



Environmental Education and Communication (EE&C) for Behavior Change

Its Role in Forest, Water, and Biodiversity Resource Management for Sustained Economic Growth in Bolivia

**Prepared for
USAID/Bolivia**

**Prepared by
Environmental Education and Communication (GreenCOM) Project**

June 2001

GreenCOM
Environmental Education and Communication Project

**Strategic
Environmental
Communication**

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This publication was prepared for USAID/Bolivia by the Environmental Education and Communication (GreenCOM) Project of USAID. The findings, conclusions, and recommendations expressed in this document do not necessarily reflect the official viewpoint of the U.S. Agency for International Development.

For more information, contact:

GreenCOM
Academy for Educational Development
1825 Connecticut Avenue, NW
Washington, DC 20009 USA

Tel: (202) 884-8000

Fax: (202) 884-8997

E-mail: greencom@aed.org

Web site: www.usaid.gov/environment/greecom

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ACRONYMS

AED	Academy for Educational Development
AJARI	<i>Aprendiendo y Jugando Activamente con Radio Interactivo</i> (Learning and Playing Actively with Interactive Radio)
BOLFOR	Bolivia Sustainable Forestry Program, a USAID-funded project
CABI	<i>Capitanía de Alto y Bajo Izozog</i> (Captain of the Upper and Lower Izozog, local indigenous government body and manager of the <i>Kaa-Iya Gran Chaco</i> National Park)
CAM	Corredor <i>Amboró-Madidi</i> (<i>Amboró-Madidi</i> Corridor)
CI	Conservation International
CIES	<i>Centro para Investigación, Educación, y Servicios</i> (Center for Research, Education, and Services)
CONCADE	<i>Consolidación de los Esfuerzos del Desarrollo Alternativo</i> (Consolidation of Alternative Development Efforts, a USAID-funded project)
CPC	<i>Centro para el Progreso de la Comunicación</i> (Center for Communication Progress, a Bolivian NGO associated with Johns Hopkins University)
DAI	Development Alternatives Incorporated
DDCP	Democratic Development and Citizen Participation Project, a USAID-funded project
DEMOSOT	USAID Democratic Initiatives Strategic Objective Team
EE&C	Environmental Education and Communication
E.G.	Economic Growth (USAID Strategic Objective)
FAN	<i>Fundación Amigos de la Naturaleza</i> (Friends of Nature Foundation, an environmental NGO)
FAO	Food and Agriculture Organization of the United Nations
FDTA	<i>Fundación para el Desarrollo de Tecnologías Alternativas</i> (Foundation for Alternative Technology Development)
GTZ	German Agency for International Technical Assistance
IR	Intermediate Result
LIDEMA	<i>Liga de Defensa del Medio Ambiente</i> (Environmental Defense League, an environmental NGO/civil society apex group)
MAPA	Market Access and Poverty Alleviation, an Economic Growth SO project
MSDP	Ministry of Sustainable Development and Planning
NGO	Non-Governmental Organization

OTB	<i>Organizaciones Territoriales de Base</i> (Territorial Organizations at the Base, local grassroots organizations)
PAS	Embassy Public Affairs Section (former USIS)
PL 480	Public Law 480 – Food for Peace
PPL	Popular Participation Law
PROMETA	<i>Protección del Medio Ambiente Tarija</i> (Protection of the Environment in Tarija, a local environment NGO)
PROSIN	<i>Proyecto para la Salud Integral</i> (Integral Health Project)
FUNDACIÓN PUMA	<i>Fundación para la Protección y Uso Sostenible del Medio Ambiente</i> (Foundation for the Protection and Sustainable Use of the Environment)
REDESMA	<i>Red de Desarrollo Sostenible y Medio Ambiente</i> (Sustainable Development and Environmental Network)
RFS	Rural Financial Services (Economic Growth SO project)
SERNAP	<i>Servicio Nacional de Areas Protegidas</i> (National Park System)
SO	Strategic Objective
TCO	<i>Tierras Comunitarias de Origen</i> (Community Indigenous Lands)
TNC	The Nature Conservancy
TOT	Training-of-Trainers
UNDCP	United Nations Development Counternarcotics Program
USAID	U.S. Agency for International Development
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund

EXECUTIVE SUMMARY

BACKGROUND

USAID/Bolivia contracted GreenCOM, the Environmental Education and Communication (EE&C) Project, to conduct a participatory assessment of EE&C needs and opportunities, develop an overarching EE&C conceptual framework and set of EE&C recommendations and implementation options, and explore how EE&C could be used as a mechanism to help bridge and develop stronger collaboration within USAID/Bolivia and between USAID/Bolivia and its partners.

A four-person GreenCOM team conducted the Participatory EE&C Assessment in March-April, 2001. During their three weeks in country (March 18 – April 7, 2001), they reviewed more than 50 USAID, Bolivian, and other donor institutions and projects, and conducted in-depth interviews with nearly 150 people in *La Paz*, *Santa Cruz*, *Cochabamba*, and *Tarija*. In May, Team Leader, Bette Booth, participated in the USAID Environment Team Partner's Meeting held in *La Paz*. During the meeting, Booth presented the draft assessment findings and recommendations to the participants and received feedback and suggestions. These suggestions and recommendations are included in this report.

PARTICIPATORY EE&C ASSESSMENT

The Participatory EE&C Assessment explored the EE&C strengths, weaknesses, obstacles, and opportunities within the following sectors: 1) Bolivian NGOs; 2) GOB institutions (The National Park System (SERNAP) and the Ministry of Sustainable Development and Planning (MSDP)); 3) Mass media; 4) Private sector; 5) Donor community; and 6) Universities. Each sector is analyzed in terms of their EE&C programs, EE&C institutional capacity, EE&C methodologies, and EE&C coverage/reach.

Four general conclusions of the assessment present the most significant weaknesses that need to be addressed to strengthen EE&C in Bolivia:

- ***EE&C objectives generally focus on changing knowledge and attitudes, rather than behavior.*** Increased knowledge and positive attitudes do not necessarily lead to behavior change. EE&C objectives should be stated in terms of environmentally desirable behaviors. EE&C practitioners should use audience research findings to identify the specific factors that most influence the desired environmentally friendly actions and to develop comprehensive strategies that address those specific factors.
- ***EE&C methodologies generally do not include the steps of assess (formative research), pretest and revise, or monitor/evaluate*** that create two-way communication with the target audience and ensure that EE&C practitioners develop strategies and materials that respond to target audience needs. EE&C methodologies should apply all of the steps of the process – assess, design/plan, pretest and refine, implement, and monitor/evaluate.

- *Except amongst EE&C professionals and a few NGOs, there is a general, erroneous attitude that “anyone can do (and does) EE&C”.* Social communication, environmental education, and social marketing professionals trained in up-to-date and state-of-the-art EE&C methods and techniques should conduct EE&C.
- *EE&C activities are generally project/activity-oriented and conducted unilaterally.* EE&C interventions have not been well coordinated with one another and lack a singular theme or consistent set of messages. This leads to duplication in the design, production, and implementation of EE&C activities and reduces their impact. EE&C activities should be systematically coordinated at a national level in a way that provides the structures and tools for increased local action.

EE&C RECOMMENDATIONS

EE&C in Bolivia needs to “go to scale”. It needs to create environmental awareness and action in sufficient numbers, involving a wide-range of target audiences and stakeholders to make a real, significant impact on the management of forest, water, and biodiversity resources for sustained economic growth. Going to scale means changing the way Bolivians do the business of EE&C. It means moving from multiple individual, geographically focused, and relatively isolated EE&C activities and projects to *coordinated, systematic, national-level EE&C that provides the structures and tools for increased local action.*

Specifically, GreenCOM recommends the following:

Develop, implement, and monitor/evaluate a five-year collaborative *Unified EE&C Strategy* that includes a *common vision*, a unified EE&C *goal and objectives*, an overall *framework* that defines the roles of each sector and partner, and a *unifying “umbrella concept”* (the common theme and key benefit of environmental action that will tie together all of the promotional aspects of the strategy).

The strategy would possess four interrelated, complementary, and, reinforcing components that are described below:

1. **Inter-Action:** Develop and strengthen mechanisms to bring together people, resources, information, experiences and materials for *exchange, collaboration, and cooperation* to build a strong base for environmental action. Strengthen LIDEMA and REDESMA to act as EE&C coordinators, but continue efforts to motivate the government, particularly the MSDP, to assume leadership in the national coordination of EE&C. Develop and strengthen ‘strategic alliances’ – collaborative action between governmental institutions, non-governmental organizations, universities, and the private sector on specific environmental EE&C issues and activities and in specific geographical areas. Increase and strengthen private sector support to, and networking and coordination with, government and NGOs involved with EE&C institutions.
2. **EE&C Capacity Building:** Strengthen Bolivian professional and technical governmental and non-governmental capacity to design, implement and monitor/evaluate

systematic, effective, and sustainable EE&C programs, interventions, and activities. Provide skills-based training with guided practice (learning while doing) to:

- Governmental and non-governmental staff in EE&C methodologies and techniques, particularly the EE&C process, behavioral analysis, & social marketing.
 - Governmental, non-governmental, and private sector decision makers and opinion leaders on sustainable development and the management of forest, water, and biodiversity resources for sustained economic growth.
 - Governmental and non-governmental decision makers and opinion leaders on how to access and use environmental technical and scientific data from REDESMA, LIDEMA, and other sources as a basis for decision-making.
4. **Participation for Local Action:** Strengthen EE&C initiatives to stimulate and fortify *local participation in and support for* the management of forest, water, and biodiversity resources for sustained economic growth. (Local participation includes municipal associations, *Mancomunidades*, municipalities, Community Indigenous Territories (TCOs), grass-roots organizations (OTBs), and individuals.) Develop through a collaborative, participatory process, *EE&C Toolboxes*, which are packaged sets of EE&C tools and materials *designed nationally to increase, strengthen, and support action locally*. Sample toolboxes could be developed for: municipal action, National Park Week, Amboró-Madidi Corridor (CAM) promotion, and community-based forestry.
 5. **Mass Communication:** Strengthen *systematic, integrated, and appropriate mass media strategies, tools, and methods* that generate greater awareness, understanding, sense of responsibility, and action for the management of forest, water, biodiversity resources for economic growth. Conduct a comprehensive, integrated *Environmental & Sustainable Development Awareness and Media Advocacy Campaign* to increase knowledge about and support for the management of Bolivia's forest, water, and biodiversity resources and to increase the perceptions of the *economic benefits* they provide when they are managed sustainably. Conduct comprehensive and systematic *media advocacy and media training* in coordination with this campaign. Develop local and national *mass media tools and materials that motivate and reinforce explicit environmental actions in specific target audiences*.

Together, these efforts are capable of generating and maintaining the widespread change needed to safeguard Bolivia's natural patrimony.

SECTION I
BACKGROUND
AND
CONCEPTUAL FRAMEWORK

A. SCOPE OF WORK

USAID/Bolivia contracted GreenCOM, the Environmental Education and Communication (EE&C) Project, to provide strategic technical assistance in how EE&C could help the Environment Team reach their Strategic Objective (SO) and Intermediate Results (IR's). USAID/Bolivia requested that GreenCOM:

- Conduct a participatory assessment of EE&C needs and opportunities;
- Through a participatory process with the Environment Team partners, develop an overarching EE&C conceptual framework and set of EE&C recommendations and implementation options; and
- Explore how EE&C could be used as a mechanism to help bridge and develop stronger collaboration within USAID/Bolivia (between its Environment, Health, Democracy, CounterNarcotics, Economic Growth, and Food Security SO Teams), as well as between USAID/Bolivia and its partners (i.e. institutional contractors, and local Bolivian institutions and NGOs).

The assessment findings and resultant recommendations would be used as tools to strengthen ongoing activities being conducted by the various Environment Team Partners. They would also be utilized to develop the Environment SO 2002 Concept Paper.

USAID/Bolivia's staff emphasized that they did not want new initiatives or projects. Rather, this consultancy was to *provide practical, achievable tools to strengthen existing capacity and ongoing activities of the Environment SO Team partners that could also be used to strengthen coordination and collaboration between the other USAID/Bolivia SO Teams.*

The list of the specific questions USAID/Bolivia asked GreenCOM to address is included in Annex A.

This document describes the results of the participatory EE&C assessment, and the proposed EE&C conceptual framework, and EE&C recommendations developed. A companion report, "Using Strategic Environmental Communication to Support USAID/Bolivia's Strategic Objective Framework and Achieve its Intermediate Results", describes the ways in which EE&C can help bridge and develop stronger collaboration within USAID/Bolivia.

B. CONSULTANCY METHODOLOGY

A four-person GreenCOM team conducted a participatory EE&C assessment for three weeks in March-April, 2001. Team members were Rick Bossi, GreenCOM Coordinator for Latin America (staff, AED); Bette Booth, Environmental Communication and Social Marketing Specialist (Team Leader, consultant AED); Marco Encalada, President of OIKOS, a leading

Ecuadorian EE&C NGO (consultant AED); and Irma Allen, EE&C Specialist (consultant, Chemonics Intl.).

The team conducted an extensive literature review before and during the assessment. A list of documents reviewed is included in Annex B. During their three weeks in country (March 18 – April 7, 2001), they reviewed the activities of more than 50 USAID, Bolivian, and other donor institutions and projects, and conducted in-depth interviews with nearly 150 people in *La Paz*, *Santa Cruz*, *Cochabamba*, and *Tarija*. The list of institutions, organizations, and people interviewed is included in Annex C.

Information sought during the in-depth interviews included: 1) the overall goals, objectives, and activities of each institution/organization; 2) strategies and methodologies they use to conduct EE&C; 3) examples of coordination with governmental and non-governmental organizations; 4) institutionalization of EE&C activities within partner organizations/institutions, local groups, and other programs; 5) lessons learned; 6) opportunities/suggestions for future EE&C work; and 7) names of other organizations and people the team should interview. If time allowed, team members also asked general questions about mass media campaigns, EE&C priority themes and target audiences, and environmental opinion leaders. The “Participatory Assessment Interview Guide” used to help standardize and organize the information collected is included in Annex D.

The organizations and individuals interviewed received team members with remarkable courtesy, interest, and enthusiasm. Interviews lasted from one to three hours. In several cases, team members scheduled a second appointment to clarify information and to sound out ideas for the team's conclusions and recommendations. The team wishes to thank the many Bolivian and international organizations, groups, and individuals for their patience, time, and support in conducting the assessment.

In May, Team Leader, Bette Booth, participated in the USAID Environment Team Partner's Meeting held in *La Paz*. More than seventy people, including representatives from other donor agencies, Bolivian government institutions, NGOs, *Mancomunidades*, municipalities, and other USAID SO teams and their partners attended. During the meeting, Booth presented the draft assessment findings and recommendations to the participants and received feedback and suggestions. Participants also divided into five workgroups to develop specific recommendations to strengthen EE&C. These suggestions and recommendations are included in this report.

C. USAID/BOLIVIA'S ENVIRONMENT STRATEGIC OBJECTIVE

As of April 2001, USAID/Bolivia's Environment Strategic Objective is ‘forest, water, and biodiversity resources managed for sustained economic growth’ through three IR's: 1) Sustainable management of natural forests in the Bolivian lowlands; 2) Adequate management of protected areas; and 3) Improved environmental management of urban and industrial pollution.

1. IR1: Sustainable Management of Natural Forests in Bolivian Lowlands

This IR is implemented primarily through the Bolivia Sustainable Forestry Program (BOLFOP)

with additional support through CADEFOR, CIFOR, and the U.S. Forestry Service. Initiated in 1992, BOLFOR worked to strengthen private and public sector capacity to sustainably manage natural forests focusing on forestry policy/institutional strengthening, forestry management, applied research, product development and marketing. By working closely with government, the private sector, universities, and civil society, BOLFOR has catalyzed dramatic changes in the forest sector since 1994. In 1999, the area of forests internationally certified as “well managed” grew by 86% to 834,300 hectares. BOLFOR is now focusing on: 1) public sector strengthening; 2) community forestry; and 3) applied research.

2. IR2: Adequate Management of Protected Areas

This IR has three major thrusts: the *Kaa-Iya del Gran Chaco* National Park; Conserving the Forest and Biodiversity of the Tropical Andes; and Protected Area Management in Southern Bolivia.

The ***Kaa-Iya del Gran Chaco National Park***, Bolivia’s largest national park, covers 3.4 million hectares and conserves the largest expanse of protected tropical dry forest in the world. It is also the only protected area in the Americas established as a result of the initiative of a local indigenous group, and the only one co-managed by them. The park is managed by the *Capitania del Alto y Bajo Izozog* (CABI), with support provided by the Wildlife Conservation Society’s (WCS) Indigenous Resource Management Program. This CABI, WCS, USAID partnership included the negotiation of a landmark agreement between indigenous organizations and the sponsors of the Bolivia-Brazil Gas Pipeline that crosses the park. It provided for unprecedented participatory consultation with local people and made available significant resources for land titling, impact mitigation, conservation, and sustainable development. The *Kaa-Iya* Program supports CABI’s efforts through institutional strengthening, development and implementation of a management plan for the protected area, applied community-based research focusing on the sustainable uses of natural resources, and environmental education.

Conserving the Forests and Biodiversity of the Eastern Slopes of the Andes: The eastern slopes of Bolivia are some of the most diverse forests in the world. Conservation International identified Bolivia’s tropical Andes as part of the world’s most important hotspots, “the epicenter of global biodiversity”, with roughly 1,360 bird species and 17,000 vascular plants. USAID is supporting three programs to conserve a string of protected areas – and the natural areas between them – running from *Amboró* National Park in Bolivia to *Manu* National Park in Peru. This bi-national program is known as the *Vilcabamba-Amboró* Corridor. The Bolivian part is known locally as the *Amboró-Madidi* Corridor or CAM. USAID CAM partners are Conservation International (CI), Wildlife Conservation Society, World Wildlife Fund (WWF) in coordination with the Fundación Amigos de la Naturaleza (FAN), and the Bolivian Park Service (SERNAP).

Protected Area Management in Southern Bolivia: USAID supports The Nature Conservancy (TNC) and their work with the Bolivian NGO, Trópico, in the management of the *Eduardo Avaroa Faunal* Reserve, and PROMETA (Protection of the Environment in Tarija), in the management of the *Tariquía* Flora and Fauna Reserve. PROMETA also played a major role in the creation of the *Serranía del Aguarague* National Park and Natural Integrated Management Area.

The Environment Results Framework Intermediate Result 2.1 is “Ecoregional planning integrates forest and protected area management”. Systematic EE&C planning and implementation would contribute significantly to achieving this IR.

3. IR3: Improved Environmental Management of Urban and Industrial Pollution

The goal of this IR is improved environmental management of urban and industrial pollution through increased institutional capacity to sustain cleaner production and increased financial capacity for investments in cleaner production. This IR was initiated in 1995 as the Pollution Prevention Program (EP3) and implemented as an environmental technical unit of the National Chamber of Industries in La Paz. EP3 provided individualized technical assistance, training, and support to priority highly contaminated industries. The program has recently been redesigned and named the Center for the Promotion of Sustainable Technologies (CPTS). It seeks to identify and respond to technical and financial factors that limit the wider adoption of cleaner production practices. CPTS also is expanding their work into micro and medium enterprises, other sectors, such as tourism (hotels) and health, and municipalities.

CPTS activities include: 1) Promoting adoption of cleaner production to industries; 2) Training a cadre of private consultants to carry out environmental audits, 3) Improving university’s capabilities to train technical specialists; 4) Increasing public awareness; 5) Providing technical assistance to support reviewing the environmental legal framework; and 6) Creating mechanisms in commercial banks to finance the adoption of cleaner production technologies. These activities are co-financed by USAID, the World Bank, and the governments of Denmark and Sweden. The Inter-American Development Bank may provide other complementary funding in the future.

The achievement of this Strategic Objective and Intermediate Results will require that a wide range of Bolivians from government, private sector, non-governmental organizations, municipalities, and local groups – are aware of, advocate for, and take action to support sustainable forestry, protected area management, and cleaner production. **Sufficient numbers** of a wide-range of target audiences and stakeholders will need to take action in order to achieve **significant impact** on the reduction of forest and water degradation and the conservation of biodiversity. Environmental education and communication can be a powerful tool to create awareness, advocacy, and behavior change to reach these environmental goals.

D. GREENCOM CONCEPTUAL FRAMEWORK AND LESSONS LEARNED

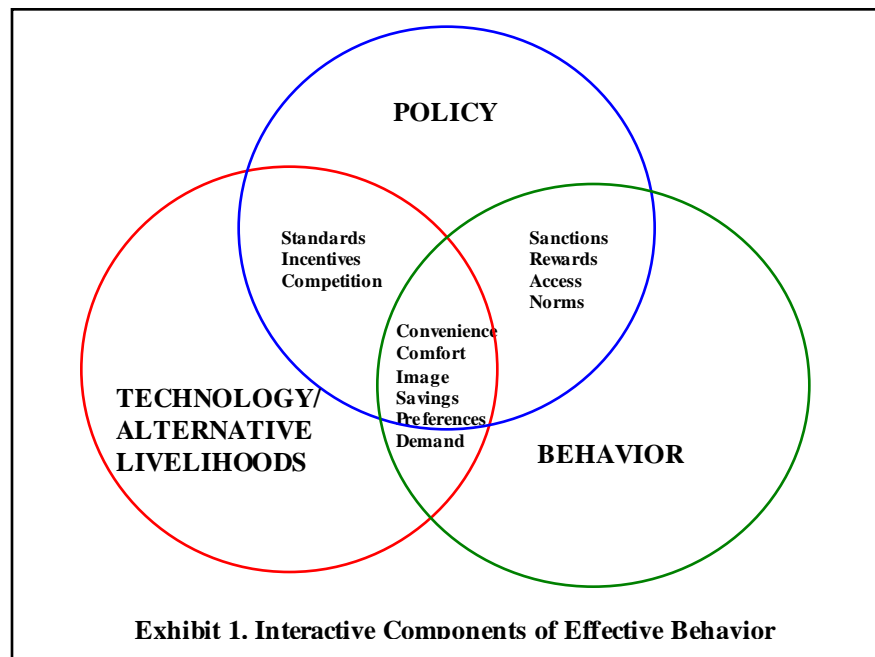
GreenCOM was started by USAID in 1993 with the mandate to apply a set of social marketing and communications techniques to environmental issues. These techniques had proven to be powerful tools for behavior change in family planning, public health, and agricultural technology transfer. USAID believed that they could be equally successful in promoting, shaping, and maintaining the complex set of behaviors needed for sustainable natural resource management, biodiversity conservation, and industrial and urban pollution. With this mandate, GreenCOM drew on four complementary disciplines in its approach - *social marketing, environmental communication, environmental education, and public participation*. The project has had the

opportunity to apply this approach in 28 countries, demonstrating that EE&C can improve the impact, increase participation in, and positively influence helpful actions in environmental and natural resource management programs throughout the world¹.

EE&C is a proven, effective tool to promote, shape, and maintain the actions necessary for the management of natural resources in a way that provides sustained economic growth. Over the last decade, the scientific study of EE&C to promote behavior change has developed a set of international standards and lessons learned. These lessons were learned from twenty years of experience with large-scale communication interventions from around the world. However, the most recent EE&C experiences in Latin America, specifically in El Salvador, Ecuador, Panama, and Nicaragua, are particularly relevant to Bolivia. The following summarizes the lessons learned that are the most relevant for application of EE&C in the Bolivian context.

1. Address Policy, Technology, and Behavior

Successful EE&C strategies address these three interactive components. The scientific study of communication and behavior change over two decades has demonstrated that programs are most effective when they anticipate and even influence the dynamics between these three broad areas. (Exhibit 1 illustrates the interactivity of these three components.)



Bolivia has made great strides in creating new policies and laws that support environmental goals. EE&C can create a broader awareness of these laws and regulations and the rights and responsibilities they entail. It can motivate an informed civil society to call for equal application of these laws. EE&C can promote, accelerate, and strengthen technology transfer and the adoption of alternative livelihoods. Finally, EE&C can support groups and individuals to try,

¹ Brian A. Day and Martha C. Monroe, Editors, "Environmental Education and Communication for a Sustainable World, Handbook for Practitioners" (USAID/Academy for Educational Development, 1999).

adopt, maintain, and advocate for environmentally friendly actions.

2. Focus on Behavior

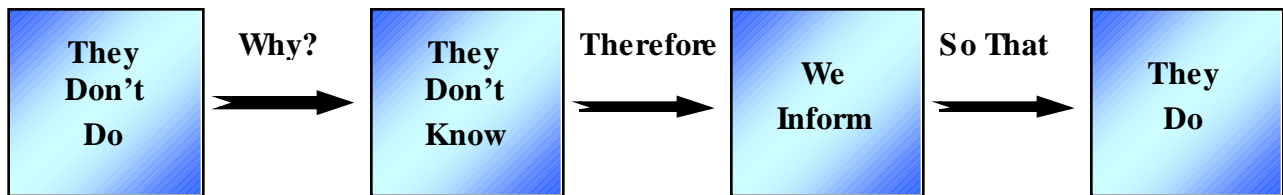
Successful EE&C strategies focus on environmentally helpful behaviors and the factors that influence them. ***Information, knowledge and positive attitudes are not enough to affect behavior change.*** Experience from thousands of public information campaigns has shown that raising public awareness or fostering positive attitudes about a problem or issue does not ensure that people will act on that new knowledge and awareness. Despite increased knowledge and positive attitudes, many people still act in ways that they know they shouldn't.

The most ***effective EE&C programs address the specific factors that influence people's actions (or inactions).*** These factors will vary. In some cases, ***laws and policies*** may not exist or existing laws may hinder the adoption of environmentally friendly actions. In other cases, people may not have the ***technologies or alternative livelihoods*** that will enable them to change their natural resource use actions. People may lack the ***skills*** they need to correctly perform environmentally friendly actions. ***Social norms*** may pressure people to act in environmentally unfriendly ways. In some cases, behavior does not need to be changed, but rather it needs to be consolidated and reinforced. In others, new behaviors need to be generated.

