRIORITY	LOW PRIORITY
Cooperation	General measures regarding sustainable use	Exotic species
In-situ conservation	Ex-situ conservation	Traditional knowledge
Finance mechanisms	Sustainable use of elements that constitute biological diversity	Incentives
Agricultural biological diversity	Research and training	Public education
Biological diversity of forests	Evaluation of impacts in order to minimize harmful effects	Access to genetic information
Marine and coastal biological diversity	Information exchange	Access to technology and technology transfer

Source: Convention on Biological Diversity.: <http://www.cbd.int/countries/?country=ci>

C1a. Status and Management of Protected Areas

There are ten types of protected land areas in Côte d'Ivoire, including botanical reserves, classified forests, fauna and flora reserves, national parks, strict nature reserves, Ramsar sites, World Heritage sites, and MAB Biosphere reserves. See Annex C for a sampling of the protected areas in Côte d'Ivoire and their national and international designations.

Côte d'Ivoire is a signatory of the African Convention on the Conservation of Nature and Natural Resources and has established a number of protected areas in line with Convention guidance. Encompassing a total land area of 32,246,000 ha, 16.9 percent of Côte d'Ivoire's land area is designated as protected.⁶⁴ There are eight national parks covering 1,762,500 ha; two biosphere reserves covering 1,770,000 ha; and, 15 botanical reserves covering 195,468 ha. In addition to these protected areas, there are 231 classified forests covering 4,200,000 ha, and 5,549 sacred forests covering 364,341 ha. Sacred forests are designated lands where conservation methods are integrated into the traditional values of the local populations.⁶⁵ Of Côte d'Ivoire's national parks, Comoé and Taï are also UNESCO World Heritage Sites. Mt. Nimba Strict Reserve, a third World Heritage site, shares a border with Guinea and Liberia. See Annex C for a summary of protected sites in Côte d'Ivoire.

Comoé National Park. One of the largest protected areas in West Africa (1,149,450 ha), Comoé National Park is located in northeastern Côte d'Ivoire, and is characterized by its great plant diversity, with 620 recorded species. The park was established as a protected area in 1926, and became a national park in 1968. Fifteen years later, in 1983, Comoé National Park was inscribed as a National Heritage Site and internationally recognized as a Biosphere Reserve under UNESCO's Man and the Biosphere Program. Due to the presence of the Comoé River, the park

⁶⁴ World Resources Institute: <http://earthtrends.wri.org/text/biodiversity-protected/country-profile-44.html>

⁶⁵ CBD, Côte d'Ivoire: <http://ci.chm-cbd.net/biodiversity/parcs>

contains plants which are normally only found much farther south, such as shrub savannas and patches of thick rainforest.⁶⁶

Comoé also hosts considerable wildlife diversity. There are 135 species of mammals, (including 11 primates, 11 carnivores and 21 species of artiodactyla), and 35 amphibian species. Comoé hosts three threatened mammals: the Chimpanzee *Pan troglodytes*, the African wild dog *Lycaon pictus* and the Elephant *Loxodonta africana africana*. Comoé hosts 500 bird species, including several birds that are internationally protected: Denham's Bustard (*Neotis denhami*), the yellow casqued hornbill (*Ceratogymna elata*) and the brown-cheeked hornbill (*Bycanistes cylindricus*). The Comoé River and its tributaries provide habitat for 60 species of fish. Three crocodiles are found in the Park, including the dwarf crocodile (*Osteolaemus tetraspis*), which is on the IUCN Red List.

A 1998 management plan was produced with help from WWF and the EU. Five checkpoints and 17 patrol posts at 20 to 30 kilometer intervals are located around the park boundary. There is a strict reserve zone where tourism is prohibited. The development of a buffer zone encompassing a contiguous game reserve is being studied. There are also two tourist zones set aside for short- and long-term visits. A rehabilitation project for the forest sector was funded by the World Bank to help with the management of protected areas.

Taï National Park. Located in southwestern Côte d'Ivoire, Taï National Park (TNP) is one of the last remaining portions of the vast primary forest that once stretched across present-day Ghana, Côte d'Ivoire, Liberia, and Sierra Leone. The park was established as a "forest and wildlife refuge" in 1926, was designated a national park in 1972, internationally recognized as a Biosphere Reserve under UNESCO's MAB in 1978, and inscribed on the World Heritage List in 1982.⁶⁷

TNP hosts enormous biodiversity. This humid tropical forest has a high level of endemism with over 150 species (16%) identified as endemic to the Taï region. The park contains some 1,300 species of higher plants, of which 54 percent occur only in the Guinean zone. For wildlife, nearly 1,000 species of vertebrate have been identified. The fauna is fairly typical of West African forests and the park contains 47 of the 54 species of large mammal known to occur in Guinean rain forest, including 5 threatened species. The African elephant *Loxodonta africana*, Pygmy hippopotamus *Choeropsis liberiensis*, cape buffalo *Syncerus caffer*, and chimpanzee *Pan troglodytes verus* are among some of the noted wildlife found in TNP. Secondary forest growth in the park is largely attributable to elephant dung. Seeds, which have passed through the elephant's digestive system, germinate easier, thereby extending plant growth throughout the park. Over 230 bird species have been recorded, including 143 species associated with primary tropical forest.⁶⁸

The park is surrounded by a buffer zone, the *Taï Zone de Protection*, about five kilometers wide, which has the legal status of a managed fauna reserves. Agriculture is allowed here, but new

⁶⁶ <http://whc.unesco.org/en/list/227>

⁶⁷ TNP: http://parc-national-de-Taï.ci/index_en.php

⁶⁸ UNEP: <http://sea.unep-wcmc.org/sites/pa/0070p.htm>

plantations or settlements are prohibited. The *Réserve de faune du N'Zo* acts as a buffer to the north. Taï Forest itself is under the responsibility of the Minister of Forests. There is a management plan for the area for 2006-15 and timber concessions have been withdrawn from the large companies. The park was put forward as an example for a pilot project to demonstrate the national conservation strategy being prepared under IUCN/WWF Project 3207. Priority management activities for Project 3207 include increasing both the size and regularity of patrols within the park, seeking recognition of the park's judicial status by local courts, removing illegal farmers in the buffer zone, removing gold miners within the park, and pursuing an education and public awareness campaign.

