



**African Information Society Initiative**

*Africa's digital agenda*

Strategy Paper  
**on e-Government Programme  
for The Gambia**



**United Nations Economic Commission for Africa**  
**Addis Ababa**  
**2003**

# I INTRODUCTION

## 1.1 Background

Implementing the African Information Society Initiative (AISI), African Ministers of Planning and Economic Development identified the use of ICTs in central Government and local administration as one of the priority sectors for the entry of Africa into the information era and as a means to support Government's administration and decentralization process, which is consistent with Vision 2020 in developing electronic information for development in the Gambia.

Responding to a request from the Hon. Secretary of State for Finance and Economic Affairs, of the Republic of The Gambia, The Executive Secretary of United Nations Economic Commission for Africa (UNECA) sent a mission to the Gambia in November 2002 to carryout a preliminary assessment and discuss modalities for the design of e-Government Strategy for the Gambia with a view to start an e-Government pilot project between the Department of State for Finance and Economic Affairs and the Office of The President for the sharing of Financial and Economic Management data and information. It is envisaged that after the successful implementation of the pilot project, all the relevant institutions and services across the country will be subsequently interconnected electronically.

The outcome of the mission was a Memorandum of understanding in which it was agreed that some of the fundamental pre-requisites to achieve a well planned and realistic e-Government program are to:

- Conduct a base line study in order to assess the situation in the country in relation to e-Government related activities, available infrastructure and technical support.
- Develop an e-Government policy and strategy.

Accordingly, a nationwide baseline study was undertaken in July 2003 in order to assess the situation in the country in relation to e-government related activities and available infrastructure and technical Support (e-government

Readiness). The survey report was discussed and adopted at the validation workshop held in Banjul, The Gambia on 17<sup>th</sup> October 2003.

## **1.2 National Consultative Workshop on e-Government Strategy**

Based on the recommendations of the baseline study and as per the MOU a National Consultative Workshop on e-Government Strategy was held in Banjul on 20-21 October 2003. The primary objective of the workshop was to enhance stakeholders' participation in the formulation of the e-government strategy and to ensure that it is in line with the with the expectations of its beneficiaries.

The workshop met in plenary sessions and working groups on following themes:

- 1. ICT Equipment and Infrastructure**
- 2. Network, IT Security and Legal Framework**
- 3. Web Development, Portals / Govt-Public Interface, Applications**
- 4. ICT HRD and Training**

The deliberations focused on the availability and the shortfalls in the area of ICT equipment and infrastructure. It also emphasised the need for proper networking, IT security and legal framework to support the e-government programme. It also discussed the issue of providing citizens an online interface with the government to transact and conduct various services. Above all, it highlighted the necessity to build countrys ICT human resources capacity to support the e-government system with special attention to the gender perspective.

Participants to the workshop recommended: (i) activities; (ii) target dates; (iii) implementing agencies; and (iv) related policy recommendations which will guide the e-government programme in the country.

## **1.3 Structure of the document**

The rest of the document is structured as follows: Chapter II defines the objectives of the e-government strategy in The Gambia, sets forth the guiding principles and priority areas, specific strategies of the proposed e-government programme in the country. The chapter also highlights the necessity of advocacy, policy dialogue, mainstreaming of e-government activities and international partnership development in the area of of e-governance. Chapter III describes implementational modalities indicating administrative and operational measures to be taken by various departments and agencies in order to create an enabling environment for the implementation of the

strategy. Chapter V is devoted to conclusion. The appendices include a draft action plan for the strategy's implementation.

## **II THE e-GOVERNMENT STRATEGY**

### **2.1 Objectives**

The African Information Society Initiative (AISI) is an action framework that has been the basis for information and communication activities in Africa for the last five years. AISI is not about technology. It is about giving Africans the means to improve the quality of their lives and fight against poverty. AISI was launched in 1996 as Africa needed a common vision for its quest not only to bridge the digital divide between Africa and the rest of the world but more importantly to create effective digital opportunities to be developed by Africans and their partners, and to speed the continent's entry into the information and knowledge global economy. Against this backdrop the present e-government initiative in The Gambia is aimed to:

- 2.1.2 Assist the country in its efforts to develop multi-sectoral e-government programme; and
- 2.1.2 Within the AISI framework support the projects prepared by the national technical committee with the assistance of ECA.

