



**UNITED NATIONS  
ECONOMIC COMMISSION FOR AFRICA**

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Distr.: GENERAL

ECA-NA/TNG/ICE/XX/6  
March 2005

ENGLISH  
Original: FRENCH

**ECA Office for North Africa**

Twentieth Meeting of the Intergovernmental  
Committee of Experts (ICE)

Tangier, Morocco  
13-15 April 2005

**THE STATUS OF INFORMATION FOR DEVELOPMENT  
ACTIVITIES IN NORTH AFRICA**

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## Introduction

1. Every passing day sees further advances in the construction of the global knowledge society, and the contribution of information to the economic and social development of countries and peoples is becoming more tangible. In today's global economy, information and knowledge have in fact become strategic resources which underlie decisions by governments, societies and the public at large. In countries which have created a favourable environment, positive effects can be measured in sectors like governance, education, healthcare and trade.

2. Information and Communication Technologies (ICT) have gradually become important components of many programs, initiatives and sectors of activity worldwide. Thus the G8 launched its G8 Dot Force<sup>1</sup> Initiative at the Okinawa Summit in July 2000, and by July 2002 this led to the approval of a number of programs<sup>2</sup>. Over the same period, the United Nations decided to coordinate the efforts of several of their agencies, in collaboration with sponsors and partners from the private sector and civil society, to form the UN ICT Task Force.

*...They [ICT] are, without doubt, enormously powerful tools for development. They create jobs. They are transforming education, health care, commerce, politics and more. They can help in the delivery of humanitarian assistance and even contribute to peace and security. One of the most pressing challenges in the new century is to harness this extraordinary force, spread it throughout the world, and make its benefits accessible and meaningful for all humanity, in particular the poor...*

*Kofi Annan<sup>3</sup>  
Speech at the launch of the UN ICT Task Force  
November 2001*

3. The World Economic Forum itself has been taking an interest in this subject since the turn of the century, and since 2003 it has published the Global Information Technology Report<sup>4</sup>, which ranks countries along the NRI, the Networked Readiness Index, which has become a recognised tool for determining the strengths and weaknesses of a country and evaluating the progress it makes in this sector.

4. Since the beginning of the 90s, Africa has opted to move in this new direction, to become part of the information revolution, with a determination not to miss this chance, which might be its last, to improve its performances and ensure greater welfare for all its citizens. This position was first shown through the general endorsement of the AISI Initiative, which has become the main pillar for ICT development in Africa.

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<sup>1</sup> Digital Opportunity Task Force

<sup>2</sup> Several programs aimed at supporting the development of ICT and arising from the G8 Dot Force were launched at the G8 Summit at Kananaskis, in July 2002. Among these was e-PolNet, [www.epolnet](http://www.epolnet), which contains an important African component.

<sup>3</sup> For the full text, see [www.unicttaskforce.org/welcome](http://www.unicttaskforce.org/welcome)

<sup>4</sup> The Global Information Technology report, [www.weforum.org/gitr](http://www.weforum.org/gitr)

5. This choice was also demonstrated in the adoption of ICT as a central component of the infrastructure sector of NEPAD, which considers policies, strategies and legislations for ICT development among its major priorities.

6. The present report describes the progress made over recent years in the elaboration of policies, plans and strategies in North Africa, draws some lessons from this and makes some recommendations for increasing the use of ICT for the sub region's development, in particular for the attainment of the Millennium Development Goals and the eradication of poverty.

### **I. AISI: An action framework for e-strategies in Africa**

7. The Economic Commission for Africa (ECA) has launched a series of national activities and studies to help governments to set up strategic, regulatory and institutional policies and frameworks aimed at ensuring the mastery and promotion of Information and Communication Technologies (ICT) for sustainable development and the fight against poverty in each of its member states.

8. This has been done within the framework of the African Information Society Initiative (AISI)<sup>5</sup>, which was adopted in 1996 by the ECA Conference of Ministers, in charge of economic development and planning. AISI's orientations are motivated by the needs of the African development agenda (the fight against poverty, food security, healthcare, education, unemployment, trade, governance, etc), and emphasise strategies, programs and projects aiming at the establishment of a sustainable information society by 2010.

9. The process of implementing an information society relies especially on the formulation of national policies (National Information and Communication Infrastructure, NICI), the measurement of the progress achieved and the monitoring of the impact of ICT on the development of a country or a region (the SCAN-ICT project).

10. It is important to point out that AISI has on many occasions been recognized as the initiative which will catalyse and federate African efforts to construct the information and knowledge society. As soon as it was launched in 1996, it was approved by heads of state and government at the OAU summit in July 1996. One year later, it was favourably received by officials of the G7 at the Denver Summit. It was later mentioned in the final meeting report of the G8 Dot Force<sup>6</sup> as one of the major initiatives aimed at reducing the digital gap separating Africa from the rest of the world. It served as the basis for discussion in preparing the African position for the two phases of the World Summit on the Information Society (WSIS). It also serves as a common reference for the coordination of the United Nations agencies' support to NEPAD. Just to mention few examples.

