ADVISORY SERVICE MISSION ON NEEDS ASSESSMENT FOR INFORMATION SYSTEMS DEVELOPMENT IN ERITREA

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BY

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Summary

Following the nomination in June 1994 by the Government of Eritrea of an ECA Development information focal point in the Ministry of Finance and Economic Development, a mission composed of the ECA Regional Adviser in Information Systems Development and the Telematics Project Officer was sent to Eritrea from 23-28 January 1995. The mission held discussions with various senior officials of the Eritrean administration including the Ministry of Trade and Industry, the Ministry of Finance and Economic Development, the Ministry of Agriculture, the Eritrean Information Systems Agency (EISA), the Asmara University, the Eritrean Chamber of Commerce, the National Bank, the Investment Center, the Inland Revenue Office, and the Customs Office. Discussions were also held with UNDP and World Food Programme officials. The mission recommended the strengthening of the capacity of institutions in Eritrea by developing information infrastructure in support of research, development planning and economic management. Being a newly independent country, Eritrea should be assisted in training, supply of computer facilities and development of substantive and electronic networks. In this regard, the mission recommended with the assistance of UNECA, inclusion of project proposals in information systems and networks development in the country’s Reconstruction and Development Programme.

Introduction and justification

At the request of respectively, the Minister of Finance and Economic Development and the Minister of Trade and Industry of Eritrea ECA undertook a needs assessment mission to Asmara from 23-28 January 1995 in the field of information systems development and electronic networking.
Objectives

The overall objective of the mission was to assist Eritrea to plan for the setting up of a national development information system and network linking various relevant Government departments, using compatible tools and methods in support of research and economic management.

The mission was specifically required to:

- assess the capabilities of the Ministry of Finance and Development in the field of Development information in order to make it a viable ECA/PADIS focal point;

- advise the Ministry of Industry and Trade in terms of information systems development;

- assess current progress in electronic communications;

- discuss with Asmara University Officials activities towards academic electronic linkages in the framework of the Capacity Building in Electronic Communications (CABECA) activities;

- provide assistance to the current systems operator in servicing local users efficiently; and

- develop a strategy for CABECA activities in Eritrea in 1995;

A series of visits and meetings were held with various senior officials of the Government during the mission and recommendations were made for implementation by Eritrea in collaboration with ECA.
Ministry of Trade and Industry

1. Several meetings were held with his excellency, the Minister of Trade and Industry and the various Directors in the ministry. The ministry outlined its needs in terms of capacity building for its information infrastructure. The need for a systematic, harmonized and global approach at the country level was advocated in the area of information management and networking which were seen to be critical in the restructuring exercise of the ministry. The need for institutional capacity building in computer facilities and equipment, manpower training and advisory services were stressed by the Ministry. In this regard, the following three priority areas were identified by officials of the Ministry for ECA assistance:

a) Data collection and dissemination methodology development

Using traditional manual techniques, the Ministry collects and analyzes massive data on trade flow and industry. This is may lead to data inconsistency and inefficiency in information dissemination techniques. Automating such manual techniques by using computers and communication technology would enhance timeliness and reliability of data. Hence UNECA was requested to assist in developing a strategy to create a Management Information System (MIS) and an overall data collection, processing and dissemination methodology in favour of the Ministry and external users.

b) Archive Management System

Manual techniques are used by the Ministry to manage records. This has created inefficiencies in the dissemination of documents and files at the internal level as well as at the national and international levels. The development of a simple, coherent, functional methodology for records management using microcomputers would create conditions for efficient decision
making. The ministry requested to benefit from ECA's bibliographic data base management software and experience in handling computerized documentation systems.

c) Human Resource Development

Within the framework of its macro economic policy the Government of Eritrea is putting emphasis in the development of human resources. In fact, skill development, training and efficient use of existing human resources are one of the focuses of the Ministry of Trade and Industry. However to be effective the human resource development plan should be supported by an efficient information system which will keep track of personnel, duties, expertise and turnovers. The experience of ECA/PADIS in expert data base development could be used to develop computer based roster which would cover all other human resource management data, including personnel record, recruitment, job openings, etc. It was felt that training in use of microcomputers for database management and centralized personnel management was necessary. Both informal and physical data exchanged networks should also be developed to interconnect departments and branches within the ministry.