### **2.2 Guiding Principles**

In carrying out the above objectives the National e-Government Task Force will be guided by the principles of AISI "to assist countries to deploy, harness and exploit ICTs to advance their socio-economic development at the local, national and sub-regional levels, enabling citizens' access to affordable telephones, broadcasting, computers and Internet services" and Bamako 2002 Declaration.

- 2.2.1 Long-term action: e-Government programme needs long-term and sustainable action and, to this end, it is essential that all stakeholders work together. It is therefore necessary to build their capacity, establish ICT Education and Training Centers, provide reliable ICT support services within the country and lessen the dependency on external technical support from abroad;

- 2.2.2 Technical reliability: Actions aimed at opening the information and services to the citizens through internet should not only be reliable but secured through the use of technically reliable tools and applications;
- 2.2.3 Stressing vulnerability: Efficiency in action at all levels of the government implies introducing changes in the way the government offices function to reduce the vulnerability of certain population groups living in rural areas, particularly women, youth and entrepreneurs;
- 2.2.4 Principle of empowerment: Each individual, government, community, institution, private and public sector enterprises, NGOs and civil society organisations should be aware of its duties and responsibilities towards an emerging information society in the country and perform actively and constantly;
- 2.2.5 Participation and partnership: Participation of all the stakeholders and a sound partnership among them provide the most effective mechanism for implementing a national e-government programme;
- 2.2.6 National autonomy: Each country has a primary responsibility to identify its strengths, weaknesses, priorities in e-government initiative and to design, implement and coordinate its national e-government projects. The role of external partners is to support and strengthen the action plans adopted at the national level;
- 2.2.7 Avoiding new structure: The focus should be on the strengthening and streamlining of the existing infrastructure for better coordination and monitoring of the implementation of the e-government projects in order to ensure the optimal use of limited resources.

### **2.3 Priority Areas**

The e-Government programme in The Gambia, drawing from the results of the Baseline Study and drawing from the priorities set forth by the national government, will be initiated in the following priority areas:

- 2.3.1 Pilot project: the proposed e-government action plan should be initiated in the first phase between the Office of the President and the Department of State for Finance and Economic Affairs.
- 2.3.2 Sectoral Projects: Three major sectors of the government namely, Education, Health and Local Government should be brought under an e-government programme in the second phase of the e-government action plan.

## **2.4 Strategies**

To implement the e-government programme in The Gambia, in collaboration with the UNECA, the National e-Government Task Force will focus on the following strategies.

### **2.4.1 ICT EQUIPMENT & INFRASTRUCTURE**

- 2.4.1.1 Select specialist team will be constituted to draw up the specifications for the cloned parts for the various uses of departments
- 2.4.1.2 Central server would be set up to process information from the networked computers. This will be supported by a back-up server as well as an off-site storage facility to save information from being completely lost in the event of power outage. Solar panels would be used as a back up for the central servers.
- 2.4.1.3 Health and safety rules to be drawn up and these will be reflected in the e-government infrastructure development policy and implementation processes.
- 2.4.1.4 Combination of switches and wireless devices will be used where applicable and found suitable.
- 2.4.1.5 A team will be assigned the responsibility to design the suitable system.
- 2.4.1.6 To initiate local capacity building and create employment opportunities assembling process will be encouraged at the local level.

### **2.4.2 NETWORK, IT SECURITY & LEGAL FRAMEWORK**

- 2.4.2.1 Every Governmental Body (Central & Local) will be provided at least ONE computer with Internet connection.
- 2.4.2.2 GAMTEL will provide Governmental Bodies (Central & Local) with email address using one common domain name e.g. "government.gm".
- 2.4.2.3 All computers in the pilot / sectoral project departments will be linked using a central server (LAN) and then linked to a wide area network (WAN).