11. AISI is thus a dynamic initiative which is still evolving over time. Its evolution takes into account of the lessons learned from countries' experiences and the interventions of various stakeholders (governments, civil society, the media, the academia, women, youth, etc) in national, regional and international processes. Its evolution is also influenced by the periodic evaluation exercises carried out on the occasion of important regional and

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<sup>5</sup> <http://uneca.org/aisi>.

<sup>6</sup> The final meeting of the G8 Dot Force took place in Calgary, Canada, in May 2002.

international meetings, such as the first African Development Forum (ADF 99<sup>7</sup>) the Regional Preparatory Conference for the first phase of the WSIS (Bamako 2002), the first phase of the WSIS held in Geneva in December 2003, and more recently the Regional Preparatory Conference for the WSIS which took place in Accra, Ghana in early March 2005.

12. A group of experts was established to advise the ECA about the achievements of AISI. The Committee on Development Information (CODI)<sup>8</sup> is the official mechanism whereby the ECA's member states follow the implantation of AISI, evaluate its progress and where necessary suggest reorientations of its work. CODI is one of the seven technical committees set up by the ECA's Conference of Ministers when reviewing its intergovernmental mechanism. Responsible for promoting the development of the information society in Africa, CODI monitors the implementation of AISI in particular. The next edition of CODI, CODI IV, will take place in April 2005 in Addis Ababa under the theme "*Information as an economic resource*".

## **II. E-strategies in Africa**

13. The development of e-strategies, which in AISI terminology are referred to as NICI<sup>9</sup> plans, is an iterative process which is carried out over several stages. It begins with the development of a Framework Document defining the specific questions which the plan needs to address. Then comes a Policy Document, which deals with what is to be realised, and finally the Plan itself, which explains how the goals to be attained are to be translated into action plans (generally extending over 3 to 5 years) which are directly achievable.

14. Even though it is the responsibility of governments to initiate, elaborate and supervise the proper execution of the plan, which requires a high level of leadership, the success of the plan cannot be complete unless its conception is from the outset participative, bringing together the major stakeholders of the country. In addition, the process must also be ongoing, that is, its priorities and implementation programs must be regularly revised to take into account any changes in the orientation of the country's programs for economic and social development, together with technological transformations which occur after it has started. Plans which might have been approved five years ago but have not been revised since, for instance, would fail to take advantage of the enormous benefits arising from the boom in the mobile phone market.

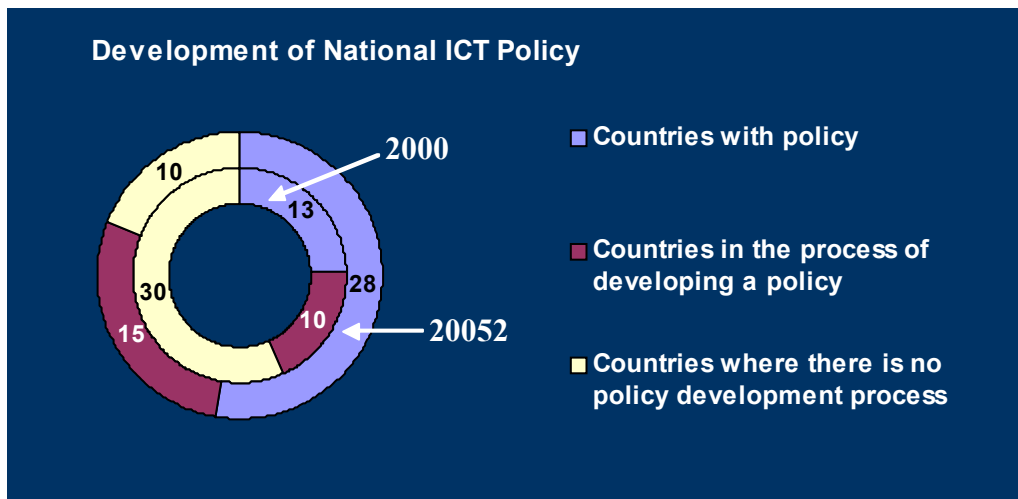
15. Since 1996, the ECA has supported several of its member states in their efforts to initiate, formulate and implement NICI plans. The highly positive results of these activities can be seen in the increasing number of countries which now have ICT development policies, which has risen from 13 in 2000 to 28 in 2005. At the same time, the number of countries whose ICT policy is being elaborated has risen from 10 in 2000 to 15 in 2005, which means that the number of countries with no plan has fallen from 30 in 2000 to 10 in 2005.

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<sup>7</sup> ADF99, the African Development Forum: The Challenge to Africa of Globalisation and the Information Age, [www.uneca.org/adf](http://www.uneca.org/adf)

<sup>8</sup> [www.uneca.org/codi](http://www.uneca.org/codi)

<sup>9</sup> NICI plan: National Information and Communication Infrastructure plan, [www.uneca.org/aisi/nici](http://www.uneca.org/aisi/nici).



Countries with a policy Countries working on a policy Countries with no policy as yet  
Source: ECA, 2005

16. This progress is the result of greater awareness on the part of decision-makers and the many concerned parties. It is reflected in the inclusion of ITC in development agendas at regional and international levels, which indicates a real mobilization of the African continent in this field.

17. The real challenge now is to ensure that on the one hand the ideas get translated into feasible programs which are actually achieved, and on the other hand that the effects are tangible and beneficial to all.

