



Global Environment Facility

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Facsimile Cover Sheet

DATE: April 8, 1999 No. of Pages: 2
Inc. Cover sheet

TO: Mr. Lars Vidaeus PHONE:
ORGANIZATION: World Bank/GEF Executive FAX: (202)522-3256
Coordinator

FROM: Mario A. Ramos PHONE: (202) 473-3297
Program Manager FAX: (202) 522-3240

CC: K. MacKinnon, G. Castro (ENVGC), F. Rittner, K. Kumari, H. Acquay, and R. de Mesa (GEF)

SUBJECT: **PDF A: Nicaragua: Renewable Energy Barrier Removal and Forest Conservation through Sustainable Harvest and Processing of High Value Added Products (Coffee and Allspice)**

Message:

Dear Lars:

As requested, we have reviewed the above PDF A and would like to offer the following comments:

The Secretariat is supporting endorsement of the PDF A. The country ratified the CBD and the CCC as highlighted in the proposal. The concept fits activities within OP #s 3 and 6. GEF financing should be for the incremental costs of those measures and activities that will accrue global environmental benefits. The note that the concept has been endorsed. There are several issues that we would like the Bank to consider as follows: (a) resolving identified problems with an MSP seems ambitious and the Secretariat trusts that the proposal will be well-focused and significant co-financing available, as domestic benefits are obvious; (b) the Secretariat understands there is significant investment by bilateral agencies (GTZ) in the buffer zone of the reserve and requests a clear statement on how the proposed project relates to those investments; (c) attention should be given to the development of a comprehensive M& E plan, so that best practice/lessons can be well documented and disseminated; (d) the Nicaragua Corridor Project already supports investment in the buffer zones of protected areas in the region. A clear statement stating how activities complement each other should be included.

In more general terms, the Secretariat requests a meeting with the IAs, particularly the World Bank and UNDP, to discuss the Agencies' pipelines in the region, portfolio balance issues, and

Mr. Lars Vidaeus

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April 8, 1999

clarification of additional agricultural-friendly activities in other projects in the region, before any other proposal gets submitted for consideration.

Thank you.

GEFSEC Project Tracking System

Response Due Date: 04/01/99

Correspondence Description

Addressed to: <u>Mr. Kenneth King</u>	Correspondence Date: 03/25/99
Date Received: 03/25/99	Organization: WB
From: Lars Vidaeus	

<i>Assigned To: M. Ramos</i>

<i>Status: Open</i>

Type: Fax Topic: PDF A: NICARAGUA: Renewable Energy Barrier Removal and Forest Conservation through Sustainable Harvest and Processing of High Value Added Products (Coffee and Allspice)
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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

Mario, please enter your review in the PRS database.
Frank and GEF staff, please send your comments to Mario by March 31.

Information Copies Sent To:

F. Rittner, M. Cruz, H. Acquay, J. Taylor

<i>Projects File Room Location:</i>
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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 Project 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: March 25, 1999

TO: See Distribution Below

FROM: *CK for*
Lars Vidaeus, GEF Executive Coordinator

EXTENSION: 34188

SUBJECT: **Nicaragua : PDF Block A Request for GEF Medium Size Project
Renewable Energy Barrier Removal and Forest Conservation through Sustainable
Harvest and Processing of High Value Added Products (Coffee and Allspice)**

Please find attached a PDF Block A Request for the Nicaragua Renewable Energy Barrier Removal and Forest Conservation through Sustainable Harvest and Processing of High Value Added Products (Coffee and Allspice). We would appreciate your comments by April 1, 1999. Thank you.