- 2.4.2.4 Necessary efforts will be made to standardise ICT hardware and software within the Public Sector also.
- 2.4.2.5 Will formulate adequate legal framework to protect privacy and restrict accessibility of sensitive data/information.
- 2.4.2.6 Adequate security support will be provided from a central technical agency to protect the reliability and integrity of the network/system.
- 2.4.2.7 Existing legislation relating to public information management will be reviewed at an appropriate level by a competent agency with a view to incorporate laws related to electronic records/data/information and intellectual property.
- 2.4.2.8 Endeavours will be made in close cooperation with the Department State for Justice to introduce necessary legislation on access, security and usage of electronic data/information.
- 2.4.2.9 A general review exercise will be undertaken on existing legislation on telecommunication with a view to accommodate, among others, private sector participation in the sector/industry e.g. Teleport development, etc.
- 2.4.2.10 Efforts will be made to establish a National E-Government/ICT Commission to oversee the development of the E-Government/ICT in all its dimensions.

### **2.4.3 WEB DEVELOPMENT, PORTALS/ GOVT-PUBLIC INTERFACE, APPLICATIONS**

- 2.4.3.1 In each department under the pilot/sectoral projects necessary and competent staff will be identified and trained and they will be specifically responsible for web development activities concerning their respective departments.
- 2.4.3.2 The identified staff will be properly trained through a capacity building and sensitisation drive within the departments. This entails building the capacity to collect information, handle equipments and software resources for building and maintaining websites.
- 2.4.3.3 Development of departmental of Intranet based interfaces will be encouraged to serve/cater to the internal needs.
- 2.4.3.4 The departmental websites will present all necessary information of public importance like latest Price Index, Reports on public issues and other statistics. Broadbased headings that are easily understandable and covers topics of interest for the general public will be used with comprehensive information to reflect the extent and

scope of the services offered by a particular department. However, sensitive information will be adequately protected and only accessible to the authorised users.

- 2.4.3.5 In the departmental websites the information would be dated and always updated and will make every effort to avoid giving erroneous information/data.
- 2.4.3.6 Governmental Portals on the web would provide sufficient information about the departments and its plans, services. It should enable citizens access those services and related information and in necessary provide their feedback on various policies. There will be government-public interfaces on the web which will provide a multi-channel avenues to give feedback through e-mail, fax etc. The concerned department would make adequate provision for attending to such feedbacks by acknowledging receipt and setting time-frame for redressal action.
- 2.4.3.7 People should be sensitised to use such channels of interacting with govt through providing feedbacks/responses. Therefore, suitable applications will be used for the portals to provide user-friendly interactive forms, electronic payment systems for revenue / tax returns and educational information systems like auto generated exam results.
- 2.4.3.8 Adequate sensitisation and publicity drive in mass media will be conducted to inform the public about the use and availability of the information/services in the websites. People should be sensitised to use such channels of interacting with govt through providing feedbacks/responses.

#### **2.4.4 ICT HUMAN RESOURCE DEVELOPMENT AND TRAINING**

- 2.4.1 The National e-Government task force in collaboration with the Department of State for Education & other higher technical institutions will develop a Training Policy on ICT at all levels, secondary schools upwards. It will facilitate the development of IT curriculum and modules for schools/colleges/university.
- 2.4.2 To boost the constant flow of IT human resources in the country a long-term plan will be drawn and initiatives will be taken at the national level to establish a technical university in The Gambia with emphasis on IT & Business education by strengthening the existing institutions and bringing them under one affiliating university setup.
- 2.4.3 In addition to the creation of facilities for ICT human resource development, steps will be taken to create IT education/training opportunities under adult and non-formal education sectors. The non-

formal education will be geared to improve the ICT skills of the illiterate Gambian particularly in the rural areas.

- 2.4.4 The e-government programme will have a provision for setting up of educational networks like school-net, senior-net youth etc. to support continuing IT education/training.
- 2.4.5 Specific provisions will be made the specialised higher training for the staff, particularly those in e-government implementational assignments in various departments through internal and external ICT courses.
- 2.4.6 The task force in cooperation with other concerned departments and institutional bodies will develop a quality control system and set procedure for monitoring and evaluation of IT education/training programmes offered in the country by various educational/training institutions.

