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**Request for budget reallocation  
and time extension (without additional funds) for  
Project PD 406/06 Rev.1 (M)  
“ESTABLISHMENT OF A NATIONAL FOREST AND TIMBER  
MARKETING STATISTICS SYSTEM”**



# **TECHNICAL REPORT IN SUPPORT OF A BUDGET REALLOCATION REQUEST FOR PROJECT PD 406/06 Rev. 1 (M) "ESTABLISHMENT OF A NATIONAL FOREST AND TIMBER MARKETING STATISTICS SYSTEM"**

## **1. INTRODUCTION**

### **1.1 Project summary**

This proposal is based on the country's potential to implement a forest information and statistics system on the basis of a joint effort. From the technical point of view, this includes the generation of data, developing monitoring skills, the economic statistical analysis of the system and the decentralisation of processes and collection of system data from the places where primary information sources are located.

The project will strengthen the National Forest Directorate's management and monitoring capacity through an Operational Information System for Forest Management and Monitoring to be based on technological infrastructure, which will include a database to feed the system.

With regard to the Directorate's management capacity, the proposal will promote the active involvement of the sector in the use and generation of statistical information through the development and implementation of Ecuador's Forest Information System.

Furthermore, the project seeks to facilitate the flow of geo-referenced data relating to the use of forest statistics through the development and implementation of a Geographic Information System.

### **1.2 Objectives**

#### **1.2.1 Overall objective**

Implement a National Forest and Timber Marketing Statistics System for the collection, processing and dissemination of information with a view to promoting and developing the forest sector in Ecuador.

#### **1.2.2 Specific objectives**

1. Build up the National Forest Directorate's management, follow-up and monitoring capabilities through the development of a forest statistics information system.
2. Establish a mechanism to promote the active involvement of the sector in the use and generation of statistical information.
3. Facilitate the flow of geo-referenced information related to the use of forest statistics on native forests.

## **2. PROJECT PROGRESS**

Progress made during the first year of project implementation towards the achievement of expected outputs is as follows:

### **2.1 Management and implementation issues**

- Development of Yearly Plan of Operation (YPO) (in fiscal format) for the implementation of the project.
- Internal reforms for the financial management of the project.
- Setting up of project technical team.

## **2.2 Progress made in relation to Objective 1.**

**Output 1.1** *Development and implementation of an operational information system to manage and monitor the Forest Regime.*

- A diagnosis of the current status of the Forest Administration System, which is under implementation by the National Forest Directorate.
- Analysis of information requirements and standards for the design and implementation of the new Forest Information and Administration System.
- Training of the project technical team and National Forest Directorate's staff for the design and implementation of the Forest Administration System.
- Implementation of the Forest Administration System (*Sistema de Administración Forestal – SAF2*), which has achieved 70% progress.

By December, at least 50% progress is expected to have been made in the implementation of this component as per the original schedule.

**Output 1.2** *Development and implementation of information technology and networking solutions*

- Diagnosis of technical and networking infrastructure requirements in technical offices and provincial environmental directorates.

It has been ascertained that there is adequate connectivity between technical offices throughout the country. In addition, it has been determined that the directorates in the provinces have their own budget for communication costs, which means that the budget assigned to this item is too high. In this respect, a consultancy has been planned for January to carry out a diagnostic study with a view to optimizing the communication process for the smooth functioning of the system.

## **2.3 Progress made in relation to Objective 2.**

**Output 2.1** *Mechanisms and instruments available to ensure the coordinated management of the effective participation of all institutions and agencies*

- Contacts have been established with forest sector related institutions for the development of forest information generating and integrating mechanisms.
- Meetings have been held with relevant institutions to assess information requirements for the country's Forest Information System.

Based on the established schedule, 30% progress has been achieved in implementation under this project output. A discussion process has been launched with public and private institutions at the national level for the establishment of the forest information and administration system.

## **2.4 Progress made in relation to Objective 3.**

**Output 3.1** *Optimal mechanisms available to ensure the flow of geo-referenced information*

- Collection and quality analysis of spatial information.

Under this output, 100% progress has been made in the collection of all spatial information available at the National Forest Directorate and in the analysis of its quality.

