



PACIFIC ISLANDS FORUM SECRETARIAT

PIFS(04)FEDMA.09

EDUCATION MINISTERS MEETING

Apia, Samoa

28-29 January 2004

AGENDA ITEM 8

ICT FOR EDUCATION – THE GLOBAL AGENDA

This paper was prepared by the Forum Secretariat to summarise the actions and activities for the promotion of ICTs for education as is outlined in the World Summit on the Information Society (WSIS) Plan of Action. The paper focuses on the objectives of the Plan of Action, and the sections pertaining to the promotion of ICTs for education and the delivery of such to obtain universal education. The paper also briefly looks at the regions position and its undertakings to illustrate how the regional and global contexts are linked and attempting to realise the same challenges.



EDUCATION MINISTERS MEETING

Apia, Samoa

28-29 January 2004

Summary Brief

ICTs FOR EDUCATION – THE GLOBAL AGENDA

Purpose

This paper reports on the actions and activities for the promotion of ICTs for education as is outlined in the World Summit on the Information Society (WSIS) Plan of Action. The paper focuses on the objectives of the Plan of Action, and the sections pertaining to the promotion of ICTs for education and the delivery of such to obtain universal education. The paper also briefly looks at the regions position and its undertakings to illustrate how the regional and global contexts are linked and attempting to realise the same challenges.

Background

2. In December 2003, world leaders met in Geneva, Switzerland for the first phase of the World Summit on the Information Society (WSIS), declaring to “build the information society – a global challenge in the new Millennium.” The second phase, planned for 2005 in Tunis, Tunisia, will be to reflect, evaluate and assess those commitments declared in the first WSIS. At the conclusion of the 2003 Summit, Leaders agreed on the WSIS Declaration of Principles and the WSIS Plan of Action, the latter setting an ambitious agenda to promote and encourage the use of ICTs to increase global participation in the global information infrastructure. These documents can be obtained from the official WSIS website <http://www.itu.int/wsisis/>

3. The objectives of the Plan of Action are:
- ? To build an inclusive information society;
 - ? To put the potential of knowledge and ICTs at the service of development;
 - ? To promote the use of information and knowledge for the achievement of internationally agreed development goals, including those contained in the Millennium Declaration; and
 - ? To address new challenges of the information society at the national, regional, and international levels.

Issues

4. An objective of the Plan of Action is to address ICT challenges at the national, regional and international level. The Pacific region has identified and acknowledged those challenges facing the region and are attempting to address them using the regions ICT guiding document, the Pacific Islands ICT Policy and Plan (PIIPP). The PIIPP covers the following areas - human resources, infrastructure, cooperation between stakeholders, and appropriate policy and regulation – all of which also mentioned in the WSIS Plan of Action. Of specific interest to educationists would be the human resource component of the PIIPP, and Section C4 of the WSIS Plan of Action, which focuses on ICT tools and activities in education, training, and capacity building.



EDUCATION MINISTERS MEETING

Apia, Samoa

28-29 January 2004

AGENDA ITEM 8

ICTs for Education – The Global Agenda

Purpose

This paper reports on the actions and activities for the promotion of ICTs for education as is outlined in the World Summit on the Information Society (WSIS) Plan of Action. The paper focuses on the objectives of the Plan of Action, and the sections pertaining to the promotion of ICTs for education and the delivery of such to obtain universal education. The paper also briefly looks at the regions position and its undertakings to illustrate how the regional and global contexts are linked and attempting to realise the same challenges.

Background

2. In December 2003, world leaders met in Geneva, Switzerland for the first phase of the World Summit on the Information Society (WSIS), declaring to “build the information society – a global challenge in the new Millennium.” The second phase, planned for 2005 in Tunis, Tunisia, will be to reflect, evaluate and assess those commitments declared in the first WSIS. At the conclusion of the 2003 Summit, Leaders agreed on the WSIS Declaration of Principles and the WSIS Plan of Action, the latter setting an ambitious agenda to promote and encourage the use of ICTs to increase global participation in the global information infrastructure. These documents can be obtained from the official WSIS website [http://www.itu/int/wsisis/](http://www.itu.int/wsisis/)

3. The objectives of the Plan of Action are:
- ? To build an inclusive information society;
 - ? To put the potential of knowledge and ICTs at the service of development;

- ? To promote the use of information and knowledge for the achievement of internationally agreed development goals, including those contained in the Millennium Declaration; and
- ? To address new challenges of the information society at the national, regional, and international levels.

Issues

Regional Context

4. An objective of the Plan of Action is to address ICT challenges at the national, regional and international level. To understand the global context of the plan of action and be able to implement it and/or promote it at the national and regional levels, one has to be familiar with the challenges facing its own population. The Pacific region has identified and acknowledged those challenges facing the region and are attempting to address them using the regions ICT guiding document, the Pacific Islands ICT Policy and Plan (PIIPP)¹.

5. The PIIPP covers the following areas - human resources, infrastructure, cooperation between stakeholders, and appropriate policy and regulation – all of which are mentioned in the WSIS Plan of Action. Of specific interest to educationists would be the human resource component of the PIIPP, and Section C4 of the WSIS Plan of Action, which focuses on ICT tools and activities in education, training, and capacity building.

6. At the Forum Communications Policy Meeting in 2002, Ministers requested accurate, complete and updated data to improve understanding of ICT developments in the region and to enhance decision-making in areas of policy and programme development. The Pacific Islands Forum Secretariat (PIFS) and the Pacific Islands Telecommunications Association (PITA) undertook a comprehensive data collection exercise: the Pacific ICT Survey 2002, and some of the findings were as follows:

- ? The human resource and institutional capacity component of the survey looked at accessibility, particularly within the workplace and educational institutions and the varying skill levels available nationally, and the constraints that limit human resource and institutional development. Despite more Pacific islanders being trained in ICT-related fields, human resources and capacity in the PICs remain limited, a situation that continues to make progress more difficult.