Distribution:

R. Asenjo, UNDP (New York) (Fax: 212-906-6998)
A. Djoghlaif, UNEP (Nairobi) (Fax: 9-011-254-2-520-825)
R. Khanna, UNEP (Washington) (Fax: 202-331-4225)

cc: Messrs./Mmes

de Mesa, GEF Secretariat (fax 23240)
Redwood, Lovejoy, Agostini, Abedin (LCSES)
Cackler (LCC2), Goldstein (LEGLA)
Kimes, Castro, Sinha, Mikitin, Bossard (ENV)

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24 March 99

Renewable Energy Barrier Removal and Forest Conservation through Sustainable Harvest and Processing of High Value Added Products (Coffee and Allspice)

Block A Project Development Fund (PDF)

PART I ELIGIBILITY	
<p>1. Project name:</p> <p>Renewable Energy Barrier Removal and Forest Conservation through Sustainable Harvest and Processing of High Value Added Products (Coffee and Allspice)</p>	<p>2. GEF Implementing Agency:</p> <p>The World Bank.</p>
<p>3. Country or countries in which the project is being implemented:</p> <p>Nicaragua</p>	<p>4. Country eligibility</p> <p>Nicaragua ratified the Convention on Biological Diversity on November 25, 1995</p> <p>Nicaragua ratified the UN Framework Convention on Climate Change on October 31, 1995.</p>
<p>5. GEF focal area(s):</p> <p>Climate Change and Biodiversity</p>	<p>6. Operational program/Short-term measure:</p> <p>This proposal falls within two Operational Programs:</p> <p>OP#6: promoting the adoption of renewable energy by removing barriers and reducing implementation costs;</p> <p>OP#3: promoting conservation of forest ecosystems.</p>
<p>7. Project linkages to national priorities, action plans, and programs:</p> <p>This project links initiatives to preserve biodiversity and limit the expansion of the agricultural frontier in the buffer zone surrounding the Bosawas Reserve.</p> <p>The project introduces sustainable extraction and processing technologies that promote sustainable production and development in rural Nicaragua by reducing deforestation and transferring highly added value (the benefits of processing and exporting direct) to those living and producing in the target region.</p> <p>This project is also consistent with Nicaragua's stated objective of improving its natural resources (environmental) management; developing the private sector; and promoting decentralization. In addition, Nicaragua's environmental strategy identifies biodiversity conservation as a critical element to achieve sustainable development. In addition, the Government of Nicaragua recognized that the country is in need of reforestation during the Consultative Group meeting in April of 1998 whereby they requested a forestry project. This proposed project would reinforce the goals of the GON within the forestry sector in the Bosawas Reserves Buffer Zone. The proposed project would also strongly support objectives of other World Bank Projects such as the Rural Municipalities Project and the Atlantic Biological Corridor. Within this strategy, the introduction of renewable energy to promote the reduction of carbon dioxide emissions and forest protection through sustainable extraction and processing of highly value added products (coffee and allspice) are singled out as high priorities for the nation because of their many biodiversity and many other environmentally positive aspects. This project also supports the ongoing efforts of the Comision Nacional de Bosawas (CNB), which is chaired by the Minister of Natural Resources and the Environment.</p>	

8. GEF national operation focal point and date of country endorsement:

Garcia A. Cantarero, GEF Operational Focal Point—Ministry of Natural Resources and the Environment, 26 October, 1998.

9. Project rationale and objectives:**OP# 6 Component:****Solar/Biomass Coffee Drying/Processing in the Bosawas Reserve Buffer Zone**

Throughout the Matagalpa region, including the 1 million hectares of agricultural boundary that comprises the Bosawas Reserve Buffer Zone, coffee drying contributes significantly to deforestation. In Central America, 90,000 acres of forest are cut to supply the firewood to dry the coffee production each harvest. In Nicaragua an estimated 6,000 acres (2,700 hectares) of forest are cut to dry each harvest. In Nicaragua and Honduras, coffee processing accounts for 16% of the industrial consumption of wood. Solar/biomass processing technologies exist which could improve the quality of the marketed coffee and which would eliminate the industry's dependence on fuelwood for the drying process. Adoption of these technologies in the small-scale rural economy is constrained, however, by a number of technical and financial barriers: lack of technical capacity to install, operate, and maintain equipment; lack of technical capacity to address quality during processing, as well as export issues; and lack of credit/financing for rural cooperatives to invest in new technology.