### III. The development of ITC in North Africa: Recent acceleration

18. African countries, aware of the central role of information and communication infrastructures in the general process of socio-economic development, have adopted and/or initiated plans and strategies to add impetus to this sector.

19. In this context, North African countries have worked to promote information and communication infrastructures in order to meet the increasing needs of the other economic sectors and to benefit from the positive effects arising from these knowledge-based activities.

#### III.1 Algeria

20. Several actions have been taken towards the construction of the information society in Algeria. The promotion of ICT will be carried out in particular by the creation of a government network linking all the ministerial departments, institutions and bodies, which will provide online services for ordinary citizens, professionals and economic operators.

21. In the same context, there is a project to set up websites for the Ministry of Trade, the foreign services and their subsidiary bodies such as Chambers of Commerce, the national trade register office, the customs services, the national statistics office (ONS), etc. The creation of these sites will give users access to data bases on regulatory and legislative issues, foreign trade figures, etc.

22. The corresponding legislative framework is being adapted with particular regard to the texts and laws regulating commercial activity, which are revised in accordance with the rules of the WTO and the forthcoming introduction of electronic trading services (e-commerce).

23. The ICT environment in Algeria is characterized by the following:

- the introduction of the internet in 1996;
- the existence of 35 internet providers<sup>10</sup> and over 4000 cybercafes;
- the presence of information infrastructures and equipment at the level of public administrations, private businesses, ministerial departments, and state institutions;
- the introduction of information processing tools in schools and universities;
- the introduction of computers and internet connections in private homes;
- the introduction of broadband (ADSL) internet access at reasonable prices;
- a technical infrastructure which is being deployed by the Ministry of Postal Services and ICT;
- the modernization of the information systems used in banking by the installation of automatic cash distributors, prepaid cards, and internet consultation of post office accounts.

24. The telecommunications market in Algeria is becoming increasingly competitive. The opening up to competition has yielded a growing number of actors and new services. The fixed telephone network has 4,500,000 distributed pairs for 2,772,000 installed lines. The goal for the fixed network is to move from the present rate of 7.2% to 9.0% in 2005, and for the number of ADSL lines installed to rise from 100,000 to 1,800,000 by about 2008.

25. Algeria, which did not feature in the NRI classification of 2001-2002, was classed 87<sup>th</sup> in 2003 and 80<sup>th</sup> in 2004, out of 104 countries evaluated.

### **III.2 Egypt**

26. In Egypt, the Minister of Information and Communication is responsible for the training of the ICR sector and the implementation of the national plan for the development of the information society, which is based on a partnership between the public and private sectors and focuses on the following issues:

- e-preparation: the provision of ICT access for all;
- e-learning: the development of human resources through the use of ICT;
- e-government: the online provision of government services for the public;
- e-business: the establishment of new ways of doing business;
- e-health: the improvement of health service availability;
- e-culture: the promotion of Egyptian culture;
- an ICT export initiative: the development of ICT industries.

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<sup>10</sup> Algérie Télécom en chiffres, March 2005 (<http://www.algeritelecom.dz>)

27. A number of measures have been taken within the framework of the national ICT program, whose priorities are the development of local demand for ICT use in the public sectors and of the corresponding human resources. To this end, Egypt has launched the following projects:

- a model for free internet access;
- a PC for every family;
- a broadband communications initiative;
- IT clubs.

28. The most significant change has come with the competition and privatization in the field of mobile phones and the provision of internet services. The telecommunications sector is dominated by Telecom Egypt together with Orascom Egypt, the second biggest Egyptian operator.

29. To make the Egyptian public more familiar with the internet, the Ministry of Information and Communications Technology has launched a program to allow Egyptian citizens to use the internet through community telecenters. These telecenters have joined the assistance, information and decision centers already set up in ministries and in provinces. The creation of computer clubs for children is another initiative aimed at increasing internet access across the country.

30. The government has ambitious programs for improving the Egyptian education system by adapting school curricula, improving the quality of teaching and incorporating ICT at all levels of the education sector. The Ministry of Education has in fact launched a plan to provide internet access to all schools, and the Ministry of Higher Education, in collaboration with the Ministry of Telecommunications and Information Technologies, has set up a program to develop information and internet use in all disciplines at the universities.

31. As Egypt is traditionally the producer of a large number of cultural items (books, films, songs, television programs), the use of ICT has been increasingly encouraged for the development of multimedia content and satellite television.

32. In June 2004, Egypt Telecom boasts more than 9.2 million fixed telephone line subscribers, with a penetration ratio of 13.3%, which makes Egypt the biggest fixed telephone provider in Africa and the Middle East<sup>11</sup>. Egypt was ranked 57<sup>th</sup> in the world according to the NRI in 2004.

### **III.3 Libya**

33. The telecommunications sector in Libya was transformed by the creation in June 1999 of Libya Telecom and Technology (LTT), a body directly attached to the general post office company.