7. The following have been identified as to why the region has insufficient human resources in the ICT sector:

- ? limited access to information infrastructure for training, such as telephones, computers, and Internet services, for individuals, schools, and organisations;
- ? training is limited to very few persons in both the public and private sector;
- ? budgetary allocations for ICT training and development are inadequate in comparison to other budgetary components in private and public sector budgets;

¹ The PIIPP was endorsed by Forum Communications Ministers at the Forum Communications Policy Meeting, held in Suva, Fiji, in April 2002.

- ? lack of qualified personnel;
- ? retention problems; and
- ? the high costs involved in IT- for example training, and equipment.

8. The table below shows the Internet access in the region, illustrating that less than 25% of the population of primary and secondary schools have Internet access, except for Niue where Internet is free. Vanuatu offers free Internet access to those schools that purchase their own computers and other equipment. Public access areas such as city libraries and Internet cafes are emerging in major centres. In most countries, Internet access from homes does not exceed 25%, with the exception of Palau. The workplace, on the other hand, sees some countries have 50% to 75% of the population accessing the Internet from work.

Table 1: Internet Access in the region

Internet Access	Homes	Primary Schools	Secondary Schools	Work place	Public Access Areas
Cook Islands	↓	-	↓	↓	↓
FSM	↓	-	↓	↓↓	↓
Fiji	↓	-	↓	↓↓	↓
Kiribati	↓	Nil	↓	↓	↓
Nauru	-	-	-	-	-
Niue	-	↓↓↓↓	↓↓↓↓	-	↓↓↓↓
Palau	↓↓	-	↓	-	↓
PNG	↓	-	↓	↓	↓
RMI	↓		↓	↓	↓
Samoa	↓	-	↓	↓↓	↓
Solomon Islands	↓	-	↓	↓	↓
Tonga	↓		↓	↓↓	↓
Tuvalu	↓			↓	↓
Vanuatu	↓		↓	↓	↓

source: UNESCO (2001), *Internet Infrastructure and e-Governance in Pacific Island Countries*.

↓ less than 25% population

↓↓ 25-50% population

↓↓↓ 50 – 75% population

↓↓↓↓ more than 75% population

Global context

9. The WSIS Plan of Action is all encompassing and sets out to address all challenges facing ICT development in every global context, from connectivity and access issues to policy and regulatory issues; from capacity building to cultural, linguistic diversity and content.

10. The four objectives of the Plan of Action and the targeted activities are hoped to be achieved by 2015, with underlying goals to include connecting universities, colleges, secondary and primary schools with ICTs; to connect public libraries, cultural centers, museums, post offices and archives with ICTs; and to adapt all primary and secondary school curricula to meet the challenges of the information society, taking into account the differing national circumstances.

11. The opening statement for Section C4 on capacity building clearly states that: *“Everyone should have the necessary skills to benefit fully from the Information Society. Therefore capacity building and ICT literacy are essential. ICTs can contribute to achieving universal education worldwide, through delivery of education and training of teachers, and offering improved conditions for lifelong learning, encompassing people that are outside the formal education process, and improving professional skills.”*

12. The capacity building section in the plan of action is not to be read in isolation but in context with the other sections such as enabling environment, the applications of ICTs, and the role of Government and other stakeholders. The sixteen goals highlighted in the capacity building section addresses the cross-section of issues in education and training – the development of national policies, curriculum and programme development, ICT applications, access to ICTs in educational institutions, and gender. It is therefore clear that cooperation is needed for these challenges and activities to take place and succeed.

13. The development of national policies to ensure the integration of ICTs is an important focus in the action plan, especially to ensure its penetration and inclusion in all facets of educational development such as curriculum development, teacher training, institutional administration and management, distance and e-learning, and eradicating illiteracy. The existence of national policies (integrating ICTs in education, health, etc) to steer and direct this development is crucial. The plan of action notes that in the context of educational policies, especially to eradicate illiteracy, it is important to note that people need to be equipped with the knowledge and skills not only to utilise these ICTs but to be able to analyse and treat this the information they obtain in creative and just ways.

14. Curriculum and especially programme development is a key focus area. The goals are aimed at launching education and training programmes for a variety of reasons- to meet educational needs of the communities and information professionals (librarians, teachers, etc); to empower local and indigenous communities using information networks and socially meaningful content; and eradicate illiteracy by designing and offering courses in facilities in the communities (schools, community hall, etc).

15. ICT applications especially for e-learning and distance education are ideal tools in supporting sustainable development in varying fields including health and employment and this is promoted in the plan of action. These are noted in the plan of action especially to create innovative and alternative ways to not only deliver education and training, but to encourage participation for those in rural and underserved areas.

16. Access to ICTs in educational institutions (including community centres) is being greatly encouraged in the action plan not only allow for greater participation in the communities but to allow for alternate ways to deliver education. Because most of the capacity building goals highlighted in the plan of action require access to ICTs (e-learning applications and distance education), this is going to be a crucial area to work on.

Conclusion

17. The WSIS plan of action is a comprehensive document outlining the objectives, targets and goals to building an information society amidst the vast challenges of the digital divide and rapidly evolving ICT environment. Because of the different national circumstances and national characteristics, the plan of action sets a target year of 2015 to try and achieve these goals. The two-phase structure of the WSIS, with the second phase summit scheduled for 2005 in Tunisia, is to provide an opportunity to take into account the challenges and evaluate the progress to date on those commitments made in 2003 at the WSIS phase one.

18. Most of the targets and goals in the plan of action are those mentioned also in the regions guiding document, the PIIPP. The region has identified, and is aware of the obstacles and challenges facing the region in ICT/education development and is addressing them accordingly at national level. The capacity building section in the plan of action and the human resource component of the PIIPP can be read in parallel as the issues and goals noted in the plan of action are those being faced and attended to by the region. The sixteen goals highlighted in the capacity building section addresses the cross-section of issues in education and training – the development of national policies, curriculum and programme development, ICT applications, access to ICTs in educational institutions, and gender – all of which are the regions target areas also.