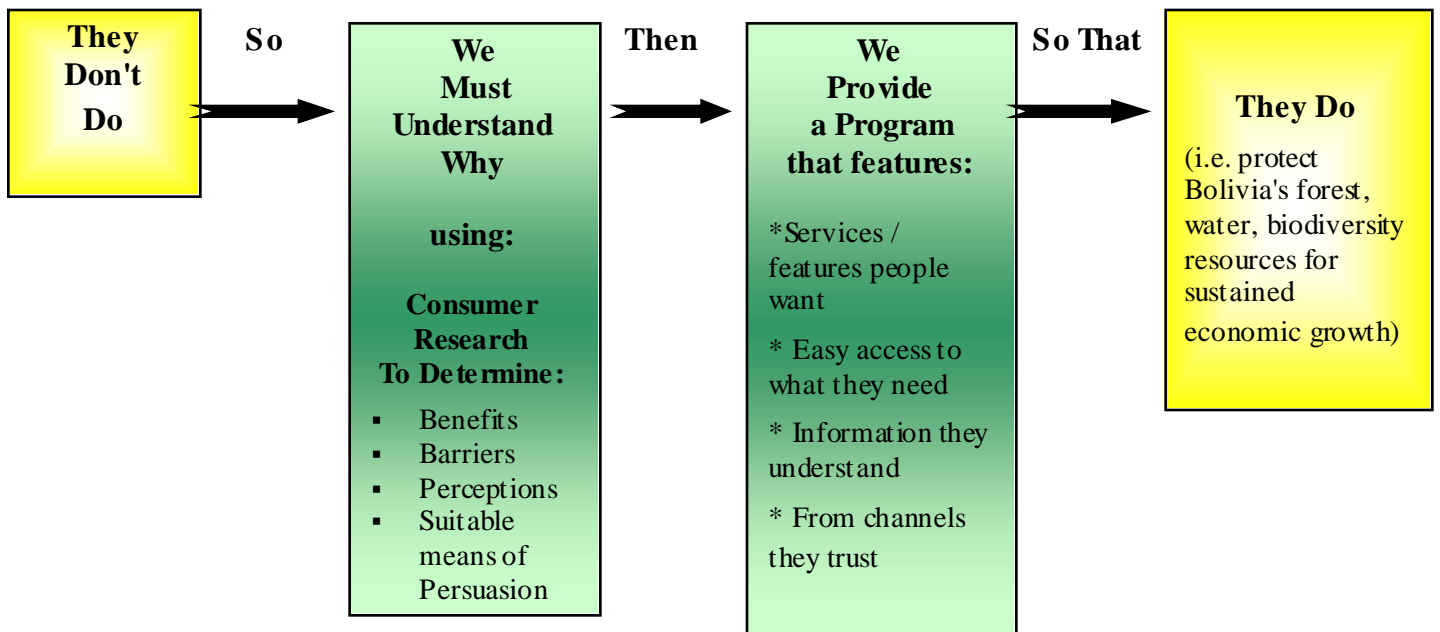
Effective EE&C programs ***use audience research findings to identify the specific factors that most influence the desired environmentally friendly actions.*** They can then develop comprehensive strategies that address these factors - increase awareness, build skills, develop better products and services, make better policies, and build social support systems (media, groups, neighborhoods, religion, schools, communities) that reward and reinforce these desired behaviors. (Exhibit 2 depicts the basic premises of both the Information and Behavioral Models of Behavior Change.)

Exhibit 2 THE INFORMATIONAL AND BEHAVIORAL MODELS OF BEHAVIOR CHANGE

Information Model



Behavioral Model



3. Put the Audience in the Driver's Seat

Successful EE&C strategies are audience-driven, rather than educator/technician, materials, or event-driven. A critical stage in the Behavioral Model is *audience research*. Bolivian EE&C should use audience research (qualitative, quantitative, and participatory techniques) to understand why people do what they currently do and what specific factors must be addressed through the program components to influence those actions. Effective EE&C uses audience research to listen to and understand what the target audience wants and needs, and then to tailor the program components to meet those needs.

Effective EE&C does not simply provide information and materials for target audiences; it is a participatory process that empowers people to identify and prioritize their environmental needs and problems, to seek and organize information about the problem, and to use that information to make decisions about the best action to take to resolve the problem. EE&C is a tool that can assist people in making informed decisions - to seek, organize, and use data to improve their decision-making processes.

4. Apply a Systematic EE&C Process

Successful EE&C strategies apply a systematic process that includes five steps - **assess, design/plan, pretest and refine, implement, and monitor/evaluate**. This process, illustrated in Exhibit 3, creates *two-way, participatory communication* with target audiences and permits communicators to refine the strategy over time in response to target audiences changing needs.

**EXHIBIT 3
THE ENVIRONMENTAL COMMUNICATION PROCESS**



5. Repeat A Coherent Core Of Messages Many Times Through Integrated Channels

Successful EE&C strategies identify and repeat a coherent core of messages frequently enough that the target audience(s) can be exposed to, understand, and act on them. Mass media, print, and interpersonal communication are integrated with and support the development and provision

of services, technologies, and products that provide alternatives to environmentally unfriendly behavior.

6. Use Persuasion

Successful EE&C strategies use persuasion, **emphasizing the benefits** target audiences will receive from their new actions. EE&C can increase people's perceptions of the **benefits** and lowers perceptions of the **cost** of specific environmental actions. Effective EE&C speaks to the heart as well as the mind.

7. Take a Long-Term Strategic Approach

Successful EE&C strategies provide sufficient time for people to become aware of the need to take environmentally friendly actions and to try, adopt, and maintain these behaviors over time. Successful strategies also provide enough time to influence behavior change in sufficient numbers of people to have a real, significant impact on the environmental problem.

E. THE BOLIVIAN CONTEXT

1. Overview

Bolivia presents a unique challenge with regards to EE&C. On one hand, it is *one of the world's richest countries in natural resources and biodiversity*. Bolivia's tropical Andes are a CI 'hotspot', "the epicenter of global biodiversity". Bolivia was the source of many of the world's popular crops such as potatoes, maize, sweet potatoes, tomatoes, beans, cocoa, and pepper. Forests cover one half of the country (53,000,000 hectares). Bolivia also contains many mineral resources (tin, gold, silver, lead, copper, potassium, and lithium) and deposits of oil and natural gas.

On the other hand, *Bolivia is one of the world's poorest countries*. With an estimated annual per capita income of \$1,040.00 (1999), it is the poorest country in Latin America and the third poorest in the hemisphere. Bolivia also has one of the highest per capita dependencies on foreign funds in the hemisphere. The total debt to export ratio is almost 4 to 1 and debt service accounts for a staggering 32% of export revenues. This debt burden remains one of the most significant impediments to economic growth. Historically, Bolivia's economy was linked to silver and tin mining; today natural gas, iron, manganese, and petroleum have supplanted ores as the primary mineral exports of the country. Natural gas is the largest source of legal export income. This history has created a widespread extractionist attitude towards natural resource management.

Agriculturally, Bolivia remains a subsistence country. Agricultural exports are dominated by cotton and soy, with smaller amounts of coffee and sugar. However, until recently, illicit exports of coca products exceeded all legal agricultural exports combined. In the late 1980s, an estimated one-third of the Bolivian work force was dependent on the illicit production and trafficking of cocaine. Currently, coca production has been eradicated in the *Chapare* region and the Government of Bolivia (GOB) is increasing efforts to decrease production in the *Yungas* region to legally established quotas.

With an estimated total population of eight million people, Bolivia is relatively thinly populated. This population is extremely heterogeneous. The *altiplano* and high valleys support 70% of the people and for centuries have been Bolivia's most densely populated area. Colonization to the northern and eastern areas of the country has created and continues to create pressure on sustainable natural resource management and biodiversity conservation. Bolivia is also undergoing rapid urbanization; more than 60% of Bolivians now live in urban areas. Demographic trends indicate that a growing majority of Bolivians will live in 15-20 of the largest cities.

There is great inequity between social sectors. In some rural areas, extreme poverty prevails. Roughly 44% of the population depends on agriculture for a living, but degradation of cleared forest areas and soil erosion has resulted in low productivity. There is an increasing urban migration resulting in greater poverty concentrations in urban areas. It is evident that the needs of the poor place heavy pressure on the environment. Increasing large scale exploitation of forests, fossil fuels, minerals and extensive monocultures are resulting in serious environmental degradation. There is ample evidence that Bolivia's natural resources are at great risk and that urban and industrial pollution is a growing problem.

Progress is being made in some areas, however. For example, through the assistance of BOLFOR, a USAID/GOB project, Bolivia is the leading tropical country in sustainable forestry. The area of Bolivian forests internationally certified as "well managed" should reach 2,500,000 hectares by 2004. In spite of this progress, each year approximately 0.3% of Bolivia's forest is converted to agricultural use, much of which is unsustainable. The Ministry of Sustainable Development and the Environment was created in 1993 with the mandate to promote sustainable development. (The name was changed to the Ministry of Sustainable Development and Planning in 1997.) During the mid-1990s, the Bolivian government also passed a number of new laws and regulations - Forestry, Education Reform, Popular Participation, Administrative Decentralization, and Capitalization. Recent adjustments in the Agrarian Reform Law (INRA), particularly the incorporation of indigenous territories (*TCOs*) as a class of communal property, also have implications for sustainable development in Bolivia. These policies and laws imply a profound transformation in the Bolivian political, social, economic, and environmental management systems.

In 1997 Bolivia became an associate member of MERCOSUR and Bolivia's neighbors represent the fastest growing export market. Capitalizing on this opportunity will be critical to create the growth needed to alleviate pervasive poverty. With 65% underemployment and widespread poverty, Bolivia must promote greater value-added production in labor-intensive enterprises².

² "USAID Bolivia Strategic Plan FY 1998 - 2002".

2. Implications for EE&C in Bolivia

The challenge for EE&C in Bolivia will be to: 1) build on the new policies and regulations, particularly those that enhance citizen participation, equity and poverty alleviation; 2) systematize and coordinate government and non-governmental EE&C actions and projects; and 3) maximize local participation in order to achieve the critical mass of environmental action necessary for the appropriate management of forest, water, and biodiversity resources that provides sustained economic growth.

However, EE&C must evolve from and respond to the complex Bolivian social context in order to meet this challenge. These socio-economic factors have significant implications for any EE&C strategy, messages, and materials.

Cultural Diversity: Bolivians are an aggregate of different cultures. There are many indigenous groups, languages, and practices. The 1992 Bolivian constitution recognized this multi-ethnic, multi-lingual, and pluri-cultural diversity and requires government policy to address and respond to the disparities and distinctions it has created. There are three major cultural areas -the high plains (*altiplano*), the high valleys, and the lowland regions (*tropico*). Historically, 50%-60% of the Bolivian population was said to be indigenous, 35% *mestizo*, 1% of African heritage, and the remainder of European extraction. Most of the indigenous peoples spoke either *Quechua* or *Aymara* as a first language and strongly resisted cultural change. There are an additional 250,000 lowland indigenous peoples representing 35 groups (*Guaraní*, *Chiquitanos*, and *Mojeños* being the largest) most of whom preserve their nomadic hunting and gathering traditions. However, these are cultures in transition. In a recent USAID Democratic Initiative study³, approximately 60% of the interviewees self-identified themselves as *mestizo*, approximately 25% white, and only 10% indigenous.

Currently the formal education system and non-formal education programs lack appropriate methodologies for effective communication with different cultural groups. Of approximately 70,000 teachers in Bolivia, reportedly only 640 are trained in inter-cultural teaching.

Implications for EE&C: *Effective EE&C needs to segment target audiences. Specifically, EE&C strategies will need to be developed for three general groups – altiplano, high valleys, and lowlands. An EE&C strategy will also need to be developed for the specific cultural and socio-economic needs of the Chaco. These strategies will need to take into account differences between rural and urban populations. Formal education teaching/learning methods must also respond to this cultural diversity in order to be effective.*

Rigorous and participatory assessment, pretesting and monitoring/evaluation will ensure that

³ Mitchell S. Seligson, "The Political Culture of Democracy in Bolivia" (University of Pittsburgh in collaboration with Encuestas y Estudios, La Paz, Bolivia; 2000).

the environmentally friendly practices and EE&C tools and materials respond to and resonate within the specific culture and traditions of each target audience segment.

Illiteracy: Bolivia's official illiteracy rate of is one of the highest in Latin America. Although officially illiteracy has been reduced to roughly 20% in recent years, it is estimated that a quarter of the urban population and two thirds of the rural population are still functionally illiterate. The illiteracy rate for women remains more than twice as high as that of men (11.8% for men and 27.7% for women). In urban areas, one of eight women is illiterate; in rural areas that number is almost one in two. The average rural girl attends school for only 2.5 years.

***Implications for EE&C:** Develop attractive, relevant, and effective EE&C methods and materials that do not require a high degree of literacy. Strengthen and increase the use of mass media, particularly local radio, to increase knowledge and motivate and reinforce action in low-literate audiences.*

Environment is a Low Priority: Environment is currently a relatively low priority in the government agenda. As mentioned, in this administration, several important units within the Ministry of Sustainable Development, such as the EE&C Unit, were discontinued. Many of the activities and plans once followed to support sustainable development have been discontinued.

***Implications for EE&C:** Increasing widespread environmental/sustainable development awareness and support at all levels, but particularly among Bolivia's decision-makers and opinion leaders, is an immediate priority. The private sector can also be motivated to take a more active role in the promotion of natural resources management, biodiversity conservation, and EE&C.*

Educational Reform: Almost half (47%) of the Bolivian population is under the age of 17; these children are the natural resource users or abusers of tomorrow. Over a twelve-year period spanning three presidential periods, a process for educational reform took place; it resulted in the Education Reform Law that was adopted in 1994. This law addresses most of the educational needs in the country and calls on popular participation for its implementation. It recognizes the diversity of Bolivia's cultures and the need to incorporate bilingual education and address local needs and interests. The reform classifies the environment as a cross-cutting theme in the curriculum and creates a governmental mandate for environmental education as a priority. The challenge is to integrate environment into the other existing subjects and to ensure that the theme is used to develop the required competencies (skills) stipulated in the reform. Unfortunately the implementation of the Reform is progressing very slowly.

***Implications for EE&C:** The many NGOs now working to support formal environmental education will need to take the initiative to ensure that their work complies with the Educational Reform and contributes meaningfully to the promotion of education in general. One of the main priorities for environmental education is to train the teachers in the teacher training colleges (Normales Superiores) and to provide in-service training for practicing teachers.*

Agrarian Reform: Adjustment of the Agrarian Reform Law (INRA) addresses important issues, especially in relation to the zoning, classification, control and fines for land use, tax exemption

for small properties, the granting of ownership of fiscal land if it is put to productive use, and the land titling for TCOs. It also has important environmental implications in terms of regulating the use of toxic substances.

Implications for EE&C: *With EE&C increasingly becoming an integral part of development processes, EE&C practitioners must understand the implications of these agrarian reforms and design strategies that increase the awareness, knowledge, and action necessary for their implementation.*

Sustainable Forestry Management: The Forestry Law (*Ley Forestal*) was passed in 1996 with the purpose of ensuring the sustainable management of Bolivia's forest resources. This comprehensive legislation specifies that forestry regulations must comply with international conventions and treaties (Biodiversity, CITES, Desertification, etc.). It mandates the protection of watersheds, riverbanks, and slopes and regulates timber extraction concessions including the development of forest inventories and management plans.

Implications for EE&C: *With half of the country covered by forests, many projects that incorporate EE&C will include forestry management. This law – its regulations and its benefits – need to be widely promoted and put into practice through effective EE&C approaches and methods.*

Decentralization: The Popular Participation Law (*Ley de Participación Popular*) enabled the creation of autonomous municipal governments (now 314). It provided for local development planning and management and in an effort to recognize indigenous communities, eliminated urban-rural barriers. The Law also provides for an allocation of funds to the municipalities 24% of collected taxes distributed proportionally according to the adult population of the municipality. Municipal governments may also administer other income such as local property taxes and licenses. The law calls for the formation of municipal Oversight Committees (*Comité de Vigilancia*), made up of representatives of community-based groups, to audit and supervise the work of the municipal governments. It also calls for the formation of municipal Environment, Forestry, and/or Sustainable Development Units who are to work with local organizations to develop municipal Action Plans. Through this law, the autonomy and authority of the *Prefectura* (departmental government) is also strengthened.

Implications for EE&C: *Sustainable natural resource management and biodiversity conservation depends on the people who live in immediate contact with them. It depends on the degree that local people feel ownership of and have the capacity for action in their sustainable use and conservation. EE&C should respond to this opportunity. It can be used as a powerful tool to strengthen the capacity of Prefecturas, Municipal Associations, Mancomunidades, municipalities and community-based groups in the sustainable management of forest and water resources and biodiversity conservation.*

The Trend of Swap for Debt: Several of Bolivia's bi-lateral creditors are in the process of exchanging Bolivia's debt for investment in development, specifically poverty-alleviation projects and environmental protection activities. For the next 15 years, Bolivia will be able to invest substantial amounts of money in the development initiatives described in Bolivia's Poverty Reduction Strategy Paper (PRSP).

***Implications for EE&C:** This situation provides a unique opportunity to initiate long-term, holistic, and sustainable EE&C activities within all levels and sectors of Bolivia as a part of these large poverty alleviation and environmental protection programs.*

SECTION II
PARTICIPATORY
EE&C ASSESSMENT RESULTS

A. EE&C IN BOLIVIA

1. Historical Context of EE&C

In the 1970's and 1980's, the Bolivian conservation movement, as in most of the world, focused on the preservation of natural areas and biological research. The inclusion of the human dimension and people's participation in conserving Bolivia's environment began in the mid 1980s. In the past 15 years, EE&C has primarily been conducted by non-governmental organizations (NGOs) with various results and impact; however, coordination between these organizations, exchange of experiences, and the systematization of their methodologies has been weak and disperse. In the mid-1980s, the *Liga de Defensa del Medio Ambiente* (LIDEMA), an environmental NGO/civil society apex group, was created to facilitate coordination of EE&C and other activities between its member organizations. LIDEMA continues in that role with 27 member organizations in 2001.

The GOB initiated their support of environmental goals with the passage of the Environmental Law in 1992. The law called for "capacity building" throughout various sectors to increase participation in achieving environmental goals. However, policies and guidelines needed to be developed to achieve this participation. In 1992, the National Secretariat for the Environment (SENMA) published "Politics and Strategies for Environmental Education" that outlined an environmental education policy and proposed integrated strategies for both formal and non-formal education. However, no government institution or entity existed to apply this policy and strategies.

In 1993, the GOB created the Ministry of Sustainable Development and the Environment. Its mandate was to promote and apply a new paradigm of sustainable development – "the integral transformation of the productive base within a framework of equality and governability through a process that rationally uses Bolivia's human, natural, physical, and financial resources and institutional and cultural patrimony without putting at risk the satisfaction of needs of future generations and the capacity of assimilation of Bolivia's natural resources"⁴. The MSDE formed a Sub-Secretariat for Promotion that had three units – Education, Communication, and *Concertación*⁵ and initiated activities to develop and coordinate national level EE&C. However, in 1997, the current government renamed this ministry the Ministry of Sustainable Development and Planning (MSDP) and discontinued this Sub-Secretariat. There is still a great deal of misunderstanding and ambivalent attitudes about sustainable development. This paradigm and the environmental dimensions of sustainable development continue to need reinforcement.⁶

⁴ Raul Bustillo, "The National Communication Strategy for Sustainable Development in Bolivia"; (Ministry for Sustainable Development and the Environment, Sub-Secretary of Promotion, Communication Unit, La Paz, 1994).

⁵ There is no one word in English that is equivalent to 'concertacion'. The Vox Compact Spanish and English Dictionary 1994 Edition defines *concertar* as "to arrange (a marriage, etc.); to conclude (a bargain); to agree upon (a price); to harmonize; to unite (efforts); to agree".

⁶ Thomas M. Catterson, "Retrospective Study of USAID Support to the Development of the Environmental Sector in Bolivia" (USAID/Bolivia, 2000).

2. EE&C Activities of USAID Environment Team Partners

All of the USAID Environment Team partners are conducting EE&C as part of their on-going activities. The following briefly describes these activities.

IR1 - Sustainable Management of Natural Forests in Bolivian Lowlands

BOLFOR does not have EE&C explicitly within the project mandate and does not have an EE&C unit or staff. However, during the first phase of the project, staff conducted extensive EE&C activities targeting opinion-leaders and decision-makers, as well as, media advocacy to support the passage of the Forest Law. BOLFOR has a strong training component; extensionists and community promoters use print materials and flip charts to promote community-based forestry management. Due to time constraints, the team did not have an opportunity to visit BOLFOR's clients and stakeholders nor observe how EE&C is conducted in the field.

IR2 – Adequate Management of Protected Areas

CABI has an Environmental Education Unit with one full-time employee. The unit developed an environmental curriculum for use in grade schools within the park boundary. *Charagua*, the municipality where the park is located, has asked CABI to expand this curriculum throughout the department. CABI has also initiated a 30-minute weekly radio program that is broadcast in *Guaraní*. A recent listener study indicated reasonable acceptance of the broadcast and its messages. Local radio could be significantly strengthened to play a more important role in increasing reach and frequency of EE&C in the region.

SERNAP does not have a specific EE&C unit or staff. However, they are extremely interested in strengthening EE&C to promote the National Park System and to increase actions necessary for adequate protected area management and biodiversity conservation. In 2000, SERNAP contracted GRAMA, a local NGO, to develop a National Park System EE&C Strategy. This strategy focuses on institutional development necessary to implement EE&C. It does not describe the specific EE&C process, particularly the social science research, necessary to develop EE&C strategies and materials that respond to target audience needs.

The international and Bolivian NGOs working in the parks and protected area of southern Bolivia and the eastern slopes of the Andes are all doing some type of EE&C; however, the amount and type of EE&C varies. The most common EE&C activities are: **school-based environmental education** and their complementary print materials (a teacher's guide and sometimes student notebooks); **participatory methodologies**; and **print materials** (flyers, pamphlets, booklets, and posters). FAN is the only NGO with in-house publishing capacity; however, they focus exclusively on producing scientific documents. A few NGOs are using mass media. CI and WWF have the most comprehensive capacity in social marketing and communication.

In general, each NGO works independently creating their own EE&C methodologies and materials. However, there is significant interest and movement towards collaboration and cooperation, specifically in relation to the *Amboró-Madidi* Corridor. For example, CI, CARE, and other NGOs working in and around *Madidi* Park are initiating a participatory process involving municipalities and other local partners to develop a *Madidi* Environmental Education Strategy. FAN, PROMETA, and TROPICO are collaborating to develop a strategy to increase

municipal participation in the CAM.

The Environment SO Team's Intermediate Result 2.1 is “Ecoregional planning integrates forest and protected area management”. As mentioned, some initial progress is taking place to achieve this indicator, especially in relation to CAM. However, systematic EE&C planning and implementation would contribute significantly in achieving this IR. Specifically, BOLFOR, SERNAP, and protected area management partners could develop an Ecoregional EE&C Plan for the *Amboró-Madidi* Corridor and/or an Ecoregional EE&C Plan for Forest Fire Prevention.

IR3 – Improved Environmental Management of Industrial and Urban Pollution

The National Chamber of Industries and CPTS have public relations units, and are extremely interested in strengthening their capacity in EE&C and social marketing. As part of the private sector, they recognize the important role of communication, marketing, promotion, and public relations. Developing this capacity will be critical to assist CPTS in achieving objectives. CPTS has produced a series of case studies on success stories of specific industries that have adopted cleaner technologies. These provide an excellent base of information that could be repackaged based on the specific target audience needs and widely diffused to promote cleaner production to a variety of target audiences.

B. FINDINGS

The Participatory EE&C Assessment sought to explore and describe the overall institutional climate of support for and obstacles to environmental education and communication in Bolivia. The findings, therefore, are organized by the characteristics, qualities, and capabilities of **each sector** rather than by individual institutions and organizations (see accompanying tables).

The following summarizes the EE&C strengths, weaknesses, obstacles, and opportunities within each of the following sectors: 1) Bolivian NGOs; 2) GOB Institutions (The National Park System – SERNAP and the Ministry of Sustainable Development and Planning MSDP); 3) Mass Media; 4) Private Sector; 5) Donor Community; and 6) Universities. Each sector is analyzed in terms of:

Programs: Overall goals (change of knowledge, attitude, and/or practices), target audiences, and communication channels.

Institutional Capacity: Personnel, management capability, decision-making capacity, training needs, sustainability, and experience working with other institutions.

EE&C Methodologies: Application of the EE&C *process* (assess, plan, pretest and revise, implement, monitor/evaluate), EE&C *planning* (audience segmentation, action-oriented EE&C objectives, creative strategy, selection/integration of communication channels), *materials design* (degrees to which they persuasive, attractive, relevant and appropriate to the specific target audience), *community participation, and partnership development*.

Coverage/Reach: National, regional, departmental, local.