34. In 2002, there were 660,000 fixed telephone lines, representing a penetration ratio of 13%, with a single provider, the General Post and Telecommunications Company (GPTC), and around 70,000 mobile phone lines also provided by a public operator, Al

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<sup>11</sup> Telecom Egypt, June 2004. <http://telecomegypt.org>

Madar. The public operator, the GPTC, has set itself the target of increasing the fixed line penetration ratio to 37% by 2020, with around 2 million lines. The mobile telephone operator Al Madar aims to achieve 250,000 lines.

35. The first private internet connection was awarded to LTT in August 1999. Despite a low penetration ratio, the development of the internet has recently taken off in Libya. Since 1999, four independent providers have joined the GPTC in offering internet services to the public. In 2002, there were 125,000 users. The number of lines rented to companies and organizations is estimated at 270, and the number of cybercafes at 320.

36. Libya is now making up for lost time in the ICT field, with the launch in September 2004 of a new mobile phone operator and internet services provider, Libyana, followed by a contract awarded by the GPTC to two foreign companies for the provision of country-wide mobile phone networks.

### **III.4 Morocco**

37. Morocco's determination to enter the information era is shown in its national e-Morocco strategy, which has five goals:

- extending the use of ICT across all levels;
- speeding up infrastructure deployment;
- accelerating deregulation and competition;
- redefining the role of the state;
- mobilizing and implementing the means required for this strategy.

38. The national e-Morocco strategy proposes five broad areas of intervention:

- education: education, training, research and culture;
- e-business: for the needs of businesses and the economy;
- e-government: for government institutions, administrations and local communities;
- e-commerce: the development of electronic trading;
- spreading the use of ICT across society.

39. The five-year ICT plan for 1999-2003, which formed the basis of the e-Morocco strategy, was constructed around the following development areas:

- the drawing up of a legislation capable of dealing with current problems (the protection of commercial domain names, data protection, the needs of electronic trading, etc);
- a new turning point in education (literacy, the integration of information processing tools and internet access into schools, etc);
- reducing, if not removing, the digital gap by policies encouraging the use of ICT in the regions and making their use available to the most deprived sections of the population;
- financing the setting up of businesses in the new knowledge economy (risk capital, loans for the launch of technology-dominated businesses, etc.).

40. In order to achieve these goals rapidly and efficiently, in particular the action plan for making the use of ICT widespread across the education system and for connecting primary schools, middle schools, high schools and universities to the internet, three deadlines have been set: the short term (2002), the medium term (2005) and the long term (2010).

41. In Morocco, telecommunications are seen as a support for other sectors of activities, a vector for development and a basis for structural reform. The transformations in this sector have yielded convincing results. The more than positive results achieved include, among other things, the sale of the second GSM licence for 1.1 billion US\$, the partial privatization of the long-standing operator for 2.3 billion US\$, the dramatic increase in the number of mobile phone subscribers, which reached 9,337,000 in December 2004, with a penetration ratio of 31.23%. 95.08% of these use the prepaid system, while the postpaid option accounts for 4.92%. The number of subscribers to fixed telephone lines was 1,308,569 in December 2004, with a penetration ratio of 4.38%.

42. In December 2004, the number of slow connection internet subscribers was 37,950, showing a decrease of 35% compared with 2003, while ADSL subscriptions reached 62,960, showing a growth rate of 220%.

43. The reform process embarked upon in the national plan has been accompanied by an international level agreement with the World Trade Organization (WTO).

44. The setting up of an information and communication system for the administration has been proposed. The foundations of this project are the inter-administration network, distance transactions and the provision of public data online, together with their accompanying measures. In fact the government is making the introduction of ICT within the administration a priority intended to facilitate the emergence of a digital administration online. The newly set up e-government program aims to improve the administration's data processing and the online provision of its services for businesses and citizens, thus reducing the cost to the taxpayers, improving the quality of service provided, and reducing processing delays. An e-government committee has been set up to carry out an action plan consisting of 32 projects.

45. Classified 64<sup>th</sup> according to the World Economic Forum's NRI in 2003, Morocco rose to 54<sup>th</sup> place in 2004, which represents second place among North African countries.

### **III.5 Mauritania**

46. Mauritania adopted its National ITC Development Strategy in May 2002, with an action plan covering the period 2002-2006<sup>12</sup>.

47. The reform of the telecommunications sector and its deregulation between 1998 and 2001 was accompanied by the creation of a Regulation Authority, the separation of the post office and telecommunications sectors, the awarding of two mobile phone licences, the opening up of the capital of the longstanding telecommunications operator to a strategic partner, the creation of a universal service access agency, and the removal of customs duties on imported ICT equipment and products.

48. The sectoral goals for 2006 are as follows:

- an increase in teledensity (currently just below 20%) to reach 33% at the end of this period;
- the development of international links (100Mbps);
- the development of the national IP network (216 areas connected) ;

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<sup>12</sup> National Strategy for the Development of New Technologies (2002-2006). Nouakchott, Secrétariat d'Etat auprès du premier Ministre chargé des technologies nouvelles, 2001.

- raising the informatization ratio to the level of 5% of the GDP;
- the training of 100 computer engineers each year;
- the development of e-government services at both central and territorial administrative levels;
- the setting up of information systems and intranet within the administration;
- the systematic inclusion of an ICT component in all programs;
- the setting up of a secure electronic trading system;
- the corresponding adaptations of the legal framework.