**Output 3.2** *Development and implementation of the Geographic Forest Information System*

- Diagnosis and design of the National Forest Directorate's Geographic Information System.
- Training of technical personnel of the National Forest Directorate, Forest Monitoring System and Technical Offices for the implementation of the project's Geographic Information System.
- Inputting of spatial forest cover patterns into the spatial environmental data infrastructure.

Under this output, 100% progress has been achieved in the implementation of the National Forest Directorate's Geographic Information System and the proposal for the incorporation of other cover patterns to be generated through the new forest information and administration system.

### 3. PROPOSED MODIFICATIONS

#### 3.1 Justification of changes

Three different issues have led to changes in the project implementation process: 1) a delay in project start-up, which has rendered the original baseline outdated and has therefore changed prevailing conditions at the time of launching the project implementation process; 2) the actions taken by the Ministry over the last two years in terms of provision of information and communications infrastructure; and 3) a change of government policy regarding the use of free software. These issues have led to changes in the budget relating to the implementation of the activities listed below, which has resulted in a budget reduction of approximately US\$ 80,000.

1.2.3 Implementation of IT infrastructure at regional technical offices and the National Forest Directorate.

1.2.7 Implementation of a communications solution.

On the other hand, the need to expand the scope of certain project activities and expected outputs has been identified. In this respect, it is proposed to expand the implementation scope of activity 1.1.3 “Analysis and design of the operational information system to manage and monitor the forest regime in Ecuador” and Objective 3, which is focused on the development and implementation of the geographic forest information system.

#### 3.2 Implications for expected project outputs

The proposed budget reallocation would expand the implementation scope of Output 1.1 and in particular activity 1.1.3 to identify current Information and Communication Technology (ICT) solutions, specifically regarding the use of digital image analysis technologies to support forest management and monitoring in the country.

The scope of Output 3.2 would also be increased as: **“Development and implementation of the Geographic Information System with monitoring capabilities”** and a new activity would be added as **Activity 3.2.7 “Identify a spatial monitoring mechanism for the harvesting of timber resources in the country”**.

To successfully achieve project objectives and the new activities proposed, it will also be necessary to extend the project to December 2011 in accordance with the schedule of activities shown in **Annex 2**.

### 4. PROPOSED BUDGET REALLOCATION

#### 4.1 Budget item 10 - Project personnel

The modifications requested for budget item 10 – Project personnel are based on the needs identified during the second year of project implementation. The most significant change is related to the national consultants as detailed in Tables 2.1 and 2.2.

The Fellowships & Training item also shows a significant increase from the original amount approved in the project document. This will be used for training staff responsible for the Forest Information and Administration System as well as personnel from the Directorate of Technology of the Ministry for the Environment. During the first year of project implementation, training has been provided on development tools for the Forest Administration System with a total cost of approximately US\$ 11,000. During the second year of project implementation, training will be provided to the project team as well as personnel from the National Forest Directorate, the Directorate of Technology and technical offices on the so-called Business Intelligence tools, which can facilitate the analysis of information generated by the Forest Administration System. The cost of these training activities is estimated at approximately US\$ 20,000. The balance is to be allocated to a fellowship for master's degree studies for the project's counterpart technician from the Ministry for the Environment.

**Table 1. Requested budget reallocation for project personnel**

ITTO FUNDING		ORIGINAL AMOUNT	RESCHEDULED AMOUNT	CHANGE (%)
<b>10</b>	<b>Project personnel</b>			
	1.1 National experts	15,175	22,409	46.67
	1.2 National consultants	50,645	105,842	108.99
	1.3 Administrative/Financial Assistance	1,650	3,754	127.51
	1.3 Other labour	0		
	1.4 Fellowships and training	26,310	40,310	53.21
	1.5 International experts	6,000	6,000	
	<b>1.9 Component Total</b>	<b>99,780</b>	<b>178,315</b>	<b>78.70</b>

**Table 2.1 Implementation during the first year of the project (2010)**

Consultant	Monthly salary	Duration of contract under ITTO support	Total salary	Main activities	Outputs under consultant's responsibility
Expert in information integration	1,340	4 months	5,360	Analysis of requirements for the implementation of the Forest Administration System	Requirements document for the development of the Forest Administration System
Production Chain Expert	1,590	4 months	6,360	Review of the country's production chains as the basis for the identification of Forest Administration System requirements	Review document on timber production chains in the country
Information Technology (IT) Expert	1,397.5	4 months	5,590	Definition of IT requirements for the implementation of the Forest Administration System	Development of documents and IT requirements and application case-studies for the implementation of the Forest Administration System
Assessment of requirements and implementation of a prototype for video image analysis to support forest monitoring	6,000	2 months	12,000	Assessment of requirements and development of image analysis prototype for forest monitoring	Prototype for the pilot implementation of a video image analysis system to support forest monitoring
Expert in Information Systems	1,030	5.5 months	5,665	Support for the implementation of the Forest Administration System	Forest Administration System Modules
<b>TOTAL</b>			<b>34,975</b>		