TNP's close proximity to the Liberian border presents the opportunity to create transboundary wildlife corridors between the park and protected forest areas, including Grebo National Forest, in Liberia. The establishment of wildlife corridors could help increase genetic diversity of chimps, monkey and elephants species on both sides of the border, and significantly improve the chances that one of the richest areas of biodiversity in West Africa can be sustained and enjoyed by future generations. Successful transboundary wildlife corridors, however, would need to consider how best to improve wildlife and forest protection and conservation on the Liberian side of the Cavally River.



A river in the gallery forest of Taï National Park.

Source: World Wildlife Fund

Mt. Nimba Strict Nature Reserve. Mt. Nimba is a transboundary reserve on the border between Guinea, Côte d'Ivoire, and Liberia. Established as a strict nature reserve in 1944, Mt. Nimba was inscribed as a National Heritage Site in 1981. There are over 2,000 vascular plant species, including 16 species endemic to the region. More than 500 wildlife species have been recorded in this reserve, and more than 200 endemic species are found on its Liberian end. The species diversity is exceptionally high because of the variety of habitats created by the presence of grasslands intertwined with forest and the variety of microclimatic niches.⁶⁹

C1b. Threats to Protected Areas

Côte d'Ivoire's environmentally precarious state is due to a myriad of factors. Threats to protected land areas include the following threats: unsustainable agricultural practices, increased industrialization and growing population density and poverty. Over fishing, industrial effluent pollution, and unregulated sewage dumping have diminished the country's marine and fresh

⁶⁹ UNEP: <http://www.unep-wcmc.org/sites/wh/pdf/Mount%20Nimba.pdf>

water resources. This section describes Côte d'Ivoire's protected areas and the threats each area faces.

Unlike Taï National Park, almost all of Cote d'Ivoire's other parks are not well-managed, maintained, or funded. Although a World Bank conservation project is just beginning at Comoé National Park (see section B4), the park has been neglected for years, and jurisdiction over Comoé National Park is split between OIPR and Forces Nouvelles, greatly complicating the prospects for sustainably managing the park. Marahoué National Park has been occupied by thousands of squatters over the past few years, and the park is now badly degraded, and has likely lost about 70 percent of its forest cover. The fate of Azagny National Park is uncertain following the 2009 death of the WCS program director at that park. The Mt. Nimba mountain transboundary protected area along the border with Liberia and Guinea is not well-protected or conserved, and is not secure in the Ivoirian zone controlled by the Forces Nouvelles.

Comoé National Park. Threats facing Comoé National Park include poaching; human settlements; agricultural and grazing pressure; and, insufficient management and access control. As a result, in 2003 the park was added to the list of World Heritage Sites in Danger due to lack of proper management; Comoé National Park has remained on the Danger List through the 2010 evaluation.⁷⁰ In fact, between 1992 and 1995, a guard and two poachers were killed during anti-poaching confrontations. While river blindness has decreased settlement and encroachment by farmers,⁷¹ damage from all three causes has intensified in the current unrest in Côte d'Ivoire and the consequent absence of effective management. Studies have shown that the last ten years of political unrest have contributed to the most intense period of poaching ever recorded within Comoé National Park.

Taï National Park (TNP). The park suffers from poaching, subsistence farming, logging, and illegal gold and iron ore mining.⁷² In particular, gold panners threaten the park by clearing large areas of forest in the low-lying zones along the backwaters of Hana and Little Hana for their prospecting digs. Insufficient funding for training, equipment, and research makes it nearly impossible to mitigate these threats. In the park's northern part, 70,000 ha are temporarily ceded for exploitation. Large fauna are threatened by hunters. While planters generally observe the official boundaries of the national park, they continue to encroach upon the buffer zone, especially in the eastern part of the park, which is severely degraded. A perimeter road built to define park-agricultural land boundaries has opened up significant portions of the park to timber contractors, shifting cultivators, and poachers. Once timber contractors fell vast blocks of land, the area is cleared for cash crop plantations. Observations in 1994 reveal that only about 100 of the 1,800 elephants accounted for in 1979 remain — probably due to disturbance and poaching.

⁷⁰ IUCN World Heritage Program: http://cmsdata.iucn.org/downloads/pr_danger_list_option2.pdf

⁷¹ United Nations Environment Program-World Conservation Monitoring Centre: <http://www.unep-wcmc.org/sites/wh/pdf/Comoe.pdf>

⁷² IUCN News, 1 July 2010:

http://www.iucn.org/knowledge/news/focus/2010_worldheritage/ground/?5590/Saving-West-Africas-rainforest-remnants&utm_campaign=1105598996&utm_content=1010836345273&utm_medium=email&utm_source=Emailvision

Elephants are killed for their ivory, monkeys and antelopes for food, and crocodile and leopard for their skins. Human presence in and around TNP disturbs chimpanzees' sexual cycle.⁷³

In 2009, Germany offered the Côte d'Ivoire's Park and Reserves Foundation \$3.2 million to support biodiversity protection in Ivorian parks and reserves in response to threats, and emphasized TNP.⁷⁴

Mt. Nimba Strict Nature Reserve. The area of Mt. Nimba Strict Nature Reserve is situated in Liberia, Côte d'Ivoire, and Guinea, but only the land in Côte d'Ivoire (5,000 ha) and Guinea (17,130 ha) is established as a reserve. The area has experienced the negative effects of human development since 1975 when roads, wells, and mine shafts were built and townships were established in preparation for extraction of iron ore. Soil removal over hundreds of square meters has caused massive erosion, and metal run-off has tainted streams. In addition to mining, pressures from deforestation, poaching, fires, livestock grazing, and inadequate management threaten Mt. Nimba's biodiversity.⁷⁵ In 1992 Mt. Nimba was added to the list of World Heritage Sites in Danger due to threats from mining, and Mt. Nimba has remained on the Danger List through the 2010 evaluation.⁷⁶

IUCN Red List: Côte d'Ivoire

Critically Endangered (1)

- Large Tooth Sawfish (*Pristis perotteti*)

Endangered (3)

- Chimpanzee (*Pan troglodytes*)
- Common Guitarfish (*Rhinobatos cemiculus*)
- Black-Chin Guitarfish (*Rhinobatos rhinobatos*)