The proposed OP#6 component would address the identified barriers by providing the technical extension services needed to configure, install, maintain, and operate a decentralized dry beneficio using Solar/Biomass Coffee Drying Systems. This effort will provide processing capacity over the next three years for the three communities of cooperative San Isidro, centered near the town of Boaco, and the communities of cooperatives Juan Fernandez and Jesus Rivera Rivera, centered in the town of El Cua. In addition, extension services will support the integration and operation of a drying system installed near the community of Aranjuez, near Matagalpa. Lastly, this component will provide support to open markets on the specialty coffee market for the cooperatives' shade produced and sustainably processed coffee. This mode of operation will offer significant increases in revenue through the added value that the drying process allows, as well as through direct access to international markets.

The objectives of the OP#6 component are to:

1. Remove barriers to successful implementation of renewable energy technology for this agro-industrial application, thereby reducing CO₂ emissions and eliminating a significant contributor to deforestation: the use of wood to dry the coffee harvest.
2. Build the technical training and support services that will assist with the expansion and replication of the solar/biomass systems throughout the target region.
3. Promote the development of a biodiversity friendly coffee processing system in Nicaragua that will provide significant increases in revenue through the direct exportation and marketing of coffee processed using renewable energy.
4. Direct the financial benefits of sustainable production and processing to the stewards of the plantations.

OP#3 Component:**Forest Ecosystem Conservation through Sustainable Harvest and Processing of Allspice**

Since the end of armed conflict in Nicaragua, the Bosawas Reserve on the border of Honduras has experienced an increasing rate of deforestation. Within the 800,000 hectare Bosawas Reserve and its buffer zone, several communities are currently involved in the informal extraction of allspice berries. Due to the low value associated with unprocessed allspice berries from the indigenous allspice trees (pimenta doica), unsustainable extraction methods are employed: the trees are often cut down in order to harvest the berries and the leaves are not used at all, even though they (like the berries) are a source of essential oil. An international market exists for high value-added products derived from the berries and leaves: essential oil

for medicines, cosmetics and food preservation; and ground allspice for the baking industry and domestic culinary use.

The proposed OP#3 component would conserve forest habitats for globally significant biodiversity by supporting training and outreach efforts for communities and allspice harvesters in the buffer zone of the Bosawas Reserve. The main aim is to introduce sustainable extraction methods which would leave the forest habitat in the buffer zone intact thereby conserving forest ecosystems and associated biodiversity. The component would also assist local communities to utilize renewable energy technologies (solar and biofuel energy) to produce ground allspice and allspice essential oil from berries and leaves. The OP#3 component would build on the organizing and training efforts of the Campesino a Campesino Program of the Union Nacional de Agricultores y Ganaderos (UNAG) and would focus on the communities centered near the Town of Siuna.

The objectives of the OP#3 component are to:

1. Preserve and expand forest habitats in the Bosawas Reserve buffer zone and implement the adoption of biodiversity-friendly sustainable extraction methods.
2. Conserve biodiversity through implementation of local monitoring and stewardship program, including training in methods of biodiversity-friendly sustainable extraction.
3. Introduce sustainable processing techniques to produce high value-added and biodiversity-friendly ground allspice and essential oil, and support direct exportation and marketing of these sustainably extracted and processed products.
4. Significantly increase revenues and direct the financial benefits of sustainable production and processing to the communities living in the Bosawas Reserve buffer zone.

10. Expected Project outcomes:

OP#6 Component Outcomes:

- (a) Renewable energy technology for coffee drying with sufficient technical training and support services introduced in the BOSAWAS buffer zone.
- (b) CO2 emissions reduced.
- (c) Revenues for producers increased.
- (d) Market for solar processed coffee on the specialty market expanded.
- (e) Solar drying/processing systems in target towns serve as profit/demonstration centers to encourage further dissemination of solar systems in the Mesoamerican region.
- (f) Use of firewood for coffee drying eliminated in the cooperatives San Isidro, Juan Fernandez and Jesus Rivera Rivera, and the community of Aranjuez, near Matagalpa.

