8456

Log No. 98-365

GEFSEC Project Tracking System

Response Due Date: 08/~~28~~/98
25

Correspondence Description

Addressed to: *Mr. Kenneth King*	Correspondence Date: 08/19/98
Date Received: 08/19/98	Organization: WB
From: Lars Vidaeaus	

Assigned To: M. Ramos

Status: Open

Type: Fax
Topic: PDF A: ECUADOR: Rescuing Ancient Knowledged on Sustainable Use of Biodiversity in Coastal Ecuador

Action Instructions

- ☐ For Bilateral meeting
- ☐ For information only. No action needed.
- ☐ Please handle/respond on behalf of Mr. Kenneth King and provide a copy.
- ☐ Please handle/respond on behalf of Mr. Mohamed El-Ashry and provide a copy.
- ☐ Please prepare a draft response and return to Program Coordinator
- ☐ Please reply directly and provide a copy.
- ☒ Please review and/or technical comments

Special Instructions

Information Copies Sent To:
A. Miller, K. Kumari, H. Acquay, J. Taylor

Projects File Room Location:

Note: A copy/original of the document is being sent directly to your attention.

Please return this page with a copy of the incoming correspondence and the reply/action taken to Program File Manager (GEFSEC Projcet File Room) before or by due date with the original copy of the correspondence and the reply/action.

THE WORLD BANK/IFC/M.I.G.A.

OFFICE MEMORANDUM

DATE: August 19, 1998

TO: See Distribution Below

FROM: Lars Vidaeus, GEF Executive Coordinator

EXTENSION: 3-4188

SUBJECT: **Ecuador – PDF Block A Request for GEF Medium-Sized Project (MSP)**
Rescuing Ancient Knowledge on Sustainable Use of Biodiversity in Coastal Ecuador

1. Please find attached a PDF Block A Request for Ecuador: Rescuing Ancient Knowledge on Sustainable Use of Biodiversity in Coastal Ecuador.

2. This concept was reviewed by the Targeted Research Committee which recommended that the concept was eligible as targeted research since it would advance our knowledge on application of traditional technologies to conservation of agrobiodiversity. The committee recommended that the concept should be further developed using PDF A resources and that the proposers should be requested to address the following issues during preparation:

- describe the methodologies proposed for the research
- better articulate the linkage between water management and conservation of agrobiodiversity,
- clarify the linkages between the rationale and objectives (paragraphs 9 and 10) in the current proposal, and
- define potential of such water management technologies for wider application for conservation of agrobiodiversity.

3. We would appreciate your comments by August 25, 1998. Thank you.

Distribution
R. Asenjo, UNDP (Fax:212-906-6998)
A. Djoghlaf, UNEP (Nairobi) (Fax: 254-2-520-825)
R. Khanna, UNEP (Washington) (Fax: 202-331-4225)

cc: Messrs./Mmes.

De Mesa, GEF Secretariat (fax 202-522-3240)

Koch-Weser (LCSES), Kimes, MacKinnon, Mikitin, Elliott, Sharma, Bossard, Nikolov (ENVGC)
ENVGC ISC
IRIS3

MID-SIZE GRANT
BLOCK A PDF

PART I - ELIGIBILITY	
1,Project name: *Rescuing Ancient Knowledge on sustainable use of Bio-diversity in coastal Ecuador*	2.GEF Implementing Agency: *THE WORLD BANK*
3.Country or countries in which the project is being implemented: *ECUADOR*	4.Country eligibility: *Ecuador ratified the CBD on February 23, 1993*
5.GEF focal area(s), and/or cross-cutting issues: *Bio-Diversity (Targeted Research)*	.Operational program/Short-term measure: *OP-1 and OP-3*

7.Project linkage to national priorities, action plans, and programs: *In September 1993 the Government of Ecuador through the Executive Decree 1107 created CAAM, to priroize the protection and/or sustainable use of the environment and bio-diversity in all the different regions of Ecuador. The Government of Ecuador has also declared the issue of "El Niño Southern Oscillation" (ENSO) of utmost importance, and of the highest priority all projects and programs destined to damping its negative impact on the natural and social environment.*

8.GEF national operational focal point and date of country endorsement:
Flor de Maria Valverde, Minister of Environment, June 9, 1998

9 Project rationale and objectives:

In the pre-Columbian past, the people of the Santa Elena Peninsula in south west Ecuador, and in northern Peru developed adaptive strategies in the face of "El Niño Southern Oscillation" (ENSO) torrential rains. The climate of this area is characterized by the northern-most influence of the Humboldt current, which is expected to give way to advances of the warm waters from the warm Panamanian current from December to May.

The advances of warm water produce seasonal rains in the area which can be minimal to non-existent in a North-South gradient. Except when ENSO events take place every seven to ten years, and tropical monsoon–type rains, characteristic of the Northern Ecuadorian and Colombian littoral occur in this thorn–bush and dry savanna region.