Near Threatened (1)

- Kerguelen Tern (*Sterna virgata*)

Vulnerable (2)

- Lappet Faced Vulture (*Torgos tracheliotos*)
- White Headed Vulture

C2. Status and Protection of Endangered Species

As previously mentioned, Côte d'Ivoire contains portions of the Guinean Forests of West Africa, a global biodiversity hotspot. The country hosts at least 3,660 plant species (105 threatened); 229 mammal species (23 threatened); 702 bird species (11 threatened); 131 reptile species (two threatened); 54 amphibian species (14 threatened); and, 111 fish species (11 threatened).⁷⁷ A recent survey of chimpanzees in Cote D'Ivoire found that the population fell by 90 percent, from estimated 8,000-12,000 individuals to 800-1,200 individuals, a decline that took place in less than twenty years.⁷⁸ The box to the side provides a list of the critically endangered, endangered and vulnerable animal species identified on the World Conservation Union Red List in Côte d'Ivoire and the CBD.

⁷³ BNET Business Network: http://findarticles.com/p/articles/mi_m1310/is_1996_Dec/ai_19090936

⁷⁴ UNESCO: <http://whc.unesco.org/en/news/576>

⁷⁵ UNEP: <http://www.unep-wcmc.org/sites/wh/pdf/Mount%20Nimba.pdf>

⁷⁶ IUCN World Heritage Program: http://cmsdata.iucn.org/downloads/pr_danger_list_option2.pdf

⁷⁷ UNEP, 2004 data, as presented by WRI: <http://earthtrends.wri.org/text/biodiversity-protected/data-tables.html>

⁷⁸ Mongabay: http://news.mongabay.com/2009/0506-hance_chimpcotedivoire.html

C3. Status and Protection of Forest Resources

The rate of deforestation in Côte d'Ivoire is one of the highest in the world. The main causes of high deforestation rates are agricultural clearing for cocoa, coffee, cotton, and palm oil plantations. All of these commodities contribute to economic growth, but have environmental consequences: uncontrolled bush fires to facilitate clearing, farming and hunting; exploitation of forest goods for trading such as fuelwood, charcoal, timber and bushmeat; and, demographic growth, rapid urbanization, and infrastructure development.⁷⁹ Côte d'Ivoire has 7,117,000 ha of total forest area; 6,933,000 ha of natural forests and 184,000 ha of plantation forests. The country lost 1,922,000 ha of its total forest area (a decline of 27 percent) between 1990 and 2000. Although forest cover is estimated to have originally been 75 percent of the total land area, in 2000, forest area only accounted for 22 percent. Ecosystem types as a proportion of total land area are currently represented as follows: forests, 15 percent; shrublands, savannas, and grasslands, 63 percent; cropland and mosaic vegetation, 20 percent; and, wetlands, two percent.⁸⁰

Côte d'Ivoire's forest cover consists of three distinct types: open forest; closed forests; and, other wooded land and other land cover. The country's dry open forests are primarily in the north and consist of mixed trees, savannah woodland, and grass. Agricultural activities exert pressure on the broad-leafed trees of the open forest, pressure that is expected to increase with a growing population. The southern closed forests consist of evergreen, including mangroves, semi-deciduous, and mountain rainforests and have been converted for coffee, cocoa, and timber production. At the start of the century, timber-producing closed rainforests covered 14 million ha. Due to the export of sawn wood, veneers, and plywood, timber became Côte d'Ivoire's third national source of earnings. The remaining 7 million ha (2003 figures) of forest cover are fragmented and largely occupied by farmers.⁸¹ Between these two zones is the "pre-forest" buffer zone that contains islands of moist forest in the savanna. Compounding the situation are forest fires that have increased to a scale too large for effective suppression. As a result, open forest can only be found around Comoé National Park in northeastern Côte d'Ivoire.

C4. Conservation Outside of Protected Areas

Conservation outside of protected areas is inconsistent. Lack of overall coordination and limited institutional capacity to collect and assess environmental information, compounded by few financial means, adversely impact the administration's ability to apply its environmental regulations effectively.⁸²

D. MAJOR THREATS TO BIODIVERSITY AND TROPICAL FOREST CONSERVATION

Like many countries in Africa, the environmental threats in Côte d'Ivoire present a tremendous challenge to biodiversity and tropical forest conservation. The causes and effects of these threats

⁷⁹ World Bank, Country Environmental Analysis, 2010

⁸⁰ World Resources Institute: <http://earthtrends.wri.org/text/forests-grasslands-drylands/country-profile-44.html>

⁸¹ Food and Agriculture Organization: <http://www.fao.org/forestry/site/18314/en/civ/>

⁸² World Bank, Country Environmental Analysis, 2010

are intricately interwoven, presenting multiple obstacles for a country that is already dealing with difficult development issues.

The main threats to sustainable natural resource use and biodiversity conservation are the recurring political instability, intensified and unsustainable land-use practices, overexploitation of natural resources, and harmful industrial practices (such as mining and oil production), which are exacerbated by the increase in the country's population and poverty. There is a general awareness of climate change, but very little strategic thinking about vulnerability or adaptation.

D1. Political Instability

Perhaps the most pressing problem facing Côte d'Ivoire is the lack of overall security. Political instability threatens biodiversity and conservation in many ways. A government that cannot enact, enforce, and ensure basic laws lacks the capacity to manage the higher-level needs of natural resource management and biodiversity conservation. Ill-equipped government bodies are unable to manage the environmentally destructive behaviors of internally-displaced and refugee populations. The inflated population leads to increased pressures on a limited resource base, which in turn leads to increased poaching, overgrazing, and deforestation.

D2. Unsustainable Land-Use Practices/Overexploitation of Resources

Shifting agriculture, logging, charcoal production, conflicting land tenure practices, bushmeat hunting and poaching are unsustainable land-use practices that threaten Côte d'Ivoire's biodiversity. Of these activities, slash and burn is the most pervasive as it is a farming technique practiced at a small and large scale throughout the country.