**Table 2.2 Expected implementation for the second year of the project (2011)**

<b>Consultant</b>	<b>Monthly salary</b>	<b>Duration of contract under ITTO support</b>	<b>Total salary</b>	<b>Main activities</b>	<b>Outputs under consultant's responsibility</b>
Forestry expert for the implementation of the Forest Administration System at the national level	1,820.72	11 months	20,027.92	Validation of system's processes and requirements in technical offices at the national level. Training for the implementation of the system at the national level.	Information system validated. Development of procedural manuals. System users trained.
Information Technology (IT) Expert	1,260.4	3 months	3,781.2	Development of forest information system	Forest Information System
Information Technology (IT) Expert	1,260.4	3 months	3,781.2	Validation of Forest Administration System at the national level.	Forest Administration System validated at the national level.
Information Technology (IT) Expert	1,260.4	3 months	3,781.2	Development of computer modules for connection with other forest information generating institutions. Development of modules for the generation of forest statistics.	Integrated forest information system. Forest statistics reporting system developed.
Processing of statistical information for the generation of forest statistics.	831.7	3 months	2,495	Processing of statistical information sent by technical offices for the production of forest statistical reports.	Forest statistical newsletters on forest product harvesting and monitoring.
Expert in Geographic Information Systems	n/a	8 months	18,000	Forest harvesting monitoring analysis in a pilot site of the Ecuadorean Amazon Region.	Assessment of forest harvesting levels in farms as compared to the data reported in forest harvesting programs.
Image analysis expert to support the forest monitoring system.	n/a	6 months	19,000	Implementation of a pilot phase for the establishment of a forest monitoring system based on video image analysis.	Forest monitoring system based on video image analysis established in forest monitoring posts.
<b>TOTAL</b>			<b>70,866.52</b>		

## 5.2 Budget item 20 - Sub-contracts

No significant changes are requested for this item in relation to the overall budget, although internal adjustments are proposed within its sub-items, mainly to provide the services required for the organization of training activities, workshops and events, the printing of project publications, and the production of outreach material on new procedures to be established as part of the implementation of the Forest Information and Administration System.

## 5.3 Budget item 30 - Duty travel

Adjustments to the original budget are requested based on costs incurred during the first year of project implementation.

## 5.4 Budget item 40 - Capital items

The main change to the original project budget requested in this proposal is related to this budget item. As detailed above, this change is hereby proposed because most technical offices already have sufficient equipment for the operation of the forest administration system. To support this request, a diagnosis has been carried out for the quantitative and qualitative assessment of the computer equipment available in the technical offices. In addition, available GPS equipment has also been assessed. Finally, the provision of scanners to all offices is proposed in order to scan all relevant documentation for uploading onto the system. A summary of these assessments is shown in **Annex 1**

**Table 3. Summary of budget reallocation requested for each budget item**

	ITTO	RESCHEDULED AMOUNT	PERCENTAGE OF CHANGE	
I. Funds administered by the Executing Agency				
<b>10</b>	<b>Project personnel</b>			
	1.1 National experts	15,175	22409	46.67%
	1.2 National consultants	50,645	105842	108.99%
	1.3 Administrative/Financial Assistance	1,650	3754	127.51%
	1.3 Other labour	0		
	1.4 Fellowships & training	26,310	40310	53.21%
	1.5 International experts	6,000	6000	-
	<b>1.9 Component Total</b>	<b>99,780</b>	<b>178,315</b>	<b>78.70%</b>
<b>20</b>	<b>Sub-contracts</b>			
	2.1 Sub-contract (Communication services)	60200	22000	-63.45%
	2.2 Sub-contract (Software license)	16000	0	-100%
	2.3. Sub-contract (Printing)	10000	20000	-100%
	2.4 Workshop and training services		15000	
	2.5 Satellite image services		17000	
	<b>2.9 Component Total</b>	<b>86200</b>	<b>74000</b>	<b>-14.15%</b>
<b>30</b>	<b>Duty travel</b>			
	3.1 DSA*	29200	20000	-31.15%
	3.2 International travel	2000	0	-100%
	3.3 Transport costs			
	<b>3.9 Component Total</b>	<b>31200</b>	<b>20000</b>	<b>-35.89%</b>