Geologically, the area from the Santa Elena Peninsula (Ecuador) to Talara (Peru) is distinguished by it's Tablazo formation, characterized by Pleistocene marine terraces that have up-lified in three different stages since the lower Pleistocene. The Tablazo formation rests on a Tertiary substrate and constitutes the uppermost acquifer, where rain water is naturally stored.

The rivers in the area run dry most of the year when it rains, and not at all when rains are scarce, or totally absent for several years. When hard seasonal rains, or an El Niño event occur, most of the water from the run-off is lost into the sea, and although, some of the acquifers are recharged in some areas –of which the Point of Santa Elena is an example– more water runs off into the sea than it sinks into the acquifer.

*To capture water from the run-off, the people of the Santa Elena Peninsula built what is now known in the area as "albarradas", "jagueyes" or "tareas". These are horse-shoe shaped earth embankments with the borrow pit in its center and its opening facing the incline to trap rain water from the run-off. The purpose of building the albarradas is to trap water from the run-off and allow it to sink into the acquifer, from which is used through several methods discussed below. Apparently the earliest albarradas were built in San Pablo, associated with a Late Valdivia occupation (c. 2000-1800 BC). The most spectacular set of Albarradas are found between the village of Muey and the Port of La Libertad. **One of these, the Albarrada of Achallán has been dated by Stothert to the Engoroy period (c. 850-300 BC).***

There were about 100 Albarradas in Muey and were mapped by McDougle between 1964-66. These are also quite evident in aerial photographs taken in the sixties and seventies. In the center of the Village of Muey, as well as in the northeast sector of La Libertad, a series of continuous excavations into the top of the acquifer created and artificial "river" and on its beaches plants that require much humidity were planted creating a tropical garden in an otherwise arid area.

The objectives of this project are: (1) to increase the understanding about the technologies utilized by the ancient inhabitants of the region to sustainable use the biodiversity of the area in relation to El Niño events; and (2) to conserve the wild relatives of the crop varieties cultivated this way.

The area of application of the Project has been severely deforested and desiccated due to the negative impact of : (a) Oil exploration and exploitation in the area since the 1920's; (b) With the building of the read from Guayaquil to Salinas in 1949 the charcoal industry that had been supported by the Oil companies expanded due to the opening of the Guayaquil market for charcoal. (c) This situation has ended but the negative effect of deforestation greatly changed the rich dry tropical forest environment that had prevailed up to the 1950's in the area. However, during El Niño events the dry forest refuge recuperates increasing the plant and fauna species.

10.Expected outcomes:

1. *Conservation of the wild relatives of: Canavalia plagiosperma* (Canavalia or jack bean)*; *Canna edulis* (achira)*; *Marantha sp.* ("arrowroot")*; *Thrianthema portulacastrum* (?)*; *Gossypium barbadense* ssp. Chiao (colored cottons)**; *Carica papaya* (papaya de mico; *Psidium guajaba* (guayaba)*: *Geoffroea spinosa* (La seca)* (**); *Xantosoma sp.* (malanga, yautia, otoy or papa china)*; *Prosopis juliflora* (algarrobo)* (**); *Jacquinia pubences*(?) (barbasco)*; *Sapindus* sp. (jaboncillo)**. Sapindaceae family; Frejol de palo (?).
2. *Conservation of traditional cultivars. Zea mays* L. (maize "Amarillo" or Creole)*; *Zea mays* L. (pop corn - canguil)*; *Phaseolus vulgaris* (common bean)*; *Cucurbita maxima.* (pumpkin))*; *Manihot esculenta* (yuca)*.
3. *Conservation of wild races/cultivars*)*: *Gossypium barbadense* ssp. Chiao (colored cottons)**; : *Psidium guajaba* (guayaba)*: *Carica papaya* (papaya de mico.
4. *Determination of the best way to rescue and implement the traditional cultivation technology today.*
5. *Mapping of acquifers and areas of possible implementation.*
6. *Recuperation of biodiversity , characteristic of the dry tropical forest ecology in the area.*

* edible
** industrial
*(**) industrial and edible (fruits)

11.Planned activities to achieve outcomes:

The study will be carried by a multi-disciplinarian-multinational team of researchers that includes archaeologists, sociocultural anthropologists, ethnobotanists, ecologists, and geologists.

The Study will be carried out in four phases:

1. *A remote sensor survey of the area, and on ground evaluation of the systems spotted in the satellite image survey.*
2. *A detail study of the remnant of the Muey system at the Santa Elena Peninsula in Ecuador, and a similar study on one of the systems spotted in Northern Peru including the sunken gardens at Chan Chan.*
3. *A geological and geographical evaluation of the Tablazo area where a pilot*

	system could be tested
4	*A determination of wild relatives of cultivars and their dependence upon local ecosystems and the alabarrada technology.*

12.Stakeholders involved in the project:

Local inhabitants and farmers who will benefit from the rescuing of the albarrada tecnology, local and national research institutes, scientific community.