Shifting agriculture contributes to deforestation and is one of Côte d'Ivoire's major threats to biodiversity.⁸³ In order for crops to be planted, land must first be cleared. The fact that coffee and cocoa, Côte d'Ivoire's major cash crops, do not need shade to grow negates any incentive to replant. However, tropical soils receive their nutrients from the surrounding trees and vegetation, so when deforestation occurs, the quality of the soil is reduced. In addition, species that require forest canopy experience habitat loss and fragmentation. While practice of the fallow system theoretically allows recently farmed lands to rejuvenate, the resource-dependent economy of Côte d'Ivoire suffers from unregulated clearing and poachers who start massive and uncontrolled bush fires. Blowing Harmattan winds, coupled with climatic conditions, have intensified the habitat fragmentation and loss that bushfires cause. Furthermore, the practices of shifting agriculture, overgrazing, bushfires, and uncontrolled forest clearing also aggravate desertification in Côte d'Ivoire.⁸⁴

Logging also contributes to the exceptionally high rates of deforestation in Côte d'Ivoire. Between 1960 and 2007, Côte d'Ivoire's tropical rain forest was reduced by over 75%, and most of the remaining forests are found in reserves and protected areas. The impressive economic growth during the 1960s and 1970s was largely driven by the rapid expansion of the agricultural sector. Loss of forest cover due to rain forest conversion for agricultural purposes affects 40-

⁸³ World Bank, Country Environmental Analysis, 2010

⁸⁴ Principles in Practice, pg. 3: www.BSPonline.org

50% of the forest area.⁸⁵ After decades of intense agriculture and logging that fed one of the most productive economies in West Africa, Côte d'Ivoire began to feel the effects of the resource depletion through a decline in agriculture productivity. The GOCI responded by setting 17 percent of the country's land aside in protected areas and taking measures against illegal logging, poaching, and settler encroachment in parks. The government banned raw-log exports and encouraged the development of forest plantations.⁸⁶ Unfortunately, since the start of civil unrest in 1999, the status of conservation has worsened.

Poor enforcement of environmental regulations explains the persistence of timber as a major export. According to the Ivoirian Ecological Group (GECI), in 2007 only two of the 123 timber companies operating in the lumber industry observe the government quotas on timber harvest. The past 15 years of logging and forest encroachment have also negatively affected traditional healers in northern Côte d'Ivoire. According to one healer, deforestation of his village has dramatically increased his travel time to collect the animal parts, bark, and medicinal plants necessary to create his products.⁸⁷

Loss of arable land due to land clearing for small-scale agriculture, overgrazing, and the resulting disappearance of vegetative cover has led to the severe degradation of Côte d'Ivoire's soils. Unsustainable use of existing range and forest resources has resulted from insufficient land and resource tenure. For agriculturalists, unclear tenure discourages improved farming techniques. With limited financial resources and access to information, local communities often have limited understanding of the long-term impacts of production activities.

Forest cover is also reduced by wood collection for fuel and heating needs in rural communities. The collected wood is transformed into charcoal, which for some can be a source of income. Wood charcoal is easily produced and universally needed, but ultimately detracts from forest longevity.

The intensity of wildlife poaching has increased in recent decades, and is typically practiced around buffer zones of protected areas. Bush meat harvesting has never been a problem when practiced at sustainable levels. However, increased demand from logging outfits and large refugee camps has dramatically increased the prevalence of poaching. In addition, land clearing for agriculture and road construction has allowed poachers to enter areas that were previously inaccessible. Some of the hunted animals are among the country's most endangered species, including the African elephant, hawksbill turtle, and western chimpanzee.

The waters of Côte d'Ivoire are also threatened by poaching. According to the GOCI Fisheries Department, fish catches have been declining. The reduction in fish stocks has caused severe unemployment along the coastal zone. Large mammals, such as the West African manatee found in lagoon complexes of Fresco and Grand-Lahou, are also victims of incidental poaching.⁸⁸ As a result of reduced fish stocks, former fishermen have also turned to agriculture, which has increased the destruction of terrestrial forests and mangroves.

⁸⁵ World Bank, Country Environmental Analysis, 2010

⁸⁶ Mongabay.com: <http://rainforests.mongabay.com/20cotedivoire.htm>

⁸⁷ Interpress Service: <http://www.afrika.no/Detailed/14652.html>

⁸⁸ Wildlife Conservation Society

Mangroves are increasingly exploited in coastal areas for use as poles in the building industry; fuel wood; and, handicrafts for the local market. Without the mangroves, coastal erosion increases, which in turn results in the loss of biodiversity, properties, and crops. Consequently, villages, roads, hotels, and other infrastructures are under threat or have disappeared.⁸⁹ The prevalence of each of the aforementioned unsustainable land-use practices threatens Côte d'Ivoire's biodiversity. However, the concomitant effect of shifting agriculture, logging, charcoal production, conflicting land tenure practices, and bush meat hunting and poaching heightens the precarious current and future state of biodiversity.

D3. Increased Industrialization

High levels of industrialization in Côte d'Ivoire present another environmental problem for the country's precarious biodiversity. The different forms of industrialization causing harm in Côte d'Ivoire include air and water pollution, oil spills, and insufficient human consumption treatment. The following paragraphs describe each threat in detail.

While gasoline exhaust from traffic congestion and industrial manufacturing cause air pollution in the commercial capital of Abidjan, water pollution is a greater threat to biodiversity. In fact, Abidjan is faced with growing amounts of waste from industrial, urban, and agricultural sources. Abidjan and San Pedro are the only two cities in Côte d'Ivoire with an established sewage system, reported as partially functioning. There are few wastewater treatment plants and household waste collection is limited or not practiced. Domestic wastewater flows directly into the inshore or estuaries where pollutants accumulate.⁹⁰ Mangroves have also been degraded by toxic waste. One such lagoon is the Ebrie Lagoon located near Abidjan. Covering a surface of 120,000 ha, the Ebrie Lagoon is essentially a dumping ground for urban and industrial waste, as nearly 60 percent of the industry in the country is concentrated around the lagoon area.⁹¹

Food processing and textile production are dominant sources of industrial pollution and they account for 85 percent of industrial waste generation and 95 percent of pollution load. Pesticides, glue, and wood preservative industries have generated some toxic effluents but the quantity is still small.⁹²