EE&C ASSESSMENT FINDINGS - BOLIVIAN ENVIRONMENTAL NGOs

	Strengths	Weaknesses	Obstacles	Opportunities
EE&C Programs	<p>1) Programs are addressing priority environmental issues.</p> <p>2) Program content is accurate.</p> <p>3) NGOs are the leaders and have the most experience in EE&C.</p>	<p>1) Target audiences often not well defined. Certain important target audiences, such as decision makers, receive relatively little attention.</p>	<p>1) NGOs are dependent on outside, donor funding. Several NGOs interviewed discussed EE&C activities and shared print materials that had been discontinued when the project funding ended. EE&C sustainability is a problem if limited to NGOs.</p> <p>2) EE&C is generally project driven, limiting cooperation and collaboration with other similar programs/projects and increasing duplication.</p> <p>3) NGOs are not specializing and often spreading themselves too thinly.</p> <p>4) Generally, EE&C is conducted as relatively isolated activities with their own goals and objectives that do not necessarily respond and contribute to the goals and objectives of larger development programs. This decreases synergy and the collaborative use of limited resources.</p>	<p>1) Strengthen EE&C capacity in other sectors as well as NGOs.</p> <p>2) Strengthen NGO strategic alliances and collaborative EE&C planning and implementation to increase efficiency and effectiveness. LIDEMA is the recognized environmental NGO leader and could take a focal role in increasing this EE&C collaboration.</p> <p>3) Integrate EE&C into existing programs to make it sustainable.</p> <p>4) Strengthen NGO marketing, public relations, and fund-raising capacity to assure their sustainability.</p> <p>5) Involve the private sector as a source of funding and support for environmental programs and goals.</p>
EE&C Institutional Capacity	<p>1) Dedicated, committed, and enthusiastic staff</p> <p>2) Experience in using some</p>	<p>1) Except within EE&C professionals and a few NGOs, the general attitude is that “anyone can (and does) do</p>	<p>1) Lack of trained & experienced EE&C professionals. Demand far exceeds the supply.</p>	<p>1) Provide training on EE&C and social marketing to strengthen the capacity of existing staff.</p>

	<p>type of EE&C in most NGOs.</p> <p>3) Participatory techniques, print and mass media production, and formal environmental education experience.</p> <p>4) NGOs are interested in EE&C training opportunities and in improving EE&C strategies and methodologies.</p> <p>5) Capacity to produce high quality print/mass media/training EE&C materials is available in some NGOs.</p>	<p>EE&C. Biologists, foresters, and other technicians are designing and implementing EE&C.</p> <p>2) EE&C is generally a small component of development projects.</p>	<p>2) Lack of a scientific attitude and application of EEC.</p>	
<p>EE&C Methodology</p>	<p>1) Strong community participation methodologies. Successful case studies to share and build on.</p> <p>2) Extensive experience in formal environmental education in the school setting. Successful case studies to share and build on.</p>	<p>1) EE&C objectives and materials focus primarily on changing knowledge and attitudes, rather than on changing behavior.</p> <p>2) NGOs apply different methodologies and develop their own tools and materials, duplicating efforts and making EE&C not cost-effective or efficient.</p> <p>3) Generally very little application of the steps of the EE&C process – assess, pretest and revise, and monitor/evaluate – that create a truly two-way communication with the target audience and help implementers to design EE&C tools and materials that are relevant, attractive, appropriate, and</p>	<p>1) Lack of trained & experienced EE&C professionals. Demand far exceeds the supply.</p>	<p>1) Focus EE&C on changing behavior and on designing programs that reduce barriers and increase the benefits to performing specific environmentally friendly behaviors.</p> <p>2) Conduct a Partners EE&C Exchange Workshop to share methodologies and materials and identify training and other support needs to strengthen EE&C.</p> <p>3) Develop a Unified EE&C Strategy (vision, goal / objectives, framework, and action plan) to increase collaborative synergy between NGOs working on the same environmental issues and/or in the same geographical areas.</p> <p>4) Identify a standard core of messages that can be repeated many times through the various</p>

		useful to the target audience.		NGO channels. 5) Train existing staff in the respective skills needed for a more science-based approach to EE&C for behavior change, particularly the EE&C process, behavior analysis, and social marketing.
EE&C Coverage/ Reach	<p>1) Due to their number and range of activities, Bolivian environmental NGOs are working in almost all of the country.</p> <p>2) Some experience with mass media, videos and the Web to increase coverage and networking.</p>	<p>1) Generally, individual NGO reach is limited. Most NGOs work in a specific geographical area and through their own staff.</p> <p>2) Communication channels generally limited to face-to-face and print materials.</p> <p>3) Over-abundance of print materials, even for illiterate or low-literate audience.</p> <p>4) Not enough use is being made of national and local mass media to increase coverage.</p>	<p>1) Need to use various languages to communicate EE&C messages.</p> <p>2) Some resistance to mass media campaigns. The motives of these campaigns are sometimes suspect.</p>	<p>1) Systematize and strengthen the use of mass media to increase reach and repetition of EE&C messages and to motivate action.</p> <p>2) Motivate and train national and local media to become environmental educators and communicators who advocate for and take actions to support environmental goals.</p> <p>3) Integrate EE&C tools and materials into other governmental and non-governmental programs to increase EE&C reach and coverage.</p>

EE&C ASSESSMENT FINDINGS - GOB INSTITUTIONS

	Strengths	Weaknesses	Obstacles	Opportunities
EE&C Programs	<p>1) INRA, Environment, Forestry, Popular Participation, Educational Reform laws that support the sustainable management of natural resource and biodiversity conservation.</p> <p>2) SERNAP and MSDP committed to sustainable development and the environment.</p>	<p>1) Changes in government can give greater or lesser degree of support and application of these laws, sustainable development, and EE&C.</p> <p>2) Awareness of sustainable development and environmental goals (the National Park System, sustainable community-based forestry, and cleaner production) low in most target audiences</p>	<p>1) Tension and perceived division between economic growth and sustainable development / biodiversity conservation. Need to increase awareness and demonstrate the relationship between the two.</p> <p>2) Unequal application of environmental laws.</p>	<p>1) A National Sustainable Development / Environment Awareness and Media Advocacy Campaign can create widespread awareness and advocacy for sustainable development and environmental goals.</p>
EE&C Institutional Capacity	<p>1) SERNAP and MSDP interested in improving environmental education and communication.</p> <p>2) Environment - transversal theme of Educational Reform</p>	<p>1) No EE&C departments in SERNAP and MSDP.</p> <p>2) MOE struggling with how to integrate environment throughout the curriculum.</p>	<p>1) Lack of professional EE&C staff</p> <p>2) SERNAP & MSDP have a full plate with limited financial and human resources. Have to respond first to environmental and park emergencies.</p>	<p>1) USAID partners can conduct EE&C work to support SERNAP and MSDP goals.</p> <p>2) Technical assistance support/training to government can improve EE&C coordination/management.</p>
EE&C Methodology	<p>1) SERNAP has developed an EE&C Strategy that focuses on institutional development.</p> <p>2) Some existing promotional materials.</p>	<p>1) No systematic EE&C methodology being applied at this time.</p>	<p>1) Lack of EE&C professional staff.</p>	<p>1) Existing SERNAP Institutional EE&C Strategy can be strengthened to include audience-driven EE&C that focuses on changing behavior in specific target audiences.</p> <p>2) PUMA Foundation, GEF, and other funding available for strengthening EE&C skills and activities.</p>
EE&C Coverage/ Reach	<p>1) Existing governmental, national, departmental, and local (park) staff</p> <p>2) Popular participation law decentralizes implementation to municipalities.</p>	<p>1) Government staff already has a full plate.</p> <p>2) Municipalities struggling with new roles and responsibilities.</p>		<p>1) Strengthen existing national, departmental, and local staff EE&C skills.</p> <p>2) <i>Mancomunidades</i> already organizing around a common natural resource such as a watershed or river. Strengthen <i>Mancomunidades</i> environmental management and EE&C skills.</p>

EE&C ASSESSMENT FINDINGS - MASS MEDIA

	Strengths	Weaknesses	Obstacles	Opportunities
EE&C Programs	<p>1) USAID Democratic Initiatives Study indicates that media reporters (and the Catholic Church) are the most trusted institutions in Bolivia.</p> <p>2) Mass media is a credible source of information to a wide range of target audiences.</p>	<p>1) Media generally charges commercial rates, even for social programming. Doesn't apply law requiring mass media to give free time for social issues.</p> <p>2) Need to use several languages for a national campaign (duplicating material production) increases costs.</p> <p>3) Television time is expensive.</p>	<p>1) Newspapers, television, and radio are a business. Reportedly have a low sense of social responsibility.</p> <p>2) Need to increase their sense of responsibility for sustainable development and the environment.</p> <p>3) Need to tie their involvement into increased listenership & readership.</p>	<p>1) Annual media purchase between several projects/NGOs will reduce the cost per spot and increase the amount of additional promotional and support time/space provided by the station/newspaper.</p> <p>2) In recent contacts by World Wildlife Fund (WWF), the media has expressed a great deal of interest in receiving more environmental and sustainable development information.</p>
EE&C Institutional Capacity	<p>1) Some project – issue specific media advocacy and training experience. LIDEMA, FAN, PAS, and <i>Madidi</i> Park Week, increased mention of specific environmental issues in the mass media.</p>	<p>1) Media training/advocacy has been project or institution specific.</p> <p>2) The capacity for quality environmental reporting is limited.</p>	<p>1) Lack of a coordinated, unified media advocacy and training plan and implementation.</p>	<p>1) Systematic, coordinated national & local level media advocacy and training can create widespread media support for environmental goals.</p> <p>2) Coordinate & strengthen environmental background and advocacy into existing media training and in-service activities – ASBORA, ERBOL, Universities, etc.</p>
EE&C Methodology	<p>1) Some NGO/government experience using mass media.</p> <p>2) AJARI (local NGO) has extensive experience and expertise in interactive radio, a proven systematic, science-based distance learning methodology.</p> <p>3) Media interested in and</p>	<p>1) Mass media uses generally short campaigns (2-3 months long).</p> <p>2) Mass media reportedly used most in moments of crisis.</p> <p>3) No continuity/coordination between environmental themes, objectives, and messages.</p>	<p>1) Multiple messages from various sources leads to confusion and little or no impact on environmental action.</p>	<p>1) A Unified EE&C Strategy can promote a coherent core of messages and the benefits of various environmental goals and actions within one integrated theme, significantly increasing the role and impact of mass media.</p> <p>2) A Unified EE&C Strategy Annual Implementation Plan can ensure that mass media materials have continuity and are coordinated with specific</p>

	open to pre-packaged materials because it makes their job easier.	4) Little integration of channels – mass media usually not coordinated with print materials, training, and other EE&C activities.		project activities. 3) Contracting advertising agencies/professionals can improve production values, ensure that materials can be heard and seen above the noise of commercial materials, and persuade people to take action. 4) Provide mass media regular, manageable, and useful packets of information on specific topics and issues.
EE&C Coverage/ Reach	1) Radio and television reach the majority of both rural and urban Bolivians. 2) Two national networks: FIDES (especially the morning program “ <i>Ahora del País</i> ”) and <i>PanAmericana</i> . Government television station reportedly covers the country. 3) Widespread, active local radio network. 4) Commercial media studies already exist for urban areas.	1) Newspaper coverage reportedly limited to approximately 140,000 people, mostly in urban areas. However, the press is an important channel to reach decision-makers & opinion leaders. 2) Television ownership reportedly primarily <u>urban</u> (20% of urban homes), but is growing rapidly in the rural areas. 3) In some areas of Bolivia, television channels from other countries are more popular than local channels.		1) Segment target audiences and select mass media based on target audience usage patterns. 2) Use existing commercial media studies to select media for urban audiences. Conduct complementary media usage studies with other target audiences. 3) Develop mass media materials for specific audience segments to make them relevant, attractive, persuasive, and useful for that specific target audience. 4) Strengthen local radio stations EE&C capacity.

EE&C ASSESSMENT FINDINGS - PRIVATE SECTOR

	Strengths	Weaknesses	Obstacles	Opportunities
EE&C Programs	<p>1) Some private sector entrepreneurs believe in and practice social and environmental responsibility.</p> <p>2) Some businesses in the industrial sector are experienced cleaner production practitioners due to CPTS. These industrialists feel proud of their efforts to apply cleaner production technologies.</p> <p>3) The organized sectors of commerce, production, and services have strong networks and maintain good communication channels with their members.</p> <p>4) The National Chamber of Industries is an active partner with USAID through CPTS.</p>	<p>1) Not all business people who have expressed interest in and been informed about cleaner production have changed their production practices.</p> <p>2) Some entrepreneurs are not genuinely committed to environmental needs.</p>	<p>1) Many business people are using the environment theme only as propaganda for their interests.</p> <p>2) Bolivia's current economic and social situation.</p> <p>3) Lack of financing for the adoption of cleaner technologies and the application of cleaner production. (Companies that generally adopt technologies do not require financial investment.)</p> <p>4) Lack of public opinion pressure and prestige for companies to implement cleaner production technologies.</p> <p>5) Local consumers do not demand products that are created using cleaner production technologies and processes.</p>	<p>1) CPTS is anxious to demonstrate through EE&C and social marketing what industries are doing in cleaner production, the efforts they have made, and the results obtained. They want to share these experiences with other productive sectors to motivate them to do the same.</p> <p>2) Identify private sector opinion leaders who believe in and practice social and environmental responsibility and involve them as spokespeople and advocates within the EE&C strategy and activities.</p> <p>3) The private sector is a virtually untapped source of funding and other support for EE&C.</p>
EE&C Institutional Capacity	<p>1) The National Chamber of Industries and CPTS are extremely interested in developing an EE&C and social marketing capacity. They understand the role and importance of communication, marketing, and publicity/promotion</p>	<p>1) Since CPTS has not done EE&C to date, the institutional infrastructure and human resources needed to conduct EE&C are inadequate.</p>	<p>1) National Chamber of Industries' cleaner production activities have been financed through donations, primarily USAID. CPTS needs to develop a business plan that identifies how they will be self-sufficient once project funds have ended.</p>	<p>1) Provide training and technical assistance to CPTS to develop:</p> <p>2) EE&C skills and methods that increase awareness of, demand for, and compliance with cleaner production technologies.</p> <p>3) CPTS Business Plan that identifies the range of products and services,</p>

	<p>techniques. 2) CPTS is well positioned in the decision-making of the National Chamber of Industries.</p> <p>3) CPTS has a broad experience in creating alliances and working in coordination with other institutions and businesses.</p> <p>4) The CPTS team is highly qualified in cleaner production technologies.</p> <p>5) The National Chamber of Industries has a Public Relations Unit.</p>		<p>2) The greatest barrier for EE&C is the lack of sufficient funding. Even if EE&C is appreciated, it is not a priority due to the general economic crisis in the country.</p>	<p>fund raising, grant writing, and other sources of income that will ensure CPTS sustainability once USAID project funding ends.</p>
EE&C Methodology	<p>1) The private sector is accustomed to and has experience with outsourcing to meet their scientific and technical needs.</p>	<p>1) Since CPTS has never implemented EE&C, they do not have the skills needed to conduct EE&C or the formative research with their target audiences needed to design the EE&C strategy.</p> <p>2) The private sector has no experience with or inclination for applying participatory EE&C methodologies.</p>		<p>1) Provide training and technical assistance to CPTS to develop the EE&C skills and methods that increase awareness of, demand for, and compliance with cleaner production technologies.</p>
EE&C Coverage/ Reach	<p>1) The chambers of industries and commerce have national coverage through decentralized offices in each department.</p>	<p>1) There are a large number of productive businesses that are not members of the chambers of industries and commerce or other associations. This limits communication with these businesses and sectors.</p>	<p>1) Other production sectors might be resentful if all of the cleaner production initiatives are coordinated through and promoted by the industrial sector.</p>	<p>1) The National Chamber of Industries is interested in expanding their environmental/cleaner production work into micro and medium-sized industries and into other productive sectors such as tourism and health.</p>

EE&C ASSESSMENT FINDINGS - INTERNATIONAL AND DONOR COMMUNITY

Strengths	Weaknesses	Obstacles	Opportunities
<p>1) All are working directly or indirectly with EE&C.</p> <p>2) In general, they have well qualified, and highly motivated staff</p> <p>3) They bring a wealth of experience into the new projects. Much of this experience has been obtained with previous work in Bolivia.</p> <p>For example, Conservation International is benefiting from lessons learned in <i>Madidi Park</i> where they have achieved marked success in developing local capacity in eco-tourism and environmental education.</p> <p>UNICEF has experience to share in working collaboratively with municipal governments (<i>Pando, Beni, and Santa Cruz</i>) to produce Annual Plans that integrates health and environment.</p>	<p>1) Large amounts of money are being provided by some of these organizations without sufficient participation in program development. For example, World Bank and GTZ are supporting Educational Reform (which has the challenge of integrating environmental education at the basic level). GTZ primarily administers the expenditure of the funds, but these donors do not have much involvement in the program being undertaken to implement the Educational Reform.</p> <p>2) The allocation of funds is often decided outside of Bolivia, with other external considerations, not just the effectiveness or impact of the project on the ground. Effective projects are often discontinued when the project funds end.</p>	<p>1) Sometimes donors have their own perspective of what EE&C tools and materials should be. With increasing tendencies to support large, multi-partner projects, there is a danger of losing touch with the day-to-day problems that the population has to face inside municipalities, homes, and classrooms.</p> <p>2) Donors frequently measure EE&C success by the number of materials produced or training courses conducted. They want EE&C products - posters, pamphlets, videos, and television spots. Effective EE&C is a participatory process that assists people to take action. It helps local people develop their own methods and materials to communicate effectively with those among whom they live.</p>	<p>1) The Bolivian donor local Environmental Working Group is a strong and well-informed voice on environmental issues within the Consultative Group for Bolivia.</p> <p>2) Share and promote EE&C international standards and lessons learned with USAID and Environmental Working Group. Specifically, conduct a one-day EE&C Working Group Session to share the standards and lessons learned and discuss how they might be applied to the Working Group's EE&C projects and activities. Identify the mechanisms to: a) Strengthen EE&C for behavior change throughout donor projects; b) Increase coordination between the various donor projects; and c) Strengthen local EE&C capacity.</p>

EE&C ASSESSMENT FINDINGS - UNIVERSITIES

	Strengths	Weaknesses	Obstacles	Opportunities
EE&C Programs	<p>1) Individual lecturers and departments are interested in the value of EE&C at university level.</p> <p>2) There are under-graduate programs and at least two masters programs (Ecology and Conservation and Sustainable Development) currently offered at university level.</p>	<p>1) In general, EE&C is still not given great priority at the highest administrative levels of the universities which were visited</p> <p>(Only one out of four).</p> <p>2) Universities generally have not developed specific policies with regards to the integration of environment into their programs.</p>	<p>1) Need to overcome the inertia of a new initiative (EE&C).</p> <p>2) The initiative will have to compete for priority with other important university issues.</p>	<p>1) Support a Bolivian University EE&C Symposium to discuss strengthening the integration of environment and EE&C and to develop EE&C policies.</p> <p>2) Integrate EE&C into existing university outreach projects and activities, for example Catholic University Local Communicators Training.</p>
EE&C Institutional Capacity	<p>1) Individual faculty members are taking the initiative to introduce and support EE&C within the university structure.</p> <p>2) Successful experiences to share. For example, Nur University has a course on sustainable development and the environment that is part of the core curriculum (mandatory) for all of its students.</p>	<p>1) EE&C activities largely depend on the individual motivation of specific staff members, so many of the initiatives are not sustainable.</p> <p>2) EE&C capacity is limited; many lecturers who are now working in EE&C have come from other fields of study.</p>	<p>1) Competition for limited finances for training will probably require external sources of funding & assistance for training staff in EE&C.</p>	<p>1) Universities have social science research capacity. Strategic alliances can be formed in which universities conduct social science research needed to develop EE&C strategies and to evaluate EE&C impact.</p> <p>2) Some existing strong departments and programs could become strategic alliances to strengthen EE&C.</p> <p>3) All university students are required to do 200 to 300 hours of community work-study. There is a tremendous potential to harness this human resource for EE&C through internships and practicums with Mancomunidades, Municipalities, NGOs, MSDP, and SERNAP.</p>
EE&C Methodology	<p>1) Some experience in the use of participatory methods and strong desire to use more.</p> <p>2) Interest in using EE&C to</p>	<p>1) Because of the relatively low priority of EE&C, there are few innovative methods being used. However, there are some</p>	<p>1) The traditional system in universities of “lecturing” to large classes is a constraint to the introduction of more</p>	<p>1) Some excellent EE&C methods and materials could be utilized by USAID’s Environment Team partners to strengthen their EE&C</p>

	link the university with the community.	exceptions.	interactive methods.	methods and activities. 2) Apply lessons learned internationally to improve universities' EE&C.
EE&C Coverage/ Reach	<p>1) The generally neutral position of universities makes them credible channels for EE&C.</p> <p>2) Universities are located throughout the country, providing opportunity for wider outreach.</p> <p>3) Universities often have Communication Departments (radio and television stations) and extension staff, increasing their outreach.</p>	1) Work in communities currently focuses on topics selected by the students and university and not necessarily on community issues or needs.	1) Universities primarily conduct exchanges with other academic institutions.	<p>1) Universities assist with the administration of teacher training colleges. The potential for strengthening environmental education of the teachers is great.</p> <p>2) Incorporating EE&C as undergraduate and graduate degrees increases the number of professional EE&C practitioners and decreases the need for retraining later on.</p>

C. CONCLUSIONS

1. General Needs

EE&C Programs

- ***EE&C activities are generally project/activity oriented and conducted unilaterally.*** There is little coordination and collaboration with other organizations. EE&C interventions have not been well coordinated with one another and lack a singular theme or consistent set of messages. This leads to duplication in the design, production, and implementation of EE&C activities and reduces their impact.
- ***There is a common concern that EE&C is not sustainable.*** When funds for a project end, the EE&C activity stops.
- ***EE&C objectives generally focus on changing knowledge and attitudes, rather than behavior.*** However, increased knowledge and positive attitudes do not necessarily lead to behavior change. EE&C objectives should be stated in terms of environmentally desirable behaviors. EE&C practitioners should ***use audience research findings to identify the specific factors that most influence the desired environmentally friendly actions and to develop comprehensive strategies that address those specific factors.***
- ***Except for cleaner production, EE&C generally targets audiences at the rural, local level - municipality, community members, and schools.*** There is less EE&C work targeting other important audiences such as government, decision-makers and opinion leaders, the private sector (except for CPTS), the media, and urban audiences.
- ***Environment is one of the transversal themes of the Educational Reform.*** However, both the governmental and non-governmental sectors are struggling with how to integrate the environmental theme into the core curriculum.
- ***EE&C is generally limited at the university level and not perceived as a priority.*** However, there are some initiatives for development of EE&C at the tertiary level (San Simon, San Andres, and EDAMAZ) and successful models (Nur) that could be shared and strengthened.
- There is low overall awareness of the benefits of sustainable development and resource use including community-based forestry, the National Park System (SERNAP), biodiversity conservation, and improved management of urban and industrial pollution. Due to Bolivia's mining history, there is a general "extractionist" attitude toward natural resource management that has created tensions and conflicts between the concepts of economic growth and sustainable development. This results in a lack of general support for the environmental actions necessary to manage forest, water, and biodiversity resources for sustained economic growth.

EE&C Institutional Capacity

- ***Except amongst EE&C professionals and a few NGOs, there is a general erroneous***

attitude that “anyone can do (and does) EE&C”. In many cases, staff who are trained in the sciences or related technical areas (forestry, biology, etc.) are designing EE&C strategies and materials. Social communication, environmental education, and social marketing professionals trained in up-to-date and state-of-the-art EE&C methods and techniques should conduct EE&C.

- ***There is a lack of trained EE&C professionals and technicians at all levels – national, regional, local.*** The demand for these professionals exceeds supply. There is a serious need to strengthen EE&C skills of personnel within existing governmental and non-governmental institutions and organizations.
- ***No one governmental or non-governmental organization is recognized as the leader in EE&C.*** Although LIDEMA is widely recognized as the leading environmental NGO, it does not currently have an EE&C Unit. A coordinating mechanism will need to be established to develop and implement a Unified EE&C Strategy.
- ***In general, the private sector has not been involved in EE&C.***

EE&C Methodologies

- ***EE&C methodologies generally do not include the steps of assess (formative research), pretest and revise, or monitor/evaluate*** that create two-way communication with the target audience and ensure that EE&C practitioners develop EE&C strategies and materials that respond to target audience needs.
- ***There is a great deal of experience in school-based environmental education.*** Most of the NGOs interviewed are carrying out in-service training of teachers and formal education materials development. There has been no mechanism or process for sharing these multiple formal education experiences, methodologies, and materials and for developing a common vision and strategy.
- ***There is also a great deal of experience in participatory EE&C methodologies.*** Again, however, there has been no mechanism or process for sharing these multiple experiences and for developing a common vision and strategy.

EE&C Coverage/Reach

- ***There is no governmental or non-governmental organization conducting or coordinating national-level EE&C.*** EE&C is conducted by governmental and non-governmental institutions and organizations throughout the country (national coverage). However, in general, each institution and organization is working with a relatively small target audience in a specific, limited geographic area. LIDEMA’s “Campaign for the Quality of Life” could be adapted and strengthened as a model for national level EE&C. Each year, LIDEMA’s NGO members, in coordination with their local counterparts, select an annual environmental theme (a common vision), such as water. Each NGO then works with local counterparts and stakeholders to define how the program and the supporting EE&C strategy will be developed in their specific geographical location.
- ***In general, EE&C utilizes face-to-face and print channels.*** There is limited experience in the use of mass media to increase the reach and frequency of EE&C messages.

- ***There is an abundance of print materials.*** Although they are of high production quality (four color/glossy paper, etc), they ***generally provide too much information and use vocabulary and symbols that may not be relevant or understandable to their target audiences.*** EE&C materials need to be pretested to ensure that they are understandable, relevant, attractive and useful to the specific target audience (not just the materials designer). EE&C materials also need to be more persuasive and speak to the heart as well as the mind. They need to emphasize the benefits of the environmental actions they are asking people to take.
- ***Mass media has been primarily used for short, sporadic campaigns.*** There has not been any experience with the systematic use of national and local mass media that is integrated with other channels (face-to-face, print, folk, Web, video, etc.) and coordinated with overall EE&C program activities. The power of the mass media to reach a critical mass of people with a consistent core of environmental messages that motivate them to take action has not yet been explored.
- ***Mass media can be used as both a national and local level channel.*** The selection of specific channels (radio, television, and print) will depend on the specific targeted audience. For example, reportedly newspapers and television news are the best channels for reaching urban opinion-leaders and decision-makers, while national radio (*FIDES* and *PanAmericana*) and local radio are best for reaching rural audiences. Media usage studies have been conducted and can be utilized to select channels for urban audiences. However, media usage studies will need to be conducted to select the channels needed to reach rural and other audiences for which there is currently no existing research.
- ***There is extensive Bolivian experience and expertise in inter-active radio,*** a proven technology for increasing knowledge and changing behavior of children (i.e. *Aprendiendo y Jugando Activamente con Radio Interactive – Ajari*). However, to date, it has not yet focused specifically on environmental goals and objectives.
- ***There has been some experience with media advocacy and training.*** However, it has been project or activity specific. Again, there has been no mechanism or process for sharing these experiences and for developing a common vision and strategy.
- ***In general, media reports on the environment focus on crisis or problems.*** The quality of environmental journalism and broadcasting is reported to be fairly poor.
- ***The Web represents an important new channel of communication for EE&C.*** Although the number of Web users in Bolivia is relatively low (1-2%), they generally include decision-makers and opinion-leaders, a critical target audience for environmental support and action. The Municipal Information System (computerizing the 314 municipal offices) and the deregulation of the telephone system will increase the numbers and expand the types of target audiences who can be reached with this channel. It can also be used to increase coordination, collaboration, and synergy between donors, governmental institutions, NGOs, and other groups working on sustainable development projects.