49. The internet has developed rapidly, with a current turnover of more than 1million €, rapid multiplication of cybercafes, a bandwidth of 45Mb/sec soon to be in place and ADSL in the process of installation. Specialized lines are expanding rapidly, and a submarine cable project is being considered. Content is also expanding, with websites for all the ministerial departments, businesses, banks and two intranets already set up (the central administration and the health service). A telemedicine network has been set up in Nouakchott and in three wilayas, together with fourteen internet access centers for schools.

### **III.6 Sudan**

50. The strategy document which has been discussed by all the parties since 2000 is now being revised. The following elements have been addressed:

- the privatization of telecommunications;
- the restructuring of the economy with an investment code and the reduction of import taxes on ICT materials.

51. The priority goals of the plan are as follows:

- the expansion of infrastructure, both qualitatively and quantitatively;
- the provision of services to citizens, especially in rural areas;
- the development of human resources ;
- the setting up of regional and international links;
- the encouragement of Research and Development in the ICT field.

52. In 2001, Sudan set up a telecommunications regulation body named the National Telecommunication Corporation. The telecom market was until recently monopolized by Sudatel for fixed telephone lines and Mobitel for mobile phone lines. In 2003, a second mobile phone licence was awarded, followed in November 2004 by the awarding of a fixed phone licence; nine internet access providers (IAPs) were authorized in addition to the three already existing. The penetration ratio for both fixed and mobile phone lines remains low compared to other countries in the sub region, in spite of a surge of 39% in fixed phone subscribers in 2003, when the number of subscribers rose from 671,842 in 2002 to 936,756 in 2003<sup>13</sup>.

53. However, taking account of the competition in the ICT field, the Arab Advisors Group predicts an annual growth in fixed lines of 25% between 2003 and 2008, when the penetration ratio is expected to exceed 7.7%, compared to 2.8% in 2003. Over the same period, the mobile phone market is expected to see annual cumulated growth of 50%, with a penetration ratio exceeding 10% in 2008 compared to 1.6% in 2003<sup>14</sup>.

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<sup>13</sup> Arab Advisors Group, Press release, August 2004 [www.arabadvisors.com](http://www.arabadvisors.com)

<sup>14</sup> Ibid.

### **III.7 Tunisia**

54. Tunisia's entry into the knowledge society is one of the Tunisian government's priorities, and the country will host the second phase of the World Summit on the Information Society in 2005. The national ICT policy covers a set of development goals, and is concerned with infrastructure, the institutional and legislative framework, and education. ICT is the sector which has shown the highest growth in recent years.

55. The 2002-2006 plan pays particular attention to the promotion of the knowledge society and the information economy including the production of software and information technology services. The government's priorities include the development of technologies and their uses, with a target of 8% of GDP in 2006. To achieve this, several measures have been taken:

- the promotion of innovation, in particular through the creation of science and technology parks, support for project incubators and assistance for setting up businesses;
- the financing of research: 1% of GDP was devoted to research in 2004;
- the development of access to ICT in businesses (1 million Tunisian Dinars);
- the creation of a favourable environment for investment with, in particular, a tax reduction of 50% for industries with a large ICT component;
- the encouragement of internet use among certain target groups, such as young people, the handicapped and the media, which benefit from a 50% reduction.

56. In this context, the internet development strategy revolves around three major themes:

- the development and modernization of infrastructure;
- the setting up of an adequate organizational and regulatory platform;
- the development of training, subcontracting and technology mastery.

57. The present situation can be described through the following figures:

- a fully digitalized telecommunications network with a telephone density of 25%, a ratio which is expected to reach 30% by 2006;
- a GSM service which is currently provided by two operators and which provides over 1.5 million lines;
- an internet network with connections which represented 2.4% in 2002 and will reach 10% in 2006;
- the number of internet users is currently 800,000 and will reach 3 million by 2006;
- the number of public internet centers is 305 (70,000 users);
- 12 internet service providers;
- 1800 websites.

58. The Tunisian government has launched an ambitious program which aims to spread the use of the internet in the education field across the whole country. This program will provide teachers, researchers and students with communication tools in order to improve exchanges within this community and to encourage the use of modern pedagogical tools. This program has set up information centers in poor areas in order to give children access to information technology and has introduced the use of the internet in primary and secondary schools and universities.

59. Moreover, electronic trading is now a reality in Tunisia, following the revision of the legal framework, the development of human resources and infrastructure, and an encouragement system. The TradeNet project which has been set up in this sector links up 7000 institutions.

60. In 2004, Tunisia was classed 31<sup>st</sup> in the world and first in Africa and in the Arab world in terms of ICT.

### III.8 Summary

61. The following table shows North African countries' performance on several indicators and compares it to that of the whole African continent.