		ITTO	RESCHEDULED AMOUNT	PERCENTAGE OF CHANGE
<b>40</b>	<b>Capital items</b>			
	4.4 Capital equipment	131290	67139	-48.86%
	<b>4.9 Component Total</b>	<b>131290</b>	<b>67139</b>	<b>-48.86%</b>
<b>50</b>	<b>Consumable items</b>			
	5.4 Office supplies	0	0	-
	<b>5.9 Component Total</b>	<b>0</b>	<b>0</b>	<b>-</b>
<b>60</b>	<b>Miscellaneous</b>			
	6.2 Auditing			
	<b>6.9 Component Total</b>	<b>0</b>	<b>0</b>	
<b>70</b>	<b>Executing Agency Management Costs</b>			
	<b>7.9 Component Total</b>	<b>0</b>	<b>0</b>	
	<b>Sub-total:</b>	<b>348470</b>	<b>339454</b>	<b>-2.58%</b>
<b>II. Funds retained by ITTO</b>				
<b>80</b>	<b>ITTO administration, monitoring &amp; evaluation</b>			
	8.1 Monitoring and review costs	20000	20000	-
	8.2 Evaluation costs	15000	15000	-
	8.3 Programme support costs	30678	30678	-
	<b>8.9 Component Total</b>	<b>65578</b>	<b>65578</b>	<b>-</b>
<b>90</b>	<b>Refund of pre-project costs</b>	<b>40000</b>	<b>40000</b>	<b>-</b>
	<b>Non refunded pre-project costs</b>		<b>9016</b>	<b>-</b>
	<b>GRAND TOTAL</b>	<b>454048</b>	<b>454048</b>	<b>-</b>

## 5. SUSTAINABILITY ASSESSMENT FOR THE OPERATION OF THE SYSTEM AFTER PROJECT COMPLETION

The future operation of the forest information and administration system within the National Forest Directorate and the Ministry for the Environment will depend to a great extent on the consolidation of the system's strength during the project implementation and financing period, as well as the soundness of the system itself, which will facilitate its adoption by users involved in forest product harvesting, transport and marketing. Thus, it will be crucial to ensure the technical soundness of the system in the second year of project implementation by making the necessary adjustments during the pilot phase. Furthermore, training should be provided to officers of the Ministry for the Environment at the headquarters and technical office levels on the management of the system as well as on the analysis and interpretation of results, which will be another key element in this process.

In view of the above, the proposed budget changes are aimed at the widest possible validation of the system among its users so as to develop an applicable and adaptive system that can be adjusted to local conditions. In addition, the aim of the proposed revisions is to set the basis for ongoing system strengthening through the use of information and communication technologies to ensure better management of forest resources in the country.

It should be pointed out that at the moment, the National Forest Directorate has a permanent IT team that is responsible for managing the current Forest Administration System (SAF) and is financed through the annual budget of the National Forest Directorate, and it is for this reason that the project is focused on the strengthening and institutionalization of the system at the national level. Thus, the consultants to be recruited with project funds will support the current SAF management team in the implementation and validation of the new system so no additional human resources will be needed after project completion.

Furthermore, the cost of the IT team as well as telecommunication costs of technical offices at the provincial level will be covered through the annual budget of each office. Therefore, the project will not generate any undue dependency but will rather support the optimization of current processes.

