



**POLITICAS ECONOMICAS Y PRODUCTIVIDAD**

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Honduras Policy Enhancement and Productivity (PEP) Contract  
Information Technology Assessment

Contract No. 522-C-00-00-00203-00

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# Information Technology Assessment for Honduras Policy Enhancement and Productivity Project

## A. Introduction

During the April 30 to May 3, 2000 time period, the consultant traveled to Honduras for an assessment of technology needs for the Central Bank of Honduras, *Unidad Nacional de Apoyo Técnico* (UNAT), Ministry of Agriculture Planning, Evaluation, and Management Unit (SAG-UPEG), and the Ministry of Industry and Commerce (SIC). The assessment was the first step to achieve the final objectives for the activity as follows:

1. Upgrade the hardware and software for the Central Bank of Honduras.
2. Prepare a procurement action request for the Central Bank of Honduras.
3. Make hardware and software recommendations for UNAT, UPEG, and SIC to USAID for procurement through a separate (non-PEP) local currency contracting mechanism.

Specifically, the tasks of the assignment were to:

1. Assess the current status of computers and related equipment within the Central Bank of Honduras.
2. Assess the computer needs of the Central Bank of Honduras.
3. Submit a procurement action request form to quote the recommended equipment.
4. Assess the current status of computer and related equipment with UNAT, UPEG, and SIC.
5. Assess the computer needs of UNAT, UPEG, and SIC.
6. Submit a draft report on findings and provide recommendations for future action.

While the hardware and software assessment was the major reason for this assignment, it rapidly became apparent that the Central Bank of Honduras, UNAT, UPEG and SIC have much deeper technology issues to address. There are important improvements that can be made to all of these agencies through the funding provided by USAID. Several recommendations are included within this document. However after looking at the overall objective of information systems within Honduras and its Ministries it is clear that

measures must be taken to improve the network infrastructure, messaging capability, and performance if sustainable improvement is to be achieved.

## **B. Activities**

During the week of May 1, 2000, the IT expert conducted an assessment of the equipment currently being used at Central Bank of Honduras, UNAT, UPEG, and SIC.

1. An analysis was conducted of the current hardware and software being used at each location.
2. Brief individual interviews were conducted with key managers and staff.
3. Meetings with PEP project staff and USAID were conducted to gather historical and contextual information as it related to all four locations.

## **C. Findings**

### **C1. Central Bank of Honduras**

The National Accounts Division is comprised of 23 people.

- Eight of the 23 staff does not have use of a dedicated computer; workstation sharing is commonplace and seriously impacts productivity.
- The Central Bank of Honduras is currently engaged in developing an application that requires a server for central access. No server is currently in place.
- The consultant found that five out of the 15 staff members are without a network connection, thereby limiting their access to network resources and limiting their ability to share files. This lack of network connectivity is due to insufficient network hub space.
- E-mail is not available to individuals in the division, thereby limiting their ability to communicate within the bank and externally with customers, consultants, and vendors.
- Of the 15 computers installed within the division, five are sub-standard and incapable of running current versions of required software. Recommendation: retire computers and replace with newer systems.
- The ten remaining computers need to be upgraded with additional memory and hard drive space. Processor speeds are adequate, but memory and storage are insufficient to run current applications.

- Computers are running different versions of Microsoft Office software; this creates version problems in documents and spreadsheets. Recommendation: upgrade licensing to MSOffice 2000.
- Computers are running three different versions of the operating system. Recommendation: upgrade all computers to Windows 98.
- Division currently has two networked printers, both low-end in capacity and speed. Recommendation: an additional high-end laser printer to improve reporting and productivity should be procured.
- Staff is not adequately trained to make full use of the resources available on their computers. Recommendation: targeted training should be conducted in the following areas: MSWord, MSExcel, file management, and Outlook..

## **C2. Unidad Nacional de Apoyo Técnico**

The *Unidad Nacional de Apoyo Técnico* was in the best condition regarding hardware and software systems. The staff of 30 people is well positioned with regard to current technology. There are some areas of technology that the agency could stand some improvement.

- A server is currently installed but not fully configured at this time. Recommendation: a backup solution, raid configuration and messaging be installed on the server.
- The technology staff within UNAT has started the development of a database, however, insufficient training and limited skills are available for development of a strategic database suitable appropriate for UNAT's needs and future requirements. An additional server should be acquired and configured to run a relational database designed specifically for UNAT's data gathering and reporting requirements.
- Because information gathering and dissemination are an important component of UNAT's mandate, an analysis should be conducted to determine the best way to distribute information. One approach could be the development of a website that could act as both an information source and information gathering tool.
- One networked printer is available to the entire division, an additional printer should be acquired to support the staff.