Recommendations

19. It is recommended that Ministers note the findings in this paper.

Pacific Islands Forum Secretariat
12 January 2004

Plan of Action

A. Introduction

1. The common vision and guiding principles of the Declaration are translated in this Plan of Action into concrete action lines to advance the achievement of the internationally-agreed development goals, including those in the Millennium Declaration, the Monterrey Consensus and the Johannesburg Declaration and Plan of Implementation, by promoting the use of ICT-based products, networks, services and applications, and to help countries overcome the digital divide. The Information Society envisaged in the Declaration of Principles will be realized in cooperation and solidarity by governments and all other stakeholders.

2. The Information Society is an evolving concept that has reached different levels across the world, reflecting the different stages of development. Technological and other change is rapidly transforming the environment in which the Information Society is developed. The Plan of Action is thus an evolving platform to promote the Information Society at the national, regional and international levels. The unique two-phase structure of the World Summit on the Information Society (WSIS) provides an opportunity to take this evolution into account.

3. All stakeholders have an important role to play in the Information Society, especially through partnerships:

a) Governments have a leading role in developing and implementing comprehensive, forward looking and sustainable national e-strategies. The private sector and civil society, in dialogue with governments, have an important consultative role to play in devising national e-strategies.

b) The commitment of the private sector is important in developing and diffusing information and communication technologies (ICTs), for infrastructure, content and applications. The private sector is not only a market player but also plays a role in a wider sustainable development context.

c) The commitment and involvement of civil society is equally important in creating an equitable Information Society, and in implementing ICT-related initiatives for development.

d) International and regional institutions, including international financial institutions, have a key role in integrating the use of ICTs in the development process and making available necessary resources for building the Information Society and for the evaluation of the progress made.

B. Objectives, goals and targets

4. The objectives of the Plan of Action are to build an inclusive Information Society; to put the potential of knowledge and ICTs at the service of development; to promote the use of information and knowledge for the achievement of internationally agreed development goals, including those contained in the Millennium Declaration; and to address new challenges of the Information Society, at the national, regional and international levels. Opportunity shall be taken in phase two of the WSIS to evaluate and assess progress made towards bridging the digital divide.

5. Specific targets for the Information Society will be established as appropriate, at the national level in the framework of national e-strategies and in accordance with national development policies, taking into account the different national circumstances. Such targets can serve as useful benchmarks for actions and for the evaluation of the progress made towards the attainment of the overall objectives of the Information Society.

6. Based on internationally agreed development goals, including those in the Millennium Declaration, which are premised on international cooperation, indicative targets may serve as global references for improving connectivity and access in the use of ICTs in promoting the objectives of the Plan of Action, to be achieved by 2015. These targets may be taken into account in the establishment of the national targets, considering the different national circumstances:

- a) to connect villages with ICTs and establish community access points;
- b) to connect universities, colleges, secondary schools and primary schools with ICTs;
- c) to connect scientific and research centres with ICTs;
- d) to connect public libraries, cultural centres, museums, post offices and archives with ICTs;
- e) to connect health centres and hospitals with ICTs;
- f) to connect all local and central government departments and establish websites and email addresses;
- g) to adapt all primary and secondary school curricula to meet the challenges of the Information Society, taking into account national circumstances;
- h) to ensure that all of the world's population have access to television and radio services;
- i) to encourage the development of content and to put in place technical conditions in order to facilitate the presence and use of all world languages on the Internet;
- j) to ensure that more than half the world's inhabitants have access to ICTs within their reach.

7. In giving effect to these objectives, goals and targets, special attention will be paid to the needs of developing countries, and in particular to countries, peoples and groups cited in paragraphs 11-16 of the Declaration of Principles.

C. Action Lines

C1. The role of governments and all stakeholders in the promotion of ICTs for development

8. The effective participation of governments and all stakeholders is vital in developing the Information Society requiring cooperation and partnerships among all of them.

a) Development of national e-strategies, including the necessary human capacity building, should be encouraged by all countries by 2005, taking into account different national circumstances.

b) Initiate at the national level a structured dialogue involving all relevant stakeholders, including through public/private partnerships, in devising e-strategies for the Information Society and for the exchange of best practices.

c) In developing and implementing national e-strategies, stakeholders should take into consideration local, regional and national needs and concerns. To maximize the benefits of initiatives undertaken, these should include the concept of sustainability. The private sector should be engaged in concrete projects to develop the Information Society at local, regional and national levels.

d) Each country is encouraged to establish at least one functioning Public/Private Partnership (PPP) or Multi-Sector Partnership (MSP), by 2005 as a showcase for future action.

e) Identify mechanisms, at the national, regional and international levels, for the initiation and promotion of partnerships among stakeholders of the Information Society.

f) Explore the viability of establishing multi-stakeholder portals for indigenous peoples at the national level.

g) By 2005, relevant international organizations and financial institutions should develop their own strategies for the use of ICTs for sustainable development, including sustainable production and consumption patterns and as an effective instrument to help achieve the goals expressed in the United Nations Millennium Declaration.

h) International organizations should publish, in their areas of competence, including on their website, reliable information submitted by relevant stakeholders on successful experiences of mainstreaming ICTs.

i) Encourage a series of related measures, including, among other things: incubator schemes, venture capital investments (national and international), government investment funds (including micro-finance for Small, Medium-sized and Micro Enterprises (SMMEs), investment promotion strategies, software export support activities (trade counseling), support of research and development networks and software parks.