2. Opportunities

EE&C Programs

- *SERNAP and MSDP are committed to and provide leadership* in sustainable development and the environment.
- There is a *recognized need for more systematic, long term, national-level, strategically planned EE&C* rather than “EE&C in crisis” and project/activity specific EE&C. Assessment interviewees repeatedly expressed a need for EE&C programmatic continuity and sustainability.
- *The Educational Reform has the environment as one of their transversal themes.*
- *There is a national trend to support public participation, decentralization, equity, and transparency.*
- *There is interest and expressed need for the development of EE&C at the university level.* Increasing the number of professional environmental educators and communicators will reduce in-service training costs in the long-term.
- *The private sector has tremendous potential* for supporting EE&C and environmental goals. Some members of the private sector are interested in demonstrating their social and environmental commitment. Some of the ways the private sector can support EE&C and environmental goals include: 1) Partnering with *Mancomunidades* and municipalities to develop economic alternatives that support the sustainable management of forest, water, and biodiversity; 2) Designing and producing print and mass media materials, as well as, organizing and conducting decision-maker and media advocacy events (advertising agencies and public relations firms); 3) Sponsoring departmental or municipal level EE&C interventions such as ‘National Park Week’ promotion and activities; 4) Underwriting the costs of EE&C activities. For example, multi-nationals such as Coca-Cola can provide funding for the production of print materials in exchange for the inclusion of their logo on the material; and 5) Private sector opinion leaders who believe in and practice social and environmental responsibility can be involved as role models, spokespeople, and advocates within the EE&C strategy and activities

EE&C Institutional Capacity

- There is *widespread interest in all sectors to improve EE&C* skills, methods, and impact.
- There are *existing EE&C institutional capacity, experience, methodologies, and materials that can be shared*, adapted, pretested, and expanded nationally through the various governmental and non-governmental partners.
- *LIDEMA is widely recognized as the leading environmental NGO* and umbrella environmental consortium.
- *Universities, such as Catholic University, San Simon University, and Nur University, have the capacity and personnel to conduct social science research* necessary to design and evaluate EE&C strategies and activities.
- *PUMA Foundation, UNDP/GEF Small Grants Program, and FUNDESNAP have funding available for strengthening EE&C* skills and activities.

EE&C Methodologies

- ***USAID Environment Team NGO partners have extensive school-based environmental education experience*** that can be shared, adapted, pretested and applied.
- ***Most USAID Environment Team NGO partners also have extensive municipal and community participation experience*** that can be shared, adapted, pretested and applied.
- ***NGOs are interested in expanding EE&C experience*** targeting governmental and non-governmental decision maker and opinion leaders, private sector, the church and other key environmental audiences.
- ***Some NGOs have EE&C experience with mass media (promotion, advocacy, and training)*** that can be shared, adapted, pretested, and applied.

EE&C Coverage/Reach

- ***The mass media (reporters) and the Catholic Church are the institutions with the highest levels of support in Bolivia.***⁷ This provides the opportunity to involve a trusted source of information – the mass media – in environmental action through national-level, systematic, and coordinated mass media advocacy and training. EE&C practitioners could also explore ways in which the Catholic Church would support environmental action.
- ***Mass Media has strong national and local coverage.*** This provides the opportunity to systematize and strengthen the use of mass media to increase reach and repetition of a coherent core of EE&C messages and to motivate action. Existing urban media usage studies can be use to define channels for this target audience.
- ***NGOs, government, and the private sector (chambers of industries and commerce) have existing representation and capacity throughout the country.***
- ***LIDEMA’s “Campaign for the Quality of Life” represents a model for national level EE&C that can be adapted and strengthened.***
- There are ***widespread opportunities to integrate EE&C tools and materials into other governmental, non-governmental, and private sector programs*** to increase EE&C reach and coverage and make EE&C more sustainable when project-specific funding ends.
- ***REDESMA is a virtual/WEB based source of environmental and sustainable development information*** that can be strengthened and linked to other initiatives and projects.

⁷ Mitchell S. Seligson, “The Political Culture of Democracy in Bolivia” (University of Pittsburgh in collaboration with Encuestas y Estudios, LaPaz, Bolivia; 1998).

SECTION III
RECOMMENDATIONS
TO STRENGTHEN
EE&C FOR BEHAVIOR CHANGE

A. UNIFIED EE&C STRATEGY

The success of environmental education and communication ultimately depends on the degree to which it has *influenced peoples' environmental behavior*. The ultimate goal of the Unified EE&C Strategy is to develop environmentally 'friendly' behaviors in a wide spectrum of target audiences that influence and impact on the appropriate management of forest, water, and biodiversity resources, resulting in sustained economic growth. Each target audience has an important role to play in relation to environmental policy, livelihood alternatives, and individual behavior change. However, ultimately, the future of Bolivian natural resources and biodiversity requires that local people feel ownership and have the necessary knowledge and skills for sustainable natural resource management and biodiversity conservation. USAID Environment partners, other governmental and non-governmental organizations, and stakeholders need to **organize nationally to create the methods, tools, materials, and support for people to act locally**.

Organize Nationally: Some EE&C tools and materials can and should be developed nationally to make them more cost-effective and to ensure that the strategy implementers are communicating a coherent set of messages. Many EE&C tools and materials could be produced nationally, reproduced, and implemented locally. These include: mass media campaigns, media advocacy, formal education methods and materials, and a variety of EE&C Toolboxes (see accompanying box on next page).

Act Locally: EE&C Toolboxes would be designed to support, systematize, and increase departmental, municipal, community-based groups, and individual knowledge, negotiation, and action. The way that the tools and materials are implemented in each department and municipality would depend on their specific cultural, socio-economic, and resource needs.

EE&C in Bolivia needs to "go to scale". It needs to create environmental awareness and action in sufficient numbers of a wide-range of target audiences and stakeholders to make a real, significant impact on the management of forest, water, and biodiversity resources for sustained economic growth. Going to scale means changing the way Bolivians do the business of EE&C. It means moving from multiple individual, geographically focused, and relatively isolated EE&C activities and projects to coordinated, systematic, **national-level EE&C that provides the structure and tools for increased local action**. A Unified EE&C Strategy is needed to go to scale nationally. The strategy would be a catalyst to coordinate and create synergy between the various governmental and non-governmental organizations conducting EE&C activities.

What is an EE&C Toolbox?

The term ‘**EE&C Toolbox**’ refers to a packaged set of EE&C tools and materials that are **designed nationally to increase, strengthen, and support action locally**. They would be designed through a participatory process and formative research with the target audience and rigorously pretested to ensure that they are understandable, attractive, relevant to, and actionable by the people within that specific audience.

The EE&C Toolbox would include a ‘User’s Guide’ that describes the **participatory methodology that would be employed to assist the target audience to identify, develop consensus for, and take specific actions**. Depending on the target audience and the EE&C objective, EE&C Toolbox materials might include workbooks or checklists, posters, pamphlets, videos, radio materials and scripts that could be adapted by local radio stations, and ideas for other complementary EE&C activities that can be developed using a participatory process with departmental, municipal, community-based groups, and other local stakeholders.

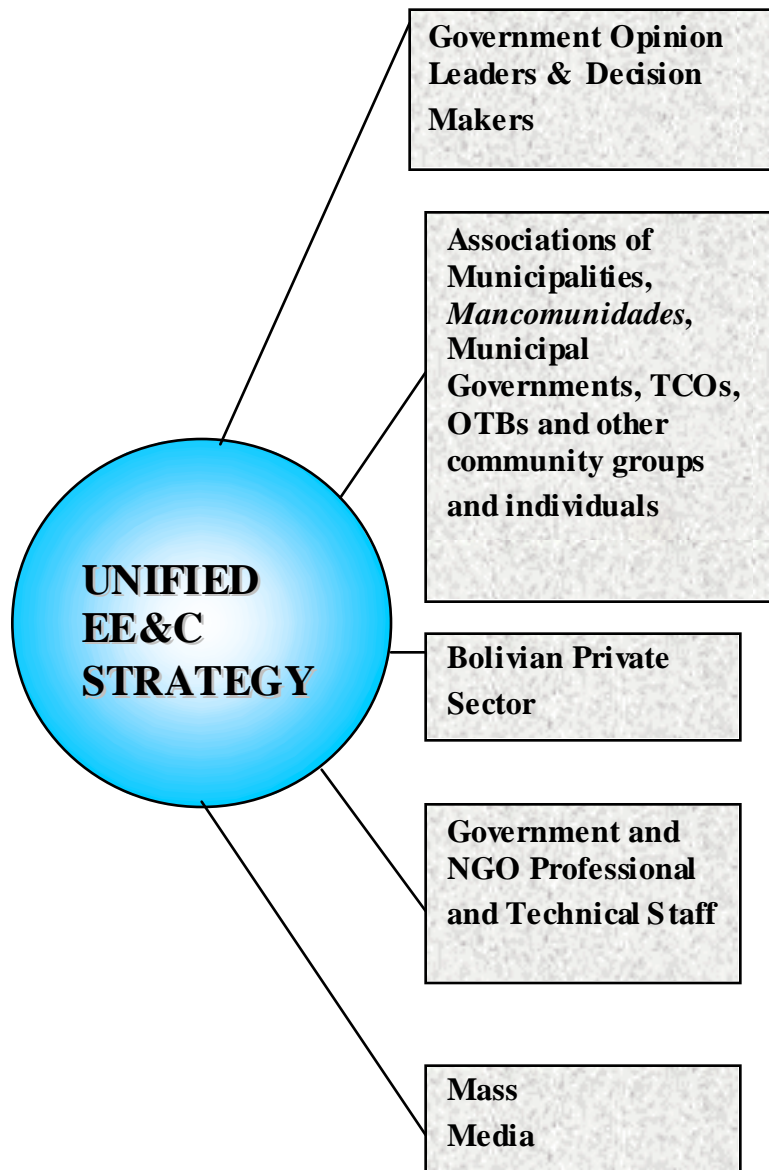
EE&C Toolboxes could then be used by a variety of governmental and non-governmental institutions, organizations, programs and projects working in the same environmental issue or geographical area. This would decrease duplication and costs of EE&C design and production, create strategic alliances and synergy between various players working in similar programs or projects, and standardize the core of EE&C messages the target audiences receive from a wide variety of channels. Training-of-Trainers Workshops with these institutions and organizations would provide skills-based training on how to use the toolboxes and provide the opportunity for networking, cooperation, and collaboration.

EE&C Toolboxes could include a Municipal Action Toolbox, a National Park Week EE&C Toolbox, a Community-based Forestry EE&C Toolbox, and a Municipal Cleaner Production EE&C Toolbox. Annex E describes these and other EE&C Toolboxes in more detail.

The following graphic illustrates the potential Unified EE&C Strategy target audiences and provides examples of the behaviors it would influence.

TARGET AUDIENCES AND BEHAVIORS

TARGET AUDIENCES



EXAMPLES OF KEY BEHAVIORS

- Demonstrate commitment & support for environmental goals as a part of Bolivia's overall development strategy.
- Demonstrate commitment & support for equal enforcement of environmental laws and regulations.
- Create/support complementary laws & regulations that support environmental goals.

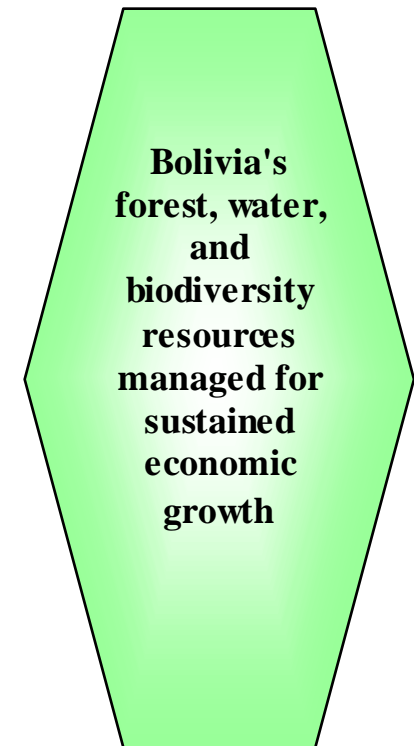
- Develop and implement local sustainable resource management plans (sustainable forestry, protected areas, and clean production).
- Take action to conserve biodiversity in protected areas.

- Support and adopt waste minimization and pollution prevention practices.
- Apply, comply with, and support laws & regulations relating to protected area management and sustainable management of natural forests.

- Develop and implement, systematic, persuasive, and sustainable EE&C methodologies and tools.
- Coordinate EE&C activities through a Unified EE&C Strategy and Programs.

- Increase quantity of environmental news on specific environmental themes.
- Demonstrate support of sustainable forestry, protected area management, and cleaner production.

RESULTS



The *Unified EE&C Strategy* would be developed for a *five-year period* and refined over time through a participatory process involving the USAID Environment Team partners and key stakeholders. The strategy would define a *common vision*, a unified EE&C *goal and objectives*, an overall *framework*, and the roles of each sector and partner within that framework. It would identify and develop a *unifying “umbrella concept”*, the common theme and key benefit of environmental action that will tie together all of the promotional aspects of the strategy. One of the first activities of the strategy would be a comprehensive, integrated *Sustainable Development and Environmental Awareness and Media Advocacy Campaign* to increase knowledge about and support for Bolivia’s natural resources and biodiversity and to increase the perceptions of the *benefits* they provide when they are managed sustainably. Annual or Bi-*Annual EE&C Action Plans* would be developed using the same participatory methodology to prioritize and coordinate the specific activities that would be conducted each year in order to achieve the strategy goal and objectives. It could initially be developed with USAID/Bolivia Environment Team SO partners, but could be expanded and adapted over time to encompass a Bolivian National EE&C Strategy.

The Environment Team partners are already implementing numerous EE&C. However, they are usually doing them unilaterally, developing tools and materials that other NGOs have already produced, and paying higher prices for small numbers of print and broadcast materials. A Unified EE&C Strategy and strengthened capacity in specific EE&C skills will create synergy between the partners, build on each partner’s experiences and areas of expertise, and make the development and production of tools and materials more cost effective. It will ensure that environmental awareness and action **goes to scale**, involving and empowering the critical mass of people necessary to make a real, significant impact on the management of forest, water, and biodiversity management for sustained economic growth.

1. Common Vision

Through a participatory process, implementing partners will define **the common vision, goal, and specific objectives** of the strategy. Ultimately, partners will need to agree on “what business we are in” in order to define these goals and objectives.

2. Framework

The framework would define the **components and programs of the strategy and the roles and responsibilities** of each sector and Environment Team partner within the framework.

Strategy Components - Sustainable Forestry, Protected Area Management, and Cleaner Production: Environment Team partners working within each of these components would develop the specific strategy for each component, ensuring that it responded to and supported the overall strategy goal and objectives. USAID requested that the GreenCOM Team specifically address how CPTS and the Environment Team can raise awareness and promote action within the private sector about improved environmental management. Suggestions for this Unified EE&C Strategy component are included in Annex F.

Strategy Programs: The Environment Results Framework Intermediate Result 2.1 is “Ecoregional planning integrates forest and protected area management”. EE&C strategy

planning and implementation is an effective tool to achieve this IR. Environment Team partners, who are working in a common geographical region or with a common set of target audiences or objective, would develop EE&C **ecoregional program strategies** that also contribute to and support the overall EE&C goal and objectives. For example, collaborative strategies could be developed for an ***Ecoregional EE&C Fire Prevention Program***, an ***Ecoregional EE&C Amboró-Madidi Corridor (CAM) Program***, or a ***Gran Chaco EE&C Program***.

Ecoregional Fire Prevention Program (BOLFOR, SERNAP, and their NGO partners): A pilot program would be conducted in one Bolivian department in order to develop, pretest, and refine a fire prevention program that can be expanded into other departments over the five years of the strategy. The program would use a participatory EE&C methodology that involves key stakeholders (representatives of the national and departmental governments, Mancomunidades, municipalities, NGOs, technicians, local media, appropriate private sector businesses, ranchers, and farmers – men and women) to develop a new system that ***supports controlled burning***. Through the participatory process they would: 1) Identify, prioritize, and agree upon the specific actions necessary for controlled burning; 2) Create a system that lowers barriers to and increases benefits for controlled burning; and 3) Develop an Implementation Plan that would include, amongst other activities, the EE&C (promotion and training) necessary to support this new system.

Ecoregional Amboró-Madidi Corridor (CAM) Program: The *Amboró-Madidi Corridor (CAM)* represents an extraordinary opportunity for major impact on biodiversity conservation. It is also an extraordinary opportunity to go to scale – to develop a participatory, collaborative EE&C model that increases communication, negotiation, and action amongst multiple stakeholders in a large, widely diverse geographical area. EE&C will be the critical link between the science of biodiversity conservation and the people who live in the corridor who need to take ownership of and obtain benefits from biodiversity conservation. The strategy could have two phases:

Phase I - Develop a CAM EE&C Strategy and CAM Promotion Tool Box. SERNAP, their international and Bolivian NGO co-administrators and partners, and key stakeholders would develop a CAM Program EE&C Strategy and Action Plan that defines the methodology they will use to communicate with and involve the multiple stakeholders at all levels. The strategy will provide the framework for the roles, responsibilities, and activities of the various stakeholders. Based on this strategy, they would develop a **CAM Promotion EE&C Toolbox, a participatory methodology and support tools and materials**, that could be utilized by governmental and non-governmental institutions, organizations, programs, and projects that are working in the corridor. The objective of the toolbox would be to promote the concept of the corridor and to negotiate and obtain commitment for a common vision of CAM natural resource management and biodiversity conservation. The Toolbox could be developed, pretested and refined during a collaborative pilot in one-two municipalities, such as *Apolo* where CI is expanding their work. This experience would be evaluated and the findings used to refine the Toolbox methods, tools, and materials.

Phase II - CAM EE&C Implementation. The CAM EE&C Strategy would be implemented in a planned, systematic sequence throughout the corridor utilizing the CAM Promotion EE&C Toolbox as a common methodology. This would ensure that

services, systems, and technologies are in place before need or demand is created that cannot be met.

Gran Chaco EE&C Strategy: The *Kaa-Iya del Gran Chaco* National Park, the department of Charagua, and the Bolivian/Paraguayan *Chaco* present a distinctive set of target audiences and EE&C needs. CABI already has experience in EE&C, particularly formal education, and has expressed interest in strengthening their capacity. Specifically CABI expressed the need to apply EE&C to ‘change the concept of space’ in the people who live in the region, to promote the concept of the *Gran Chaco*, and to develop within its inhabitants a shared vision of this unique region and the sustainable use of its natural resources.

A *Gran Chaco* EE&C Strategy should be developed through a collaborative process with the stakeholders and resource users of *Charagua*. This strategy could be shared with the NGOs and local stakeholders working to manage and conserve the Chaco region in neighboring Paraguay and to develop a bi-national Eco-Regional *Gran Chaco* EE&C Strategy in the future. The strategy should particularly explore how local radio can be strengthened to create a forum and two-way channel of communication between the varied and sometimes isolated groups that populate this immense region and to promote the specific actions needed for the sustainable management of the Chaco’s natural resources.

3. Umbrella Concept

The strategy would include a unifying “umbrella concept”, the guiding principle that specifies the general nature and character of the messages to be designed. The umbrella concept lays out the focus for the strategy and describes the ***common theme*** that will tie together all of the promotional aspects of the strategy. The umbrella concept also includes the ***key benefit***, the most salient and meaningful benefit target audiences will receive from adopting the environmentally friendly actions promoted through the Unified EE&C Strategy.

The umbrella concept would be developed based on social science research on Bolivian values. This research would explore knowledge, attitudes, and behaviors related to sustainable natural resource management and biodiversity conservation. Specifically, the research would explore the link between the environment-sustainable development and Bolivian values of economic growth, family income, and quality of life. The National Environmental Awareness and Media Advocacy Campaign would use this umbrella concept to promote sustainable resource management, for example, “Clean Production is Good Business”, “National Parks Create Jobs”, “Community-Based Forestry Increases Municipal Income”.

4. National Sustainable Development and Environmental Awareness and Media Advocacy Campaign

There is very low awareness of and support for sustainable forestry, the National Park System, the need for biodiversity conservation, and cleaner production in a number of important target audiences. ***This lack of awareness and support, particularly in governmental and private sector decision-makers and opinion leaders, represents a serious obstacle to the management of forest, water, and biodiversity resources for sustained economic growth.***

A systematic, integrated, and coordinated **national Sustainable Development and Environmental Awareness and Media Advocacy Campaign** is needed to increase the awareness, support, and advocacy in this critical target audience. This campaign would be conducted throughout the five years of the strategy. However, it would be intensified in the first year in order to establish the broad base of support necessary for environmental action that would be developed in the following years. The objectives of the campaign would be to increase awareness, advocacy, and specific actions of governmental and private sector decision-makers and opinion leaders for the management of forest, water, and biodiversity management for sustained economic growth. It would use national and local mass media targeting both urban and rural audiences. Appropriate activities and support materials, such as forums, symposiums, and fact sheets, would be developed for specific governmental and private sector institutions, organizations, and groups.

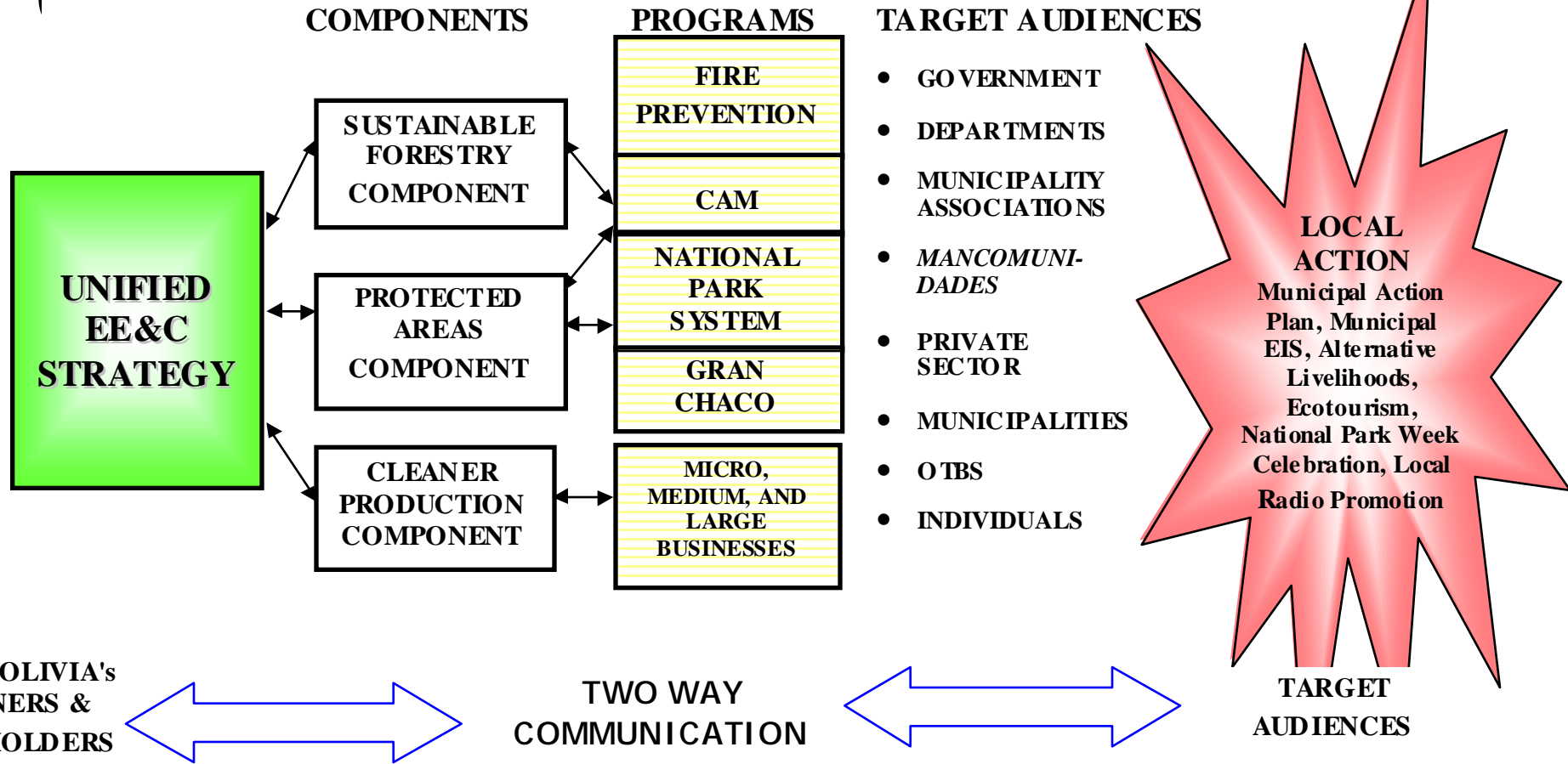
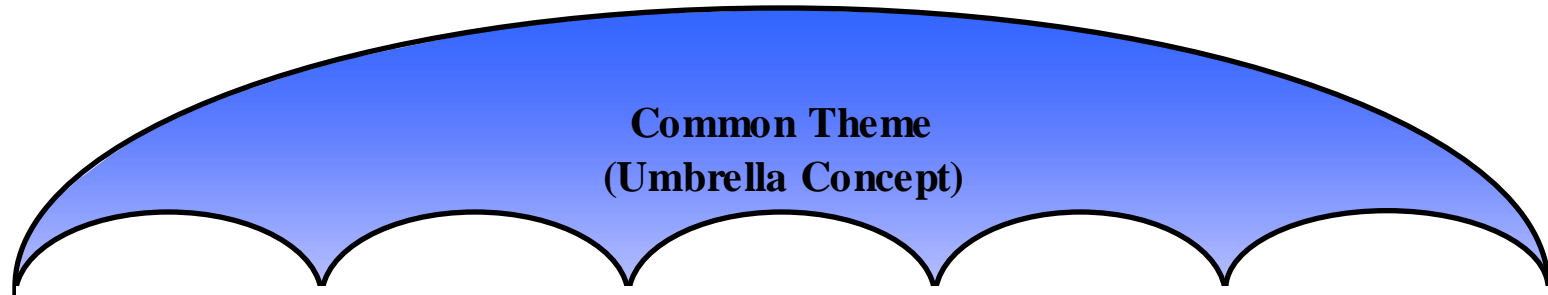
As mentioned, the campaign strategy would be developed based on the findings of formative research on Bolivian values. The results of this research would identify the *unifying umbrella concept and common theme* that would be used to promote the *benefits environmental action provides to the national economy and family income and well-being*. The slogans, messages, and materials would be rigorously pretested to ensure that they were attractive, relevant, persuasive, and actionable for the various target audiences, and to ensure that they would not cause or be used for negative political repercussions.