## **2.5 Advocacy and Policy Dialogue**

- 2.5.1 The advocacy activities of the e-government task force will be geared towards decision-makers at the highest levels, administrators and beneficiaries of the e-government programmes with a view to ensuring that the e-government principles and perspectives are taken into account in formulation of the national development strategies and programmes. The task force's advocacy and policy dialogue will attempt to bring political leadership and civil service personnel to focus on: (i) comprehensive multisectoral nation e-government plan in the long-term; (ii) laws and legal framework to support citizens' right to information, validity of e-transaction and data security; (iii) promotion of a conducive environment to support ICT education and training within the country; (iv) allocation of adequate resources to finance e-government activities; and (v) actions for greater involvement of people in the e-government initiative.
- 2.5.2 Another major issue for advocacy will be to sensitize the government on the need to provide for freedom to every citizen to secure access to information under the control of public authorities, consistent with public interest, in order to promote openness, transparency and accountability in administration and in relation to matters connected therewith or incidental thereto.
- 2.5.3 This e-Government Strategy Paper, which builds on the baseline study and subsequent recommendations of the National Consultative Workshop, remains the principal instrument of policy dialogue with all stakeholders to position e-government agenda as a central development issue to manage ICT in a manner that secures the fair, balanced and harmonious development of all the people with

particular attention to the needs and aspirations of the most disadvantaged in society (Bamako 2002 Declaration).

- 2.5.4 Policy dialogue will also underscore the importance of monitoring progress towards attainment of the objectives set forth by this strategy paper and the overall national development goals set under PRSP-II and Vision 2020.

## **2.6 MAINSTREAMING OF e-GOVERNMENT ACTIVITIES**

- 2.6.1 Given the crosscutting nature of the e-government initiative and its impact on different sectors, the national e-government task force will take into account the necessity of the mainstreaming the e-government sectoral projects through: (i) analysis of the governance and decentralisation issues in the PRSP-II; (ii) assessment of the impact of the e-government initiative in the context of socio-economic development and (iii) screening of future projects and programmes of the government so as to ensure that the e-government dimensions are fully taken into account and reflected in the project designs.
- 2.6.2 The e-government initiative will take into account the interventions of other partners in all sectors and the priorities expressed by the beneficiaries, in order to focus on decentralisation and community-based local response. This, in other words, will follow a consistent participatory approach that allows the involvement of broad stakeholders at all stages of planning, implementation, follow-up and evaluation of the sectoral projects.
- 2.6.3 An efficient and long-lasting impact on any e-government initiative implies not only internal skills and know-how, but also internal ICT resources managed properly by each participating sector/department. The national e-government task force will, therefore, assist the concerned departments in establishing a mechanism that should ensure greater transparency in resource allocation and management

## **2.7 PARTNERSHIP DEVELOPMENT**

- 2.7.1 The e-Government programme in The Gambia envisages strategic partnership set up to reduce the digital divide in Africa. Therefore, it is proposed that in implementing this programme a digital solidarity coalition/fund will be launched under the leadership of interested African governments to harness the resources in the region.
- 2.7.2 In the same vein, close cooperation will be maintained with regional and subregional organisations and institutions such as ECA, ECOWAS

and the national e-government task force also coordinate its action with bilateral partners.

### **III IMPLEMENTATIONAL MODALITIES**

#### **3.1 Institutional Measures**

The implementation of the e-government programme in The Gambia will be facilitated by the following actions:

- 3.1.1 The national e-government task force will have the primary responsibility for the mainstreaming of various sectoral projects. These projects will be coordinated by a focal point within the task force in consultation with an e-government project adviser. The focal point will also be responsible for the policy dimension, and for liaison and collaboration with partner institutions within the country and donors/funding agencies. It will also prepare an annual progress report and present the same to concerned institutions within and outside the country.
- 3.1.2 Sectoral projects should be planned and designed with specific reference to this strategy paper and policy recommendations made therein. A separate project development exercise should be undertaken to identify these projects, estimate budgetary requirements and set necessary guidelines and time frame for their implementation.
- 3.1.3 There is an immediate need to strengthen the internal capacity of the pilot phase departments through staff training and sensitisation programmes, as well as the recruitment of specialists for project design and implementation.