The mission discussed UNECA's experience in the above areas and possibilities of immediate assistance and suggested that the Ministry acquires an efficient information system based on adequate equipment and facilities. Hence the Ministry of Trade and Industry should acquire the necessary micro-computer in order to benefit from ECA/PADIS assistance in information systems management. To this end, the mission recommended the development of a series of project proposals which would cover user training and equipment as well as advisory services. If requested to do so, ECA could assist in developing the various proposals and in their implementation.

The present situation within the Ministry of Trade does not cater for coordinated and harmonized information infrastructure from which users would receive timely data for analysis. In fact, data entered in Customs Office is reprocessed several times by the Ministry of Trade and
the Inland Revenue Office while it could have been processed once and used as many times as
required by any user within the Government circle. It was suggested that data should be entered
in one site for all users which should be the Customs Office. The mission recommended the
development of a harmonized information network which would prevent from duplication of
activities and incompatibility between information systems.

University of Asmara

A training and service laboratory of the Computer Science Unit is connected via ethernet
using Novel netware. 21 computers of which 50% are 286 machines and 30% are 486 PCs are
wired to the Local Area Network (LAN). Also, several stand alone machines are available for
research. A Sun Sparc station was donated by Eritreans in North America for the UUCP
connection; but it did not start due to technical problems. Discussions were held with Asmara
University officials in order to explore activities and problems in the area of academic
connections. The mission discussed progress of the national electronic network in which the
University was supposed to take part. However due to human resources and financial
constraints, the University which is still under restructuring is not connected to the global
community and needs heavy assistance to take off the ground.

Discussions centred around academic links and computer science teaching. The mission
informed the University that the academic community in Eritrea can be connected to international
networks using low cost communication technology. In this regard, Fido installation, connection
to PADISnet and demonstration was given to show the viability of the technology for the
academic community. It was stressed that building a proper national academic connection should
begin with, built on existing telecommunications infrastructure.
Computer skills and fundamentals teaching staff is very rare. The University requested ECA to assist with computer lecturers in any computer field. Furthermore, application software programs, micro computers, modems, cables, wires and transformers software, utilities and linkage programs are in great demand by the University. However, the mission felt that the capacity of the Unit should be highly enhanced because it was pivotal to the national capacity building in information science, academic computing and specifically in computer science. As opposed to mushrooming computer training bureaus in Asmara the unit is the only place where dedicated programmers, "gurus" can emerge to build the country's almost non-existent expertise in networking, computer science and programming.

United Nations Development Programme (UNDP)

The United Nations Development Program could play a major role in building national information and networking infrastructure in Eritrea. Discussions held with UNDP Officials indicated that contributions of UNDP national IPF to information infrastructure was made through the public sector management program to strengthen the Eritrean Information Systems Agency (EISA). Other United Nations agencies contributed to the information component through sectoral funds. The United Nations Sudano Sahelian Office (UNSO) and UNICEF are some of the UN agencies in Eritrea which assisted the public sector to develop the information system. More contributions are still needed from UN agencies in Asmara to contribute to the virtually untouched information management field.

The United Nations Development Programme was using its own closed network "Higgins" to communicate within UNDP's various offices around the world. Even though the UNDP network opened gateways to other networks such as the Internet, its connectivity to remote centres in developing countries is unavailable. The establishment of a link to the future national network is critical for UNDP to contribute towards sustainable TCP/IP connection and to reach the local public during project execution. Discussions were held with the programme
officers at UNDP Asmara on the future UN network within Eritrea which could be linked to the Internet. ECA’s assistance in training and setup was requested.

Eritrean Information Systems Agency

The Eritrean Information Systems Agency was established to:

a) develop and promulgate a set of standards and supporting guidelines regarding government and public enterprise sector acquisition and maintenance of computers;

b) develop an appropriate set of policies and management practices supporting more effective and efficient application and exploitation of information technology within the Government and the public enterprise sector;

c) develop and implement technical training programmes within the Government and public enterprise sectors, as well as develop programmes in improving and encouraging training delivery capacity within the private sector;

d) support other government policies and priorities in the area of information technology, such as increasing computer accessibility; conversion to national script; regionalization; private sector industrial development; research and development; the development of high priority government and public enterprise sector management information systems (MIS); and general manpower development;
e) give direction to private sector training operations in terms of curriculum and course content;

f) establish and promulgate strategic information technology priorities for the Government and the public enterprise sector;

g) develop and put in place an appropriate management framework and supporting management practices for the Government and the public enterprise sector;

h) provide managed facilities;

i) promote local manufacture/assembly plant for computer equipment and other facilities;

j) develop a training plan and courses for government and public enterprises personnel and deliver training courses to government and public enterprise employees as well as to private individuals;

k) develop guidelines for private sector training organizations;

l) charge and receive payment for the services it render or for the products it sells.