The *Media Advocacy* component of the campaign would be integrated with the Awareness Campaign and conducted simultaneously. The objectives would be to increase the number of: 1) Accurate articles, news stories, and broadcasts about specific topics relating to sustainable forestry, the National Park System / biodiversity conservation, and cleaner production; 2) Journalists receiving weekly or bi-weekly information from reliable and accurate sources of information such as REDESMA and LIDEMA; 3) Media personalities and journalists vocalizing commitment to and support of sustainable development, environmental goals and the specific environmental topics; and 4) Mass media (radio/television stations and newspapers) developing their own regular environmental sections/programs. For example, a Bolivian newspaper would develop an environmental supplement for school children.

The Media Advocacy Strategy would be developed based on focused research, specifically in-depth interviews conducted with media opinion leaders, to identify the most appropriate and attractive methods and channels to reach this critical target audience. Some of the options (utilized successfully in other Latin American countries) that would be explored in the research include: 1) Launch the Campaign with a National Sustainable Development and the Environment Media Symposium; 2) Field trips to observe the environmental resources or sustainable development solutions and the benefits they provide (for example, cleaner production, alternative livelihoods, sustainable forestry, and ecotourism); 3) Weekly or bi-weekly Fact Sheets promoting specific environmental solutions and actions; and 4) Regular press conferences.

The following graphic illustrates the relationship between Unified EE&C Strategy components, programs, and target audiences.

UNIFIED EE&C STRATEGY COMPONENTS & PROGRAMS



B. FOUR AREAS OF OPPORTUNITY

The Participatory EE&C Assessment identified four areas of opportunities for increasing and strengthening EE&C impact in Bolivia. These four areas are interrelated, complementary and reinforcing. They are:

- **Inter-Action;**
- **EE&C Capacity Building;**
- **Participation for Local Action; and**
- **Mass Communication**

1. Inter-Action

This area of opportunity strengthens mechanisms that bring together people (resources, information, experiences and materials) for the coordination, exchange, networking, and collaboration that are needed to build a stronger base for environmental action. This area of opportunity involves *strengthened virtual and interpersonal networking, creating new strategic alliances on specific environmental issues or in geographical areas, and improved coordination and collaboration between environmental partners and stakeholders.*

The target audience of this area of opportunity is extremely broad. It includes governmental and non-governmental institutions, organizations, groups, and individuals.

2. EE&C Capacity Building

This area of opportunity strengthens governmental, non-governmental, and university staff in the design, implementation, and monitoring/evaluation of systematic, effective, and sustainable EE&C. The Participatory EE&C Assessment concluded that there is currently a lack of trained environmental communicators and educators. The demand for these services far exceeds the supply. It also concluded that there is no one organization that is the leader in EE&C. This means that EE&C skills need to be strengthened across the board – from national governmental decision-makers to the park guards who can play an important role as park interpreters and environmental educators. This area of opportunity focuses on providing *skills-based training with guided practice (learning by doing)* in three areas: 1) EE&C skills; 2) Sustainable development and the environment concepts, problems, and solutions (particularly those related to sustainable forestry management, the National Park System and biodiversity conservation, and cleaner production); and 3) how to access and use environmental technical and scientific data as a basis for decision-making.

The target audiences are national, departmental, and local governmental personnel, non-governmental and university staff, and governmental and private sector decision makers and opinion leaders.

3. Participation for Local Action

This area of opportunity builds on and reinforces the Popular Participation Law and USAID/Bolivia's DEMOSOT initiatives (and others) work with municipal and local capacity building. Specifically, it develops and strengthens EE&C initiatives that motivate and strengthen local action for forest, water, and biodiversity resource management for sustained economic growth. This area of opportunity involves the *development of practical EE&C tools and materials that increase knowledge and skills necessary for local action and the integration of these tools within existing structures, programs, and projects.*

Target audiences are departmental governments, Municipal Associations, *Mancomunidades*, municipalities, TCOs, and community-based groups and individuals.

4. Mass Communication

This area of opportunity strengthens the application of appropriate and effective mass media strategies, tools, and methods to create greater awareness, understanding, support and sense of responsibility for the management of forest, water, and biodiversity resources for sustained economic growth. It involves *significantly strengthening the role of mass media to increase reach and frequency*⁸ of EE&C messages. However, *mass media alone cannot change behavior.* This area of opportunity *strengthens the integration and coordination of mass media with the delivery of services, products, and technologies* that provide alternatives for environmentally unfriendly behaviors. It strengthens the integration of mass media with other EE&C channels such as print and interpersonal communication. This area of opportunity also involves *media advocacy and media training.*

Target audiences will be segmented to ensure that the mass media materials are relevant, attractive, persuasive, and actionable to the specific target group for which they are developed. Audiences will include: Private sector and governmental decision makers and opinion leaders, media professionals, municipalities, and specific rural and urban audiences.

The following matrix summarizes the activities that could be conducted in each of these four areas of opportunity.

⁸ Reach and frequency are advertising terms that describe a way to measure the impact of mass media. Reach is the **number of people** who hear or see a specific message. Frequency is the **number of times** people hear or see a specific message.

AREAS OF OPPORTUNITY SUMMARY ACTIVITIES

Inter-Action	EE&C Capacity Building	Participation for Local Environmental Action	Mass Communication
<p>1) Develop and implement a Unified EE&C Strategy and integrated EE&C components and programs.</p> <p>2) Strengthen LIDEMA as the National EE&C Network and Clearinghouse.</p> <p>3) Strengthen REDESMA as the virtual clearinghouse of environmental & sustainable development information.</p> <p>4) Develop and strengthen ‘strategic alliances’ – collaborative action between governmental institutions, non-governmental organizations, universities, and the private sector on specific environmental EE&C issues and activities and/or in specific geographical areas.</p> <p>5) Increase and strengthen private sector support to and networking and coordination with governmental and NGO EE&C.</p> <p>6) Develop a Basic EE&C Library – a set of standard, state-of-the-art international and Bolivian materials on EE&C that can be distributed to (purchased by) governmental and non-governmental organizations and used as a reference for their staff, counterparts, and stakeholders.</p>	<p>Provide skills-based training with guided practice (learning while doing) to:</p> <p>1) Governmental and non-governmental staff in the EE&C methodologies and techniques, particularly the EE&C Process, Behavioral Analysis, & Social Marketing.</p> <p>2) Governmental, non-governmental, and private sector decision makers and opinion leaders on sustainable development and the management of forest, water, and biodiversity resources for sustained economic growth.</p> <p>3) Governmental and non-governmental decision makers and opinion leaders on how to access and use environmental technical and scientific data from REDESMA, LIDEMA, and other sources as a basis for decision-making.</p>	<p>Develop EE&C Toolboxes that are planned nationally to support action locally, such as:</p> <p>Municipal Action Toolbox</p> <p>Municipal Cleaner Production EE&C Toolbox</p> <p>EE&C for Action Toolbox</p> <p>Awards Scheme Toolbox</p> <p>National Park Week EE&C Toolbox</p> <p>Community-based Forestry EE&C Toolbox</p> <p>National Park System Promotion EE&C Toolbox</p> <p>Park Sentinel EE&C Toolbox</p> <p>Amoró-Madidi Corridor (CAM) Promotion EE&C Toolbox</p> <p>Fire Prevention EE&C Toolbox</p> <p>Annex E describes these and other EE&C Toolboxes and the process that would be used to develop them in more detail.</p>	<p>1) Conduct a comprehensive, coherent, and collaborative Sustainable Development and Environmental Awareness and Media Advocacy Campaign to increase awareness, advocacy, and action for the management of forest, water, and biodiversity resources for sustained economic growth and to promote the benefits their sustainable management provides to national, municipal, and family economies and well-being.</p> <p>2) Conduct comprehensive and systematic media advocacy and media training in coordination with this campaign.</p> <p>3) Develop local and national mass media tools and materials that motivate and reinforce explicit environmental actions in specific target audiences. Utilize mass media in a way that is integrated with and supports services, products and technology that provide alternatives to environmentally unfriendly behaviors and other EE&C channels such as print and interpersonal communication.</p>

C. CROSS-CUTTING ISSUES

The following sections describe several issues that have cross-cutting implications for EE&C in Bolivia.

1. PUMA Foundation and EE&C

The Foundation for the Protection and Sustainable Use of the Environment (*Fundación para la Protección y Uso Sostenible del Medio Ambiente* - PUMA) represents a unique opportunity to initiate long-term, holistic, and sustainable EE&C activities within all levels and sectors of Bolivia as a part of poverty alleviation and environmental protection programs. Some of the ways *Fundación* PUMA can support and strengthen Bolivian EE&C include: 1) Establish EE&C criteria that must be met for grants to be awarded; 2) Establish a proportion (percentage) of PUMA funds that are specifically dedicated for EE&C activities. Priority should be given to activities that are integrated into ongoing development programs; 3) Establish a fund for seed money to generate other sources of technical and financial support for EE&C, for example, sponsorship/assistance from the private sector, such as the Smithsonian Institute and transnational companies; and 4) Establish a fund to provide undergraduate and graduate level scholarships in EE&C.

2. Formal Education

The Educational Reform Law and the mandate to include the environment as one of the transversal themes in the curriculum represents a tremendous opportunity to develop the concepts and actions needed for sustainable resource management and conservation in the next generation. Almost 50% of all Bolivians are under the age of 17. These children are the Bolivian resource managers of the next decade. Forming sustainable resource management knowledge, attitudes, and practices within school children will be the critical to the creation of the critical mass of people necessary to make a real, significant impact on the management of forest, water, and biodiversity resources for sustained economic growth.

Almost all of the Environment Team partners are already doing or plan to do formal environmental education. However, each organization is working independently, utilizing different approaches and methodologies, and duplicating development and production of materials. This increases USAID's costs unnecessarily. An EE&C Workshop for the Environment Team Partners should be conducted to: 1) Provide partners with an orientation/update on the Educational Reform Law and its relation to environmental education; 2) Share the methodologies, resources, and materials they are using and conduct a participatory analysis of successes, failures, opportunities, and obstacles; 3) Based on this analysis, develop a common vision, methodologies and teaching/learning materials, and next steps for action.

There is also a need to build EE&C capacity in school teachers. Unless teachers are trained how to integrate environment into core subjects, environment will very likely be lost from the school curriculum. Environmental education workshops for trainers at teacher training colleges would assist them to develop appropriate methodologies and approaches for environmental education within the new requirements.

3. EE&C and Universities

Universities are a relatively untapped source of cooperation, collaboration, and synergy for EE&C. Incorporating EE&C as undergraduate and graduate degrees increases the number of professional EE&C practitioners and decreases the need for retraining later on. Universities also assist with the administration of teacher training colleges; their potential for contributing to develop competency in environmental education among teachers is great.

Specific recommendations to strengthen EE&C within universities include:

- a) Conduct a national University Environmental Education and Communication Symposium, coordinated by the Bolivian University Committee, to develop an Environmental Policy and plan how to integrate EE&C into their curriculum and programs. At a relatively small cost, representatives of universities could be brought together to discuss the integration of environment and to encourage them to develop EE&C policies.
- b) Integrate EE&C into existing university outreach training activities such the La Paz Catholic University/ERBOL Journalist Training.
- c) Involve universities in conducting social science research needed to develop EE&C strategies and to evaluate EE&C impact.
- d) Some universities have strong departments and programs that could become strategic alliances for EE&C activities in specific geographical areas.
- e) All university students are required to do 200 to 300 hours of community work-study. There is a tremendous potential to harness this human resource for EE&C. Specifically, these students could do internships with the Environment Team partners and/or student research could be coordinated with and respond to the needs of partner organizations, municipalities, and other environmental stakeholders.
- f) Some universities have excellent EE&C methods and materials. For example, those produced by Nur University could be utilized by the Environment Team partners to strengthen their EE&C methods and activities.

4. Kusillo Museum of Science and Play

The *Kusillo* Museum of Science and Play provides a unique resource for EE&C in Bolivia. The museum is visited by thousands of children each year and provides them with hands-on, participatory experiences in environmental education. Kusillo Museum staff also conducts outreach activities with schools in *La Paz* and *El Alto*. Museum management and staff have demonstrated their initiative and capacity to develop attractive museum displays and conduct community outreach activities within a short period of time and with limited funds.

Consequently, the museum should be a participant in the development of the Unified EE&C Strategy and be utilized and strengthened as a channel of communication on specific themes and

actions relating to the management of forest, water, and biodiversity resources for sustained economic growth.

D. TARGET AUDIENCES, ILLUSTRATIVE TACTICS, AND INDICATORS

The following matrixes describe the target audiences, illustrative tactics and activities that could be conducted, and the indicators for performance that could be used to measure achievement for each EE&C area of opportunity.

EE&C TARGET AUDIENCES, ILLUSTRATIVE TACTICS AND INDICATORS

EE&C Area of Opportunity Target Audiences and Characteristics	Illustrative Tactics	Illustrative Indicators of Performance	Result
<p style="text-align: center;">INTER- ACTION</p> <p><i>Private sector</i></p> <p><i>Governmental institutions</i></p> <p><i>NGOs</i></p> <p><i>Donor agencies</i></p> <p><i>Municipalities</i></p> <p><i>Universities</i></p> <p><i>Local organizations and groups</i></p> <p><i>Individuals</i></p>	<p>1) Develop and implement a Unified EE&C Strategy and integrated EE&C components and programs.</p> <p>2) Strengthen LIDEMA as the National EE&C Network and Clearinghouse.</p> <p>3) Strengthen REDESMA as the virtual clearinghouse of environmental & sustainable development information: a) Develop & strengthen links and information exchange between REDESMA and the Municipal Information System, community forestry MIS, National Park System MIS, and Cleaner Production MIS. b) Develop a simple, inexpensive monitoring system for environmental pollution that can be used by the private sector, NGOs, and municipalities to track progress.</p> <p>4) Develop and strengthen ‘strategic alliances’ – collaborative action between governmental institutions, NGOs, universities, and the private sector on specific environmental issues and EE&C activities such as: media advocacy, training (forums, symposiums, workshops), formal education environmental curriculum development, university EE&C development, EE&C social science research, etc.</p> <p>5) Increase and strengthen private sector support to and networking and coordination with governmental and NGO EE&C interventions.</p>	<p>1) Increased number of partners coordinating EE&C activities within a Unified EE&C Strategy.</p> <p>2) Increased number of active members in the network. Increased number of specific EE&C projects and activities these members collaborate on.</p> <p>3) Increased number of Web members and number of hits at the site. This includes: a) Increased accurate, practical and relevant information necessary for the management of forest, water, and biodiversity resources for sustained economic growth; b) Increased number of links to other relevant environmental sites; c) Increased accurate, locally produced information about environmental pollution.</p> <p>4) Increased number of specific activities conducted with inter-institutional coordination and collaboration.</p> <p>5) Increased numbers of private sector companies doing and supporting EE&C.</p>	<p>Increased impact of USAID assistance and achievement of the Environment Strategic Objective:</p> <p>“Forest, water, and biodiversity resources managed for sustained economic growth” through systematic, coordinated, integrated EE&C strategies, methods, and tools.</p> <p>“Ecoregional planning integrates forest and protected area management”. (IR2.1)</p>

EE&C TARGET AUDIENCES, ILLUSTRATIVE TACTICS AND INDICATORS

EE&C Area of Opportunity Target Audiences and Characteristics	Illustrative Tactics	Illustrative Indicators of Performance	Result
<p style="text-align: center;">EE&C CAPACITY BUILDING</p> <p><i>Government and NGO professional and technical staff.</i></p> <p><i>Private sector and governmental decision-makers and opinion leaders.</i></p>	<p>1) Skills-based training with guided practice (learning while doing) to:</p> <p>a) Governmental and non-governmental staff in EE&C methodologies and techniques, particularly the EE&C Process, Behavioral Analysis, Social Marketing.</p> <p>Other training might include: Media Advocacy and environmental reporting, mass media and print design, Fund-raising, grant writing, public relations, teacher training, and skills-based training and supervision.</p> <p>b) Governmental, non-governmental, and private sector decision makers and opinion leaders on: a) sustainable development and its relation to the environment, and the specific issues of sustainable forestry, the National Park System and protected area management, and clean production.</p> <p>c) Governmental, non-governmental, and private sector decision makers and opinion leaders on how to access (REDESMA, LIDEMA, and other sources) and use technical and scientific data as a basis for decision-making.</p> <p>2) National University EE&C Symposium, coordinated by the Bolivian University Committee, to develop an Environmental Policy and plan how to integrate EE&C into their curriculum and programs.</p> <p>3) Workshop for Teacher Training College trainers to strengthen environmental education teaching/learning techniques.</p> <p>4) Develop a Basic EE&C Library – a set of standard, state-of-the-art international and Bolivian materials on EE&C that can be distributed to (and purchased by) governmental and non-governmental organizations and used as a reference for their staff.</p>	<p>1) Increased number of professional and technical staff trained in EE&C skills.</p> <p>2) Increased number of EE&C skills acquired and maintained over time (Training Objectives Checklist).</p> <p>3) Increased number of decision-makers and opinion leaders who demonstrate commitment and support for:</p> <p>a) The management of forest, water, and biodiversity resources for sustained economic growth as part of Bolivia’s overall development strategy; b) Complementary laws and regulations that support environmental goals; and c) Equal enforcement of environmental laws;</p> <p>4) Increased number of decision-makers and opinion leaders at the national, departmental, and municipal levels who seek and use reliable and accurate technical and scientific environmental data in their decision-making processes.</p> <p>5) MSDP has a EE&C Department with appropriate personnel, budget, and national strategy.</p> <p>6) Increased numbers of universities with EE&C curriculum, programs, and activities.</p> <p>7) Increased numbers of teachers applying environmental education.</p> <p>8) Increased numbers of governmental institutions, non-governmental organizations, universities, and the private sector who have and regularly use state-of-the-art EE&C materials as references.</p>	<p>Increased institutional and technical capacity to sustainably manage forests (IR1.2), manage protected areas (IR2.5), and sustain clean production (IR3.1).</p> <p>Increased GOB commitment to environmental goals as part of its overall development policy.</p>

EE&C TARGET AUDIENCES, ILLUSTRATIVE TACTICS AND INDICATORS

EE&C Area of Opportunity Target Audiences and Characteristics	Illustrative Tactics	Illustrative Indicators of Performance	Result
<p style="text-align: center;">PARTICIPATION FOR LOCAL ACTION</p> <p><i>Departmental governments</i></p> <p><i>Municipal Associations</i></p> <p><i>Mancomunidades</i></p> <p><i>Municipalities</i></p> <p><i>TCOs</i></p> <p><i>OTBs and other local groups</i></p> <p><i>Individuals</i></p>	<p>1) Develop EE&C Toolboxes, a packaged set of EE&C tools and materials that are designed nationally to increase, strengthen, and support action locally, such as Municipal Action EE&C Toolbox</p> <p>Municipal Cleaner Production EE&C Toolbox</p> <p>National Park System Maps and Promotion EE&C Toolbox</p> <p>Community Forestry EE&C Toolbox</p> <p>EE&C for ACTION Toolbox</p> <p>EE&C Amboró-Madidi Corridor (CAM) Promotion EE&C Toolbox</p> <p>Environmental Awards Scheme EE&C Toolbox</p> <p>National Park Week EE&C Toolbox</p> <p>Park Sentinel Program Toolbox</p> <p>Ecotourism EE&C Toolbox “Eco-tourism Creates Jobs”</p> <p>Fire Prevention EE&C Toolbox</p> <p>Watershed/Water Management EE&C Toolbox</p> <p>Safe Pesticide Use EE&C Toolbox</p>	<p>Increased number of Mancomunidades, Municipalities, & TCOs that develop and implement Municipal Environmental Action Plans (Ordenamiento Ambiental Municipales), Rapid EIS, Forestry Management Plans, National Park Day, and other municipal actions.</p> <p>Increased number of Mancomunidades, Municipalities, & TCOs that provide funds for environmental action and seek additional funding for specific environmental projects and activities.</p> <p>Increased number of people (men and women) within each ManComunidad, Municipality, and TCO who participate in the development and implementation of the Ordenamiento Ambiental Municipales, Rapid EIS, Forestry Management Plans, National Park Day, and other municipal environmental actions.</p> <p>Increased number of OTBs and other community groups (men and women) that identify an environmental problem and take the appropriate action to solve it.</p> <p>Increased number of citizens (men and women) who demand cleaner production technologies to reduce local pollution.</p> <p>Increased number of businesses within each ManComunidad, Municipality, and TCO that adopt cleaner production technology.</p>	<p>Increased local constituency actively participating in sustainable water and forestry management and protected area conservation (IR2.6).</p> <p>Increased institutional and technical capacity to sustainably manage forests (IR1.2), manage protected areas (IR2.5), and sustain clean production (IR3.1).</p>

EE&C TARGET AUDIENCES, ILLUSTRATIVE TACTICS AND INDICATORS

EE&C Area of Opportunity Target Audiences and Characteristics	Illustrative Tactics	Illustrative Indicators of Performance	Result
<p style="text-align: center;">MASS COMMUNICATION</p> <p><i><u>Segmented Target Audiences:</u></i></p> <p><i>Decision Makers and Opinion leaders</i></p> <p><i>Media Professionals</i></p> <p><i>Specific Urban Audiences</i></p> <p><i>Specific Rural Audiences</i></p>	<p>1) Conduct a comprehensive, coherent, and collaborative Sustainable Development and Environmental Awareness and Media Advocacy Campaign to increase awareness, advocacy, and action for the management of forest, water, and biodiversity resources for sustained economic growth; and to promote the benefits the sustainable management of these resources provides to national, municipal, and family economies and well-being.</p> <p>2) Conduct comprehensive and systematic media advocacy and media training in coordination with this campaign.</p> <p>3) Develop local and national mass media materials that motivate and reinforce explicit environmental actions in specific target audiences. Use mass media in a way that is integrated with and supports services, products, and technology that provide alternatives to environmentally unfriendly behaviors and other EE&C channels such as print and interpersonal communication.</p>	<p>1) Increased awareness and knowledge of sustainable water and forestry management, the National Park System, biodiversity conservation, and clean production and their benefits.</p> <p>2) a) Increased number of articles, news stories, broadcasts about <u>specific topics</u> relating to sustainable forestry, the National Park System/biodiversity conservation, and cleaner production; b) Increased numbers of journalists receiving information from reliable and accurate sources of information such as REDESMA and LIDEMA; c) Increased number of key media personalities vocalizing commitment to and support of environmental goals and the specific environmental topics; d) Increased number of mass media producing regular environmental sections/programs such as an environmental newspaper supplement for children and youth.</p> <p>3) Increased number of people (men and women) doing specific environmental actions such as controlled burning, sustainable forest harvesting, and controlling illegal hunting within national parks and reserves.</p> <p>4) Increased number of micro, medium, and large production businesses seeking and adopting cleaner production technologies.</p>	<p>Increased public awareness and participation of civil society in environmental policy and management.</p> <p>Increased GOB commitment to environmental goals as part of its overall development policy.</p> <p>Increased institutional and technical capacity to sustainably manage forests (IR1.2), manage protected areas (IR2.5), and sustain clean production (IR3.1).</p>

E. ROLES AND RESPONSIBILITIES

The national government, USAID/Bolivia and other donors, municipality and departmental governments, universities, NGOs, and the media all have important roles in increasing, strengthening, and coordinating the EE&C needed to go to scale. Annex G describes their potential roles and responsibilities in detail. The following describes the potential roles and responsibilities of the USAID/Bolivia Environment Team partners to strengthen EE&C.

1. The Unified EE&C Strategy

As mentioned, the roles of the Environment Team partners would be defined as a part of the framework of the Unified EE&C Strategy. In general, the roles and responsibilities would build on the strengths of each institution and organization. For example, LIDEMA: EE&C coordination, EE&C with decision-makers, and media advocacy; CI: communication and social marketing; WWF: communication; FAN: technical print production; REDESMA: virtual networking; and Ajari: interactive radio. The following are suggestions on specific roles and functions needed to develop, implement, and monitor/evaluate the Unified EE&C Strategy.