During the night of August 19, 2006, over 500 tons of petrochemical waste were dumped from the Dutch vessel *Probo Koala* at a number of sites in Abidjan. At least three people died, and 100,000 were affected by inhaling the toxic fumes, which resulted in respiratory and intestinal problems. In 2007, the owner of the *Probo Koala*, Trafigura, paid a large settlement to the GOCI in return for indemnity against prosecution. In 2008, two Nigerian officials who were involved in handling the dump in Abidjan were sentenced to imprisonment. In 2009, Trafigura agreed to pay a settlement to victims of the toxic waste dumps, though compensation funds have

⁸⁹ GEF, Côte d'Ivoire Coastal Zone Integrated Environmental Problem Analysis, 2002

⁹⁰ World Bank, Country Environmental Analysis, 2010

⁹¹ Terra Daily:

http://www.terradaily.com/reports/Once_the_pearl_of_ICoast_Abidjan_lagoon_now_a_pollution_nightmare_999.html

⁹² GEF, Côte d'Ivoire Coastal Zone Integrated Environmental Problem Analysis, 2002

not yet been transferred to the victims.⁹³ In 2010, Trafigura was fined for violating European waste laws.⁹⁴

The *Probo Koala* spills have resulted in many reforms. In response to public outcry at the delayed clean-up response, the GOCI proposed a “polluter-pays” system to finance decontamination and drainage infrastructure. The proposed project would control and regulate all discharge into the lagoon. To date the GOCI has created a “lagoon police” unit to monitor the lagoon’s banks; enacted a large-scale mangrove reforestation campaign; and earmarked funds for a de-pollution boat. In June 2010, UNEP formally handed over a new laboratory equipped to test for hazardous waste from ships entering Abidjan’s port. The new facility will be led by the GOCI/CIAPOL. In addition to testing for water and soil contamination, other outcomes include a comprehensive assessment of the port.⁹⁵



Source: www.commondreams.org

Pollution translates into a human health hazard and an economic loss from reduced fishing activities and tourism. Ivoirians who can no longer support themselves from the marine resources have migrated inland. The natural resource base, already stressed, is subject to further extraction and degradation by the former fishing community.

D3a. Extractive Industries

Côte d’Ivoire’s gold, diamond, and most recently, oil, attract neighboring and foreign investors. While extractive industries are a source of economic growth, excessive and negligent

⁹³ International Centre for Trade and Sustainable Development:
<http://ictsd.org/i/news/bridgesweekly/79188/>

⁹⁴ All Africa.com: <http://allafrica.com/stories/201007230885.html>

⁹⁵ UNEP:
<http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=628&ArticleID=6626&l=en>

exploitation can cause long-term detrimental effects to the environment. Below are examples of extractive industry activities in Côte d'Ivoire.

In late November 2007 construction began on an offshore pipeline that will link Abidjan with Yamoussoukro and Bouaké, the second largest city in Côte d'Ivoire. The pipeline route will run an estimated 385 kilometers and follow Côte d'Ivoire's main north-south highway. President Gbagbo presented the project as a first step in the development of a network that will help to further diversify the Ivoirian economy, by increasing exports of refined products to neighboring countries. While Mr. Gbagbo stressed that the pipeline represents an environmental and safety improvement by virtue of reducing the need for road transport of petroleum products, the increased access to forests caused by land clearing will likely increase the bushmeat trade. Pipeline construction will likely also disrupt habitats, affect nesting cycles, and result in spills that could conceivably destroy underground water sources.

Gold and diamonds are other minerals whose extraction can have negative environmental consequences. As the country contains large sources of these valuable resources, the pursuit of economic growth can take precedence over the long-term negative effects such extraction can cause. In 2008, Côte d'Ivoire was accepted as a candidate country in the Extractive Industries Transparency Initiative (EITI). EITI aims to make natural resources benefit all; is comprised of a coalition of governments, companies and civil society; and establishes a standard for companies to publish what they pay and for governments to disclose what they receive.

To ensure the country can benefit from its resources in the future, it is imperative that the GOCI properly manage current extraction rates and practices. Planning can be a challenge for countries like Côte d'Ivoire with tenuous political and economic standings. However, as evidenced in the preceding paragraphs, sound environmental conservation of extraction sites is in the country's best interests.

D4. Population Density/Poverty

Further exacerbating the fragile situation is the overall high poverty rate. With an estimated population of 21,504,162,⁹⁶ and an estimated annual growth rate of 2.1 percent, Côte d'Ivoire's population is expected to reach 25 million people by 2025.⁹⁷ In the 2011 UNDP "Human Development Report," Côte d'Ivoire ranked 170th out of 187 countries in terms of human development.⁹⁸

Poverty can be traced back to government deficiencies. Non-compulsory primary school attendance combined with few non-resource-based income-generating opportunities is a recipe for disaster. According to the UNDP, in 2007 only 48.7 percent of Ivoirians were literate (60.8 percent of men and 38.6 percent of women), compared with 65 percent of Ghanaians (71.7 percent of men and 58.3 percent of women). As Côte d'Ivoire's population has grown and become increasingly dependent on the remaining natural resources, competition for these resources has also increased. With limited skills to draw upon, Ivoirians live off the land or

⁹⁶ The World Factbook, 2011

⁹⁷ Total Population by Country: http://www.photius.com/rankings/world2050_rank.html

⁹⁸ UNDP 2011 Human Development Report: <http://hdr.undp.org/en/reports/>

migrate to cities where they believe there are more options. Côte d'Ivoire's few urban centers are being called upon to sustain larger and larger numbers of people. The loss of fisheries has also pushed rural people toward larger cities such as Abidjan where unemployment, juvenile delinquency, and prostitution are already major issues. Rural to urban migration is perhaps more destructive than rural to rural migration. Those who have the means migrate to dense urban areas, and consequently add to pressures of a greater magnitude. As the population density is higher in urban settings, the potential of health epidemics is more intense and the scope more invasive.