C2. Information and communication infrastructure: an essential foundation for the Information Society

9. Infrastructure is central in achieving the goal of digital inclusion, enabling universal, sustainable, ubiquitous and affordable access to ICTs by all, taking into account relevant solutions already in place in developing countries and countries with economies in transition, to provide sustainable connectivity and access to remote and marginalized areas at national and regional levels.

a) Governments should take action, in the framework of national development policies, in order to support an enabling and competitive environment for the necessary investment in ICT infrastructure and for the development of new services.

b) In the context of national e-strategies, devise appropriate universal access policies and strategies, and their means of implementation, in line with the indicative targets, and develop ICT connectivity indicators.

c) In the context of national e-strategies, provide and improve ICT connectivity for all schools, universities, health institutions, libraries, post offices, community centres, museums and other institutions accessible to the public, in line with the indicative targets.

d) Develop and strengthen national, regional and international broadband network infrastructure, including delivery by satellite and other systems, to help in providing the capacity to match the needs of countries and their citizens and for the delivery of new ICT-based services. Support technical, regulatory and operational studies by the International Telecommunication Union (ITU) and, as appropriate, other relevant international organizations in order to:

- i) broaden access to orbital resources, global frequency harmonization and global systems standardization;
- ii) encourage public/private partnership;
- iii) promote the provision of global high-speed satellite services for underserved areas such as remote and sparsely populated areas;
- iv) explore other systems that can provide high-speed connectivity.

e) In the context of national e-strategies, address the special requirements of older people, persons with disabilities, children, especially marginalized children and other disadvantaged and vulnerable groups, including by appropriate educational administrative and legislative measures to ensure their full inclusion in the Information Society.

f) Encourage the design and production of ICT equipment and services so that everyone, has easy and affordable access to them including older people, persons with disabilities, children, especially marginalized children, and other disadvantaged and vulnerable groups, and promote the development of technologies, applications, and content suited to their needs, guided by the Universal Design Principle and further enhanced by the use of assistive technologies.

g) In order to alleviate the challenges of illiteracy, develop affordable technologies and non-text based computer interfaces to facilitate people's access to ICT,

- h) Undertake international research and development efforts aimed at making available adequate and affordable ICT equipment for end users.
- i) Encourage the use of unused wireless capacity, including satellite, in developed countries and in particular in developing countries, to provide access in remote areas, especially in developing countries and countries with economies in transition, and to improve low-cost connectivity in developing countries. Special concern should be given to the Least Developed Countries in their efforts in establishing telecommunication infrastructure.
- j) Optimize connectivity among major information networks by encouraging the creation and development of regional ICT backbones and Internet exchange points, to reduce interconnection costs and broaden network access.
- k) Develop strategies for increasing affordable global connectivity, thereby facilitating improved access. Commercially negotiated Internet transit and interconnection costs should be oriented towards objective, transparent and non-discriminatory parameters, taking into account ongoing work on this subject.
- l) Encourage and promote joint use of traditional media and new technologies.

C3. Access to information and knowledge

10. ICTs allow people, anywhere in the world, to access information and knowledge almost instantaneously. Individuals, organizations and communities should benefit from access to knowledge and information.

- a) Develop policy guidelines for the development and promotion of public domain information as an important international instrument promoting public access to information.
- b) Governments are encouraged to provide adequate access through various communication resources, notably the Internet, to public official information. Establishing legislation on access to information and the preservation of public data, notably in the area of the new technologies, is encouraged.
- c) Promote research and development to facilitate accessibility of ICTs for all, including disadvantaged, marginalized and vulnerable groups.
- d) Governments, and other stakeholders, should establish sustainable multi-purpose community public access points, providing affordable or free-of-charge access for their citizens to the various communication resources, notably the Internet. These access points should, to the extent possible, have sufficient capacity to provide assistance to users, in libraries, educational institutions, public administrations, post offices or other public places, with special emphasis on rural and underserved areas, while respecting intellectual property rights (IPRs) and encouraging the use of information and sharing of knowledge.
- e) Encourage research and promote awareness among all stakeholders of the possibilities offered by different software models, and the means of their creation, including proprietary, open-source and free software, in order to increase competition, freedom of choice and affordability, and to enable all stakeholders to evaluate which solution best meets their requirements.

f) Governments should actively promote the use of ICTs as a fundamental working tool by their citizens and local authorities. In this respect, the international community and other stakeholders should support capacity building for local authorities in the widespread use of ICTs as a means of improving local governance.

g) Encourage research on the Information Society, including on innovative forms of networking, adaptation of ICT infrastructure, tools and applications that facilitate accessibility of ICTs for all, and disadvantaged groups in particular.

h) Support the creation and development of a digital public library and archive services, adapted to the Information Society, including reviewing national library strategies and legislation, developing a global understanding of the need for “hybrid libraries”, and fostering worldwide cooperation between libraries.

i) Encourage initiatives to facilitate access, including free and affordable access to open access journals and books, and open archives for scientific information.

j) Support research and development of the design of useful instruments for all stakeholders to foster increased awareness, assessment, and evaluation of different software models and licences, so as to ensure an optimal choice of appropriate software that will best contribute to achieving development goals within local conditions.

C4. Capacity building

11. Everyone should have the necessary skills to benefit fully from the Information Society. Therefore capacity building and ICT literacy are essential. ICTs can contribute to achieving universal education worldwide, through delivery of education and training of teachers, and offering improved conditions for lifelong learning, encompassing people that are outside the formal education process, and improving professional skills.

a) Develop domestic policies to ensure that ICTs are fully integrated in education and training at all levels, including in curriculum development, teacher training, institutional administration and management, and in support of the concept of lifelong learning.

b) Develop and promote programmes to eradicate illiteracy using ICTs at national, regional and international levels.

c) Promote e-literacy skills for all, for example by designing and offering courses for public administration, taking advantage of existing facilities such as libraries, multipurpose community centres, public access points and by establishing local ICT training centres with the cooperation of all stakeholders. Special attention should be paid to disadvantaged and vulnerable groups.

d) In the context of national educational policies, and taking into account the need to eradicate adult illiteracy, ensure that young people are equipped with knowledge and skills to use ICTs, including the capacity to analyse and treat information in creative and innovative ways, share their expertise and participate fully in the Information Society.

e) Governments, in cooperation with other stakeholders, should create programmes for capacity building with an emphasis on creating a critical mass of qualified and skilled ICT professionals and experts.