OP#3 Component Outcomes:

- (a) Biodiversity in forest habitats in the target zone conserved and expanded through the adoption of sustainable allspice extraction practices.
- (b) Local biodiversity/habitat monitoring program implemented.
- (c) Solar drying and biofuel/solar distillation plant for the preparation of allspice and allspice essential oil installed and operating.
- (d) Revenues for target communities increased.
- (e) Processing equipment and base of expertise in the target town to serve as profit/demonstration center to encourage further dissemination of sustainable extraction methods and solar and biofuel processing systems.

11. Planned activities to achieve outcomes:**OP#6 Component – RETs for Coffee Drying/Processing**

- **Completes configuration and design for target cooperatives' dry beneficio using solar/biomass systems, allowing for future expansion.**
- **Develop and implement capacity building/training program to support the installation, operation, maintenance and repair of solar and related equipment, as well as quality control and export issues.**
- **Implement baseline co-financing instruments for the purchase and installation of drying and processing equipment.**
- **Implement marketing program to increase demand for coffee dried using renewable energy technology.**
- **Biological and socio-economic monitoring including: amount of coffee processed and exported, corresponding reductions in CO2 emissions through the use of solar drying systems, revenues and profits, employment opportunities provided by the program; and employment opportunities for women.**

Baseline co-financing for this component will cover the purchase and installation of drying and processing equipment, as well as the purchase of solar-dried coffee on the international specialty coffee market. GEF financing will focus on barrier removal, primarily through the training and capacity building activities.

OP#3 Component – Biodiversity Conservation and Forest Protection through Sustainable Allspice Extraction.

- **Develop and implement training program on sustainable extraction methods for allspice which maintain forest ecosystems and biodiversity habitats.**
- **Biological and socio-economic monitoring including: area and quality of allspice resource, change in habitat as compared to baseline, variation in yields, revenues and profits; employment opportunities provided by the program; employment opportunities for women; and amount of allspice products processed and exported.**

Complete additional baseline assessment of allspice forest habitat beyond initial target to define potential areas for project expansion.

- **Complete configuration and design for allspice processing and distillation plant.**
- **Implement baseline co-financing instruments for the purchase and installation of drying and distillation equipment.**
- **Develop and implement capacity building/training program to support the installation, operation, maintenance and repair of solar, biofuel, and related equipment, as well as, processing procedures and export issues.**

Implement marketing program to connect with growing market for essential oils. Build demand for allspice and allspice essential oil processed by rural communities using renewable energy technology.

Baseline co-financing for this component will cover the purchase and installation of drying and distillation equipment, as well as the marketing program related to purchase of allspice and allspice essential oil on the international market. GEF financing will focus on training activities for sustainable extraction and production methods, habitat conservation awareness, habitat monitoring program, and capacity building activities.

12. Stakeholders involved in the project:

Stakeholders include the coffee producing families of the target cooperatives:

- near the Town of Boaco, Cooperative San Isidro
- near the Town of El Cua, Cooperatives Juan Fernandez and Jesus Rivera Rivera
- near the Town of Aranjuez, Cooperative Aranjuez

the allspice producing members/shareholders near Siuna;

the body of members that will be trained in the various methods and technologies for the project;

the technical assistance Campesino a Campesino Program of UNAG;

the Frontera Agricola project, for the monitoring and mapping of allspice resources;

co-financiers: the Ecumenical Development Cooperative Society (SOCED), and the Institute for International Cooperation (IIZ);

the Ministry of Natural Resources and the Environment;

and the alliance of importers/roasters/distributors that will purchase the coffee and allspice products.

PART II. INFORMATION ON BLOCK A PDF ACTIVITIES**13. Activities to be financed by the PDF:**

- Stakeholder workshops with co-financing organizations and project managers to confirm credit arrangements for stakeholder cooperatives. Companies currently trading the products (coffee and allspice) that have expressed interest will also participate.
- Complete financial analysis with co-financiers to determine if the proposed GEF funded barrier removal activities sufficiently reduce implementation costs as expected.