Country	Teledensity		Mobile phone subscribers per 100 inhabitants		Mobile phone subscribers as a percentage of phone subscribers		PCs per 100 inhabitants		Computers linked to the internet per 10,000 inhabitants		Internet users per 10,000 inhabitants
	1998	2003	1998	2003	1998 <sup>1</sup>	2003	1998 <sup>3</sup>	2003	1998 <sup>2</sup>	2003	2003
Algeria	5,01	6,93	0,06	4,54	1,20	39,6	0,54	0,83	0,009	0,27	159,78
Egypt	6,47	12,73	0,15	8,45	2,24	39,9	0,98	2,91	0,27	0,49	437,01
Libya	9,07	13,56	0,36	2,30	3,84	14,5	--	2,34	0,003	0,12	289,33
Morocco	5,03	4,05	0,42	24,43	7,73	85,8	0,72	1,99	0,29	1,18	331,96
Mauritania	0,62	1,39	--	12,75	--	90,2	0,62	1,08	0,004	0,09	43,60
Sudan	0,55	2,70	0,03	1,95	5,04	41,9	0,19	0,61	0	-	90,13
Tunisia	8,06	11,77	0,42	19,69	4,95	62,6	1,48	4,05	0,05	0,27	637,01
<b>North Africa</b>	<b>4,98</b>	<b>7,59</b>	<b>0,24</b>	<b>10,54</b>	<b>4,17</b>	<b>53,5</b>	<b>0,76</b>	<b>1,98</b>	<b>0,11</b>	<b>0,55</b>	<b>376,7</b>
<b>Africa</b>	<b>2,26</b>	<b>3,00</b>	<b>--</b>	<b>6,18</b>	<b>--</b>	<b>67,5</b>	<b>--</b>	<b>1,44</b>	<b>--</b>	<b>4,22</b>	<b>156,18</b>

Sources: ITU, 1999, 2003, 2005, (1) Compiled by SRO-NA, 2005 –(2) An overview of the African ICT Sector – 1998/99 (<http://www.uneca.org/aisi>), (3) ITU Estimations, 2002.

62. But beyond these figures, which show quantitative progress, real progress can be measured in terms of the greater awareness, at the highest decision-making levels, of the importance of ICT for the development of states and their peoples.

Furthermore, we should also note an important change in the kind of stakeholders now taking part in the construction of the information society: from a few initiated people with technical background, we have moved to the participation of users who do not necessarily master the technology, but who have grasped its advantages.

63. Several lessons may be learned from the experiences of drawing up national ICT plans at the African level and the North African level:

- the need to make all parties more involved in all the stages of formulation, implementation and updating of national strategies;
- the importance of responsible high-level leadership of the process;
- the need to learn from good practices and successful experiences;
- greater efforts to bring the projects to fruition;
- particular attention to be paid to sectoral policies and strategies;
- the integration of geographical data infrastructure within the NICI process;
- the need to strengthen sub regional cooperation.

#### **IV. Regional initiatives**

##### **IV.1 Why is the regional dimension important?**

64. As we have seen, the advancement of ICT in North African countries has recently speeded up, especially over the last three years. However, efforts have been largely concentrated on the national plans, and there has been very little collaboration at the regional level.

65. ICT could greatly contribute to promoting regional cooperation and integration if the appropriate policies, programs and mechanisms are put in place. This is why there should be more effort to integrate issues relating to the information society within the regional cooperation and integration framework. Regional cooperation could improve the economies of scale which strengthen the position for collective negotiation, improve compatible standards, and attract investment.

66. Given that physical frontiers do not represent an obstacle for ICT, it is important to draw up regional e-strategies which can be linked together and which are in line with the national e-strategies, and which at the same time deal with regional policies, financing and regulatory questions in a way which allows harmonization<sup>15</sup>. To achieve this, the ECA has worked in collaboration with several regional economic communities to create initiatives for the setting up of a regional information and communication infrastructure (RICI)<sup>16</sup>.

67. So far, the Commission has been working with:

- The ECOWAS, on the definition of a legal framework for e-commerce within an ECOWAS/UEMOA joint initiative;
- The CEMAC, on the harmonization of ICT/IDG regulations within the framework of a CEMAC/ECCAS cooperation project;
- The COMESA, on a project for harmonizing the national e-strategies of its member states;
- The EAC<sup>17</sup>, on an e-government project;
- The SADC, on internet governance, in collaboration with TRASA, the Telecommunications Regulators' Association of Southern Africa;
- And more recently, the ECA has assisted the UMA in its efforts to encourage collaboration in the field of electronic trading.

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<sup>15</sup> Regional Preparatory Conference for the WSIS: National, regional, local and sectoral e-strategies. Accra, 2005.

<sup>16</sup> [www.uneca.org/aisi](http://www.uneca.org/aisi)

<sup>17</sup> Kenya, Uganda, Tanzania.

68. In October 2004, a regional workshop organized by the ECA and the International Telecommunication Union in Gaborone, Botswana recommended the setting up of a regional working group on ICT indicators, made up of representatives of the five African sub regions<sup>18</sup>. The second Regional Preparatory Conference for the WSIS, in Accra, Ghana, also recommended that this issue should be considered a regional priority, and that the establishment of specific base indicators should serve for the evaluation of the progress brought about by ICT.

69. Similarly, the New Partnership for Africa's Development (NEPAD) recommends a regional approach to the implementation of its goals, and advocates more collaboration and mobilization of effort. In its infrastructure section and its e-Africa program, NEPAD has identified several projects and initiatives within this framework, and it insists on the importance of coordination with the regional economic communities (RECs).