**ANNEX 1. Summary of the assessment of equipment requirements in the technical offices  
of the Ministry for the Environment at the national level  
(Date of preparation: September 2010)**

TECHNICAL OFFICE	Computer units available	GPS units available	Computer units required	GPS units required	Scanners required
COCA	4	3	0	0	1
NUEVA LOJA	2	1	1	0	1
TENA	3	3	0	0	1
QUEVEDO	1	0	0	1	1
PUYO	2	2	0	0	1
SAN LORENZO	2	2	1	1	1
CAYAMBE	1	1	0	1	1
ESMERALDAS	2	2	1	1	1
LATACUNGA	3	1	0	1	1
RIOBAMBA	2	0	0	1	1
BORBON	1	1	0	0	1
MACAS	3	3	0	0	1
IBARRA	5	2	0	0	1
AMBATO	1	1	0	0	1
TULCAN	1	1	1	1	1
QUININDE	2	1	1	0	1
GUARANDA	1	1	0	0	1
QUITO	1	1	0	0	1
STO.DOMINGO LOS COLORADOS	2	2	0	0	1
CUENCA	1	1	0	0	1
PORTOVIEJO	1	5	0	0	1
AZOGUES	1	0	1	1	1
PEDERNALES	1	2	1	0	1
GUAYAQUIL	2	0	0	1	1
LA MANA	2	1	0	1	1
ZAMORA	0	1	1	1	1
PALORA	1	1	0	0	1
MACHALA	1	1	1	0	1
LOS BANCOS	2	2	1	0	1
LOJA	1	1	1	1	1
NARANJAL	1	1	0	0	1
GONZANAMA	1	1	1	0	1
MUISNE	1	2	1	0	1
BABAHOYO	1	0	0	1	1
GUALAQUIZA	1	1	0	1	1
PINAS	2	1	0	0	1
VALLADOLID	1	1	1	1	1
ALAMOR	1	0	1	1	1
SANTA ELENA	0	1	1	0	1
GUALACEO	0	0	0	0	1
GUAYAQUIL (PUERTO)	0	0	1	1	1
Total			17	17	41
Estimated value			800	500	100
Total value required			13600	8500	4100

TOTAL REQUIRED

26,200

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**ANNEX 2. SCHEDULE OF ACTIVITIES FOR THE 2ND YEAR OF PROJECT IMPLEMENTATION (2011)**

	YEAR 2011											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
<b>Component 1. Implementation of Forest Information and Administration System</b>												
<b>Output 1.1 Development and implementation of an operational information system to manage and monitor the forest regime.</b>												
Activity 1.1.3 Analysis and design of the operational information system to manage and monitor the forest regime in Ecuador including digital image analysis to support forest monitoring.												
Activity 1.1.5 Development of operational information system for management and follow-up.												
Activity 1.1.6 Testing of operational information system for management and follow-up												
Activity 1.1.7 Implementation of the operational information system at data input, collection and processing points												
Activity 1.1.8 Implementation of a database administration system for a forest information portal and the operational information system for management and follow-up												
Activity 1.1.9 Training of personnel in the use of operational information systems for management and follow-up												
Activity 1.1.10 Preparation of system related manuals and documentation												
Activity 1.1.11 Information system feedback for management and follow-up												
<b>Output 1.2. Development and implementation of information technology and networking solutions</b>												
1.2.2 Formulation of alternative technological networking solutions												
1.2.3 Implementation of IT infrastructure												
1.2.4 Development and implementation of a secure vertical portal on forest information												
1.2.5 Implementation of security solutions												
1.2.6 Implementation of a communications solution												
1.2.7 Training												
1.2.8 Testing of communications solution												
1.2.9 Preparation of documentation and manuals												

<b>Component 2. Promoting a forest sector involvement mechanism</b>																				
<b>Output 2.1 Mechanisms and instruments available to ensure the coordinated management of the effective participation of all institutions and agencies</b>																				
Activity 2.2.4 Development of strategic document for the implementation of the forest information system																				
Activity 2.2.5 Evaluation of potential national forest information system stakeholders' capacity and level of IT implementation																				
Activity 2.2.6 Development of work plans with national forest information system stakeholders																				
<b>Output 2.2 Development and implementation of Ecuador's forest information system</b>																				
Activity 2.2.1 Design and implementation of the national forest information system																				
Activity 2.2.2 Testing of the national forest information system																				
Activity 2.2.3 Training																				
Activity 2.2.4 Preparation of national forest information system manual and documents																				
<b>Specific objective 3. To encourage the flow of geo-referenced information related to the use of forest statistics</b>																				
<b>Component 3.2 Implementation of the Geographic Information System with monitoring capabilities</b>																				
Activity 3.6 Preparation of geographic information system manuals and documents.																				
Activity 3.2.7 Identify a spatial monitoring mechanism for the harvesting of timber resources in the country																				