Among other factors, biodiversity conservation is contingent upon a healthy and productive population. Physically or economically debilitating illnesses force rural citizens to depend upon their immediate environment to satisfy their basic needs. Côte d'Ivoire has the highest incidence of HIV/AIDS in West Africa, with an estimated 3.9 percent of the adult population infected. HIV/AIDS and other diseases can affect a country's biodiversity, as demonstrated by work in Tanzania. In 2005, implementers of the USAID-funded Population, Equity, AIDS, and Coastal Ecosystems (PEACE) initiative focused on the role of HIV/AIDS in the overexploitation of coastal Tanzania. The threat assessment confirmed that the direct impacts of HIV/AIDS on biodiversity included accelerated rates of natural resource extraction due to increased dependence on wild foods and wildlife, medicinal plants, timber, and fuel wood; decreased availability of labor due to sickness and death within the villages and among conservation staff; and, loss of traditional knowledge and skills.⁹⁹

Biodiversity is affected by large-scale human migration and political crises. Civil war and flexible immigration regulation along national borders represents an environmental and health threat in Côte d'Ivoire. During the 2003 civil war, southern Côte d'Ivoire experienced an influx of refugees from the north. Refugees fleeing Liberia's 2006 civil war exacerbated Côte d'Ivoire's population pressures.¹⁰⁰ The influx of migrating refugees—those who are fleeing from conflict or poverty, within or between countries—strains natural resources and basic service provisions. Refugees need shelter, food, and fuels, all of which they gather from their surrounding natural environment. Uninhabited lands in forest parks and reserves are often used as resettlement lands. Refugee camps tend to be sites of high population density that consequently intensifies the impact on the natural resource base *and* the propensity of disease transmittal.

The current legal framework is insufficient to regulate competing demands, particularly those of newly sedentary communities and original inhabitants who find they are vying for the same resource base. Tradition-based rules and regulations are inadequate, and those that do exist are not applied uniformly. Citizens have little forum for community participation due to limited capacity to apply the laws.

⁹⁹ USAID: www.crc.uri.edu/download/Final_threats_assessmen.pdf

¹⁰⁰ UN High Commissioner for Refugees: <http://www.unhcr.org/cgi-bin/texis/vtx/page?page=49e484016>

E. ACTIONS NECESSARY TO CONSERVE BIODIVERSITY AND TROPICAL FORESTS

This section recommends actions that can mitigate the threats to biodiversity and tropical forests presented in Section D. These actions were not conceptualized for any particular organization but instead could be implemented by a variety of actors, including the GOCI, NGOs, international donors, or research institutions. The majority of the recommendations are based on findings from desktop research and STEWARD field work. Section F will make specific recommendations for USAID.

E1. Political Instability

Peace and security in general and around transboundary areas is contingent upon sound and participatory policies. Political stability can be promoted at all levels of government. At the local level, for example, in Côte d'Ivoire's transboundary areas, groups can support community-based organizations, including efforts to create clear property rights and encourage predictable and transparent land management practices. At the national level, groups can help strengthen government institutions, law enforcement, democratic processes, decentralization, and transparency. For example, measures can be taken to improve regional mining sector practices and oversight. Côte d'Ivoire has made an effort to promote political stability at an international level by engaging in the EITI.

Creating economic growth activities in transboundary areas is a way to increase regional peace. The advent of alternative income opportunities in resource-dependent communities, such as sustainably harvested non-timber forest products, reduces conflict over scarce resources. A diversified market demands diversified skills, which often leads to increased participation.

E2. Unsustainable Land-Use Practices/Overexploitation of Resources

Unsustainable land-use practices and overexploitation of resources stems from poverty and poorly enforced regulations. While many of the initiatives below are dependent upon a stable and transparent government, support from local and international NGOs and donor organizations can bolster GOCI capacity and community engagement.

The following are suggested actions pertaining to forestry:

- Encourage participatory land-use planning. For example, designate and demarcate lands for community agriculture; encourage community seedling production and tree planting efforts in forests outside government-controlled forest estates; have communities participate in fire prevention and firefighting (fire management); and, engage communities in wildlife conservation.
- Promote improved subsistence agricultural practices, agroforestry, and animal husbandry.
- Improve timber sector oversight and management and continue building capacity within the forestry department.

The following are suggested actions pertaining to marine resources:

- Encourage participatory land-use planning. For example, designate and demarcate lands for marine use and mangrove preservation; and, combine research on the movement and behavior of manatees to inform a zoning plan that would regulate human activity at times when manatees are vulnerable.
- Promote improved fisheries practices and involve local citizens in monitoring activities, and adopt the FAO's Code of Conduct for Responsible Fishing.
- Improve marketing of fish inland to forest communities to help reduce bush meat pressure on inland forests.
- Work with neighboring states to reduce fisheries poaching in international waters.

Government strengthening and community buy-in can be achieved through educational outreach. Creating a space where interaction with schools and school officials presents an opportunity to open a dialogue for environmental education with those populations most directly responsible for local resource management, and most affected by external conservation efforts. NGOs and donors should consider replicating the Vie et Forêt program that was operated by WWF. These efforts could be implemented at the existing TNP site or expanded to other national parks and protected areas with similar resource pressures. Programs could also be implemented in the STEWARD-suggested pilot sites. Another option is for NGOs and donors to tailor a Vie et Forêt program to meet the needs of coastal dwellers. These are discrete ways to include conservation education into established programs to reach the populations with whom they work.

Support for marketing and export of sustainably harvested non-timber forest products is an incentive for conservation and an opportunity to diversify income-generating activities. Finally, ecotourism is another economic growth opportunity that also targets environmental goals. Ecotourism not only provides income-earning opportunities for rural communities but also benefits larger private sector groups in the urban areas. Paying rural residents to attend training where they will learn basic conservation skills and learn about the need to protect their land has the potential to increase levels of park protection. Developing a "training of trainers" approach is one means to bring the initiative to scale.

E3. Increased Industrialization

In the same way that national and international organizations can build civil society and governmental capacity to mitigate unsustainable resource use, measures can be taken to mitigate the harmful effects of increased industrialization:

- Promote improved subsistence agricultural practices, agroforestry, and animal husbandry, as reduced inputs and/or alternative farming practices can reduce water and soil pollution.
- Improve sanitation and wastewater disposal, and adopt water quality standards and employ local citizens in monitoring.
- Develop a public awareness and education campaign focusing on manatee behavior and water quality issues.