#### **IV.2 Regional projects: Few achievements in North Africa**

70. Taking account of the challenges posed by globalization and the state of integration within the sub region, the ECA, with the assistance of its North Africa office, is carrying out various actions, in accordance with the directives set by the Initiative, in order to help the countries of the sub region to use the new technologies as vectors of regional integration, on the one hand, and as tools to help in fighting poverty and promoting development, on the other hand.

71. In this context, in addition to the activities related to the preparation of the WSIS, the ECA is supporting initiatives involving the North African countries:

- support for the development of technology parks and project incubation centers. In this connection a workshop was organized with the El Ghazala technological pole in Tunisia in September 2004;
- The launch of a project for measuring the progress of indicators, within the framework of the activities of the African Research Network (ARN<sup>19</sup>);
- An extension of the SCAN-ICT project to open it up to several North African countries, after the participation of Morocco in the first phase of the project.

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<sup>18</sup> <http://www.itu.int/ITU-D/ict/botswana04/doc>

<sup>19</sup>ARN, the African Research Network, is a network linking African academics who have been asked by the ECA to reflect upon the impact of the information society on Africa and its most important characteristics and prospects (use of African languages, industrialization, indicators, etc.). The network was officially inaugurated during the first phase of the WSIS in Geneva in 2003.

## **V. What more can be done to build a knowledge society in North Africa?**

72. Given the cross-cutting nature of ICT, which can be placed at the service of all the facets of the economic and social development of a country or region, identifying priorities for which projects to implement can be a difficult task, and ultimately an endless one. For this reason it is essential to start by prioritising the fields to be dealt with and thus to draw up a schedule for the interventions.

73. In the case of North Africa, it is necessary to integrate the development of regional infrastructure, regulations, the strengthening of capacities, partnerships and participation in governance at a global level. Moreover, it will be necessary to take into account intersectoral questions such as the finalizing of relevant content and gender parity in all fields and during all phases of the implementation of ICT.

74. The strategic issues common to all the countries of the region, which we recommend to consider at national as well as regional level, are as follows:

### **V.1 Development of infrastructure**

75. The development of the information and communication infrastructure, where much progress, sometimes spectacular, has recently been made, mainly involves the continued extension of national infrastructures and the connections between one country and another. Infrastructure development should not be limited to mere quantitative increases in teledensity; it should also ensure easier and more equitable access to ICT. This means, in particular, the integration of geographical components (more access in rural and peri-urban areas) and social components (access for the youth, the handicapped, etc.)

76. In addition to a coordination of the technological choices, it requires the adaptation and harmonization of legal and regulatory frameworks, together with the choice of an attractive tariff policy which will favour exchanges between the countries of the sub region. This point must be considered a prerequisite for the construction of a knowledge society in the region.

### **V.2 Content Development**

77. The development of relevant and appropriate content can be seen as an indicator of a country's ability to build the knowledge society. It is therefore essential to support the creation of local content. North Africa is lucky in that all its member states have in common the use of Arabic, which means they can collaborate effectively in this domain and provide access to a wider range of data and knowledge, in particular in the field of distance learning, for the most immediate challenges are no longer technical but rather informational. The increased availability of information will certainly contribute to greater transparency and consequently to better governance.

78. Since the knowledge economy is one of the targeted objectives, the choice of sectors for the production of content must make it possible to go beyond the stage of mere promotional information, which is often static, and which characterizes most of the websites and information systems available today. We must now promote the development of systems which offer comprehensive, reliable and up-to-date economic and social data which can provide decision-makers with the means to make the right strategic choices, which can offer academics and researchers the resources needed for their work, and which will attract the attention of economic operators and potential investors.

79. The variety and wealth of content are also a guarantee that the information society will not lead to a uniformization of thought, but that it will protect the cultural diversity of our world.

80. Finally, the development of content offers excellent opportunities for job creation and reduction of unemployment among young people in general and graduated young people in particular.

### **V.3 Human capital**

81. It is generally agreed that the construction of the information society must help people to develop their full potential. This is a further reason to support investment in human capital, which is a fundamental component of this evolving society. The survey of the sub region's achievements in the preceding paragraphs shows that almost all the countries have already paid particular attention to the integration of young people, notably by large-scale introduction of ICT resources in schools and universities. Besides these measures, some have gone so far as to create programs specifically aimed at the youth (Egypt) or to set up centers specially devoted to them (the information centers for youth in Tunisia). These efforts must be continued, for knowledge in this rapidly developing sector is constantly evolving. For this reason, in addition to the traditional education systems, new types should be promoted, such as in-service training, self learning courses (especially those using ICT) and ICT retraining programs for qualified young people whose educational background has not equipped them to be competitive on the job market.

82. The investment in human capital must be accompanied by greater efforts to make the public aware of the digital culture.

### **V.4 Encouraging research and innovation**

83. It is important that the construction of the information society in North Africa should be accompanied by research and development programs which will allow it to spread and evolve.

84. These programs will first of all make possible greater mastery of ICT and will aim at adapting them to local contexts. Particular attention could be paid to developing innovative applications using the Arabic language, or user interfaces which can overcome the barrier of illiteracy.

85. They should also have a socio-economic dimension which makes it possible to study the real effects of the information society.