In view of the above, the role of the agency in developing the national information and networking infrastructure should be a high priority for the Government. EISA must stand at the center of standardizing, harmonizing and providing tools to the national information infrastructure. In this regard, EISA already undertook significant advisory services to Government offices on standardization, computerization and establishment of Local Area Networks. EISA should be strengthened in its trained and skilled human resource to undertake the goals set by its mandate.
The discussion held with the head of EISA revealed that the agency's staff engaged in all types of duties and most of them lack the further advanced technical skills in areas such as LAN, UUCP, Information Systems design and development. It was clear that EISA can benefit from PADIS training workshops and fellowships. Since EISA is a Government sponsored center reporting directly to the Office of the President, it is could be used as a tool for reaching and assisting the Cabinet. Hence the establishment of Cabinet’s Information Network (CIN) should be one of the priorities of EISA. ECA can assist in study tours, fellowships and advisory services to help EISA build a cabinet Information network. Management Information Systems should be an area where EISA could give more focus. Hence, information system design techniques (standards, networks, presentation of information etc.) should be perceived by EISA and donor organizations as a priority area which needs to be strengthened. However, the mission felt that there was need for skills upgrading and manpower strengthening in the following areas to enable EISA play its role efficiently:

- Information Policy (national)
- Unix administration and networking
- Low cost communication system
- Information Systems development
- Wide Area Networks (private)
- Local Area networks (Protocols, interconnections)
- Handling text based information
Network development, interconnection and management

Client/server database management systems

Communications technology

EISA was a focal point of PADIS/IDRC CABECA project. Unfortunately, national Electronic networking activity did not take off due to lack of International Direct Dial line (IDD) out of Eritrea. It was indicated that the Eritrea Telecommunications authorities was doing there best to install IDD lines. The installation of IDD lines would enable EISA to poll London directly. The mission suggested that in order to minimize costs, poll could be initiated by GnFido in London. CABECA can arrange for the poll from GnFido. The Director of EISA requested from PADIS a CABECA Host Institutions Agreement detailing what would be involved in networking including network ethics and security issues.

Eritrea Chamber of Commerce

The mission met with the Secretary General of the Eritrean chamber of commerce to review the type of formal and informal networks available at the center. Discussion was also made on the TINET network and installation of electronic connections. Since the Chamber of Commerce is just beginning its operations, collection of information both locally and internationally has just started. Data was not yet available on a computerized format. Charts and crude formats are given to users from secondary data collected from the National Bank, Foreign Trade Department and other trade promotion centres.

The Chamber of Commerce was playing an active role in the Common Market for Eastern and Southern Africa (COMESA). In this regard, a COMESA network program was installed and brief training was given to relevant staff of the Chamber of Commerce and the Ministry of Trade and Industry. Company profiles data are stored in the database and regular
query results sent to national and international users. The Chamber of Commerce, made an arrangement with the German Chamber of Commerce which was liaizing with the International Chamber of Commerce networks to provide reliable data on regular basis. It was understood that the German Chamber of Commerce would provide office automation tools to its Eritrean counterpart.

The Chamber of Commerce publishes a regular monthly newsletter, main trade publications and document on small scale industries. Even though, the efforts to produce such publications by a chamber of commerce was highly commendable, there was still lack of the necessary quality. An automated office equipped with powerful word processing tools (ie. Ms word, Ventura publisher, Page Maker) and other publishing software programs (corel draw, adobe tools) could provide a sustainable base for starting improved quality publications. The documentation center was using traditional methods to process and store data. The Centre should be reorganized and automated using software such as CDS/ISIS which would provide a reliable documentation and archive management system.

Computerization and office automation was critical for an information provider such as the Chamber of Commerce. Electronic networking should be recommended because it was the best means to reach the global community, create awareness and promote trade in this young nation. Development of the information system of the chamber could be the starting point towards automation. The mission felt that the following four areas would provide the chamber with the "cutting edge" information technology :

- Office automation for better desktop publishing
- Management Information System to provide reliable data to management for decision making, undertake trade promotion;
Client information system to answer queries related to trade, small scale industries and the position of the country in the global market.

- Electronic networking to link to the global market.