Completion of workplan and monitoring and evaluation plan in consultation with partners.

- Develop strategic plan for expedited initial system introduction that will allow some solar-dried coffee from the coming 1999/2000 harvest to reach the market.

Stakeholder meetings to present project plan, philosophy, and methodology.

- Collect social assessment data through research and interviews.
- Collect and review baseline data for biodiversity monitoring component, and develop indicators for monitoring conservation objectives and potential biodiversity impacts of sustainable use practices supported under the project.
- Determine biological criteria used to define biodiversity-friendly extraction and production methods.
- Complete baseline assessment of allspice forest habitat and determination of boundary and size of initial target area for the project.

14. Expected outputs and completion dates:

- Co-financing mechanisms and procedures for the project established.
 - Institutional arrangements, including but not limited to a clear delineation of project implementation and responsibilities among stakeholders, clarified.
 - Project plan and project brief with details of all GEF investments to be made under the project with three-year phase-in strategy developed.
 - Strategic plan to introduce the 1999/2000 harvest into the market developed.
 - Data related to Social assessment collected and analyzed, and participation issues identified.
- Baseline data collected and reviewed, target project area identified.
- Biological criteria for biodiversity-friendly extraction and production methods defined.
 - Biodiversity monitoring framework developed, including indicators.

PDF Block A activities are expected to be completed by November 99.

15. Other contributors/donors and amounts:

Donors for various aspects of the project implementation have been identified to date:

National Renewable Energy Laboratory (NREL)	\$75,000 (configuration and design plans)
Coffee importers and roasters	\$460,000 (coffee sales and marketing)
Frontera Agricola Project	\$25,000 (allspice habitat baseline assessment and monitoring)
UNAG, Campesino a Campesino Program	\$10,000 (socio-economic analysis)
Total to date:	\$570,000

16: Total budget and information on how costs will be met (including the Block A grant):

PDF Activities	Total	GEF	MDI
Stakeholder meetings	21,500	13,500	5,000
Co-financing strategy	3,500	1,500	2,000
Workplan development	33,000	8,000	28,000
Social assessment and biological monitoring data gathering	22,000	2,000	20,000
Total	80,000	25,000	55,000

PDF Expenditure Categories	Block A
Consultants	14,000
Workshops	3,000
Information processing and compilation	1,500
Material	3,500
Administrative Costs	3,000
TOTAL	25,000

Partners Frontera Agricola and the Campesino a Campesino Program have been working on organizing cooperative communities, researching legal and titling issues, and collecting baseline data on habitat analysis and allspice resources in the target zone for the past year. Figures on money spent to date on these project preparation activities are not available at this time.

PART III. INFORMATION ON THE APPLICANT INSTITUTION

17. Name: Mesoamerican Development Institute (MDI)

19. Mandate/terms of reference:

The Mesoamerican Development Institute (MDI) is a nonprofit working to promote renewable energy technology for productive, highly-value-added applications in rural Mesoamerica. MDI is working in collaboration and partnership with the UNAG program, Campesino a Campesino, a horizontal technical assistance and training program with extensive field experience working in the target region, specifically, cooperatives in the Bosawas Reserve Buffer Zone.

18. Date of establishment, membership, and leadership:

Established in 1995
Leadership: Raúl Raudales, Director
Five principal researchers; four field team members in Miramar, Costa Rica.

20. Sources of revenue:

US Department of Energy (DOE), National Renewable Energy Laboratory (NREL), Sandia National Laboratory, Cooperative Montes de Oro, Fundación Forestal, World Wild Life Fund, and Coffee Kids, Inc.

To date over \$658,000 has been spent on the development of the production processes to be implemented in this project.

21. Recent activities/programs, in particular those relevant to the GEF:

MDI has developed the production process using renewable energy, as well as other related processing and storage equipment. MDI has field tested solar/biomass dryer on a working plantation and has established a field research and training center with partner, Cooperative Montes de Oro in Miramar Costa Rica.