This activity will in practice depend on networks of researchers from the various countries of the sub region who will work in collaboration with their African and Mediterranean counterparts. They will stimulate creativity and allow the results of the innovations to be accessible on a wider scale.

### **V.5 Determining the priority applications**

86. It is clear that, at the national level, the success of the implementation of e-strategies depends on their being well adapted to the development priorities of the country concerned. The same is true for ICT development programs at the regional level: the starting point must be issues which are priorities for several of the countries, which will allow the identification of the sectors which promise the most immediate results. Among these, e-commerce ranks highly. At a recent meeting concerned with the use of ICT to encourage exchange between the Maghreb countries<sup>20</sup>,

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<sup>20</sup> Seminar on the use of ICT and the development of exchanges between the Maghreb countries organized by the UMA, the ECA and the UNDP's ICT DAR program, Tangier, 1-3 March 2005.

the participants made some recommendations which can be implemented at the regional level, such as:

- a harmonization of the legal framework for e-commerce services;
- the setting up of a study to identify and encourage the spread of good e-commerce practices in the region;
- the search for complementarities in fields which offer opportunities for industry, such as manufacturing subcontracting, teleservices and software development.

87. They also recommend focusing on opportunities offered by e-tourism and the need to develop a common platform for this sector.

## **V.6 Development of the private sector**

88. AISI has always insisted that the building of the information society is a participative process in which all the concerned parties must be involved. This message has up to now been very well received by all the actors except for the private sector, whose commitment is not very convincing and whose interventions have been far below expectations. This problem is not specific to Africa, still less to North Africa; it is an almost universal phenomenon, and the first phase of the WSIS demonstrated that the so-called partnership between public and private sectors, which is so often invoked, remains mere rhetoric most of the time.

89. From now on it is essential that this trend should change, and that the private sector should become more pro-actively involved, for its participation is indispensable if what has already been accomplished is to be maintained.

90. The private sector can also contribute to many aspects of the information society. However, the most appropriate field for its investment is of course that of infrastructures, which nevertheless remain the concern of a limited circle made up of the multinationals which alone have the capacity needed to invest in this field. As for the local private sector in the North African countries, its small size explains its relatively limited participation. For this reason, regional alliances must be sought which would give this sector the weight needed for it to have a real impact.

## **V.7 Cross fertilization**

91. The concept of learning is at the heart of the knowledge society, which must use it to consolidate its position. It is therefore essential to have mechanisms for the exchange of information on the ICT implementation programs and for sharing experiences. These mechanisms must be set up between the countries of the region and within each country itself, between the various actors concerned, and they may take the form of regular dialogs between the public and private sectors and the multiple components of civil society. In particular, they will rely on data bases and information systems which should preferably be available online. The promotion of South-South cooperation also requires a framework of mutual learning and exchange of experiences between countries.

## **VI. The WSIS**

92. The World Summit on the Information Society, WSIS, is the first of its type to place on the world agenda a subject which has only relatively recently attracted attention. It originated in the sub region, for its organization was decided at the ITU meeting held in Minneapolis in 1998, as a result of a proposal from Tunisia. The WSIS has an unusual structure: it is organized in two stages, the first having taken place in Geneva in December 2003, while the

second will take place in Tunis from 16-18 November 2005. Tunis 2005 represents a historic opportunity for the whole of the international community to bring out a shared view of the information society and develop an action approach aimed at reducing the digital gap and leading to a balanced information society which will be accessible to all<sup>21</sup>.

93. The ECA was involved from an early stage in the organization of Africa's participation in the WSIS, seeing in it an opportunity to achieve greater integration of ICT within Africa's development agenda, and consequently to accelerate the implementation of AISI. Africa was one of the first regions of the world to get involved, first at Bamako in May 2002, in preparation for the first phase in Geneva, and more recently in Accra, in February 2005, in preparation for the Tunis phase. In taking this position, the continent has defined its priorities and expressed its expectations for the results of the Summit.

94. North Africa, which has participated in all activities relating to the WSIS, can now strengthen its role in the process across the Arab world. It will thus be able to emphasise its distinctive characteristics at the ministerial meeting to be held in Cairo next May.

### **Conclusion**

95. North Africa has almost unanimously opted for an active and worthy participation in the knowledge society and economy.

96. The brief survey provided here reveals a recent acceleration of investment in the ICT sector and the resulting progress at national levels.

97. The mobilization for both phases of the WSIS, together with the number and diversity of the participants and preparatory events, provide so many indicators that the countries of the sub region have recognized the cross-cutting importance of ICT, their potential contribution to all development sectors, and the effectively unique opportunity they represent for these countries.

98. Serious efforts must still be made if the regional dimension is to attain its full significance. In choosing a few priority areas which can yield mobilizing projects to be carried out jointly, the countries of North Africa will ensure that the synergies so fervently desired and recommended will become a reality leading to greater cooperation, and will contribute more wealth and opportunities for development.

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<sup>21</sup>Message of His Excellency Mr. Zine El Abidine Ben Ali, President of the Republic of Tunisia, to the participants at the first phase of the World Summit on the Information Society (Geneva, 10-12 December 2003). <http://www.smsitunis2005.org>.

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