Technical Content Review: EE&C training and materials need to be reviewed by specialists to ensure that they are technically accurate. For example, sustainable forestry EE&C could be reviewed by BOLFOR, CADEFOR or the *Superintendencia Forestal* (Forestry Service). The National Park System and biodiversity EE&C could be reviewed by SERNAP, and Cleaner Production EE&C by CPTS. Each organization could assign a specific staff member to review EE&C tools and materials for the accuracy of technical content. The vocabulary, images, and other design considerations would be based on the needs and perspectives of the specific target audience.

Design of the Unified EE&C Strategy: All of the Environment SO Team partners should take part in the participatory process necessary to develop the strategy and its complementary components and programs. Involving other USAID/Bolivia SO Teams and their partners would enrich the process and forge the framework for USAID/Bolivia collaboration and synergy. The Environment SO Team (and other SO Team) partners should be trained in the EE&C and social marketing skills needed to design and implement the strategy.

Mass media, print, training, and other EE&C tools design: The EE&C Unified EE&C Strategy would define the specific roles each partner would take in the steps of the EE&C process. Partners with recognized leadership in a specific area could take the lead in the development of specific materials. Some media design and production would be outsourced to private sector professionals and advertising agencies. The Environment SO Team partners should be trained in the EE&C and social marketing skills needed to design *attractive, relevant, and persuasive media materials* and to conduct skills-based participatory training.

Formative Research (Assessment, pretesting, monitoring/evaluation): This capacity needs to be significantly strengthened to implement effective EE&C. Environment SO Team partners should be trained in social science and participatory research techniques. Some research should

be outsourced to universities and private sector research professionals. A small set of environmental questions could be included in the DEMOSOT Democratic Initiatives annual study and other SO Team research to monitor the impact of the Unified EE&C Strategy in a cost-effective way.

Implementation: The Environment Team partners would be responsible for implementing the strategy components and programs. Developing strategic alliances with other institutions and organizations on a specific environmental issue or in a geographic location will increase reach and frequency of EE&C messages and make EE&C more sustainable. EE&C Toolboxes would make implementation by this wide variety of organizations more efficient and effective, and would ensure that the target audiences receive a coherent core of environmental messages from these multiple channels.

2. Coordinating Organization

The Unified EE&C Strategy will entail the coordinated action of many different institutions and organizations. No one Bolivian organization currently has the capacity or skills to provide this coordination at this time. During the USAID/Bolivia Environment Team Meeting, participants suggested that LIDEMA take this role, but that efforts continue to motivate the government, particularly the MSDP, to assume leadership in the national coordination of EE&C. LIDEMA does not currently have an EE&C Unit and will need financial, staffing, and training support to provide this leadership. Participants also suggested that the National Council on Sustainable Development (*Consejo Nacional para el Desarrollo Sostenible*) be informed and involved in providing support for national-level EE&C.

F. IMPLEMENTATION PLAN AND TIMELINE

This report describes an overarching EE&C conceptual framework and draft unified strategy to increase awareness and change behaviors related to the management of forest, water, and biodiversity resources for sustained economic growth. It provides options for EE&C tactics and activities that can be used within this strategy, too many to be implemented in the near-term. The timeline for the implementation of this strategy, therefore, would be in two general phases:

Phase I - Setting the Stage (May 2001- September 2002): During this phase, EE&C activities would be selected that “provide a quick fix with a broad impact”. Specifically EE&C activities would be conducted that:

- Initiate the development and implementation of a five-year Unified EE&C Strategy for Environment SO Team Partners.
- Provide formative research with potential target audiences that will be used to design the Unified EE&C Strategy, components, and programs.
- Pretest models for going to scale.
- Strengthen USAID/Bolivia SO Teams collaboration and synergy.

Phase II - Going to Scale (September 2002-2007): The five-year Unified EE&C Strategy would be developed and implemented based on the social science research, experiences, and lessons learned from Phase I.

The following tables describe some of the specific activities that would be conducted during Phase I – Setting the Stage.

GENERAL ENVIRONMENT STRATEGIC OBJECTIVE ACTIVITIES FOR PHASE I (2001-2002) - SETTING THE STAGE

Inter-Action	EE&C Capacity Building	Participation for Local Environmental Action	Mass Communication
<p>1) Strengthen and support LIDEMA as the coordinator of Bolivian EE&C.</p> <p>2) Support REDESMA to develop and conduct a promotional campaign: This campaign would increase awareness of REDESMA and position them as the Bolivian virtual source of comprehensive, accurate environmental & sustainable development information.</p> <p>Develop & strengthen links and information exchange between REDESMA and the Municipal Information System, community forestry MIS, National Park System MIS, and Cleaner Production MIS.</p>	<p>1) Conduct a two-day USAID Environment Team Partners EE&C Exchange Workshop (swap meet) to:</p> <p>a) Share current methodologies, resources, and materials. (<i>linea de base y rescate e intercambio de experiencias, materials, etc.</i>);</p> <p>b) Apply the EE&C Manager's Checklist (Annex H) or similar instrument to analyze current methodologies and materials and identify training and other resource needs to strengthen EE&C; c) Identify additional information and resources necessary for the 'Unified EE&C Strategy Development Workshop'; and d) Identify the core workgroup who will provide general follow-up to develop the Unified EE&C Strategy.</p> <p>2) Based on the results of the USAID Environment Team Partners' EE&C Exchange Workshop, conduct a two-day Unified EE&C Strategy Development Workshop. During the workshop conduct social marketing training to develop the Unified EE&C Strategy vision, goal, objectives, and framework.</p>	<p>1) Support LIDEMA to conduct a Municipal Institutional Assessment, the formative research needed to identify methodologies and tools for local environmental action that respond to the target audience needs and link environmental action to municipal income.</p> <p>2) Based on the results of the Municipal Institutional Assessment, develop the Municipal Action EE&C Toolbox through a participatory, collaborative process with pilot municipalities.</p>	<p>1) Conduct a focused study on Bolivian values to develop the umbrella concept and theme for the Unified EE&C Strategy and national Sustainable Development and Environmental Awareness and Media Advocacy Campaign.</p> <p>2) Conduct focused research (in-depth interviews) with mass media opinion-leaders about appropriate strategies, channels, and materials for media advocacy and media training.</p>

IR 2.1 - ECOREGIONAL PLANNING

SPECIFIC ACTIVITIES FOR PHASE I (2001-2002) - SETTING THE STAGE

Inter-Action	EE&C Capacity Building	Participation for Local Environmental Action	Mass Communication
<p>1) Initiate the CAM EE&C Program Workgroup: Conduct the first of a series of regular CAM EE&C Program workgroup meetings to develop the CAM EE&C Program vision and framework and establish methodologies for involving other stakeholders in the next stages of implementation.</p> <p style="text-align: center;">and/or</p> <p>2) Initiate the Fire Prevention EE&C Program to develop a <i>new system</i> that supports controlled burning</p> <p>3) Develop a <i>Gran Chaco</i> EE&C Strategy.</p>	<p>1) Develop through a participatory, collaborative process, pretest and refine, and implement the <i>CAM Promotion EE&C Toolbox</i> in one-two corridor municipalities (<i>Apolo</i>, for example). Evaluate the experience and use the results to develop the CAM EE&C Program Strategy.</p> <p>2) Conduct a Fire Prevention Workshop in one pilot department. During the workshop, train the participants in social marketing and use the concepts to develop the pilot Fire Prevention Program and EE&C.</p> <p>3) Conduct a two-day <i>Gran Chaco</i> EE&C Workshop. During the workshop, train the participants in EE&C and social marketing and use the concepts to develop the <i>Gran Chaco</i> EE&C Strategy.</p> <p>Conduct training to strengthen the use of local radio for local environmental action.</p>	<p>1) Involve representatives of the departmental governments, Mancomunidades, municipalities, OTBs and other community groups in the development of the CAM EE&C Strategy and CAM Promotion EE&C Toolbox.</p> <p>2) Involve representatives of the national and departmental governments, <i>Mancomunidades</i>, municipalities, NGOs, technicians (foresters and extensionists), local media, appropriate private sector businesses, ranchers, and farmers - men and women - to develop and implement the pilot Fire Prevention Program and system. Use the participatory, collaborative process of this pilot program to develop the Fire Prevention EE&C Toolbox.</p> <p>3) Involve representatives of the departmental government, municipalities, NGOs, technicians, local media, appropriate private sector businesses, different ethnic groups and resource users - men and women - to develop and implement the <i>Gran Chaco</i> EE&C Strategy.</p>	<p>1) Develop, pretest and refine, and use mass media, particularly local radio, to increase knowledge about and commitment to the corridor.</p> <p>2) Develop, pretest and refine, and use mass media, particularly local radio, to increase knowledge, awareness, and compliance with the new Fire Prevention Program and system.</p> <p>3) Strengthen the use of local radio to increase environmental action in the <i>Gran Chaco</i> as part of the <i>Gran Chaco</i> EE&C Strategy.</p>

**IR1: SUSTAINABLE MANAGEMENT OF NATURAL FORESTS
SPECIFIC ACTIVITIES FOR PHASE I (2001-2002) - SETTING THE STAGE**

Inter-Action	EE&C Capacity Building	Participation for Local Environmental Action	Mass Communication
<p>Conduct a collaborative, participatory Institutionalization & EE&C Assessment (with the <i>ManComunidad de Chiquitana</i>, TCOs, and <i>Agrupaciones de Lugar</i>) to develop a Sustainable Forestry EE&C Strategy.</p>	<p>During the Assessment, provide training to the <i>ManComunidad de Chiquitana</i> and local stakeholders on EE&C and social marketing. Use these concepts to develop the Sustainable Forestry EE&C Strategy.</p>	<p>Involve representatives of the departmental government, municipalities, NGOs, technicians, local media, appropriate private sector businesses, different ethnic groups and resource users - men and women – in the Institutionalization Assessment and to develop and implement the Sustainable Forestry EE&C Strategy.</p>	<p>During the Assessment, explore: The specific ways that mass media and media advocacy can be used to increase widespread national support for sustainable and community-based forestry.</p> <p>Strengthen the use of local radio to increase sustainable forestry action as part of the Sustainable Forestry EE&C Strategy. Local radio can be used to increase participation in and support for the adoption of forestry management technologies and skills.</p>

**IR2: ADEQUATE MANAGEMENT OF PROTECTED AREAS
SPECIFIC ACTIVITIES FOR PHASE I (2001-2002) - SETTING THE STAGE**

Inter-Action	EE&C Capacity Building	Participation for Local Environmental Action	Mass Communication
<p>See Table Ecoregional Planning (IR2.1).</p> <p>Develop the National Park System EE&C Strategy and Toolbox through a participatory, collaborative process with SERNAP, the NGO co-administrators, and key local stakeholders.</p>	<p>Conduct a two-day National Park System EE&C Workshop. During the workshop, train the participants in EE&C and social marketing and use the concepts to develop the National Park System EE&C Strategy.</p>	<p>Involve representatives of the key Mancomunidades and municipalities that are in or close to national parks in the development of the National Park System EE&C Strategy and Promotion Toolbox and other EE&C Toolboxes that are developed to support the National Park System. (For example, the National Park Week EE&C Toolbox and the Park Sentinel EE&C Toolbox.)</p>	<p>1) Develop and conduct a Mass Media and Media Advocacy Campaign that promotes the benefits of the National Park System.</p> <p>2) Develop and broadcast/distribute widely a song by <i>Azul Azul</i> on the National Parks. A popular song to a salsa or rap beat is an effective, easy way for a widespread audience to learn the names of the parks and an identifying aspect about each one.</p>

**IR3: IMPROVED ENVIRONMENTAL MANAGEMENT
OF URBAN AND INDUSTRIAL POLLUTION
SPECIFIC ACTIVITIES FOR PHASE I (2001-2002) - SETTING THE STAGE**

Inter-Action	EE&C Capacity Building	Participation for Local Environmental Action	Mass Communication
<p>1) Support CPTS to implement a one-day workshop with USAID/Bolivia SO Teams and relevant partners on Cleaner Production concepts, methods, and techniques.⁸ The objectives of this workshop would be to:</p> <p>a) Identify specific areas where USAID/Bolivia-funded project activities such as technology transfer could potentially result in increased pollution.</p> <p>b) Identify specific ways that cleaner production concepts and techniques could be utilized to strengthen local and municipal capacity in sustainable resource management.</p> <p>c) Identify next steps for collaborative action.</p>	<p>1) Conduct a three-day CPTS EE&C Workshop. During the workshop, train participants in EE&C and social marketing and use the concepts to develop the Cleaner Production EE&C Strategy and the formative research plan.</p> <p>2) Provide training with guided practice to the Chamber of Industries staff and their contractors to develop the EE&C skills necessary to conduct systematic, practical, effective EE&C strategies, methods, and activities.</p>	<p>1) Conduct a 2-3 day Cleaner Production training course for the three industrial municipalities that have expressed interest in integrating cleaner production into their municipal objectives, plans, and activities. The objective of the course would be to: a) increase awareness/knowledge about cleaner production concepts and techniques (success stories); b) exchange industrial pollution problems and solutions between the municipalities; c) identify the municipalities' pollution problems and needs; and d) identify ways that CPTS can respond to these problems and needs over the next five years.</p> <p>2) Based on this experience, develop (through a participatory, collaborative process) the Municipality Cleaner Production EE&C Toolbox.</p>	<p>1) Conduct formative research with micro, medium, and large businesses on cleaner production knowledge, attitudes, and practices. The results will be used to select the communication channels, including mass media for the Cleaner Production EE&C Strategy.</p>

⁸ The new technologies and businesses promoted and supported by USAID Team SOs have the potential to increase the pollution of natural resources and pressure on biodiversity if they do not integrate cleaner production concepts and techniques.

SECTION IV

ANNEXES

ANNEX A: SPECIFIC QUESTIONS USAID ASKED GREENCOM TO ADDRESS

Sustainable Forestry

- Are there opportunities for BOLFOP to improve its communication with municipal groups (*Agrupaciones Sociales de Lugar* or ASLs,) the *Mancomunidad* of *Chiquitana* (an association of municipalities), and indigenous reserves (*Territorios Comunitarios de Origen*-TCOs), regarding forest management rights and responsibilities?
- Bolivia suffers from massive fires during *El Niño* years. Between the months of August-October 1999, over 12 million hectares burned in the Departments of Santa Cruz and Beni alone, creating grave human health hazards, the loss of wood and biodiversity, and releasing 82 million tons of carbon into the atmosphere. How can a communications strategy be used to prevent and manage fires by addressing this huge recurrent problem?

Protected Area Management

The Bolivian Park Service has identified EE&C as one of its highest priority needs and current deficiencies. Currently, most Bolivians are not familiar with their national parks, limiting public support for some of the world's most beautiful and ecologically important protected areas, which cover 14% of the country.

- How can GreenCOM, working with SERNAP and the conservation organizations supported by USAID/Bolivia, improve the public's awareness and appreciation of its national park system? How can GreenCOM assist USAID/Bolivia's partners in developing and implementing communication strategies both at a national level and for individual protected areas?
- The World Wildlife Fund, Conservation International, and the Bolivian Park Service (SERNAP), are embarking on an ambitious plan to conserve the eastern slopes of the Andes. Communication with hundreds of stakeholders, ranging from national government agencies to local women's groups, will be key. How can WWF, CI, and SERNAP best promote effective communication with such disparate groups over such a large area?

Cleaner Production

- How can the *Centro de Promoción y Tecnologías Sostenibles* (CPTS) and the Environment Team raise awareness of the private sector about improved environmental management and promote action?
- Are there approaches/messages that could be jointly used by CPTS and the Health Team? What mechanisms can USAID/Bolivia use to provide assistance?

Crosscutting Issues

- USAID/Bolivia's Democratic Development and Citizen Participation activity is designed to

strengthen municipalities and promote democratic participation. It needs tools (“*instrumentos e instructivos*”) to incorporate environmental messages and activities into their procedures. How best can the Democracy and Environment Teams collaborate on this?

- There is a budding Bolivian Environmental Education Network. How can GreenCOM help the Mission to relate it to the Environment SO and suggest an appropriate implementation mechanism?
- Press coverage of environmental issues is fairly frequent but often poorly done. How can this be improved? Does it make sense to work with PAS (former USIS) to improve training of journalists on environmental issues?
- The Bolivian NGO PROMETA plans to commence a campaign to improve water conservation in the city of *Tarija*. How can this campaign be made most effective?
- How can the nascent *Fundación PUMA* (Enterprise for the Americas Initiative) best develop an EE&C strategy or use EE&C in its grant program?

Gender Considerations

In Bolivia, as is the case elsewhere throughout Latin America, women and girls in urban, rural, and peri-urban areas are often the victims of worsening environmental conditions (e.g., they must walk farther for clean drinking water) as well as barometers of environmental change (e.g., they monitor child health, such as respiratory problems attributed to poor ventilation of smoke in the household from open cooking fires, or diarrhea caused from pesticide-laden food or contaminated water). Recognizing the importance of this segment of society to protect environmental quality and conserve natural resources, women and girls will be a special focus of any proposed EE&C training or program development activity.

Efforts will be taken to ensure that stereotyping of Bolivian women and girls is not promoted by the draft unified EE&C strategy or through the specific activities implemented under the specific activities proposed for the participating Bolivian stakeholder institutions. In addition, Bolivian women and girls should be featured in positive environmental stewardship roles in an effort to boost their status and hopefully, affect social norms. Any EE&C training activity, practicum or product will also acknowledge that Bolivia women are not a homogeneous group, and that teenage girls, rural farm women, or urban professionals might require different environmental messages, information, or instruction than men and boys.

ANNEX B: LITERATURE REVIEWED

- Abaca, Cristina M., 1999. *Environmental Education Baseline Survey*, WWF/UK, Bolivia
- Anello, Eloy and Juanita de Hernández, 1997. *Educación Potencializadora, Modulo 1*. Universidad Núr - Insitituto Superior de Educación Rural (ISER). Bolivia
- Anello, Eloy and Juanita de Hernández, 1995. *Capacitación de Agentes de Desarrollo Comunitario, Modulo 4 Capacitación de Adultos*. Universidad Núr. Bolivia
- Anello, Eloy and Juanita de Hernández, 1993. *Capacitación de Agentes de Desarrollo Comunitario, Modulo 3 Participacion Comunitaria*. Universidad Núr - Insitituto Superior de Educación Rural (ISER). Bolivia
- Anello, Eloy and Juanita de Hernández, 1995. *Capacitación de Agentes de Desarrollo Comunitario, Modulo 9 Conceptos Básicos en la Administración de Proyectos*. Universidad Núr - Insitituto Superior de Educación Rural (ISER). Bolivia
- Anello, Eloy and Juanita de Hernández, 1994. *Capacitación de Agentes de Desarrollo Comunitario, Modulo 6 Planificacion Estrategica*. Universidad Núr - Insitituto Superior de Educación Rural (ISER). Bolivia
- Anello, Eloy, de Hernández, Juanita, and Lasta, Patricia, 1995. *Capacitación de Agentes de Desarrollo Comunitario, Modulo 11 Contabilidad Básica y Apoyo Logistico*. Universidad Núr - Insitituto Superior de Educación Rural (ISER). Bolivia
- Ardaya, Rubén, *Procesos de Gestión Municipal Participativa*, Volumen I, Desarrollo Democrático Participación Ciudadana, Bolivia, s.f.
- Balderrama, Teresa, et al., 1999. *Manual del Promotor Ambiental*, Fondo Mundial para la Naturaleza WWF-Bolivia, Bolivia
- Beneria-Surkin, Jordi, 1998. *Socio-Economic Study of Five Izoceño Communities*. Proyecto Kaa-Iya, CABI/WCS/USAID Bolivia. Santa Cruz
- Brady, Ronald C., 1990. *The Bolivian Environmental Protection Movement: A Current Assessment*. The Woodrow Wilson School of Public and International Affairs, Princeton University.
- BOLFOR/USAID, 1997-2000. *Boletín BOLFOR Edición Especial, Edición #13, Edición #18, y Edición #21*. BOLFOR/USAID Bolivia.

- Bustillo, Raul, 1994. *Estrategia Nacional de Comunicación para el Desarrollo Sostenible en Bolivia*. Ministerio de Desarrollo Sostenible y Medio Ambiente, Subsecretaría de Promoción, Dirección de Comunicación. La Paz, Bolivia.
- Cabezas, Susana, 1999. *Conservación del Medio Ambiente en Escuelas Indígenas: Guía para docentes del nivel primario de la Amazonía, el Oriente y el Chaco sobre educación para el desarrollo sostenible en el área de ciencias de la vida*. UNICEF y Reforma Educativa Meco-Bolivia. La Paz
- Capitanía del Alto y Bajo Izozog/WCS-Bolivia, 2000. *Ayuru, Kerekere, Tüi: Nuestra Vida en el Izozog*. Proyecto Kaa-Iya, CABI/WCS/USAID Bolivia. Santa Cruz
- Capitanía del Alto y Bajo Izozog/WCS-Bolivia, 2000. *Educación Ambiental en el Izozog, Área Ciencias de la Vida Rama Diversificada, Guía del Maestro*. Proyecto Kaa-Iya - CABI/WCS/USAID Bolivia. Santa Cruz
- Capitanía del Alto y Bajo Izozog/ WCS-Bolivia, 2000. *Arakae, Historia de la Comunidades Izoceñas*. Proyecto Kaa-Iya, CABI/WCS/USAID Bolivia. Santa Cruz
- Capitanía del Alto y Bajo Izozog/ WCS-Bolivia, 2000. *Ore, Mbaembimba Kaa Ipo Reta - Nosotros, Los Animales del Monte, Cuentos de Animales Izozog*. Proyecto Kaa-Iya, CABI/WCS/USAID Bolivia. Santa Cruz
- CARE/Bolivia, 2000. *Ciclo de Aprendizajes Básicos: El Niño y su Entorno, Primer Grado*. Educación Ambiental (Municipios de Padilla, Alcalá, Monteagudo y Muyupampa). Sucre, Bolivia
- CARE/Bolivia, 2000. *Ciclo de Aprendizajes Esenciales: Control y Conservación de Suelos, Cuarto Grado*. Educación Ambiental (Municipios de Padilla, Alcalá, Monteagudo y Muyupampa). Sucre, Bolivia
- CARE/Bolivia, 2000. *Ciclo de Aprendizajes Diferenciados: En Busca del Desarrollo Sostenible, Séptimo Grado*. Educación Ambiental (Municipios de Padilla, Alcalá, Monteagudo y Muyupampa). Sucre, Bolivia
- Catterson, Thomas M., 2000. *Retrospective Study of USAID Support to Development of the Environment Sector in Bolivia*, The Environment Team USAID/Bolivia, Bolivia
- Centro de Capacitación Integral de la Mujer Campesina - Proyecto Desarrollo Democrático Participación Ciudadana - USAID, *El Desarrollo Sostenible del Municipio*, Programa Género en los Municipios, Bolivia, s.f.
- Centro de Capacitación Integral de la Mujer Campesina - Proyecto Desarrollo Democrático Participación Ciudadana - USAID, *Capacidades Personales Valores y Actitudes*, Bolivia, s.f.