### **C3. Ministry of Agriculture Planning, Evaluation, and Management Unit**

This unit was severely limited by the lack of computer hardware and software systems. The unit is comprised of 35 staff members with only nine computers adequate enough to service their needs.

- Network access and a central server were not available. All computers were stand-alone. This seriously impacts the staff's ability to generate documents necessary to meet their mandate. Several staff were observed using typewriters to generate documents. Recommendation: the installation of a LAN and central server. Existing computers will need to be upgraded with network interface cards.
- Staff to computers ratio is four to one. There is no utilization of technology to gather, monitor or evaluate Ministry of Agriculture policies or programs. Recommendation: immediate acquisition of 26 computers. All computers should have the capability to operate on a network and come configured with MSOffice 2000.
- Existing computers are inadequately configured to run the current version of MSOffice and network operating system. Recommendation: upgrade existing computers with additional memory and hard drive space.
- Internet access is not available. Due to the regional aspect of this organization, it is important to make available to staff and regional units some vehicle for researching and managing agricultural policies and programs. Recommendations: the installation of either dedicated access to the Internet or installation of four Internet walk up workstations.
- Lack of e-mail inhibits the flow of information throughout the unit. Recommendation: acquire a mail server that could serve as both a messaging hub and a central file store.
- Tools for monitoring and evaluation of programs are not available. Recommendation: development of monitoring and evaluation tools and training should be made available to technical staff.
- There are an insufficient number of printers to support staff. Recommendation: acquire and install three networked printers.

### **C4. Ministry of Industry and Commerce**

The technology resources within the Ministry of Industry and Commerce are seriously limited. The total number of staff is 28 and the unit has a total of five computers for the

entire office. Current methods used for information gathering and dissemination was fax and courier.

- Observed an absence of technology tools needed to accomplish rudimentary office tasks. Recommendation: a more thorough examination and assessment of workflow within this unit.
- There is a lack of workstations, printers, and adequate office automation software. Recommendation: the installation of 23 network computers, three networked laser printers, and current versions of MSOffice 2000.
- Key managers expressed that the lack of Internet and e-mail tools often leads to the loss of vital information. Counterpart agencies in other countries communicate via e-mail, leaving the SIC out of the information loop. Recommendation: the acquisition and implementation of a central server that can serve as both a messaging and mail server.
- There are a large number of documents stored in files and not readily accessible for critical report generation and information management. Recommendation: a high-end scanning station should be installed and made available on the network.
- Training opportunities are not available to staff. Recommendation: training in MSOffice, email and file management should coincide with the deployment of technology.
- Laptop computers are critical to traveling staff. Recommendation: the purchase of two laptops for use by staff attending seminars and conferences. This will enable key staff members to capture information in the field.
- The deployment of a website would greatly improve the sharing of information on policy changes between countries and would increase public awareness of trade policies. Recommendation: take steps to examine the deployment and support of an agency website.
- A presentation tool for seminars and conferences was not available. Recommendation: purchase of a data display projection unit.

#### **D. Final Recommendations**

Based on the findings listed above, this section includes recommendations for next steps and for the acquisition of equipment to ensure that the above agencies meet the information needs based on their mandate for the future. Please note that the costs provided for the recommended equipment are based on quotes received in June and July 2000.

## **D1. Central Bank of Honduras**

As specified in the statement of work for the Reactivation of the Economy through Agricultural Credit and Technology (REACT) Activity, “the contractor is expected to define additional computer requirements for implementing the Central Bank’s economic monitoring and reporting system.” After the assessment, the contractor is to provide additional computer equipment “to carry out the collection, processing, and reporting of this socioeconomic data.”

The table below includes the recommended computer equipment that will enable the Central Bank to better meet its mandate. This equipment must be accompanied by technical assistance and training to properly install the equipment. We recommend the following:

- One network engineer – estimated level of effort – 10 days
- One trainer – estimated level of effort – 3 days
- One workstation specialist – estimated level of effort – 7 days

All staff at the Central Bank should receive one half day of training in MSOffice products and one half day of training in NT file management. Also, it is recommended that one systems support engineer be identified in the organization. Training should be provided to the engineer in NT server support, Windows 98 support, Network Management, Exchange Administration, and Data Communication.