There was shortage of microcomputers at the chamber. Few PCs could make a difference in the overall operation of the chamber's activities. Furthermore, upgrading of skills in database management and basic usage of microcomputers was necessary to give better service to users.

The Bank of Eritrea and the Investment Center

The Bank of Eritrea and the Investment Center are two institutions with the same Head of institution. The Governor of the Bank was at the same time Director of the Investment Center. The Bank was leading the restructuring and reconstruction of financial institutions in the country. According to its mandate the bank has initiated activities towards establishing structured financial flows and vertical and horizontal networks with various institutions in the country. Skill development in financial management and computerization were among the critical priorities of the Bank. In this regard, there a study was taking place for the development of a Bank’s information system including client networks. Discussions focused on ECA’s contribution towards setting up of an information system of the bank which would include:

- advice on setting up the structure of formal and physical networking with various offices in the country describing the types of links, compatibility of systems networks and protocols; and

- assistance in training of the staff in modern technology.

Office automation was already undertaken in the Investment Center for better service to its clientele and the promotion of investment in the country. The flow of information and
efficiency of the center was attracting investors worldwide. There were over 340 project proposals submitted to the center since its establishment a year ago. Since the investment center was linked to various Government offices and ministries, the establishment of a formal information flow procedure wired to a physical network was recommended.

The Eritrean Inland Revenue Office

The Inland Revenue Office was finishing the clearing of 100 years long piles of documents weighing several tons. It covers 20 district offices and 10 regional offices which would be gradually computerized. It has started first steps towards computerization by using a systematic approach towards file management, archive and customer support. The manual system used could easily be upgraded to an automated information system. A second step was to interconnect the districts by a reliable network as soon as telecommunication facilities will improve. The Inland Revenue Office would be functionally linked to the regional offices (provincial), potential district branches, municipalities, Ministry of Trade, Customs office, Ministry of Transport, factories, and the Ministry of Information.

An expert from the International Monetary Fund (IMF) arrived during the mission to assist in the automation of the office. The Head of Inland Revenue briefed the mission on plans to introduce microcomputer facilities during 1995. The IMF expert was studying the best techniques for office automation. Training, system development and maintenance would be undertaken by EISA as soon as equipment arrives. The establishment of a standardized national information system would facilitate the efficient flow of information among these offices and reduce duplication of efforts.
The Eritrean Customs Office

The Customs office generates raw data for its internal users and other institutions in the country. Over 50,000 declaration forms with several copies circulate annually. This created inconvenience and difficulties in organizing data and producing statistics.

Developing an automated system at the customs would reduce waste of precious client times and resources and would provide timely flow of information to users. Technical assistance to customs was provided by the Eritrean Information Systems Agency. Also, external technical assistance was expected from the COMESA in the installation of ASYCUDA/Eurodate database. The IMF expert assisting the Inland Revenue Office was also entrusted with work on automation of the Customs Office and development of an harmonized information infrastructure to enable easy flow of data. All custom ports (Assab, Massawa, Asmara airport, the central railway station) would be computerized. Networking the customs office to ports and airports was recommended. In addition to facilitating information flow between various recipients of primary data, networking of customs would improve other activities such as the combatting of international drug trafficking and other crimes related to trade.

EISA should play a major role in standardizing and checking for compatibility among the receivers of primary data from the Customs Office (ie. Ministry of Trade, Bank of Eritrea, Ministry of Finance, The Inland Revenue Office).

Ministry of Agriculture

The mission undertook a brief visit to the Ministry of Agriculture to meet with the Heads of Planning and Programming at the ministry. The ministry had started to develop information infrastructures including networks on early warning system. However, information on projects, agricultural production and research which were known to be critical to research and
development were not yet planned. The ministry requires a well developed documentation center with automated computer filing system to support its research department.

From the discussions it appeared that the Ministry needed long range ECA assistance in information and network development activities. A request was made on the spot for ECA to study the information needs of the ministry and propose tools for efficient flow of information for decision making process. The following areas were included in the request:

- Basic Computer Skill
- Information Systems Design
- Information Management
- Networking

Ministry of Finance and Economic Development

The delegation met on the last day of the mission with officials of the Ministry of Finance to discuss findings of the mission and collaboration areas. Since the ministry was the focal point to the ECA development information system network, discussions covered all aspects in which PADIS was supposed to provide necessary assistance. Discussion focused on information management, capacity building and standardization of donor assistance to the country.