- f) Develop pilot projects to demonstrate the impact of ICT-based alternative educational delivery systems, notably for achieving Education for All targets, including basic literacy targets.
- g) Work on removing the gender barriers to ICT education and training and promoting equal training opportunities in ICT-related fields for women and girls. Early intervention programmes in science and technology should target young girls with the aim of increasing the number of women in ICT careers. Promote the exchange of best practices on the integration of gender perspectives in ICT education.
- h) Empower local communities, especially those in rural and underserved areas, in ICT use and promote the production of useful and socially meaningful content for the benefit of all.
- i) Launch education and training programmes, where possible using information networks of traditional nomadic and indigenous peoples, which provide opportunities to fully participate in the Information Society.
- j) Design and implement regional and international cooperation activities to enhance the capacity, notably, of leaders and operational staff in developing countries and LDCs, to apply ICTs effectively in the whole range of educational activities. This should include delivery of education outside the educational structure, such as the workplace and at home.
- k) Design specific training programmes in the use of ICTs in order to meet the educational needs of information professionals, such as archivists, librarians, museum professionals, scientists, teachers, journalists, postal workers and other relevant professional groups. Training of information professionals should focus not only on new methods and techniques for the development and provision of information and communication services, but also on relevant management skills to ensure the best use of technologies. Training of teachers should focus on the technical aspects of ICTs, on development of content, and on the potential possibilities and challenges of ICTs.
- l) Develop distance learning, training and other forms of education and training as part of capacity building programmes. Give special attention to developing countries and especially LDCs in different levels of human resources development.
- m) Promote international and regional cooperation in the field of capacity building, including country programmes developed by the United Nations and its Specialized Agencies
- n) Launch pilot projects to design new forms of ICT-based networking, linking education, training and research institutions between and among developed and developing countries and countries with economies in transition.
- o) Volunteering, if conducted in harmony with national policies and local cultures, can be a valuable asset for raising human capacity to make productive use of ICT tools and build a more inclusive Information Society. Activate volunteer programmes to provide capacity building on ICT for development, particularly in developing countries.
- p) Design programmes to train users to develop self-learning and self-development capacities.

C5. Building confidence and security in the use of ICTs

12. Confidence and security are among the main pillars of the Information Society.

- a) Promote cooperation among the governments at the United Nations and with all stakeholders at other appropriate fora to enhance user confidence, build trust, and protect both data and network integrity; consider existing and potential threats to ICTs; and address other information security and network security issues.
- b) Governments, in cooperation with the private sector, should prevent, detect and respond to cyber-crime and misuse of ICTs by: developing guidelines that take into account ongoing efforts in these areas; considering legislation that allows for effective investigation and prosecution of misuse; promoting effective mutual assistance efforts; strengthening institutional support at the international level for preventing, detecting and recovering from such incidents; and encouraging education and raising awareness.
- c) Governments, and other stakeholders, should actively promote user education and awareness about online privacy and the means of protecting privacy.
- d) Take appropriate action on spam at national and international levels.
- e) Encourage the domestic assessment of national law with a view to overcoming any obstacles to the effective use of electronic documents and transactions including electronic means of authentication.
- f) Further strengthen the trust and security framework with complementary and mutually reinforcing initiatives in the fields of security in the use of ICTs, with initiatives or guidelines with respect to rights to privacy, data and consumer protection.
- g) Share good practices in the field of information security and network security and encourage their use by all parties concerned.
- h) Invite interested countries to set up focal points for real-time incident handling and response, and develop a cooperative network between these focal points for sharing information and technologies on incident response.
- i) Encourage further development of secure and reliable applications to facilitate online transactions.
- j) Encourage interested countries to contribute actively to the ongoing United Nations activities to build confidence and security in the use of ICTs.

C6. Enabling environment

13. To maximize the social, economic and environmental benefits of the Information Society, governments need to create a trustworthy, transparent and non-discriminatory legal, regulatory and policy environment. Actions include:

- a) Governments should foster a supportive, transparent, pro-competitive and predictable policy, legal and regulatory framework, which provides the appropriate incentives to investment and community development in the Information Society.
- b) We ask the Secretary General of the United Nations to set up a working group on Internet governance, in an open and inclusive process that ensures a mechanism for the

full and active participation of governments, the private sector and civil society from both developing and developed countries, involving relevant intergovernmental and international organizations and forums, to investigate and make proposals for action, as appropriate, on the governance of Internet by 2005. The group should, *inter alia*:

- i) develop a working definition of Internet governance;
 - ii) identify the public policy issues that are relevant to Internet governance;
 - iii) develop a common understanding of the respective roles and responsibilities of governments, existing intergovernmental and international organisations and other forums as well as the private sector and civil society from both developing and developed countries;
 - iv) prepare a report on the results of this activity to be presented for consideration and appropriate action for the second phase of WSIS in Tunis in 2005.
- c) Governments are invited to:
- i) facilitate the establishment of national and regional Internet Exchange Centres;
 - ii) manage or supervise, as appropriate, their respective country code top-level domain name (ccTLD);
 - iii) promote awareness of the Internet.
- d) In cooperation with the relevant stakeholders, promote regional root servers and the use of internationalized domain names in order to overcome barriers to access.
- e) Governments should continue to update their domestic consumer protection laws to respond to the new requirements of the Information Society.
- f) Promote effective participation by developing countries and countries with economies in transition in international ICT forums and create opportunities for exchange of experience.
- g) Governments need to formulate national strategies, which include e-government strategies, to make public administration more transparent, efficient and democratic.
- h) Develop a framework for the secure storage and archival of documents and other electronic records of information.
- i) Governments and stakeholders should actively promote user education and awareness about online privacy and the means of protecting privacy.
- j) Invite stakeholders to ensure that practices designed to facilitate electronic commerce also permit consumers to have a choice as to whether or not to use electronic communication.
- k) Encourage the ongoing work in the area of effective dispute settlement systems, notably alternative dispute resolution (ADR), which can promote settlement of disputes.
- l) Governments, in collaboration with stakeholders, are encouraged to formulate conducive ICT policies that foster entrepreneurship, innovation and investment, and with particular reference to the promotion of participation by women.
- m) Recognising the economic potential of ICTs for Small and Medium-Sized Enterprises (SMEs), they should be assisted in increasing their competitiveness by streamlining