- Centro de Capacitación Integral de la Mujer Campesina - Proyecto Desarrollo Democrático Participación Ciudadana - USAID, *La Globalización y la Pobreza*, Programa Género en los Municipios, Bolivia, s.f.
- Centro de Capacitación Integral de la Mujer Campesina - Proyecto Desarrollo Democrático Participación Ciudadana - USAID, *La Ley de Participación Popular*, Programa Género en los Municipios, Bolivia, s.f.
- Centro de Capacitación Integral de la Mujer Campesina - Proyecto Desarrollo Democrático Participación Ciudadana, *La Planificación Participativa Municipal*, Bolivia, s.f.
- Centro de Capacitación Integral de la Mujer Campesina, *Instrumentos de Análisis de la Realidad Nacional*, Programa Formación de Líderes Locales para la Participación Política y Gestión Comunal, Bolivia, s.f.
- Centro de Educación y Desarrollo Integral del Campesino (CEDICA), 1999. *Guía Didáctica de Educación Ambiental*, Santa Cruz, Bolivia
- Centro de Estudios de la Realidad Económica y Social (CERES), 2000. *Los Conflictos Socioambientales en el Parque Nacional Carrasco*. Cochabamba, Bolivia
- Centro Interdisciplinario de Estudios Comunitarios (CIEC), 1996. *Educación Ambiental Rural: "Guía para la Aplicación de Temas Ambientales en la Escuela"*.
- Centro Interdisciplinario de Estudios Comunitarios (CIEC), Ministerio de Desarrollo Sostenible y Medio Ambiente, FONAMA/Banco Mundial, 1995. *Educación para el Desarrollo Sostenible: Guía Conceptual y Metodología para el Docente*. San Borja-Beni-Bolivia
- Conservation International, 1999. *The 4-P Workshop, Designing Communications Strategies for Conservation Project*. Conservation International. Washington, D.C.
- Cuba R., Pablo, 1998. *Conozcamos Nuestro Municipio*. Gobierno Municipal de Tarata.
- Cuéllar, Erika, 2000. *Tatu Reta*. Proyecto Kaa-Iya, CABI/WCS/USAID Bolivia. Santa Cruz
- Cuéllar, Rosa Lerry, 2000. *¿Para Qué Sirven los Animales el Monte en Izozog?* Proyecto Kaa-Iya, CABI/WCS/USAID Bolivia. Santa Cruz
- de Hernández, Juanita, Anello, Eloy, Boddy, Peter, Cortez, Rene Mitchel, and Shoai, Crystal, 1995. *Capacitación de Agentes de Desarrollo Comunitario, Modulo 5 Areas Programáticas del Desarrollo*. Universidad Núr - Instituto Superior de Educación Rural (ISER). Bolivia
- de la Quintana, Liliana, 1998. *Nuestros Derechos: Niñas y Niños Indígenas en la Amazonia, Oriente y Chaco (Las Tierras Bajas de Bolivia)*, UNICEF/Bolivia. La Paz

- de Vries, Aldert, 1998. *Territorios Indígenas en las Tierras Bajas of Bolivia: Un analisis de su estado a 1998*, Confederación de Pueblos Indígenas de Bolivia (CIDOB), Centro de Planificación Territorial Indígena (CPTI), y Servicio Holandés de Cooperación al Desarrollo (SNV). Santa Cruz
- Domroese, Margret C. and Sterling, Eleanor J., 1999. *Interpretación de la Biodiversidad, Manual para Educadores Ambientales en los Trópicos*. American Museum of Natural History. New York, United States
- EDC/USAID, *Aprendiendo Jugando: Guía para Educadoras, Maestros/as y Promotores*. La Paz
- Educación Radiofónica de Bolivia ERBOL, 1996. *Estrategia de Comunicación Educativa para el Desarrollo*, Bolivia
- Equipo DDPC, *Actores de la Gestión Municipal Participativa*, Volumen III, Tomo I, Desarrollo Democrático Participación Ciudadana, Bolivia, s.f.
- Equipo DDPC, *Actores de la Gestión Municipal Participativa*, Volumen III, Tomo II, Desarrollo Democrático Participación Ciudadana, Bolivia, s.f.
- Equipo DDPC, *Actores de la Gestión Municipal Participativa*, Volumen III, Tomo III, Desarrollo Democrático Participación Ciudadana, Bolivia, s.f.
- Equipo DDPC, *Ciclo de Gestión Municipal Participativa*, Volumen II, Tomo I, Desarrollo Democrático Participación Ciudadana, Bolivia, s.f.
- Equipo DDPC, *Ciclo de Gestión Municipal Participativa*, Volumen II, Tomo II, Desarrollo Democrático Participación Ciudadana, Bolivia, s.f.
- Equipo DDPC, *Ciudadanía en la Participación Popular*, Proyecto Desarrollo Democrático Participación Ciudadana, Bolivia, s.f.
- Erazo, Orlando, 1998. *Pilcomayo. Estudios sobre la Contaminación*, Centro de Estudios Regionales para el Desarrollo de Tarija, Bolivia
- ERBOL, 2000. *Evaluación de Incidencia de Campaña Radiofónica: Alimentos Fortificados Tomo I: Informe de Resultados y Anexos*. Educación Radiofónica de Bolivia. La Paz, Bolivia
- Escuelas del ANMI San Matías. *Educación Ambiental: Guía de Aprendizaje para Alumnos del Nivel Primario - Cursos Primero y Segundo (I-II)*. Santa Cruz, Bolivia
- Escuelas del ANMI San Matías. *Educación Ambiental: Guía de Aprendizaje para Alumnos del Nivel Primario - Cursos Tercero y Cuarto (III-IV)*. Santa Cruz, Bolivia

- Escuelas del ANMI San Matias. *Educación Ambiental: Guía de Aprendizaje para Alumnos del Nivel Primario - Cursos Quinto y Sexto (V-VI)*. Santa Cruz, Bolivia
- Federación de Asociaciones Municipales de Bolivia (FAM), 2000. *Proyecto Desarrollo Democrático y Participación Ciudadana, 2000*. La Paz
- Fernández, Marisol Ramallo, 1999. *Impacto Institucional y Tecnológico del Proyecto Agroforestal "Jatun Sach'a"*. Proyecto Manejo, Conservación y Utilización de los Recursos Forestales en el Trópico de Cochabamba Fase II - UNDCP/Ministerio de Agricultura/FAO. Cochabamba, Bolivia.
- FONAMA, *Cuenta Ambiental "Iniciativa para las Américas (EIA)"*, Fondo Nacional para el Medio Ambiente (), Bolivia, 2001
- FONAMA, *Manual para la Elaboración de Proyectos de Educación Ambiental y Comunicación*, Bolivia, s.f.
- Galarza, Isabel M., 1998. *Evaluando una Experiencia de Educación Ambiental*. LIDEMA y Fundación Konrad Adenauer Stiftung. La Paz, Bolivia
- Geller, Scott E., *The Challenge of Increasing Pro-Environment Behavior*, Virginia Polytechnic Institute and State University, Estados Unidos, s.f.
- Giné L., Jannette, 1999. *Guía Didáctica de Educación Ambiental*. Centro de Educación y Desarrollo Integral del Campesino. Santa Cruz, Bolivia
- Gobierno Municipal de Tarata. *Conozcamos Nuestro Municipio*. Centro de Estudios de la Realidad Económica y Social (CERES). Cochabamba, Bolivia
- GOB, 1993. *Políticas y Estrategia de Educación Ambiental en Bolivia (PAABP)*. Secretaria Nacional del Medio Ambiente Dirección de Políticas Ambientales - Maria Soledad Quiroga y Elvira Salinas. La Paz
- GOB, 2000. *Centinela de la Salud*. Ministerio de Salud y Previsión Social y Ministerio de Defensa Nacional Comando en Jefe FF.AA.La Paz
- GOB, 2000. *Manual del Instructor Para la Instrucción Integral del Soldado "Centinela de la Salud"*. Ministerio de Salud y Previsión Social, Comando en Jefe de las FF.AA. de la Nación Departamento III- Operaciones - Unidad de Capacitación y Acreditación Profesional Programa Centinela de la Salud. La Paz
- GOB/USAID, 2000. Volumen 1 *Ciclo de Gestión Municipalidad Participativa*. Rubén Ardaya S. Proyecto Desarrollo Democrático Participación Ciudadana. La Paz
- GOB/USAID, 2000. Volumen 2 *Ciclo de Gestión Municipalidad Participativa: Tomo 1 Guía para el Facilitador*, Proyecto Desarrollo Democrático Participación Ciudadana. La Paz

- GreenCOM. *Áreas Protegidas de Nicaragua (Guía Turística)*. Academy for Educational Development/USAID. Managua, Nicaragua
- Guzmán, Jorge, 2001. *Informe sobre Estudio VOA/PAS en el Chapare*, VOA/PAS, Bolivia
- Guzmán, Jorge, 2001. *Programa VOA/PAS en los Yungas, Informe y Resultado sobre la primera actividad*, VOA/PAS, Bolivia
- Hamel, J, et.al., *Evaluación de la Exposición en Sitios Peligrosos - Zona Metalúrgica Alto Lima II El Alto - Bolivia*, Universidad Mayor de San Simón - Bolivia, Organización Panamericana de la Salud - Oficina Regional en Bolivia, Universidad Autónoma de San Luis Potosí - México, Centro Panamericano de Ecología Humana y Salud - OPS-OMS, s.f.
- Herrera, Patricia, Dorys Mendez Z., Dorys, and Parra F., Beatriz. *Manual de Educación Ambiental para el Maestro*, Universidad Autónoma Gabriel René Moreno, Museo de Historia Natural, Bolivia, s.f.
- Herrera, Patricia; Mendez, Dorys and Parra F., Beatriz. *Manual de Educación Ambiental para el Maestro*. Universidad Autónoma Gabriel René Moreno, Museo de Historia Natural, Departamento de Educación Ambiental y Difusión. ALKE & Co. (Bolivia), S.A.
- Kern, Robert K., 1994. *How to Design and Implement an Environmental Awareness Campaign*, USAID Project in Development and Environment (PRIDE), United States
- Los Dialogos de Bosquito...y el Profesor Búho*. Departamento de Comunicación Social, La Superintendencia Forestal de Bolivia, November 1997
- Ministerio de Desarrollo Sostenible y Medio Ambiente, Secretaria de Recursos Naturales y Medio Ambiente, Subsecretaria de Promoción, 1997. *Teniendo un Puente al Futuro, Políticas de Educación para el Desarrollo Sostenible*. Ministerio de Desarrollo Sostenible y Medio Ambiente. La Paz, Bolivia
- Ministerio de Desarrollo Sostenible y Planificación, Servicio Nacional de Áreas Protegidas, 2000. *Información Técnica del Sistema Nacional de Áreas Protegidas de Bolivia*. Ministerio de Desarrollo Sostenible y Planificación. La Paz, Bolivia
- Ministerio de Desarrollo Sostenible y Planificación, Viceministerio de Asuntos de Género, Generacionales y Familia, 1999. *Indicadores Sociales, Etnicos, de Género y Generacionales de Municipios con Población Indígena del Oriente, Chaco y Amazonia (Beni)*. Universidad de la Cordillera/UNICEF. LaPaz, Bolivia
- Ministerio de Desarrollo Sostenible y Planificación, Viceministerio de Asuntos de Género, Generacionales y Familia, 1999. *Indicadores Sociales, Etnicos, de Género y*

- Generacionales de Municipios con Poblacion Indigena del Oriente, Chaco y Amazonia (Cobija - Pando)*. Universidad de la Cordillera/UNICEF. LaPaz, Bolivia
- Ministerio de Desarrollo Sostenible y Planificacion, Viceministerio de Asuntos de Genero, Generacionales y Familia, 1999. *Indicadores Sociales, Etnicos, de Genero y Generacionales de Municipios con Poblacion Indigena del Oriente, Chaco y Amazonia (Santa Cruz)*. Universidad de la Cordillera/UNICEF. LaPaz, Bolivia
- Ministerio de Desarrollo Sostenible y Planificacion, Viceministerio de Medio Ambiente, Recursos Naturales y Desarrollo Forestal, 1996. *Ley Forestal No. 1700 (12 de Julio de 1996). Reglamento de La Ley Forestal Decreto Supremo No. 24453 (18 de Octubre de 1996)*. LaPaz, Bolivia
- Ministerio de Desarrollo Sostenible y Planificación, Viceministro de Medio Ambiente, Recursos Naturales y Desarrollo Forestal, Dirección General de Desarrollo Forestal Sostenible, 1999. *Ley Forestal No. 1700 Reglamento de la Ley Forestal Decreto Supremo No. 24453*. Ministerio de Desarrollo Sostenible y Planificación. La Paz, Bolivia
- Nuevo Gran Angula, Revista del Desarrollo Alternativo, Año 2001 No. 3*. La Paz, Bolivia
- OESER-CREACION, 2000. *Conocer es Vivir: Proyecto Etno-Ecoturistico Educativo*. Cochabamba, Boliva
- OYENDU, Voz de la Confederación de Pueblos Indígenas de Bolivia, Segunda Epoca - Numero 9 Diciembre 2000*. CIDOB. Santa Cruz, Bolivia
- Palma, Edgar, Aramayo S., Osvaldo, Inchauste, Víctor Hugo, *Plan de Manejo del Area Protegida Amboró*, DFID - CARE Bolivia - Proyecto Amboró, Bolivia, s.f.
- PROA - FONAMA, 1997. *Guía de trabajo - Franelógrafo*, Proyecto “Aplicación de un Paquete Educativo para lograr Calidad Ambiental 1996-1997”, Bolivia, Enero
- PROCESO Servicios Educativos and WWF/Bolivia. *Educación Ambiental: Escuelas del Area Natural de Manejo Integrado San Matías (Guía para Educadores)*. Bolivia
- PROCESO Servicios Educativos and WWF/Bolivia, 1999. *Manual del Promotor Ambiental (Apoyo a la Auto Gestión Local de Áreas Protegidas del Pantanal Boliviano)*. Santa Cruz, Bolivia
- PROMETA, *Construyendo Alianzas entre la Sociedad y la Naturaleza*, Folleto, Protección del Medio Ambiente Tarija (PROMETA), Bolivia, s.f.
- PROMETA, *Educación Ambiental en el Área del Parque Nacional y Área Natural de Manejo Integrado de la Serranía del Aguara Güe*, Cartilla de promoción para la:, Bolivia, 2000

- Proyecto de Investigación sobre los Recursos Naturales (CIDOB-DFID), 2001. *Memorias del Primer Encuentro Nacional del Manejo de Fauna en Territorios Indígenas de Bolivia (5-10 Junio 2000, Santa Cruz, Bolivia)*. Santa Cruz
- Proyecto de Investigación sobre el Manejo los Recursos Naturales (CIDOB-DFID), 2001. *Manejo tradicional de los recursos naturales en los pueblos indígenas*. Santa Cruz
- Proyecto Desarrollo Democrático y Participación Ciudadana (DDPC) and Federación de Asociaciones de Municipios de Bolivia (FAM-Bolivia), 2000. *Normas Fundamentales para la Gestión Municipal Participativa: Compendio*. Cochabamba, Bolivia
- Proyecto Desarrollo Democrático Participación Ciudadana, 1997. *Democracia y Participación: Manual para el buen ciudadano*. Bolivia
- Proyecto Desarrollo Democrático y Participación Ciudadana - USAID Bolivia, 2000. *Normas Fundamentales para la Gestión Municipal Participativa, Compendio*. Bolivia
- Quiroga, María Soledad and Salinas, Elvira, 1993. *Educación Ambiental y Comunicación*, FONAMA, Bolivia
- Revista Habitat*, Liga de Defensa del Medio Ambiente LIDEMA, Bolivia, No. 57, 2000
- Revista Habitat*, Liga de Defensa del Medio Ambiente LIDEMA, Bolivia, No. 58, 2000
- Revista Habitat*, Liga de Defensa del Medio Ambiente LIDEMA, Bolivia, No. 59, 2000
- Revista Los Diálogos de Bosquito y El Profesor Búho - ¿Qué es el Bosque y la Biodiversidad?*, Superintendencia Forestal de Bolivia, Bolivia, 1997
- Rojas, Pablo Cuba, 1997. *El Difícil Avance de Los Procesos Educativos: Una experiencia educativa de riego en Apaga Punta - Bolivia*, Centro de Estudios de la Realidad Económica y Social - CERES, Cochabamba
- Salinas, Giovanna, 2001. *Estudio de La Calidad de Agua Mediante El Uso de Macroinvertebrados Bentonicos en Dos Rios de La Rnfft*, Reserva Nacional de Flora y Fauna Tariquia, Bolivia
- Seligson, Mitchell A., 2001. *La Cultura Política de la Democracia en Bolivia: 2000*, Universidad Católica Boliviana, Bolivia
- Seligson, Mitchell A., 2000. *La Cultura Política de la Democracia en Bolivia: 2000*. Universidad Católica Boliviana / Encuestas y Estudios / USAID. La Paz, Bolivia
- Seligson, Mitchell A., 1999. *The Political Culture in Bolivia: 1998*. Department of Political Science, University of Pittsburg / USAID. La Paz Bolivia

- Seligson, Mitchell A., 1998. *The Political Culture of Democracy in Bolivia: 1998*, U.S. Agency for International Development, Bolivia
- SERNAP. *Plan de Manejo del Área Protegida Amboró*. SERNAP, CARE Bolivia, Proyecto Amboro. La Paz, Bolivia
- Suárez A., Roger, 2000. *De Todo Un Poco: Experiencias, Reflexiones, Pensamientos, Poesías y Canciones*. Proyecto Kaa-Iya - CABI/WCS/USAID Bolivia. Santa Cruz
- TRÓPICO (Asociación Boliviana para la Conservación), *Diagnostico Participativo: Recursos Naturales y Patrimonio Cultural de Parque Nacional y Area Natural de Manejo Integrado Cotapata*
- UNDCP, Ministerio de Agricultura, Ganadería y Desarrollo Rural Viceministerio de Desarrollo Alternativo, FAO, and PNUD, 1999. *Educación Ambiental para el Trópico de Cochabamba (Guía del Maestro)*. Cochabamba, Bolivia
- UNDCP, Ministerio de Agricultura, Ganadería y Desarrollo Rural Viceministerio de Desarrollo Alternativo, FAO, and PNUD, 1999. *Educación Ambiental para el Trópico de Cochabamba (Cuaderno de Apuntes para el Alumno, Sexto de Primaria)*. Cochabamba, Bolivia
- UNDCP, Ministerio de Agricultura, Ganadería y Desarrollo Rural Viceministerio de Desarrollo Alternativo, FAO, and PNUD, 1999. *Educación Ambiental para el Trópico de Cochabamba (Cuaderno de Apuntes para el Alumno, Séptimo de Primaria)*. Cochabamba, Bolivia
- UNDCP, Ministerio de Agricultura, Ganadería y Desarrollo Rural Viceministerio de Desarrollo Alternativo, FAO, and PNUD, 1999. *Educación Ambiental para el Trópico de Cochabamba (Cuaderno de Apuntes, Octavo de Primaria)*. Cochabamba, Bolivia
- UNDCP, Ministerio de Agricultura, Ganadería y Desarrollo Rural Viceministerio de Desarrollo Alternativo, FAO, and PNUD, 1999. *Educación Ambiental para el Trópico de Cochabamba (Texto del Alumno, Sexto de Primaria)*. Cochabamba, Bolivia
- UNDCP, Ministerio de Agricultura, Ganadería y Desarrollo Rural Viceministerio de Desarrollo Alternativo, FAO, and PNUD, 1999. *Educación Ambiental para el Trópico de Cochabamba (Texto del Alumno, Séptimo de Primaria)*. Cochabamba, Bolivia
- UNDCP, Ministerio de Agricultura, Ganadería y Desarrollo Rural Viceministerio de Desarrollo Alternativo, FAO, and PNUD, 1999. *Educación Ambiental para el Trópico de Cochabamba (Texto del Alumno, Octavo de Primaria)*. Cochabamba, Bolivia
- UNICEF and PROCESO (Servicios Educativos), 2000. *Reconstruyendo Nuestra Vida: Apoyo Psicológico a Los Damnificados de Ascensión de Guarayos - Agosto 2000*. La Paz, Bolivia

- USAID, 2000. *USAID's Environmental Programs in Bolivia*, Boletín, Bolivia, Mayo de 2000
- USAID/BOLIVIA, 2000, *Results Review and Resource Request (R4) Fiscal Years (FY) 1999-2002*, USAID, Bolivia
- USAID/BOLIVIA, 1998. *Strategic Plan FY 1998-2002*, USAID, Bolivia
- USAID/BOLIVIA, 1997. *Participación Ciudadana Efectiva - Seminario Participación Electoral (Material de Apoyo)*, Gobierno de Bolivia - USAID Bolivia, Bolivia, Marzo de 1997
- Villaruel, Richard, 2000. *Los Animales del Monte También Tienen Enfermedades*. Proyecto Kaa-Iya, CABI/WCS/USAID Bolivia. Santa Cruz
- Wood, Diane Walton, 1984. *Preliminary Analysis of Private Environmental Groups in Bolivia*. International Institute for Environment and Development / USAID. La Paz, Bolivia

ANNEX C: ORGANIZATIONS VISITED AND PEOPLE INTERVIEWED

USAID/BOLIVIA

Liliana Ayalde, Director
Wayne Nilsestuen, Deputy Director

Environment

Barbara Belding, Chair
Robert Kenny, Deputy Chair - Environmental Team
Doug Mason, Biodiversity and Forestry Management
Victor Bullen, Regional Environmental Advisor

Economic Opportunity

David Delgado, Chair
Jeff Levin, Rural Finance Services

Democratic Initiatives

Michael Eddy, Chair

Counternarcotics

Ken Wiegand, Chair
Orietta Sacre

P.L. 480

Carl E. Brockman, Executive Director
Luis Jordán, Technical Director
Oscar Calvimontes, Technical Department

Food Security

Larry Rubey, Director
Daniel Sanchez-Bustamante

Health

Susan K. Brems, Chair
Judith Timyan, Reproductive Health Technical
Advisor/Population Leadership Program

SOS

Sonia Aranibar

LA PAZ

Ministry of Sustainable Development and Planning Vice Ministry for Environment, Natural Resources and Forestry Development

Neisa Roca Hurtado, Vice-Minister
Marcelo Pinto Sanzatenea, Director General of
Quality Control and Environmental Services
Lourdes Parrado, Coordinator -
BOLFOR/VMDARNF
Marcelo Pinto, Director – DGICSA
Hernan Fernandez, Consultant – DEIGCSA, DGICSA

Ministry of Sustainable Development and Planning National Park System (SERNAP)

Luis Pabón Zamora, Director
Sergio Eguino B., Director - Planning

Conservation International (CI)	Juan Pablo Arze, Director CI - Bolivia Raul Bustillo, Marketing and Communication, Programs and Projects Manager
Wildlife Conservation Society (WCS)	Lilian Painter, Co-Director Robert Wallace, Investigator
TROPICO	Ximena Aramayo Cuenca, Executive Director
LIDEMA	Marianella Curi Chacón, Executive Director
Kusillo Museum	Wendy McFarren, Director Bill Fischelis, Technical Advisor
REDES MA	Helen Weeda, Coordinator Gabriela Ugarte, Communications
Peace Corps	Charna Lefton, Deputy Director Ryan Taylor, APCD Cathy Fitzgerald, PCV
Embassy Public Affairs Section (PAS)	Ray Tripp, Cultural Officer Melissa Clegg-Tripp, Information Officer Olga Palma, Mass Media Specialist Sylvia de Vizcarra, Cultural Specialist
QUIPUS Cultural Foundation	Peter McFarren Deutsch, President
SOLON Foundation	Pablo Salon, Executive Director Juan Carlos Alurralde T., Coordinator - CGIAB Project Sharbel Gutierrez
UNICEF	Sonia Noriega, Amazonia y Proguarani Project
GTZ	Maria del Carmen Rocabado, Projects Coordinator
Escuelas Radiofónicas de Bolivia (ERBOL)	Rene Seballos, Director
GRAMA	Elvira Salinas, Director Maria Soledad Quiroga
CARE BOLIVIA	Francisco Boersn, Associate Director Erik Arancibia, Director Project MIRNA E. Yovanna Imaña M., Director P.L. 480 Title II Project Liz Fischelis, Assistant Sub-Director

	Other staff
SEMTA	Juan Jose Castro Guzman, Executive Director
Catholic University, La Paz	Ronald Grebe Lopez, Director - Social Communication Department
UNDP	Eduardo Forno, Acting Resident Representative
World Bank	Maximo Liberman, Environmental Specialist, Opportunity Pillar
University of San Andres Ecology Institute	Heidi Resnikowsky, Acting Director
CIEC	Eric Roth
National Chamber of Industries	Geraldo Velasco Tellez, Manager
CPTS	Carlos Arze Landívar, Director
AJARI	Cecilia Crespo Valdivia, Director Juan Alvaro Cisneros Aguilar
Bolivian Association of Broadcasters (ASBORA)	Raul Novillo Alarcón, Board of Directors and General Manager - Digital Sur 95.7 FM Carlos Azurduy Fuentes, Commercial Manager - Digital Sur 95.7 FM.
FONAMA	Consuelo Wolfhaard Rudón, Coordinator - Initiatives of the Americas Environmental Account Waldo Gómez, Technical Assistant to the Environmental Account
Democratic Citizen Participation Development (DDCP) Project	Maria Eugenia Vera, Municipal Governance Juan Carlos Munguía, Municipal Governance Juan Carlos Barbery, Municipal Governance Juan José Munguía S., DDCP Participation Support Fund Ludwing A. Valverde, DDCP Effective Citizenship Specialist
Food for the Hungry, Intl.	Tricia Peterson, Environmental Coordinator Jorge Guerra, Roads

SANTA CRUZ

WCS

Michael Painter, Bolivia Program Director
Oscar Castillo, Kaa-Iya Project Coordinator

BOLFOR

John Nittler, Team Leader
Julio Ledezma, Forestry Management Specialist
Marco Antonio Albornoz Castro, Assistant Coordinator of
Forestry Organizational Development

WWF

Patricia Caffrey, Director and Country Representative
Ana Alicia Eid, Communications
Roger Landívar
Henry Campero
Pamela Rebolledo G., Pantanal Coordinator

Capitanía del Alto y Bajo Izoog (CABI)

Evelio Arambiza Segundo, Executive Director
Gueisa Duran Ortiz

Noel Kempff Mercado National History Museum

Patricia Herrera de Pinto, Director - Environmental
Education and Diffusion

EDAMAZ

Gabriel Rene Moreno

Confederación de los Pueblos Indígenas de Bolivia (CIDOB)

Gueisa Durán Ortíz, Economy and Development
Secretariat
Eliana Rioja, Clearinghouse Coordinator
Pablo Rivera, Communication
Angel Comaconi, Education
Wendy Townsend, Consultant

Universidad NUR

Jeremy Martin, Director - Sustainable Development
Department
Mary C. Torrico Ferrel, Coordinator - Social
Communication Department
John Kepner, Director - International Projects and
Programs

Fundación Amigos de la Naturaleza (FAN)

Natalia V. Araujo, Coordinator - Amboró-Madidi
Corridor
Alain Muñoz-Communication Director
Enrique Gutierrez, Organizational Development Director
Claudia Jordan, Assistant - Biodiversity Guides Project
Cynthia Añez, Director - FAN Press
Arneldo Montero, Conservation, Ecotourism and Local
Communities Department Director

PROCESO

Teresa Balderama, Director Environmental Education
Project

Waite Hernando, Education Technician
Agustin Ferruficio, Field Technician

COCHABAMBA

Farmer Agrobioenergetic Assistance Program (PAAC)

Magdalena Medrano V., Executive Director

Peace Corps

Remigio Ancalle, APCD - Natural Resources Management and Conservation
Ing. Nathaniel Mahanes-Natural Resources Volunteer

CONCADE

Steven Huffstutlar, Director
David Anderson, Marketing and Investment Director
Dr. Larry Szott, Agriculture Director
Christine Arcos, Educational Program Coordinator

UNDCP/FAO Forestry Project

Greg Minnick, Chief Technical Advisor
Javier Ramallo Fernandez, Communication Consultant
Emma Lunapizarra, Education Consultant

San Simon University

Emiglio Cespedes Salazar, Agriculture Sciences Faculty - Ladder Project (PROLADE) Coordinator

Economic and Social Studies Center (CERES) Bolivia

Pablo Cuba, Director

Forestry School

Gustav Nebel, Technical Adviser

National Agricultural University, Cochabamba (AGRUCO)

Freddy Delgado Burgoa, Director

TARIJA

PROMETA

Alfonso Blanco, Executive Director
Claudio Terzo

Tarija Municipality

Oscar Tardoya Roy a, Director - Environment, Natural Resources and Forestry Development

Instituto Interuniversitarias (INIBREH)

Claude de Patoul, Chief Technical Advisor

Centro de Estudios Regionales de Tarija (CERDET)

Miguel Castro Arce, Executive Director

Tarija Chamber of Industries

Amado Montes, Director - Environment Unit and Cleaner Production Advisor to the Tarija Municipality

ANNEX D: ASSESSMENT INTERVIEW GUIDE

1. Nombre de la Institución / Organización
2. Dirección
3. Numero de Teléfono

4. Propósito Principal de la Institución (¿Cuales son las actividades generales de la organización?)

5. Nombres y Cargos de las Personas Entrevistadas

6. Actividades de Educación y Comunicación Ambiental (EyCA):

<input type="checkbox"/> Educación Formal	<input type="checkbox"/> Educación No-Formal	<input type="checkbox"/> Medios Masivos
<input type="checkbox"/> Medios Impresos	<input type="checkbox"/> Capacitación en EyCA	<input type="checkbox"/> Ensayo de Materiales

 Investigación Social: Listar las técnicas (observación, cualitativas verbales, cuantitativas verbales, técnicas participativas) _____

<input type="checkbox"/> Participación Comunitaria	<input type="checkbox"/> Mercadeo Social	<input type="checkbox"/> Política y leyes
<input type="checkbox"/> Desarrollo de Capacidad Local / Municipal	<input type="checkbox"/> Redes y Colaboración Interinstitucional	

- Otras:

7. ¿Quién es la audiencia meta principal de sus actividades de EyCA? ¿A qué otras audiencias se dirigen?