**Recommended equipment:**

Quantity	Description	Unit Price (\$)	Total Price (\$)
1	Server Dell Power Edge or equal 512 MB Ram Dual Processor Raid 5 Drive-6GB x 4, 10,000 RPM Hard Drives (w/ Raid SCSI controller) NT 4 Server, export grade encryption Intel Pro 100 MB Ethernet Card IDE CD Rom 3.5" floppy drive U.S. Keyboard External DLT tape drive 110 V power	7,720.00	7,720.00
13	Workstations Pentium III 500 MGz/T + base w/4mb Video Memory, Integrated Audio, 512K cache, with integrated 10/100 networking Spanish Keyboard 128mb, ecc, sdram, 1 dimm, 100 mgz, 250+ External Speakers 56k internal fax/modem IDE CD-RW 17" monitor 3.5" floppy drive 10.0 gig hard drive wheel mouse 110 V power	1,625.00	21,125.00
Quantity	Description		
13	Windows 98 Second Edition/Spanish	114.00	1,482.00
1	Norton Antivirus Suite (covers NT server, exchange server, & workstations)	1,075.00	1,075.00
1	Veritas Backup Exec – Enterprise Edition	865.00	865.00
10	64MB Edeo Simms (upgrade for current com)	88.00	880.00
10	64 MB Dimm (for new workstations)	61.00	610.00
10	10.0 GB Hard Drive Upgrades	99.00	990.00
10	Windows 98 Second Edition/Spanish Upgrades	99.00	990.00
1	APC BK 650	162.00	162.00
13	NT 4.0 Client Access Licenses	29.00	377.00
1	MS Exchange 5.5, Service Pack 3 English Edition	1,630.00	1,630.00
1	24 Port 10/100 Hub	835.00	835.00
23	MS Office 2000 Upgrades	220.00	5,060.00
2	Networked 8100N HP Laser Printers	2,877.00	5,754.00
<b>Estimated Total</b>			<b>49,555.00</b>

**D2. Unidad Nacional de Apoyo Técnico**

The following table illustrates the specific hardware being recommended to properly equip the *Unidad Nacional de Apoyo Técnico*:

Quantity	Description	Unit Price (\$)	Total Price (\$)
1	Server Single Pentium III 600 MHz Processor 512 MB SDRAM RAID 5 Drive – (9 GB x 4) 7200 RPM Hard Drives 1.44MB Diskette Drive MS Windows NT 4.0 Server with 10 client licenses (plus 5 purchased separately) Intel Pro 100mb Ethernet Card 56K Internal Modem 12/24 GB Internal DDS-3 Tape Backup 17/40x CD ROM Drive IDE Veritas BackupExec Software, Version 7.3 NTFS Files System for Windows NT U.S. Keyboard 15” SVGA Monitor MS Exchange Server with 25 Client Access License	5,010.00	5,010.00
1	APC SMART UPS 1400 NET with PowerChute software for Server	590.00	590.00
1	HP LaserJest 8000 Printer, 24 PPM, 16 MB RAM, 1200 DPI	2,020.00	2,020.00
<b>Estimated Total</b>			<b>7,620.00</b>

### D3. Ministry of Agriculture Planning, Evaluation, and Management Unit

The following table illustrates the specific hardware being recommended to properly equip the Ministry of Agriculture Planning, Evaluation, and Management Unit:

Quantity	Description	Unit Price (\$)	Total Price (\$)
26	Workstations (Desktops) Pentium III 667 MHz, 512K Level 2 Cache 128 MB SDRAM Video Card with Intel 3D AGP Graphics 40x Max/17x Min. Variable CD-ROM Drive SVGA Monitor with 17" Viewable Image 3.5" 1.44MB Floppy Drive 10 GB Ultra ATA Hard Drive 3Com 10/100 Remote Wake Up NIC Soundblaster 64V PCI Card Wheel Mouse External Speakers 110 V Power Windows 98 Second Edition MS Office Premium 2000 Installed MS Works Suite 2000 Installed MS Word 2000 Installed Norton Anti-Virus 2000 International Warranty	1,800.00	46,800.00
2	Laptop Computers Pentium III 600 MHz 4.8 GB Ultra ATA hard drive 128MB SDRAM, 2 DIMMs Removable Modular Floppy Drive Xircom RealPort 10/100+56K Combo PC Card 24x CD Rom 14" Viewable Color Image Size 110 V Power or NiMH Battery Power Windows 98 Second Edition MS Works Suite 2000 Norton Anti-Virus 2000 Saddle Bag International Warranty	2,580.00	5,160.00
1	Server Single Pentium III 600 MHz Processor 512 MB SDRAM RAID 5 Drive – (9 GB x 4) 7200 RPM Hard Drives 1.44MB Diskette Drive MS Windows NT 4.0 Server with 10 client licenses (plus 5 purchased separately) Intel Pro 100mb Ethernet Card 56K Internal Modem 12/24 GB Internal DDS-3 Tape Backup 17/40x CD ROM Drive IDE Veritas BackupExec Software, Version 7.3 NTFS Files System for Windows NT 110 V Power U.S. Keyboard 15" SVGA Monitor MS Exchange Server with 25 Client Access License	5,010.00	5,010.00