Over the past year, MDI has conducted a pilot marketing program to introduce solar-dried café solar® to the specialty coffee market in the US and Canada. MDI has conducted numerous training sessions for retail managers and marketing specialists for coffee importers/retailers in the US and Canada on how to promote solar-dried coffee. In addition MDI has put together an alliance of importers/roaster/retailers that desire to market and sell the coffee (and allspice essential oil) that will be produced by this project.

As part of the project preparation activities, MDI has held a workshop in Costa Rica (July 1998) on the use of solar drying equipment and benefits for small growers that was attended by small producers from eight countries in Latin America.

In addition, MDI has met with each of the stakeholder communities (Boaco, El Cua, Aranjuez, and Siuna) for the proposed project and identified appropriate partners for providing training and technical assistance, credit, and biological monitoring programs. These project partners include the following organizations:

- Union Nacional de Agricultores y Ganaderos (UNAG) maintains extension and education services nationwide. The Program Campesino a Campesino is one of UNAG's largest programs to provide technical training to its members. The program receives support from multilateral organizations in Europe and the US.
- The Programa de Desarrollo Sostenible en Zonas de Frontera Agrícola en Centro America (PFA). This program was established in 1986 to support alternative development activities in the agricultural frontier in sensitive regions of Central America. The PFA is currently active in the Peten, Guatemala; Sierra de Agalta, Honduras; BOSAWAS, Nicaragua; SIAPAZ, Nicaragua; and Darien, Panama.
- The Ecumenical Development Cooperative Society (SOCED) was established in 1975 with support from the World Council of Churches. SOCED supports the creation of productive enterprises by opening lines of credit, guaranties or equity investment. SOCED financing is more than 20 million dollars in the Central America and the Caribbean.
- The Austrian Institute for International Cooperation (IIZ) supports rural investment for productive applications.

PART IV. INFORMATION TO BE COMPLETED BY THE IMPLEMENTING AGENCY**22. Project identification number:****23. Implementing Agency contact person:**

Christine Kimes, Global Environment Coordinator

tel: (202) 473-3689 fax: (202) 614-0087 email: ckimes@worldbank.org

Paola Agostini, Task Manager

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24. Project linkage to Implementing Agency program(s):

The project is consistent with the World Bank's Country Assistance Strategy for Nicaragua, which identifies the destruction of forests as an issue of major importance for the country, and gives top priority to improving natural resource management.

Currently, the World Bank has three projects related to this proposal: (i) a Rural Municipalities Project which aims to reduce rural poverty and improve natural resources management; (ii) an Atlantic Biological Corridor Project (GEF), which aims to promote the integrity of a biological corridor along the Atlantic slope of Nicaragua by ensuring the conservation and sustainable use of biological resources in this region; and (iii) a Sustainable Forestry Investment Promotion Project which aims improve local capacity and develops alternatives to address long term forestry issues in Nicaragua.

The proposed MSP is located in a part of the Atlantic slope which is not included in the on-going ABC project. MSP activities would therefore not duplicate on-going project activities, and would complement efforts under the Corridor project by testing new approaches to habitat protection and attention to root causes of habitat loss in the Corridor.

October 26, 1998

Mr. Mohamed El-Ashry
Executive Officer and Chairman
Global Environmental Facility
The World Bank
Washington, DC.

Dear Sir:

After reviewing the project, *"Introduction of Renewable Energy Technology to Promote Reduction of CO₂ Emissions and Forest Protection Through Sustainable Extraction and Processing of Highly Value-Added Products: Coffee and Allspice,"* I do not have any objection to it and it complies with GEF requirements.

Furthermore, this type of projects are the ones we need in the Central America Region.

The Mesoamerican Development Institute (MDI) should be the executing organization of the project, and the recipient of the grant.

Very truly yours,

Garcia A. Cantarero
Nicaragua Operational Focal Point