8. ¿Cuáles son sus actividades de EyCA y que metodologías están utilizando para comunicarse con su audiencia meta? (CONSEGUIR UNA LISTA Y SI ES POSIBLE EJEMPLARES DE LOS MATERIALES)

9. ¿Han realizado algunas investigaciones sobre sus audiencias metas, pre-ensayos de materiales, y/o monitoreos / evaluaciones del impacto de las actividades de educación y comunicación ambiental? (PROFUNDIZAR)

10. ¿Qué infraestructura existente se ha utilizado para realizar estas actividades?

11. ¿Hasta que punto se les ha incorporado las actividades de EyCA en su sistema?

12. ¿Comparten experiencias y materiales de EyCA con otras organizaciones/ instituciones / individuos? ¿De qué manera?

13. ¿Qué lecciones - triunfos y fracasos - han aprendido de estas actividades?

14. ¿Cuáles han sido las principales limitaciones y dificultades en realizar las actividades de EyCA?
15. ¿Qué fuentes externas le esta prestando o le ha prestado asistencia en EyCA?
16. A base de sus experiencias en EyCA ¿Qué seguimiento le gustaría a usted ver (actividades, procesos y necesidades en el futuro)?
17. ¿A quién(es) más recomendaría que entrevistemos durante nuestra visita?
18. Ahora me gustaría cambiar un poco el tema sobre las actividades específicas de ustedes para explorar una visión más universal de la educación y comunicación ambiental..... De todos los problemas ambientales que tiene Bolivia, ¿cuál es el problema prioritario que debería ser el enfoque de una actividad intensiva de EyCA? ¿Porqué?
19. ¿Quién debería ser la audiencia meta prioritaria para una actividad intensiva de educación y comunicación ambiental? ¿Porqué?
20. ¿Cuál sería la fuente de información confiable para esta audiencia?
21. ¿Cuál sería la organización o institución que debería tomar el liderazgo para realizar esta actividad de educación y comunicación ambiental?
22. ¿Ha existido una “campaña” (social o comercial) que ha tenido mucho impacto (positivo) en Bolivia? ¿Cuál y porque? Negativo – ¿cuál y porqué?
24. ¿Ha existido una campaña o actividad ambientalista que ha tenido mucho impacto? ¿Cuál? ¿Porqué cree que tenía tanto impacto? o ¿porqué no ha existido?
25. Cuando piensa en educación y comunicación ambiental, ¿Cuál organización/ proyecto esta reconocido como la mayor protagonista / el líder en este campo?

ANNEX E: EE&C TOOLBOXES

The term ‘**EE&C Toolbox**’ refers to a packaged set of EE&C tools and materials that are **designed nationally to increase, strengthen, and support action locally**. They would be designed through a participatory process and formative research with the target audience and rigorously pretested to ensure that they are understandable, attractive, relevant to and actionable by the people within that specific audience.

The EE&C Toolbox would include a ‘User’s Guide’ that describes the **participatory methodology that would be employed to assist the target audience to identify, develop consensus for, and take specific actions**. Depending on the target audience and the EE&C objective, EE&C Toolbox materials might include workbooks or checklists, posters, pamphlets, videos, radio materials and scripts that could be adapted by local radio stations, and ideas for other complementary EE&C activities that can be developed using a participatory process with departmental, municipal, community-based groups, and other local stakeholders.

These EE&C Toolboxes could be reproduced and implemented by the SO Team partners and Bolivian governmental and non-governmental institutions and organizations, and international donor programs and projects working on the same environmental issue or in the same geographical area. This would decrease duplication and costs of EE&C design and production, create strategic alliances and synergy between various players working in similar programs or projects, and standardize the core of EE&C messages the target audiences receive from a wide variety of channels. Collaborative Training-of-Trainers Workshops with SO Team partners, Bolivian governmental and non-governmental institutions and organizations, and international donor programs and projects would provide skills-based training on how to use the toolboxes and provide the opportunity for networking, cooperation, and collaboration.

An Example of an EE&C Toolbox in Action

National Park Week EE&C Toolbox: An inter-institutional team composed of SERNAP, NGO park administrators, and representatives from selected municipalities (men and women) would develop the Toolbox methods, tools, and materials based on and guided by the experiences of Conservation International's *Madidi* Park Week and the “4-P Participatory Planning Process”. These would be rigorously pretested and then launched in one-two municipalities. This experience would be evaluated and the results used to finalize the Toolbox methodology, tools, and materials.

Through the participatory methodology described in the “Users Guide”, municipalities (government, NGOs, community-based groups, schools, etc.) would develop a local Park Week Celebration Action Plan. The Toolbox could contain videos and cassette recordings depicting and sharing experiences of other municipalities who had conducted a local park week celebration. It would provide a variety of ideas and support materials on municipal-level EE&C activities that could be conducted to support this celebration. For example, the Toolbox could

include sample radio scripts and a standard National Park Week jingle and song that could be used by local radio stations. It could include National Park Week posters and sample ideas for local posters that could be created by local groups, NGOs, and school children to promote the celebration. The Toolbox could include ideas for local contests and folk media; these could be videoed and recorded for on going park promotion and for networking with other municipalities.

The concept of National Park Week and the specific park celebration would be promoted through national mass media and media advocacy. National level journalists would be invited to participate in the municipal Park Week Celebration and encouraged to print and broadcast articles about the park and the celebration.

This experience would be evaluated annually and the results used to fine-tune the Unified EE&C Strategy Action Plans for the following year.

Other Examples of EE&C Toolboxes

Municipal Toolboxes

Municipal Action EE&C Toolbox: This toolbox would include: ***Ordenamiento Ambiental Municipal*** - a practical, participatory methodology and format to develop a Municipal Action Plan (Local Agenda 21). **Rapid Environmental Impact Assessment** – a simple tool (checklist) that enables municipalities to apply an environmental impact assessment to their local projects and activities. ***¿Qué Podemos Hacer?*** - a practical tool and methodology that empowers community-based groups to identify an environmental problem and take action to solve it.

Municipal Cleaner Production EE&C Toolbox: This toolbox would provide the practical, effective methodology, tools, and materials needed to develop and implement a Municipal Cleaner Production Certification Program. Businesses would be motivated to comply with cleaner production criteria in order to be certified by the municipality. CPTS would provide overall technical support and training. NGOs and universities could assist in providing technical assistance and support to small and medium-sized businesses.

The toolbox would include the support materials needed to implement the certification program. Example materials might include: Cleaner Production Certification Checklist (A practical process and checklist municipalities can use to identify sources of pollution and monitor adoption of cleaner production technologies); and technical guides (CDs, videos, cassettes, and/or manuals) to support NGO, university, and private sector training. It would also include prototypes of EE&C materials that could be produced to increase awareness, advocacy, and action for cleaner production. These might be print materials such as posters, clean production applications and certificates, and brochures and mass media materials (radio and television) that could be adapted to promote and create demand for cleaner production.

Forestry Toolboxes

Community-based Forestry Action EE&C Toolbox: This toolbox would contain a participatory methodology, tools, and materials that would assist local groups to take action and increase municipal-level communication about sustainable forestry management.

National Park System and Biodiversity Conservation Toolboxes

National Park System Promotion EE&C Toolbox: This toolbox would contain a variety of materials and participatory tools to create awareness, support, and advocacy for the National Park System and the specific parks within it.

National Park Week EE&C Toolbox: Described above.

Park Sentinel EE&C Toolbox: This school-based activity could be coordinated and promoted nationally, and implemented locally within municipalities located in or near to a national park or reserve. It would involve, motivate, and educate school children in specific activities (one each month) to do specific actions related to the park and biodiversity conservation. For example, school children could conduct simple surveys to assess environmental knowledge, attitudes, and practices within their community (integrating math, science, and written skills in one activity). The results would be used to assess the impact of the Unified EE&C Strategy components and programs. School children could also assess levels of pollution in the local rivers and streams (in coordination with GLOBE), evaluate tree density, monitor birds in their area, estimate the volume of solid waste in their community by measuring how much garbage is produced within a week in their own houses, or write letters to their legislators about local environmental problems and potential solutions. The children would receive certificates and other recognition for taking part in the program and doing the monthly activities.

Ecotourism EE&C Toolbox “Conserving Biodiversity Creates Jobs”: This toolbox would be based on Conservation International’s experience in *Chalalan* and could be used to promote the benefits eco-tourism can provide to municipalities, local groups, and families. *Chalalan S.A.* is now an independent, self-supporting eco-tourism company. Their experience and the methodology used to create this sustainable income source for biodiversity conservation would be an important resource to other municipalities in and close to national parks and reserves.

Ecoregional Planning Toolboxes

Award Scheme EE&C Toolbox: This toolbox would provide the practical, effective methodology, tools, and materials to develop an awards program which uses a social mobilization approach to increase environmental action in a wide range of stakeholders.

EE&C Amboró-Madidi Corridor (CAM) EE&C Toolbox: This toolbox would provide a participatory, collaborative methodology to promote the corridor and negotiate commitment to a

common vision for natural resource management and biodiversity conservation amongst the multiple stakeholders in this large, widely diverse geographical area.

Watershed /Water Management EE&C Toolbox: This toolbox would contain a participatory methodology, tools, and materials that assists municipalities and Mancomunidades to identify and negotiate the specific actions people will take to manage and conserve local watershed and water resources.

Fire Prevention EE&C Toolbox: This toolbox would include a participatory yet collaborative methodology, tool, and materials that help a team of key stakeholders (representatives of the national and departmental governments, Mancomunidades, municipalities, NGOs, technicians, local media, appropriate private sector businesses, ranchers, and farmers – men and women) to *develop a new system that supports controlled burning*. Through the participatory process the team would: 1) Identify, prioritize, and agree upon the specific actions necessary for controlled burning; 2) Create a system that lowers barriers to and increases benefits for controlled burning; 3) Develop an implementation plan that would include, amongst other activities, the promotion and training necessary to support this new system.

EE&C for ACTION Toolbox: This toolbox would provide a participatory process and tools that assist interdisciplinary, inter-institutional, and multi-level groups to identify, negotiate, and prioritize the specific actions they will take to reach their goal, and to monitor the adoption and impact of those actions. This process results in an observation checklist of actions (or results of these actions) that the group and others can use to subjectively monitor and evaluate the impact of their activities.

Safe Pesticide Use EE&C Toolbox: This toolbox would contain a participatory methodology, tools, and materials that would assist local groups to identify and take action in regards to the appropriate and safe use, application, and storage of pesticides.

ANNEX F: EE&C OPPORTUNITIES TO SUPPORT CLEANER PRODUCTION

The National Chamber of Industries and CPTS have Public Relations Unit, and are extremely interested in strengthening its capacity in EE&C and social marketing. Indeed, developing a strong EE&C capacity will be essential for CPTS to achieve all of its objectives: promote industry adoption of cleaner production, train a cadre of private consultants to carry out environmental audits, increase universities' capabilities to train technical specialists; and increase public awareness. Specifically, the cleaner production EE&C would:

- 1) **Increase national public awareness of and popular demand for cleaner production** through the Sustainable Development and Environmental Awareness and Media Advocacy Campaign. The campaign will emphasize the **social and economic** benefits of cleaner production. It will link cleaner production to cost-effectiveness benefits for businesses, and health and social welfare to communities. It will highlight practical success stories and emphasize that cleaner production is good business for everyone – families, communities, municipalities, the private sector, and the country.

- 2) **Increase widespread demand for and adoption of cleaner production technologies in large, medium, and micro businesses:** Systematic, coordinated EE&C developed specifically for each target audience will emphasize the **economic benefits of cleaner production for all sizes** (micro, , medium, and large) **and types of businesses to optimize production.**
 - **Municipality-based Cleaner Production:** Three municipalities - *La Paz, Tarija, and Sucre* are interested in creating alliances with CPTS. This represents an exciting opportunity to develop a **municipality-based model for increasing demand for and support of cleaner production technologies.** Municipality-based cleaner production would integrate and coordinate government, local NGOs, universities, the school system, and the private sector support for and compliance with cleaner production. Specifically, municipalities could develop and implement a Cleaner Production Certification Program wherein businesses would need to comply with certain cleaner production criteria in order to be certified. CPTS could train local NGOs, universities, and technical schools to provide technical assistance and supervision to micro and medium-sized businesses. EE&C would create widespread awareness and demand for cleaner production, strengthen communication with businesses about the what they need to do in order to be certified, provide timely reminders for specific actions (for example, informing businesses when and where to obtain the ('Application for Municipal Cleaner Production Certification')), and reinforce the positive actions various stakeholders take in the adoption of cleaner production technologies. A ***Municipality Cleaner Production EE&C Toolbox*** could be developed to systematize and strengthen this activity.

 - **Cleaner Production Distance-Learning Courses** about simple cleaner production technologies and techniques is another opportunity for increasing the demand for and adoption of cleaner production in the micro and medium sized businesses. Many cleaner

production options are not complicated and do not require extensive technical, operational, and financial assistance. CPTS estimates that at least 50 production sectors could learn about and adopt cleaner production techniques through a distance-learning course. Distance Learning Cleaner Production Courses can offer micro and medium business owners and administrators relatively easy ways to reduce waste and increase profit. The courses can be marketed nation-wide to increase widespread awareness and adoption of cleaner production concepts and techniques. Cleaner Production Distance Learning Courses could greatly reduce the costs associated with providing individual cleaner production training and technical assistance.

The courses would also be useful for other USAID Environment partners and other SO Teams such as Economic Growth, Food Security, and Alternative Development that have technology transfer as part of their objectives. Many Environment and other SO Team projects involve agricultural and agro-forestry technology transfer and the creation or strengthening small businesses, industries, and services such as ecotourism. These technologies and services seek to optimize production to increase family and municipal income. However, in many cases, these new technologies and businesses actually increase contamination of natural resources and pressure on biodiversity because they do not integrate cleaner production concepts and techniques.

The Cleaner Production Distance Learning Courses would be developed using client-based formative research. They would be rigorously pretested and revised before being launched in a pilot area. They could be developed in coordination with one municipality, for example *Tarija*, which has expressed interest in strengthened municipality-based cleaner production. The pilot would be evaluated and the results used to improve the course and guide the national 'roll-out' of this new CPTS product / service over the next five years.

The course could be taught through cassette tapes (interactive radio) or interactive CDs/Internet. A series of complementary mini-manuals could be developed as on-site reference materials. Participants would 'self-select', rather than be selected by CPTS. The courses would be promoted and business owners would seek the course to improve their businesses. They would receive a certificate (and other incentives) for completing the course and adopting cleaner technologies and actions. The course could also be promoted as part of Municipality-based Cleaner Production.

- 3) **Train a cadre of private consultants to carry out environmental audits:** CPTS proposes to train 50 professionals in various sectors of cleaner production. Application of EE&C can ensure that the curriculum, tools, and materials are developed based on the this target audience needs and focus on providing the skills-based training and supervision needed to conduct environmental audits and provide cleaner production technical assistance and support.
- 4) **Increase capacity to train technical specialists:** CPTS could develop (using formative research), pretest, and revise a cleaner production curriculum for secondary and technical schools that will increase the knowledge, attitudes, and skills necessary for students to

apply cleaner production in their post-secondary school production systems and homes. The curriculum would be developed in an inter-disciplinary, inter-institutional workgroup composed of CPTS, curriculum design specialists, teachers, students, and university representatives. The pilot would be evaluated and the results used to improve the course and guide the national 'roll-out' of the curriculum over the next five years.

ANNEX G: EE&C ROLES AND RESPONSIBILITIES

National Government

- Provide the legislative framework for environmental action, raise awareness about specific laws and regulations, and ensure the equal application of environmental laws and regulations.
- Provide leadership for public awareness and participation through the national commemoration of special Environment Days and campaigns.
- Involve NGOs and the private sector in the discussion and planning of EE&C within the Education Reform and other environmental initiatives.
- Provide leadership and national coordination of EE&C for sustainable development.
- Allocate funds for EE&C from debt swaps and include EE&C in budget allocations

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- Assist the GOB in policy development.
- Provide support for the development of institutional EE&C policies, for example, universities and the National Parks.
- Provide technical and financial support to stakeholders in EE&C.
- Integrate an EE&C dimension into other relevant SO Teams.
- Periodically assess and evaluate progress of the Unified EE&C Strategy.

International Community and Donors

- Ensure that development projects have an appropriate EE&C component, in order to take advantage of every opportunity possible to link development and environment in a meaningful, cost efficient, and sustainable manner. For example, the Bolivian donor local Environmental Working Group could develop environmental management guidelines to assess project proposals.
- Give priority to building capacity in existing infrastructure for EE&C.
- Provide technical and financial support to projects and local NGOs to enable them to participate meaningfully, contributing specialized skills and services, in the implementation of the Unified EE&C Strategy.
- Continue to educate the administrators their respective country headquarters administrators about Bolivia's unique environmental conditions and challenges so as to ensure continued support for the environment and EE&C.

Municipal Associations, Mancomunidades and Municipal Governments

- Ensure that despite all the other existing priorities, the development of Annual Environment Action Plans becomes a major priority.
- Collaborate with NGOs and private sector institutions to provide systematic in-service training in EE&C to all their staff in order to promote wise decision making with respect to environmental issues
- Ensure that environmental monitoring is an integral and important part of the duties of the municipal government.
- Facilitate and motivate the involvement of the private sector to create alternative livelihoods

that provide for the management of forest, water, and biodiversity resources for sustained economic growth.

Universities

- Develop a policy for integrating environment into their programs of study to ensure EE&C at the tertiary level. (This can be done individually at selected universities, but could be supported and catalyzed through joint meetings.)
- Allocate a proportion of students' community service to EE&C studies and projects.
- Ensure that as many departments as possible develop EE&C community links.
- Facilitate short courses for building EE&C capacity.
- Promote EE&C investigation and research, including impact studies to evaluate EE&C methods and materials.

Non Governmental Organizations (NGOs)

- Mobilize private and donor resources for EE&C.
- Support national and local government initiatives for EE&C (e.g. Education Reform, Municipality Annual Environment Plans).
- Provide specialized skills and resources to schools and other groups (e.g. development of EE&C materials and innovative EE&C methods).
- Build capacity for EE&C and for sustainable development, in general, within the government, community-based organizations, municipalities, departmental level agencies, and in other sectors.
- Build environmental awareness through advocacy and dissemination of relevant information and materials.
- Coordinate efforts and increase collaboration with assistance from LIDEMA.

Mass Media

- Provide increasingly better quality and quantity of environment news.
- Increase the reach and frequency of accurate EE&C messages.
- Increase the range of target populations. For example, publish a newspaper environmental supplement for school children or develop environmental radio programs for businessmen.
- Build capacity for environmental reporting and broadcasting.

REDESMa and other Environmental Networks

- Collect and disseminate information on the environment and on EE&C.
- Provide information on the activities of stakeholders on EE&C to assist with coordination.
- Provide information about stakeholders to catalyze networking among them (sharing experiences, lessons learned, resources, etc.)
- Provide information on environment and on EE&C to the general public through Internet cafes, etc.

ANNEX H: EE&C MANAGER'S CHECKLIST

I. APPLIES THE EE&C PROCESS: ASSESS, PLAN, PRETEST AND REVISE, IMPLEMENT, AND MONITOR/EVALUATE

ASSESS

- 1. Defines the environmental problem to be addressed by the EE&C strategy.
- 2. Defines the goal of the EE&C intervention that will address this problem.
- 3. Defines the “ideal behaviors” people need to do to solve the environmental problem.
- 4. Conducts systematic research with doers and non-doers in order to understand the specific factors that influence the adoption of the ideal behaviors and to develop strategies that reduce barriers and increase the benefits of adopting those behaviors.
- 5. Selects appropriate research techniques to conduct the research:
 - Structured Observation Qualitative Verbal Techniques
 - Quantitative Verbal Techniques Participatory Rural Appraisal Techniques
- 6. Collects gender disaggregated data to define more easily gender specific communication strategies.
- 7. Members of the target audience(s) and other stakeholders take an active role in the assessment decisions and activities.
- 8. Research results are shared with and between the EE&C implementers, members of the target audience(s), and other stakeholders.

PLAN

- 1. Has a written EE&C Plan
- 2. The EE&C Plan includes:
 - Statement of the environmental problem;
 - Summary of the formative research that guides the design of the EE&C strategy
 - Environmental EE&C goal Segmented target audiences;
 - EE&C objectives stated in terms of behavior change
 - Social marketing analysis of product, place, price, as well as promotion (if appropriate)

- ___ Description of the phases of implementation and priority activities for each phase;
- ___ Creative strategy:(analysis of obstacles, barriers, key benefit and support statement and tone)
- ___ Strategies that respond to both men and women's specific perceptions and needs.
- ___ Media plan that: **a)** describes the role of each channel; **b)** demonstrates how the channels are integrated and support each other; and **c)** demonstrates that channel selection was based on target audience needs and usage patterns.
- ___ Training Plan ___ Monitoring Plan ___ Evaluation Plan ___ Timeline;
- ___ Management Plan ___ Budget.

___ 3. Members of the target audience(s) and other stakeholders take an active role in the development of the plan.

___ 4. Community members take the lead role in developing local EE&C strategies and actions.

PRETEST AND REVISE

- ___ 1. Reviews materials/training with technical experts to ensure that messages are technically correct.
- ___ 2. Reviews materials with decision-makers and other stakeholders to ensure that messages are supported and are not politically sensitive.
- ___ 3. Pretests materials with representatives of the specific target audiences.
- ___ 4. Pretests measure the five components of effectiveness: attraction, comprehension, acceptability, self-involvement and persuasion.
- ___ 5. Pretests are systematic and have research rigor in their design and implementation.
- ___ 6. Makes changes in the materials/training based on the results of the pretest.

IMPLEMENT

- ___ 1. All media and interpersonal communication channels are in place at their planned time.
- ___ 2. Services and products are in place before demand is created for them.
- ___ 3. Conducts skills-based training:
 - ___ Training is designed based on the needs and current skills of the participants.
 - ___ Training has specific behavioral objectives that are clear and relevant to the participants.
 - ___ Trainers/participants apply an observation checklist developed from the behavioral objectives to assess skills development.

___ Training includes repeated practice of the new skills.

___ When participants practice new skills, they are provided feedback (based on the application of the observation checklist) that is specific, positive and relevant.

___ Participants commit to practicing their new skills immediately after the training and then are given an opportunity (either in a follow-up session or supervisory visit) to reflect on their experience and receive feedback from their trainer, supervisor and/or other participants.

___ 4. Materials (print, broadcast, folk media, etc.)

___ Materials are persuasive, emphasizing the benefits identified in the formative research and defined in the communication plan.

___ Materials are attractive and demonstrate a production quality appropriate for the target audience.

___ Materials are relevant to and appropriate for the specific target audience in terms of language, vocabulary, images, sources of information, format, symbols, etc.

___ 5. Materials are coordinated and integrated (containing common language, vocabulary, images, sources of information, format, symbols, etc.)

___ 6. Community members take the lead role in implementing local EE&C strategies and actions.

MONITOR / EVALUATE

___ 1. Conducts systematic and regular (every three-four months) monitoring of EE&C activities.

___ 2. Uses appropriate research techniques to conduct the monitoring:

___ Structured Observation

___ Qualitative Verbal Techniques

___ Quantitative Verbal Techniques

___ Participatory Rural Appraisal Techniques

___ 3. Members of the target audience(s) and other stakeholders are involved in conducting and analyzing the monitoring.

___ 4. Monitoring results are shared with and between the EE&C implementers, target audience(s) and other stakeholders.

___ 5. Makes changes and refines the EE&C strategies, activities and materials based on the monitoring results.

___ 6. Members of the target audience(s) and other stakeholders take an active role in making these decisions.

___ 7. Community members take the lead role in refining their local EE&C strategies and actions based on the monitoring results.

II. COMMUNITY PARTICIPATION

- _____ 1. Community members identify and prioritize their problems, needs, and wants.
- _____ 2. Community members use participatory techniques to understand what people think, do and need related to the priority problems.
- _____ 3. Community members identify solutions to meet those needs.
- _____ 4. Community members develop and implement their action plans.
- _____ 5. Community members use participatory techniques to make changes and refine their action plans.

III. PARTNERSHIP DEVELOPMENT AND COORDINATION

- _____ 1. Coordinates activities with other organizations working in the same area (government, NGOs and/or POs)
- _____ 2. Provides and/or receives training from other organizations working in the same area if appropriate and/or necessary.
- _____ 3. Involves a “Multi-Part Team” composed of the various sectors, disciplines and levels (including representatives of the stakeholders/target audiences and equal representation of men and women, ethnic groups, or other cultural variations) in the five steps of the EE&C process – assess, plan, pretest and revise, implement and monitor/evaluate.
- _____ 4. Obtains private sector support and coordination in the development and implementation of the EE&C activities.



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