PART II - INFORMATION ON BLOCK A PDF ACTIVITIES

13.Activities to be financed by the PDF: *(a) local consultations with the area communities that have used the Albarradas systems; (b) a Workshop for the Project participants to articulate the multidisciplinary aspects of the project. (b) travel cost of local experts. (c) scientific, technical and environmental reviews of the proposed project.*

14.Expected outputs and completion dates: *(a) project brief; (b) assessment of scientific, technical, environmental, and economic feasibility of the proposed activity, including its relevance for future funding. (c) preparation of terms of reference of the project.*

15.Other possible contributors/donors and amounts: *The Weeden Foundation has expressed interest in contributing to this project around 20,000 US DOLLARS. There will be an in-kind contribution of about $200,000 in Ecuador*

16.Total budget and information on how costs will be met (including the Block A grant):940,000 US DOLLARS

PART III - INFORMATION ON THE APPLICANT INSTITUTION.

17 Name: *Escuela Superior Politecnica del Litoral, ESPOL, Guayaquil, Ecuador. Centro de Estudios Arqueológicos y Antropológicos CEAA. And Fundacion Pedro Vicente Maldonado para las Ciencias del Hombre y de la Tierra, an NGO member of the Ecuadorian Committee for the Defense of Natural Setting and the Environment (CEDENMA) and is affiliated to the Ecuadorian Corporation of Private Organizations (CEOP). Yearly reports by external auditors are available (Price Waterhouse or Naranjo y Asociados).*

18 Date of establishment, membership, and leadership: *La Escuela Superior Politecnica del Litoral, ESPOL Guayaquil, Ecuador. Was created by Executive Decree No. 1664 on 29 October 1958. A copy of ESPOL's statutes is appended. The Fundacion Pedro Vicente Maldonado was created by Acuerdo Ministerial No. 5091 of the Ministry of Education and Culture on 30 July 1984 published in the National Register No. 4 16 August 1984. The Statutes of the Foundation were reformed in September 1993 and its see changed to the city of Guayaquil.*

19.Mandate/terms of reference: *ESPOL's mandate is to educate in science and technology; form the necessary professionals in science and technology at the University level to aid in the integral development of Ecuador; develop research in science and technology; offer services to the community; make available and offer extension programs in the areas of its mandate; carry out research in science and technology; contribute to finding solutions for the rational and sustainable exploitation and use of the environment and to the development of an autonomous technology that may contribute to up grading the living conditions and culture of Ecuadorian Society. FPVM's mandate is to*

20.Sources of revenue: *The National Budget for Consejo Nacional de Univesidades y Escuelas Politécnicas del Ecuador. The Government of Ecuador. The Fundacion Pedro Vicente Maldonado balance and past experience are appended.*

aide in the development of Ecuador's technical, administrative and ethical capacity under the perspective of sustainable development. The Foundation privileges its participation in the Educational system and with the Scientific community in order to better the quality of education.	

21.Recent activities/programs, in particular those relevant to the GEF. *ESPOL through its Faculty and departments has carried out environmental impact studies. FPVM has carried out an important diagnostic study of Ecuador Coastal resources and their sustainable management. It participated in the creation and management of the PMRC This was a joint project with the Center for Natural Resources of the University of Rohde Island, and it was supported by the Inter American Development Bank*

PART IV - INFORMATION TO BE COMPLETED BY IMPLEMENTING AGENCY
22. Project identification number:
23.Implementing Agency contact person:
24.Project linkage to Implementing Agency program (s):

"EL ECUADOR HA SIDO, ES Y SERA PAIS AMAZONICO"

REPUBLICA DEL ECUADOR
MINISTERIO DE MEDIO AMBIENTE

Quito, 9 de junio de 1998
Oficio N°- 1133-MMA

Señora
Gabriela Arcos
OFICIAL DE OPERACIONES
BANCO MUNDIAL
Ciudad.-

Atención: Señor Gonzalo Castro
Especialista en Biodiversidad
División de Medio Ambiente Global
Departamento de Medio Ambiente
THE WORLD BANK
1818 H. Street, N.W.
Washington, D.C. 20433
USA

De mi consideración:

Una vez revisado el anteproyecto "Rescate del Conocimiento Antiguo sobre el Uso Sostenible de la Biodiversidad en la Costa del Ecuador" presentado por la Escuela Superior Politécnica del Litoral ESPOL y la Fundación Pedro Vicente Maldonado, esta Secretaría de Estado considera de suma importancia su implementación, para cuyo efecto se permite recomendar el mismo.

Sin otro particular, me suscribo de usted.

Atentamente,

Flor de María Valverde

Dra. Flor de María Valverde
MINISTRA DE MEDIO AMBIENTE

RP/sv/.

RECIBIDO
BANCO MUNDIAL
Mabela Angela Hidalgo
10 junio/98