The ministry informed the mission that PADIS would be considered for inclusion of information technology aspects and information management into projects to be submitted to donor agencies. The mission was also informed by the Deputy Director of Development that PADIS assistance would be required for implementation of development information activities
in the ministry in the framework of UNDP projects and other projects submitted to donor agencies.

Conclusion and recommendations

From the assessment above, it can be concluded that a continuous effort would be required to develop the information infrastructure in Eritrea. The motivation and restructuring and reconstruction process from the very beginning in all sectors would make feasible the development of an harmonized and compatible information system and network in Eritrea. Care should be exercised in receiving donors assistance with ambitious packages which could result in unreliable information infrastructure with little or no compatibility. Realization of information as a basic tool for overall socio-economic development in the country would be a primary step towards building an efficient information network in Eritrea. Also, in coordinating information activities, the broader difference between information for the mass media and other for decision making should be delimited. Sectoral information systems in banking, industry, trade, etc. should be developed to:

- bring competitiveness within a given sector;
- use easily available techniques and resources;
- link to other sectors by maintaining compatibility;
- speed up development with evolving new technologies; and
- follow international standards to make Eritrea competitive in the global market.
The traditional thinking towards information management can change through capacity building specially in terms of skills development and upgrading. Managers should be trained in use of new information technologies for better management and efficient handling of resources. Training and sensitization of managers, information producers and users was very useful to improve management techniques and research. Special attention should be given to training, information management and networking.

The country requires further training in the following three areas:

(i) Fellowships (PADIS)

- three fellowships should be awarded to selected national institutions in Eritrea to learn and practice information management at PADIS

- one fellowship should be awarded to EISA to study cabinet information systems in Egypt or in another country

(ii) National Training in Information Management and Networking by PADIS

- a three week training to all users of information in management of information system (databases, statistics and handling bibliographic information)

- a three week training to network users and systems operations on

  - Global communication networks
  - Fido technology
Local Area Networks

National network design and management

(iii) Donor supported short term training

Donor support should be sought to undertake training in information systems management and advanced skills in unix, uucp administrator client/server databases.

Strengthening capacity of Asmara University

The strengthening of Asmara University computer support unit should be undertaken. The unit could solve a long standing academic problem in computer science training in Eritrea. A good computer science unit could easily build an information science department in the university thus handling the computer training needs of the country. Courses in Library and Information Science minoring Computer Science should begin to cope with the scarcity of skilled resource for handling information.

The computer science unit should be supported by all means to strengthen its capacity in hardware, (LAN, Powerful servers, WAN, accessories, skilled programmers and unix machines etc.) It should also build Macintosh capacities since Macintosh machines handle scripts other than Latin including Geez. Use of Mac machines could improve national capacity in publication and networking.
Strengthening capacity of Institutions in Eritrea

Computer equipment is a prerequisite for building effective information systems however, training should not be provided to users without computers. The Ministry of Trade and Industry should be equipped with the necessary computers to facilitate information systems building in archiving personnel management, and management of data on trade and industry. A proposal should be developed and sent to donors to assist in building the ministry's capacity in information handling.

Improving electronic networking capability

Electronic networking is beginning in Eritrea and as is the case in every country developing governments are slow to new technology. Hence a culture for efficient information handling and exchange is yet to be developed in Eritrea hence constituting barriers in the use of electronic communications. Thus, the effort under the CABECA project to establish a public node was beset by difficulties of telephone lines.

The development of electronic networking capability should be based on the realities of a country. The community in Eritrea was divided along professional lines. The University, the UN community, public and private sectors, NGOs and government institutions requires separate nodes in separate machines. The following four nodes may be required to interconnect Eritrea:

- Academic node - serving the university to be closely tied to EISA for linkage to public, government and private institution.

- UN node at the UN premise

- NGOs node using the currently function basis computer or their own
The polling from Addis Ababa or calling PADIS for international mail was inconvenient and unreliable. It also increases international telephone cost. The mission proposed to make arrangements for an international poll from GnFido in London to circumvent the above problems. Arrangement of poll from London would open the way for direct experience and communication to the Internet. PADIS under the CABECA project could make an arrangement for the international networking poll to Eritrea. Adequate training for users and continuous support on low cost electronic communication technology should also be given to the system operators. While hand holding and continuous support require commitment of an institution such as PADIS the training of information professionals and users should be provided by experts in all types of networking technologies to accommodate all users requirements.