E3a. Extractive Industries

To mitigate the potential negative effects that mining can cause (e.g., habitat destruction, water contamination), it is critically important that the GOCI, NGOs, and donors engage with the major mining companies to ensure that mining benefits the people. Furthermore, transparent practices on the part of government will help to allow local and international actors to monitor activities to ensure they are being undertaken in a responsible manner. The advantages of corporate social and environmental responsibility (e.g., marketing, regulations) should be promoted through public-private partnerships and engagements with the donor community. Employing local citizens in mining rehabilitation and monitoring activities is a way to support both alternative livelihoods and sustainable extraction practices.

E4. Population Density/Poverty

Taking measures to reduce poverty and population growth will positively affect biodiversity and tropical forests conservation. While it is common historically to have large families, if government, NGOs, and donors provided family planning education and non-resource-based employment, population growth would likely decrease. A slower population growth rate would reduce the need for resource-based employment, thereby encouraging the development of alternative income opportunities. Family planning awareness initiatives are another way that organizations can decrease the prevalence of HIV/AIDS.

Community planning should also be considered. As pressures from the environment come from longtime residents and refugees, project areas with adequate services and density considerations should be designed. Rural to urban migration has increased in the past several years, resulting in increased demands upon municipal and natural resources in coastal areas. While urban areas offer increased economic and social opportunities, to keep growth and poverty in check, the GOCI and development organizations must also invest in rural development. Community planning of rural areas indirectly reduces population pressures in urban areas.

F. PROGRAM RECOMMENDATIONS FOR USAID

According to the FY 2012 Congressional Budget Justification, the U.S. government continues its commitment to assist Côte d'Ivoire in promoting security, global health and HIV/AIDS, and budget and planning performance. Several overarching objectives encompass these foreign assistance priorities, including peace and security, and investing in people.

F1. Peace and Security Recommendations

Political uncertainty is deemed by the U.S. government to be a pressing problem in Côte d'Ivoire. As President Ouattara gains control over the elements of government, maintaining a unified and cohesive security sector will be one of the most critical tasks. Programs funded under the Peace and Security Objective will be managed by the U.S. Department of State, and focus on professional development in the security sector. A focus is to ensure that border security is maintained with the goal of deterring and reducing cross-border trafficking of weapons, people, and valuable raw materials, such as diamonds and cocoa. A total of \$25,000 in International Military Education and Training funding will support the development and professionalization of the new army, which will need to be established once Ouattara has gained control over the military per the Ouagadougou Political Accord. Activities will have a particular focus on respect for human rights and improved military justice systems.

Because poor natural resource management is intrinsically linked to poverty, and poverty is linked to war and insecurity, the need for political stability is paramount. A government that is able to enforce policies that encourage alternative and sustainable livelihoods for resource-dependent populations and increase the capacity of poor communities to manage their local natural resource use will increase its potential toward conserving biodiversity. With respect to biodiversity and tropical forestry, USAID can promote and support greater transparency within and governance by environmental ministries of the GOCI. In general, greater enforcement of natural resource laws is needed, as is the development of related policies. In addition, government agencies need support in asserting their authority within many protected areas to begin enforcement.

In so much as USAID's work can influence Côte d'Ivoire's national policies, the government should be encouraged to rapidly adopt appropriate policy and land reforms that facilitate access and recognize land ownership rights of the users. In addition, effective protection measures in favor of the environment should lead to a much greater participation and involvement of farmers and their respective communities in upholding their natural resource base.

One such measure could be the development of a transboundary conservation agreement between the government and local peoples that describes the mission, goals, and objectives for the area. Creating a participatory environment from the onset where local people feel invested is an essential criterion for successful long-term collaboration. For instance, emerging transboundary collaborations between Liberia and Côte d'Ivoire in the Taï-Sapo complex,¹⁰¹ as well as ongoing work in the Mt. Nimba area of Liberia, Guinea, and Côte d'Ivoire,¹⁰² hold promise of providing enormous benefits for biodiversity and tropical forestry, as long as the economic livelihoods of local communities are carefully incorporated into transboundary planning and management. The Taï-Sapo complex is likely the best investment opportunity, since this area has received much foreign assistance and has hosted wildlife researchers for many years. In comparison, local security in the Mt. Nimba area is less certain.

With respect to supporting sustainable economic growth through regional peace, USAID should continue to support and aim to expand programming like STCP and Rainforest Alliance cocoa certification. These programs, which support farmers through training and the provision of inputs, focus on diversifying the economy and lessen pressure on nearly exhausted resources. Reducing dependency on natural resources is a way for the country to expand its economy.

As mentioned in STEWARD's suggested pilot sites, USAID can support economic growth as follows:

- Encourage ecotourism in places like the Taï and N'Zo protected areas and in coastal heritage sites and mangrove forests, and promote "volunteer vacations" to help with area collection of biological data and monitoring activities.

¹⁰¹ Taï-Sapo complex: <http://www.tai-sapo.org/>

¹⁰² Darwin Nimba project: <http://www.nimbadarwin.org/index.html>

- Encourage non-timber forest product industries such as rattan and bamboo furniture, honey, and household utensils production, and the use of logging and sawmill waste in the carving industry and promoting it along with ecotourism.
- Promote the marketing of fish in forest areas.

F2. Investing in People Recommendations

The U.S. Government continues to support the fight against HIV/AIDS as a top foreign assistance priority for FY 2012. Côte d'Ivoire is a focus country under the President's Emergency Plan for HIV/AIDS Relief (PEPFAR). Under the leadership of the Ivoirian Government, \$142.5 million will be used to build partnerships to provide integrated prevention, care, and treatment programs throughout the country, and to support orphans and vulnerable children.

Given the interrelated nature of health and the environment, and the strong response of the U.S. to health issues in the region, USAID could dedicate some PEPFAR funding to incorporate messages about the importance of environmental conservation. More specifically, to gauge the direct impacts of HIV/AIDS on biodiversity, USAID could replicate the 2005 Tanzanian PEACE initiative in Côte d'Ivoire. USAID could also expand upon its PACPNT involvement by delivering joint health and environmental workshops or training during school and health center visits. Funding dedicated to health programming should consider including "health and the environment" on their agendas to raise awareness of conservation issues and emphasize the health benefits of a healthy and sustainably managed resource base. PACPNT, health workshops, and conferences offer an opportunity to introduce crosscutting environmental themes to agendas and materials.