administrative procedures, facilitating their access to capital and enhancing their capacity to participate in ICT-related projects.

n) Governments should act as model users and early adopters of e-commerce in accordance with their level of socio-economic development.

o) Governments, in cooperation with other stakeholders, should raise awareness of the importance of international interoperability standards for global e-commerce.

p) Governments, in cooperation with other stakeholders, should promote the development and use of open, interoperable, non-discriminatory and demand-driven standards.

q) ITU, pursuant to its treaty capacity, coordinates and allocates frequencies with the goal of facilitating ubiquitous and affordable access.

r) Additional steps should be taken in ITU and other regional organisations to ensure rational, efficient and economical use of, and equitable access to, the radio-frequency spectrum by all countries, based on relevant international agreements.

C7. ICT applications: benefits in all aspects of life

14. ICT applications can support sustainable development, in the fields of public administration, business, education and training, health, employment, environment, agriculture and science within the framework of national e-strategies. This would include actions within the following sectors:

15. E-government

a) Implement e-government strategies focusing on applications aimed at innovating and promoting transparency in public administrations and democratic processes, improving efficiency and strengthening relations with citizens.

b) Develop national e-government initiatives and services, at all levels, adapted to the needs of citizens and business, to achieve a more efficient allocation of resources and public goods.

c) Support international cooperation initiatives in the field of e-government, in order to enhance transparency, accountability and efficiency at all levels of government.

16. E-business

a) Governments, international organizations and the private sector, are encouraged to promote the benefits of international trade and the use of e-business, and promote the use of e-business models in developing countries and countries with economies in transition.

b) Through the adoption of an enabling environment, and based on widely available Internet access, governments should seek to stimulate private sector investment, foster new applications, content development and public/private partnerships.

c) Government policies should favour assistance to, and growth of SMMEs, in the ICT industry, as well as their entry into e-business, to stimulate economic growth and job creation as an element of a strategy for poverty reduction through wealth creation.

17. E-learning (see section C4)

18. E-health

- a) Promote collaborative efforts of governments, planners, health professionals, and other agencies along with the participation of international organizations for creating a reliable, timely, high quality and affordable health care and health information systems and for promoting continuous medical training, education, and research through the use of ICTs, while respecting and protecting citizens' right to privacy.
- b) Facilitate access to the world's medical knowledge and locally-relevant content resources for strengthening public health research and prevention programmes and promoting women's and men's health, such as content on sexual and reproductive health and sexually transmitted infections, and for diseases that attract full attention of the world including HIV/AIDS, malaria and tuberculosis.
- c) Alert, monitor and control the spread of communicable diseases, through the improvement of common information systems.
- d) Promote the development of international standards for the exchange of health data, taking due account of privacy concerns.
- e) Encourage the adoption of ICTs to improve and extend health care and health information systems to remote and underserved areas and vulnerable populations, recognising women's roles as health providers in their families and communities.
- f) Strengthen and expand ICT-based initiatives for providing medical and humanitarian assistance in disasters and emergencies.

19. E-employment

- a) Encourage the development of best practices for e-workers and e-employers built, at the national level, on principles of fairness and gender equality, respecting all relevant international norms.
- b) Promote new ways of organizing work and business with the aim of raising productivity, growth and well-being through investment in ICTs and human resources.
- c) Promote teleworking to allow citizens, particularly in the developing countries, LDCs, and small economies, to live in their societies and work anywhere, and to increase employment opportunities for women, and for those with disabilities. In promoting teleworking, special attention should be given to strategies promoting job creation and the retention of the skilled working force.
- d) Promote early intervention programmes in science and technology that should target young girls to increase the number of women in ICT carriers.

20. E-environment

- a) Governments, in cooperation with other stakeholders are encouraged to use and promote ICTs as an instrument for environmental protection and the sustainable use of natural resources.
- b) Government, civil society and the private sector are encouraged to initiate actions and implement projects and programmes for sustainable production and consumption and the environmentally safe disposal and recycling of discarded hardware and components used in ICTs.

c) Establish monitoring systems, using ICTs, to forecast and monitor the impact of natural and man-made disasters, particularly in developing countries, LDCs and small economies.

21. E-agriculture

a) Ensure the systematic dissemination of information using ICTs on agriculture, animal husbandry, fisheries, forestry and food, in order to provide ready access to comprehensive, up-to-date and detailed knowledge and information, particularly in rural areas.

b) Public-private partnerships should seek to maximize the use of ICTs as an instrument to improve production (quantity and quality).

22. E-science

a) Promote affordable and reliable high-speed Internet connection for all universities and research institutions to support their critical role in information and knowledge production, education and training, and to support the establishment of partnerships, cooperation and networking between these institutions.

b) Promote electronic publishing, differential pricing and open access initiatives to make scientific information affordable and accessible in all countries on an equitable basis.

c) Promote the use of peer-to-peer technology to share scientific knowledge and pre-prints and reprints written by scientific authors who have waived their right to payment.

d) Promote the long-term systematic and efficient collection, dissemination and preservation of essential scientific digital data, for example, population and meteorological data in all countries.

e) Promote principles and metadata standards to facilitate cooperation and effective use of collected scientific information and data as appropriate to conduct scientific research.