All nodes should learn network management and ethics. The potential hosts should enter into agreement with CABECA in order to host their respective nodes. The government should be sensitized on the usage of electronic communication in a country. Knowledge of the potential of electronic communication may clear the long standing thought that "e-mail threatens national security". Decision makers and users should consider e-mail as:

- only another tool of communication
- will not create security problems which would not occur while using other techniques (electronic networks are easier to trace compared to other technologies)
- since it was a value added service to a telephone its use should be promoted and encouraged by telecommunication authorities
setting higher tariff for electronic communication was not a competitive approach. Tariff should be set lower or remain in the same level of that of telephone costs considering the nature of modem trails without human intervention.

PT&Ts should understand networking techniques (what is involved in electronic communications) to improve their competitiveness in the rapidly changing technology and better serve their clients.

The telecommunication infrastructure should be improved to enable "wiring" of Eritrea to the global network. With improved telecommunication infrastructure connection to "TCP/IP" the global Internet network would be facilitated.

**Improving information handling capability of various departments in a standardized and harmonized network**

All the ministries and institutions visited by the mission needs to be strengthened in their information handling capabilities. An efficient flow of information should also be ensured. The smooth flow of information could happen only if standards and harmony are established at all levels. It should be clear that standards do not mean computer standards. Users can set up as many computers as required if all PCs meet basic requirements. Standards should mean database types, interfaces to them, data structures, techniques of information collection, software compatibility, network protocols, open client/server application tools and types, thesauri, field formats, etc. System developers should be cautious in the above related areas to design seamless systems which network and relate to each other.

The mission stressed the need for standardized and harmonized information systems in Eritrea. This would not be difficult to achieve for Eritrea as it is a newly independent country where information systems are at the formation stage. Standards at all levels (computer
compatibility, data base software type, data bases, formats, fields lengths, field type) are necessary to promote information networking. Also, compatibility and standardization should be geared to international connections; global links such as Internet, Fido, Network types Pan African Development Information System (PADIS) and PTA/Tinet should be accommodated in the country’s available infrastructure.

National coordination should be undertaken by EISA to ensure compatibility and networkability. It should be clear that computer reliability and functionality is much more important than computer compatibility. The compatibility of personal computer is no more a question if the operating system is the same. Training on basics of computers should clear this confusion about computer standards, (for most user standard meant buying "NEC" or Olivetti". It is harmonization of information systems which deserves greater attention as compared to computer compatibility. Assistance by the ECA (PADIS) should focus on harmonization of information systems and networks. This requires continuous monitoring and feed-back both from information users, operators and system designers.

2. Donor support to the country should also focus on building its information capability. Since information is a power for competitiveness attention should be focused on developing Eritrea’s capacity in this field. As donors emerge to cover the information sector, coordination of their input should not be overlooked. The Ministry of Planning and Finance including EISA should develop a long term strategy in the information sector on which donor contribution would be coordinated. Without a sound information policy and strategy efforts to standardized, harmonize and link all sectors will become meaningless. PADIS' experience in national information policy and studies on other countries could assist Eritrea to structure and develop the information policy and instruments to make it effective.
Annex I

List of persons met during the mission

1. Ministry of Trade and Industry
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   Telephone 11 30 10, 12 09 03
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   - His Excellency Mr. Ogbe Abraha
   - Mr. Taddesse, Head of Planning & Programming
   - Mr. Yoseif G/Egziabher
   - Tekle Senbet Emam, Head of Administration

2. Asmara University
   P.O.Box 1220
   Tel 12 10 60
   Fax 12 10 60
   - Prof. VLAD Beka Chivily
   - Ato Mequanent Abraha

3. United Nations Development Programme
   DUFP
   P.O.Box 1229
   Tel 18 15 84
   - Douglas Broderick, DUFP
4. Eritrean Information Systems Agency  
P.O.Box 1411  
Tel 11 87 09  
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- Ato Tewolde Gobo

5. Eritrean Chamber of Commerce  
P.O.Box 856  
Tel 12 15 89

- Ato Kiflemariam Zerom, Secretary General

6. Inland Revenue Office

- Ato Yemane Adal

7. Ministry of Agriculture  
P.O.Box 1048  
Tel 18 10 42

- Haile Awalom  
- Asgedom

8. Customs Office  
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- Ato Alazar Mesfin, Customs Director  
- Ato Yehdego Arjaia G/Kirstos, Legal Head
9. Ministry of Finance
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- Ato Tesfamariam Tekie