#### **3.2 Operational Measures**

- 3.2.1 In keeping with the priorities identified in this strategy paper, the nation e-government task force will give priority to the successful implementation of the programme in the identified sectors. They will also focus on the cross-cutting issues like NICI policy development, poverty reduction, good governance, gender and decentralisation of administration. A two year Action Plan will be developed in line with the recommendations of the National e-Government Consultative

Workshop to monitor the implementation schedule of targeted activities. An outline of the Action Plan is presented in Appendix:1.

- 3.2.2 Various aspects of e-government related activities will be taken into account in the project development phase, in accordance with the recommendations made in the Action Plan.
- 3.2.3 During identification and preparation, the project development team will refer to the findings and recommendations of the Baseline Study as well as consult with the local communities and civil society representatives.
- 3.2.4 Monitoring and evaluation of the implementation of the e-government projects will be undertaken in order to learn from its successes and failures. Such lessons will contribute towards regional knowledge on best practices as a model for Africa. These exercises will be carried out technical support of specialised agencies of UNECA.
- 3.2.5 In order to extend the knowledge base to help other African countries design and manage e-government programmes, operational research will be conducted in socio-cultural and behavioural area and other socio-economic domains relevant to e-governance.

### **3.3 Resource Mobilisation**

- 3.3.1 The primary challenge in e-government initiative is to mobilise the resources to meet the scale of the programme. Greatly increased resources are needed to expand national capacities, support essential infrastructure and training. Increased investment from donors, domestic budget and private companies need to be combined with additional funds to meet the country's resource requirements. The AISI framework is a step forward in creating a viable mechanism to address this urgent problem of resources.
- 3.3.2 The successful implementation of the strategic objectives and priorities of the e-government programme in The Gambia will require the mobilisation of additional resources. The additional resources are required to meet the funding gap in priority areas, including: (i) institutional capacity building and provision of ICT equipment; (ii) establishment of a premier technical university for higher ICT education and training through formal and non-formal educational (open and distance) modes; and (iii) partnership development activities in the region through the UNECA and other regional institutions.

## IV CONCLUSION

- 4.1 e-Government programme both a multisectoral development and empowerment. It affects every sector and every aspects of governance. Therefore, it is necessary to adopt multisectoral control strategies and to give priority to an integrated participatory approach.
- 4.2 Cognisant of its limitations with respect to resources – both human and financial – confident of the ongoing effort by African countries the UNECA has chosen to support the e-government initiative in The Gambia. This initiative should, therefore, focus on: (i) the promotion of political commitment at all levels through advocacy and policy dialogue; (ii) backup of sectoral projects by mainstreaming all ICT related activities under NICI plan; and (iii) the strengthening of regional coordination mechanisms in order to obtain greater synergy in ICT development in Africa.
- 4.3 The Gambia e-government strategy include, inter alia, the strengthening of its internal ICT resources to guarantee smooth implementation of the strategies, the decentralisation of responsibilities for mainstreaming ICT related activities in the country into various sectors and departments, and the mobilisation of required resources.
- 4.4 The Gambia's strategic options with regard to e-government programme will allow the country to attain its vision of poverty reduction and human capital development, in addition to symbolising its presence as a model for e-government initiatives in Africa.

**ACTION PLAN FOR e-GOVERNMENT PROGRAMME  
IN THE GAMBIA**  
(As recommended during the Nation Consultative Workshop on e-Government Strategy at Banjul, 20-21 October 2003)

Proposed Activities	Time Frame	Responsibility
<b>1. ICT EQUIPMENT &amp; INFRASTRUCTURE</b>		
Identification of Equipment of Equipment: <ul style="list-style-type: none"> <li>• Computers -Workstations</li> <li>• Linux/windows Based</li> <li>• Central Server               <ul style="list-style-type: none"> <li>○ Back up solar panels</li> </ul> </li> <li>• Printer/Fax/Scanner- Network</li> <li>• Security, Firewall for network</li> <li>• UPS, APC Smart UPS</li> <li>• Switches</li> </ul>	1 <sup>st</sup> quarter 2004 during Pilot phase	Gamtel, IT companies DOSCIT
<b>2. NETWORK, IT SECURITY &amp; LEGAL FRAMEWORK</b>		
NETWORK	3 months	E-Govt. Taskforce, GAMTEL, etc.
	3 months	DOSCIT, GAMTEL, E-Govt. Taskforce, Govt. Body.
	1 Year	GAMTEL, IT Companies, E-Govt. Taskforce, Govt. Body,
	1-2 Years	DOSFEA, DOSCIT, IT companies DOSCIT, e Government Taskforce, NRS
IT SECURITY	6 months	DOSCIT, DOSJ
LEGAL FRAMEWORK	18 months	DOSCIT, DOSJ, E-Govt. Taskforce DOSFEA  DOSCIT, DOSJ E-Govt. Taskforce DOSFEA  DOSCIT, DOSJ,