C8. Cultural diversity and identity, linguistic diversity and local content

23. Cultural and linguistic diversity, while stimulating respect for cultural identity, traditions and religions, is essential to the development of an Information Society based on the dialogue among cultures and regional and international cooperation. It is an important factor for sustainable development.

a) Create policies that support the respect, preservation, promotion and enhancement of cultural and linguistic diversity and cultural heritage within the Information Society, as reflected in relevant agreed United Nations documents, including UNESCO's Universal Declaration on Cultural Diversity. This includes encouraging governments to design cultural policies to promote the production of cultural, educational and scientific content and the development of local cultural industries suited to the linguistic and cultural context of the users.

b) Develop national policies and laws to ensure that libraries, archives, museums and other cultural institutions can play their full role of content—including traditional knowledge—providers in the Information Society, more particularly by providing continued access to recorded information.

- c) Support efforts to develop and use ICTs for the preservation of natural and, cultural heritage, keeping it accessible as a living part of today's culture. This includes developing systems for ensuring continued access to archived digital information and multimedia content in digital repositories, and support archives, cultural collections and libraries as the memory of humankind.
- d) Develop and implement policies that preserve, affirm, respect and promote diversity of cultural expression and indigenous knowledge and traditions through the creation of varied information content and the use of different methods, including the digitization of the educational, scientific and cultural heritage.
- e) Support local content development, translation and adaptation, digital archives, and diverse forms of digital and traditional media by local authorities. These activities can also strengthen local and indigenous communities.
- f) Provide content that is relevant to the cultures and languages of individuals in the Information Society, through access to traditional and digital media services.
- g) Through public/private partnerships, foster the creation of varied local and national content, including that available in the language of users, and give recognition and support to ICT-based work in all artistic fields.
- h) Strengthen programmes focused on gender-sensitive curricula in formal and non-formal education for all and enhancing communication and media literacy for women with a view to building the capacity of girls and women to understand and to develop ICT content.
- i) Nurture the local capacity for the creation and distribution of software in local languages, as well as content that is relevant to different segments of population, including non-literate, persons with disabilities, disadvantaged and vulnerable groups especially in developing countries and countries with economies in transition.
- j) Give support to media based in local communities and support projects combining the use of traditional media and new technologies for their role in facilitating the use of local languages, for documenting and preserving local heritage, including landscape and biological diversity, and as a means to reach rural and isolated and nomadic communities.
- k) Enhance the capacity of indigenous peoples to develop content in their own languages.
- l) Cooperate with indigenous peoples and traditional communities to enable them to more effectively use and benefit from the use of their traditional knowledge in the Information Society.
- m) Exchange knowledge, experiences and best practices on policies and tools designed to promote cultural and linguistic diversity at regional and sub-regional levels. This can be achieved by establishing regional, and sub-regional working groups on specific issues of this Plan of Action to foster integration efforts.
- n) Assess at the regional level the contribution of ICT to cultural exchange and interaction, and based on the outcome of this assessment, design relevant programmes.
- o) Governments, through public/private partnerships, should promote technologies and R&D programmes in such areas as translation, iconographies, voice-assisted services and

the development of necessary hardware and a variety of software models, including proprietary, open source software and free software, such as standard character sets, language codes, electronic dictionaries, terminology and thesauri, multilingual search engines, machine translation tools, internationalized domain names, content referencing as well as general and application software.

C9. Media

24. The media—in their various forms and with a diversity of ownership—as an actor, have an essential role in the development of the Information Society and are recognized as an important contributor to freedom of expression and plurality of information.

- a) Encourage the media—print and broadcast as well as new media—to continue to play an important role in the Information Society.
- b) Encourage the development of domestic legislation that guarantees the independence and plurality of the media.
- c) Take appropriate measures—consistent with freedom of expression—to combat illegal and harmful content in media content.
- d) Encourage media professionals in developed countries to establish partnerships and networks with the media in developing ones, especially in the field of training.
- e) Promote balanced and diverse portrayals of women and men by the media.
- f) Reduce international imbalances affecting the media, particularly as regards infrastructure, technical resources and the development of human skills, taking full advantage of ICT tools in this regard.
- g) Encourage traditional media to bridge the knowledge divide and to facilitate the flow of cultural content, particularly in rural areas.

C10. Ethical dimensions of the Information Society

25. The Information Society should be subject to universally held values and promote the common good and to prevent abusive uses of ICTs.

- a) Take steps to promote respect for peace and to uphold the fundamental values of freedom, equality, solidarity, tolerance, shared responsibility, and respect for nature.
- b) All stakeholders should increase their awareness of the ethical dimension of their use of ICTs.
- c) All actors in the Information Society should promote the common good, protect privacy and personal data and take appropriate actions and preventive measures, as determined by law, against abusive uses of ICTs such as illegal and other acts motivated by racism, racial discrimination, xenophobia, and related intolerance, hatred, violence, all forms of child abuse, including paedophilia and child pornography, and trafficking in, and exploitation of, human beings.
- d) Invite relevant stakeholders, especially the academia, to continue research on ethical dimensions of ICTs.

C11. International and regional cooperation

26. International cooperation among all stakeholders is vital in implementation of this plan of action and needs to be strengthened with a view to promoting universal access and bridging the digital divide, *inter alia*, by provision of means of implementation.

- a) Governments of developing countries should raise the relative priority of ICT projects in requests for international cooperation and assistance on infrastructure development projects from developed countries and international financial organizations.
- b) Within the context of the UN's Global Compact and building upon the United Nations Millennium Declaration, build on and accelerate public-private partnerships, focusing on the use of ICT in development.
- c) Invite international and regional organizations to mainstream ICTs in their work programmes and to assist all levels of developing countries, to be involved in the preparation and implementation of national action plans to support the fulfilment of the goals indicated in the declaration of principles and in this Plan of Action, taking into account the importance of regional initiatives.