Finally, USAID could bolster its support of national, regional, and local government capacities of natural resource management. Support could take the form of funds for increased and more frequent training of local community members as forest ombudsmen. USAID could also provide technical assistance to local governments on how to introduce rural communities to alternate livelihoods. Providing a training-of-trainers event in microfinance programs or seminars about the benefits of ecotourism and creation of sustainably harvested forest products are some examples.

G. CONCLUSION

Home to West Africa's largest remaining island of primary forest and providing habitat for 28 endemic species, Côte d'Ivoire offers a compelling case for conservation. However, the country's political instability greatly diminishes the prospects for developing away from a resource-dependent economy. If the status quo continues, the country's biodiversity and rich natural resources are likely to continue to decline.

U.S. foreign assistance is aimed at the functional objectives of peace and security, and investing in people. In October, 2011, benefits from the African Growth and Opportunity Act were reinstated for Côte d'Ivoire; these benefits provide opportunities to increase mutually beneficial trade and investment between Côte d'Ivoire and the United States.

The threats identified in this report are only beginning to be directly addressed by proposed FY 2012 U.S. foreign assistance programming. In addition, USAID can look to incorporate environmental components into existing activities to facilitate conservation and mitigate the impacts of economic activities with the potential for unintended negative consequences.

Therefore, the following general recommendations should be kept in mind as specific programming is considered and planned:

- Activities with the potential to affect rural populations should target areas of high conservation value, especially those along the buffer zone of protected areas. Project implementers should collaborate with organizations in the country (e.g., IUCN, GOCI, GIZ) to expand existing or create new programs that encompass environmental concerns into their planning. New efforts in the transboundary buffer areas around Taï and Mt. Nimba National Parks should be supported, and other areas for intervention could include the resource-rich coast encompassed in Azagny National Park and buffer areas surrounding Comoé National Park.

Other considerations should include the following:

- Support of policies that consider biodiversity conservation and protection. Policies pertaining to extraction (such as oil, gas, and iron ore) should promote sustainable techniques, including agroforestry, and look to mitigate the potential negative impact of ecosystem disruption by using sustainable and risk-adverse drilling practices. Continued support for compliance with the EITI is recommended.

Programs should continue support of opportunities that combine income generation and environmental conservation. Examples are ecotourism, fish market expansion in forests, and training community members in resource management. The joint-funded Rainforest Alliance certification program and the PACPNT consortium project in TNP are instances of programs that seek to incorporate the needs of marginalized individuals in natural resource management by providing technical assistance and income-generating opportunities. In addition, there is good potential for a multi-zone, multi-purpose, community-managed protected area at the presently non-gazetted, biodiversity-rich Tana forest in SE corner of Ivory Coast. SOS Forêts is interested

in this site and Nature Conservation Research Centre could bring in its expertise in community-managed protected areas. In the broader Abi Lagoon area, one finds traditional lagoon fisheries management systems that could be strengthened and replicated. Mangrove restoration and management should have broad potential in this area.

ANNEX A – REFERENCES

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ANNEX B – ENVIRONMENTAL ISSUES AND RELEVANT GOVERNMENT ORGANIZATION

Governmental Organization	Environmental Issues (No. indicates the relevant chapter)											
	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10	4.11	4.12
	Air Pollution	Water Pollution	Coastal Erosion	Solid Waste	Energy	Water Supply	Waste Water Treat	Forest and Desert	Biodiversity	Natural Resources	Natural Disaster	Env. Education
Ministry of Environment and Construction	••	••	••	••	••	••	—	••	••	••	••	••
Ministry of Agriculture and Animal Resources	—	—	—	—	—	—	—	—	••	••	—	—
Ministry of Infrastructures	••	••	••	••	—	••	••	—	—	••	••	—
Ministry of Higher Education and Scientific Research	—	—	—	••	••	—	—	••	••	••	—	—
Ministry of Energy	••	—	—	••	••	—	—	—	—	—	—	—
Ministry of Interior and Decentralization	—	—	••	••	—	—	—	—	••	••	••	••
Ministry of National Education	—	—	—	—	—	—	—	—	—	—	—	••
Ministry of Communication	—	—	—	—	—	—	—	—	—	—	—	••
Ministry of Solidarity and Woman Promotion	—	—	—	—	—	—	—	—	—	—	—	••

Note: 1) : ••••• Relevant Organization • —••• No responsible • na••• Lack of information

ANNEX C – LIST OF SITES

Site	Hectares	Date Established
Botanical Reserve (15)		
Bamoro	2,200	1932
Bouafle	32,400	1929
Divo	32,400	1975
Kassa	7,200	1935
Katiola	200	1926
Moni	10,000	1954
Mont Sangouine	25,000	1932
N’Ganda-N’Ganda	4,400	1958
Mont Nieton	11,268	1961
Niangbon	1,700	1932
Orumns Boka	3,600	1929
Singrobo	1,200	1929
Tankessé	3,600	1929
Tos	23,000	1929
Yappo	37,300	1929
Classified Forest (298)		
Faunal and Flora Reserve (1)		
Haut Bandama	123,000	1973
Partial Faunal Reserve (1)		
N’Zo	130,000	1954
National Park (8)		
Azagny	19,000	1981
Banco	3,000	1953
Comoé	1,150,000	1968
Taï	350,000	1990
Iles Ehotile	10,500	1974
Marahoue	101,000	1968
Mont Peko	34,000	1968
Mont Sangbe	95,000	1976
Strict Nature Reserve (2)		
Lamto	2,500	1968
Mont Nimba	5,000	1944
Wetlands of International Importance (Ramsar) (6)		
Complexe Sassandra-Dagbego	10,551	2005
Parc national d’Azagny	19,400	1996
Fresco	15,507	2005
Grand Bassam	40,210	2005
Iles Ehotilé-Essouman	27,274	2005
N’Ganda N’Ganda	14,402	2005

Site	Hectares	Date Established
World Heritage Convention (3)		
Comoé National Park	1,149,250	1983
Mount Nimba Strict Nature Reserve	5,000	1981
Taï National Park	330,000	1982
UNESCO-MAB Biosphere Reserve (2)		
Comoé National Park	1,150,000	1983
Taï National Park	620,000	1977

Source: UNEP-World Conservation Monitoring Centre: <http://www.unep-wcmc.org/wdpa/country1.cfm>

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