		E-Govt. Taskforce, GIPFZA
<b>3. WEB DEVELOPMENT, PORTALS/ GOVT-PUBLIC INTERFACE, APPLICATIONS</b>		
1. Web Development	Within the Pilot phase	Concerned Depts of State & the Task Force
2. Building the website (Getting the content)	Within the Pilot Phase	Concerned Depts of State & the Task Force
3. Portals and Government - Public Departmental Interfaces	Within the Pilot Phase	Concerned Depts of State & the Task Force
4. Applications	Within the pilot phase period	Concerned Depts of State & the Task Force
<b>4. ICT HUMAN RESOURCE DEVELOPMENT AND TRAINING</b>		

1. Training needs assessment	Jan 2003	EDUC, DOSCIT NETF, PMO
2. Training of Trainees	Mar. 2004	GAMTEL & IT Insts UoTG, DOSCIT.
3. IT training for school & Educational Institution	Jan 04- Sept	DOSE, DOSCIT NETF, UOG
4. IT Literacy Programs Countrywide for unemployed youths & dropout	Jan – Dec 2004	NETF LOGL Govt, Health & NYC
5. awareness creation for govt officials enterprises & citizens, young people.	Jan 2004	MDI, GMTI, PMO, DOSCIT, NETF and IT Companies DOSE, NETF Local Gov.
6. Training Technician and programmes (through internal & external training programmes (Develop) science of service for them)	Beginning Jan 2004	IT companies, Area council DCD and DOCIT
7. Develop software that recognise the major local language to enhance training of illiterate members of society	2004 – 2006	NETF, Govt, Dept DOCIT, local Govt, Health, DOSE, NYC IT Companies
8. Training of Staff and users at all level	2004 2 quarter	NETF, DOCIT NTA, DOSE and NYC
9. Monitoring and Evaluation of training programme	Last Qtr of the pilot project	UNECA

APPENDIX : 2

**Extract from the Report of the Baseline Study  
on ICT resources for e-Government Programme  
in The Gambia**

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1. CONCLUSIONS

The main focus of this needs assessment exercise (baseline study) was to aimed at identifying existing ICT resources in The Gambia in order to assess the e-Readiness of the country in relation to the proposed e-government initiative. As per the analysis

of the survey data and based on the discussions held with various stakeholders, following major conclusions were drawn:

1. The country has sufficient ICT equipment in a number of institutions and it has the potential to introduce e-government programme in some identified sectors where such equipments are available. However, availability of ICT equipment across all institutions is not uniform, especially in the rural areas.
2. A fair number of institutions are connected to LAN. But, none of the institutions are interconnected and the LAN is hardly used for intra-institutional communication purposes.
3. It is encouraging that there are four ISPs in The Gambia and the Internet access cost is quite reasonable compared to other African countries. There is a large number of Internet café's and telecenters accessible to public in capital city and adjoining areas. A number of web-services are also available through these ISPs. However, such services are hardly utilized by various institutions at present mainly due to lack of awareness and necessary expertise.
4. The Internet is mainly used for email purposes and the visibility of The Gambia on the web is very negligible in terms of local contents and information.
5. The telephone system in the country is fairly strong with fiber optic line covering a major portion of the country (south bank of the river Gambia). With the proposed extension of the fibre optic line on the north bank forming a loop across the country the telephone system will be more reliable to support ICT based services in near future.
6. ICT development initiatives are taking shape in the country. However, there is a very acute shortage of adequate human resources in terms of ICT expertise to support such major initiatives. The proposed IT cadre is an illustrative effort in this direction.
7. All the stakeholders showed tremendous eagerness and enthusiasm to be on board with the E-govt. programme. The local government officials and the divisional commissioners who are working in remote locations seemed to be waiting eagerly for the ICT initiative to reach them as they were facing tremendous hurdles in communicating with the national HQ as well as other colleagues in the area. The overall enthusiasm shown by various stakeholders in the course of the consultations can be said to be the biggest advantage for the proposed e-government programme in The Gambia. With necessary strategy, plans and guidance in place, they can really lead the country to the desired status of an AISI E-government Model.
8. The education sector from the secondary to university level appeared to have already mapped the course of action towards making the country education system to cater to the demands of ICT-driven society in future. The Vice Chancellor of the University of The Gambia was specifically enthusiastic to launch advanced ICT programmes for building up the technical manpower with the country through regular as well as Open and Distance Learning programmes.

