



INTERNATIONAL TELECOMMUNICATION UNION TELECOMMUNICATION DEVELOPMENT BUREAU

**WORLD TELECOMMUNICATION DEVELOPMENT
CONFERENCE (WTDC-98)**

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PLENARY MEETING

Director, Telecommunication Development Bureau

REPORT ON THE AFRICAN REGIONAL TELECOMMUNICATION DEVELOPMENT CONFERENCE (AF-RTDC-96)

The African Regional Telecommunication Development Conference (AF-RTDC-96) was organized in Abidjan from 6 to 10 May 1996. It was attended by 338 persons, including delegates and observers from 56 countries, representing both governments and the private sector. Participants included a number of ministers and senior officials; representatives of 36 organizations and agencies and representatives of a number of banks.

The Conference was chaired by H.E. Mr. Ezan Akélé, Minister of Economic Infrastructure of the Republic of Côte d'Ivoire. In addition to the Steering Committee and the Editorial Committee, the Conference created three committees to deal respectively with policies and strategies, with development of networks, and with financing.

The Conference adopted eight Resolutions and seven Recommendations. The most important achievement was the adoption of the African Green Paper (Telecommunication Policies for Africa) which analyses the changes in the telecommunication sector and contains many specific policy recommendations, and which was subsequently circulated to all ITU Member States in the African Region.

The Resolutions and Recommendations adopted by the Conference are presented in Annex 1 for information and reference.

Annex: 1

- For reasons of economy, this document is printed in a limited number of copies. Participants are therefore kindly asked •
to bring their copies to the meeting since no others can be made available.

ANNEX 1

**Resolutions and Recommendations adopted by the African Regional Telecommunication
Development Conference (AF-RTDC-96)**

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* This is a consolidated set of five Recommendations.

RESOLUTION 1

AFRICAN GREEN PAPER

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

considering

- a) that the African Regional Telecommunication Development Conference (Harare, 1990) created a standing African Information and Telecommunications Policy Study Group (AITPSG) and entrusted it with the preparation of a regional policy document entitled the *African Green Paper: Telecommunication Policies for Africa*, pursuant to Resolution ATDC-90/No. 1;
- b) that the AITPSG, with the support of all the countries of the region, has produced a document in line with the terms of reference set out in Resolution ATDC-90/No. 1;
- c) that the African Green Paper should be considered as a thought-provoking reference document suggesting an appropriate approach and offering a number of potential options for defining and bringing about, as harmoniously as possible, restructuring and accelerated development of the telecommunication sector in Africa;
- d) that the guidelines given in the African Green Paper should be considered as possible alternatives that each country may take into consideration in defining the evolution of the telecommunication sector,

conscious

- a) that a common reference framework would facilitate policy harmonization and the creation of a genuine African regional market;
- b) that any reference document on telecommunications requires regular updating in view of the rapid evolution of the sector,

noting

- a) the unprecedented awareness of the role of telecommunications and information technologies in countries' economic, social and cultural development;
- b) the commitment of African subregional socio-economic groups to promoting communication and information media,

resolves

- 1** to approve the African Green Paper;
- 2** to promote and support implementation of the recommendations set forth in the African Green Paper, as an official reference document for the whole African region,

invites

administrations in the African region to take the necessary accompanying measures for implementation of the African Green Paper, in particular:

- a) possible establishment of a national coordination committee for national information and telecommunication policy to ensure follow-up at the operational, regulatory and policy-making levels;

- b) promoting the African Green Paper as an official reference document setting out guidelines or possible alternatives that countries may take into consideration according to their specific situations;
- c) taking account, when formulating their research and development strategies, of the potential offered by new information technologies,

also invites

regional and subregional organizations to take the necessary steps to define a policy, a regulatory framework and criteria of convergence that are more binding, at both subregional and national level, on the basis of the Green Paper and other relevant working documents,

requests the Telecommunication Development Bureau

- 1 to circulate the final version of the African Green Paper to all ITU Members in the African region, and the concerned regional and subregional organizations, and among economic, financial, legal and planning bodies in the African region;
- 2 to regularly update the African Green Paper in collaboration with the countries of the region, PATU and the subregional telecommunication organizations in Africa,

requests the Director of BDT

- 1 to transmit this resolution to the Organization of African Unity and the Pan-African Telecommunications Union and to the four subregional economic groups in Africa;
- 2 to report on implementation of this resolution to the next African regional telecommunication development conference.