D. Digital Solidarity Agenda

27. The Digital Solidarity Agenda aims at putting in place the conditions for mobilizing human, financial and technological resources for inclusion of all men and women in the emerging Information Society. Close national, regional and international cooperation among all stakeholders in the implementation of this Agenda is vital. To overcome the digital divide, we need to use more efficiently existing approaches and mechanisms and fully explore new ones, in order to provide financing for the development of infrastructure, equipment, capacity building and content, which are essential for participation in the Information Society.

D1. Priorities and strategies

- a) National e-strategies should be made an integral part of national development plans, including Poverty Reduction Strategies.
- b) ICTs should be fully mainstreamed into strategies for Official Development Assistance (ODA) through more effective donor information-sharing and co-ordination, and through analysis and sharing of best practices and lessons learned from experience with ICT-for-development programmes.

D2. Mobilizing resources

- a) All countries and international organizations should act to create conditions conducive to increasing the availability and effective mobilization of resources for financing development as elaborated in the Monterrey Consensus.
- b) Developed countries should make concrete efforts to fulfil their international commitments to financing development including the Monterrey Consensus, in which developed countries that have not done so are urged to make concrete efforts towards the target of 0.7 per cent of gross national product (GNP) as ODA to developing countries and 0.15 to 0.20 per cent of GNP of developed countries to least developed countries.

c) For those developing countries facing unsustainable debt burdens, we welcome initiatives that have been undertaken to reduce outstanding indebtedness and invite further national and international measures in that regard, including, as appropriate, debt cancellation and other arrangements. Particular attention should be given to enhancing the Heavily Indebted Poor Countries initiative. These initiatives would release more resources that may be used for financing ICT for development projects.

d) Recognizing the potential of ICT for development we furthermore advocate:

- i) developing countries to increase their efforts to attract major private national and foreign investments for ICTs through the creation of a transparent, stable and predictable enabling investment environment;
- ii) developed countries and international financial organisations to be responsive to the strategies and priorities of ICTs for development, mainstream ICTs in their work programmes, and assist developing countries and countries with economies in transition to prepare and implement their national e-strategies. Based on the priorities of national development plans and implementation of the above commitments, developed countries should increase their efforts to provide more financial resources to developing countries in harnessing ICTs for development;
- iii) the private sector to contribute to the implementation of this Digital Solidarity Agenda.

e) In our efforts to bridge the digital divide, we should promote, within our development cooperation, technical and financial assistance directed towards national and regional capacity building, technology transfer on mutually agreed terms, cooperation in R&D programmes and exchange of know-how.

f) While all existing financial mechanisms should be fully exploited, a thorough review of their adequacy in meeting the challenges of ICT for development should be completed by the end of December 2004. This review shall be conducted by a Task Force under the auspices of the Secretary-General of the United Nations and submitted for consideration to the second phase of this summit. Based on the conclusion of the review, improvements and innovations of financing mechanisms will be considered including the effectiveness, the feasibility and the creation of a voluntary Digital Solidarity Fund, as mentioned in the Declaration of Principles.

g) Countries should consider establishing national mechanisms to achieve universal access in both underserved rural and urban areas, in order to bridge the digital divide.

E) Follow-up and evaluation

28. A realistic international performance evaluation and benchmarking (both qualitative and quantitative), through comparable statistical indicators and research results, should be developed to follow up the implementation of the objectives, goals and targets in the Plan of Action, taking into account different national circumstances.

a) In cooperation with each country concerned, develop and launch a composite ICT Development (Digital Opportunity) Index. It could be published annually, or every two years, in an ICT Development Report. The index could show the statistics while the

report would present analytical work on policies and their implementation, depending on national circumstances, including gender analysis.

b) Appropriate indicators and benchmarking, including community connectivity indicators, should clarify the magnitude of the digital divide, in both its domestic and international dimensions, and keep it under regular assessment, and tracking global progress in the use of ICTs to achieve internationally agreed development goals, including those of the Millennium Declaration.

c) International and regional organizations should assess and report regularly on universal accessibility of nations to ICTs, with the aim of creating equitable opportunities for the growth of ICT sectors of developing countries.

d) Gender-specific indicators on ICT use and needs should be developed, and measurable performance indicators should be identified to assess the impact of funded ICT projects on the lives of women and girls.

e) Develop and launch a website on best practices and success stories, based on a compilation of contributions from all stakeholders, in a concise, accessible and compelling format, following the internationally-recognized web accessibility standards. The website could be periodically updated and turned into a permanent experience-sharing exercise.

f) All countries and regions should develop tools so as to provide statistical information on the Information Society, with basic indicators and analysis of its key dimensions. Priority should be given to setting up coherent and internationally comparable indicator systems, taking into account different levels of development.

F) Towards WSIS phase 2 (Tunis)

29. Recalling General Assembly Resolution 56/183 and taking into account the outcome of the Geneva phase of the WSIS, a preparatory meeting will be held in the first half of 2004 to review those issues of the Information Society which should form the focus of the Tunis phase of the WSIS and to agree on the structure of the preparatory process for the second phase. In line with the decision of this Summit concerning its Tunis phase, the second phase of the WSIS should consider, *inter alia*:

a) Elaboration of final appropriate documents based on the outcome of the Geneva phase of the WSIS with a view to consolidating the process of building a global Information Society, and reducing the Digital Divide and transforming it into digital opportunities.

b) Follow-up and implementation of the Geneva Plan of Action at national, regional and international levels, including the United Nations system, as part of an integrated and coordinated approach, calling upon the participation of all relevant stakeholders. This should take place, *inter alia*, through partnerships among stakeholders.