9. Last but not the least, the lack of reliable electric supply and its virtual nonexistence in rural areas is a major hurdle towards sustaining the e-government initiatives in the country.

## 5. RECOMMENDATIONS

Based on the findings of this study following recommendations may be put forwarded:

1. A few key institutions and government departments with sufficient ICT equipment and infrastructure already in place may be identified and a pilot e-government project should be initiated by linking these institutions through WAN.
2. This baseline study should be followed by drawing up a National e-Government Strategy for The Gambia incorporating the pilot projects in the initial phases as well as the complete long-term e-government action plan for the country on a realistic time scale.
3. As an initial pilot project, the proposed e-government action plan should be initiated in the first phase between the Office of the President and the Department of State for Finance and Economic Affairs.
4. On the basis of the preliminary assessment, three major sectors of the government namely, Education, Health and Local Government should be brought under an e-government programme in the second phase of the e-government action plan. Local Area Networks (LAN) and Wide Area Networks (WAN) should be set up with appropriate networked applications to interlink institutions to provide government services and receive feedbacks from citizens. All the stakeholders in these departments, particularly the identified task force leaders, should be initiated into the e-government action plan in their respective sectors/roles to implement the programme effectively and efficiently. Similarly other sectors of the government should be included in the later phases of the national e-government programme.
5. A dedicated ICT education and training programme should be launched in collaboration with the secondary education department and the University of The Gambia. Advanced training on ICT to support the e-government initiative and to meet the demand of the ICT personnel in the country should be imparted through various extension and continuing education programmes via formal, distance and open learning modes. Computer awareness and training programmes should be launched immediately for the pilot project sectors/offices to ensure the smooth implementation of the e-government programmes.
6. ICT master plans should be drawn up in all institutions to lead to a comprehensive national ICT master plan in due course. These master plans should meet the demands of ICT equipment and information security mechanism in all sectors so that all these institutions are on board on the e-government programme in due course.

7. The number of ICT equipment in key institutions should be drastically increased with necessary funding and technical support
8. To improve the electric supply situation, the rural electrification programme should be expedited on war footing and other alternative sources of power should be explored.
9. The gender gap in the personnel specialised in ICT should be addressed by their empowerment through specifically designed ICT education and training programmes and additional investment in the education of girls and women at all levels.
10. Considering their present involvement in the initiative, the National Technical Committee constituted for the e-government baseline study should be expanded in the next stage to form a national task force involving relevant stakeholders to oversee the implementation of the proposed pilot projects in the country.
11. The IT security should be a major issue to be addressed while launching the e-government programme. However, as the present survey didn't deal much with the policy issues, aspects like standardization, sustainability and sector-specific needs assessment should be handled in more details under the NICI policy process.
12. Initiatives should be undertaken at the UNECA level to generate an E-govt Development fund at the regional level involving Partnership for Information and Communication Technology In Africa (PICTA) and other donors as The Gambia will need such a pool to fall back upon to support its e-government strategy and implementation.
13. The WSIS platform should be used by the government of The Gambia to mobilize resources to implement the pilot projects and programmes identified under the National e-Government strategy.
14. For successful implementation of the e-government programme, a sensitization drive should be undertaken targeting the decision makers at the highest level.