2	Linksys 24-port Hub, RJ-45 connection, 10/100 Autosensing	255.00	255.00
26	Surge Protectors	6.00	156.00
26	APC Backup UPS Pro 420 – 110 v Power	185.00	4,810.00
1	APC SMART UPS 1400NET with PowerChute for Server	590.00	590.00
26	APC Line 600 Power Conditioners (Regulators) – 110 v Power	80.00	2,080.00
1	HP ScanJet 6350CXI Flatbed Scanner, 1200 DPI, 36 Bit, USB-98/SCSI with Automatic Document Feeder and Adobe Photoshop Professional Software	795.00	795.00
3	HP LaserJet 8000 Printer, 24 PPM, 16 MB RAM, 1200 DPI	2,020.00	6,060.00
1	InFocus LP 400 DLP Projector, 700 Lumens, SVGA 800x600 resolution	2,000.00	2,000.00
<b>Estimated Total</b>			<b>73,716.00</b>

#### D4. Ministry of Industry and Commerce

The following table illustrates the specific hardware being recommended to properly equip the Ministry of Industry and Commerce:

Quantity	Description	Unit Cost (\$)	Total Cost (\$)
28	Workstations (Desktops) Pentium III 667 MHz, 512K Level 2 Cache 128 MB SDRAM Video Card with Intel 3D AGP Graphics 40x Max/17x Min. Variable CD-ROM Drive SVGA Monitor with 17" Viewable Image 3.5" 1.44MB Floppy Drive 10 GB Ultra ATA Hard Drive 3Com 10/100 Remote Wake Up NIC Soundblaster 64V PCI Card Wheel Mouse External Speakers 110 V Power Windows 98 Second Edition MS Office Premium 2000 Installed MS Works Suite 2000 Installed MS Word 2000 Installed Norton Anti-Virus 2000 International Warranty	1,800.00	50,400
2	Laptop Computers Pentium III 600 MHz 4.8 GB Ultra ATA hard drive 128MB SDRAM, 2 DIMMs Removable Modular Floppy Drive Xircom RealPort 10/100+56K Combo PC Card 24x CD Rom 14" Viewable Color Image Size 110 V Power or NiMH Battery Power Windows 98 Second Edition	2,580.00	5,160.00

	MS Works Suite 2000 Norton Anti-Virus 2000 Saddle Bag International Warranty		
1	Server Single Pentium III 600 MHz Processor 512 MB SDRAM RAID 5 Drive – (9 GB x 4) 10,000 RPM Hard Drives 1.44MB Diskette Drive MS Windows NT 4.0 Server with 10 client licenses (plus 5 purchased separately) Intel Pro 100mb Ethernet Card 56K Internal Modem 12/24 GB Internal DDS-3 Tape Backup 17/40x CD ROM Drive IDE Veritas BackupExec Software, Version 7.3 NTFS Files System for Windows NT 110 V Power U.S. Keyboard 15” SVGA Monitor MS Exchange Server with 25 Client Access License	5,010.00	5,010.00
2	Linksys 24-port Hub, RJ-45 connection, 10/100 Autosensing	255.00	510.00
28	Surge Protectors	6.00	168.00
28	APC BackUp UPS Pro 420 – 110 V Power	185.00	5,180.00
1	APC SMART UPS 1400NET with PowerChute Software for Server	590.00	590.00
18	APC Line 6600 Power Conditioners (Regulators)	80.00	1,440.00
1	HP ScanJet 6390C Flatbed Scanner, 1200 DPI, 36 Bit, USB-98/SCSI with Automatic Document Feeder and Adobe Photoshop Professional Software	795.00	795.00
3	HP LaserJet 8000 Printer, 24 PPM, 16 MB RAM, 1200 DPI	2,020.00	6,060.00
1	InFocus LP 400 DLP Projector, 700 Lumens, SVGA 800x600 resolution	2,000.00	2,000.00
<b>Estimated Total</b>			<b>77,313</b>