RESOLUTION 2

SPECIAL MEASURES FOR THE LEAST DEVELOPED COUNTRIES

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

noting

Resolution 1 of the WTDC-94, and Resolution 30 of the Kyoto Plenipotentiary Conference,

concerned

that the number of LDCs in Africa has more than doubled (14 to 33) since the listing started in 1971 and continues to rise,

further concerned

that the state of telecommunications development in the African LDCs remains, on average, the lowest of all the regions in the world, due to, among other things, low investment in the sector in these countries,

resolves to invite

Africa's development partners to increase substantially their assistance and, in particular, their investment in the development of telecommunications in the least developed countries of Africa,

requests the Director of the BDT

1 to continue to review the state of telecommunications in the African LDCs with a view to proposing and implementing concrete and effective activities designed to accelerate the pace of telecommunication development in rural areas in these countries, especially pilot projects designed to encourage increased investment;

2 to continuously review the five priority areas adopted by the WTDC-94 with a view to revising them in the WTDC-98. As an interim measure, to include sector reform and restructuring as well as GMPCS as additional priority areas for the African LDCs,

requests the ITU Council

to propose to the next plenipotentiary conference to allocate a specific budget for LDCs for financing activities in the priority areas to be adopted by the WTDC-98.

RESOLUTION 3

TELECOMMUNICATION POLICY IN RURAL AND ISOLATED REGIONS

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

considering

- a) that the Report of the Maitland Commission (The Missing Link) highlighted the fact that populations in many parts of the world have inadequate access to basic telephony;
- b) that the World Telecommunication Development Conference (Buenos Aires, 1994), reaffirming the important and urgent need to provide access to basic telecommunication services for everyone, adopted Programmes 9 (Integrated rural development) and 12 (Telematics and computer networks) of the Buenos Aires Action Plan, as well as the Special Programme for the least developed countries (LDCs),

noting

- a) that little or no progress has been made towards implementing the Maitland Commission's recommendations that everyone worldwide be brought within reach of the basic telephone service;
- b) that the clear correlation between the availability of telecommunication services and economic and social development has been firmly established;
- c) that, in the economic climate prevailing in the 1990's, there are very few opportunities for external financial support at the international level and only limited opportunities at the national level, in order to support telecommunication services in rural and isolated areas of developing countries;

d) that the provision of telecommunication services generates significant income and offers increasing potential, which might serve as the basis for extension of telecommunication services to rural and isolated areas of developing countries,

recognizing

a) that spectacular progress has been made in some developing countries through universal access to telecommunication services in rural and isolated areas countrywide, thereby demonstrating the economic and technical feasibility of projects to provide this type of service;

b) that, in some areas and some developing countries, there is convincing evidence of the overall profitability of telecommunication services in rural and isolated areas,

recognizing further

a) that the provision of telecommunication services in rural and isolated areas has to be profitable for the service provider, if the services in question are to be sustained;

b) that there are several state-of-the-art technologies which may help to make the provision of telecommunication services in rural and isolated areas more profitable;

c) that access to telecommunication services in rural and isolated areas can only be achieved through judicious choice of technological options allowing access to and maintenance of good-quality and economical services,

resolves

to support the following principles as a basis for providing access to telecommunication services in rural and isolated areas:

1 Universal access

Universal access to telecommunication services should be offered at a convenient location in each community. The type and number of services must fully meet the community's needs, and the scope and volume of services should increase as demand grows and new applications emerge.

2 Rural telecommunication programme

Rural telecommunications must be introduced through a well-structured, rigorous and ordered programme covering several years, which develops and draws on local experience and expertise.

3 Regulatory framework

The regulatory body must monitor the sustained provision, quality and financial viability of telecommunication services, under the terms of the obligation to provide universal service, which requires that some attention be paid to commercial principles in the provisions of telecommunication services.

4 Financial resources

It should be recognized that the two main sources of financing are the service-providing operator's own funds and national and international private sector investment. In the first case, the funds are managed by the service provider for reinvestment purposes; in the second case, the provision of rural telecommunication infrastructure has to be organized or regulated in such a way as to ensure its profitability.

5 Commercial approach

The operator providing rural telecommunication services must adopt a commercial approach, with the service operated on a commercial basis and with the aim of maximizing revenue and minimizing costs.

RESOLUTION 4

REVITALIZATION OF ACTIVITIES OF THE PANAFTEL NETWORK

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

noting

- a) that the objective of the PANAFTEL network is to have a reliable and high-quality integrated telecommunication network, enabling all countries to communicate between themselves without transiting outside Africa;
- b) that a substantial part of intra-African traffic is still routed through transit centres outside the continent;
- c) that the PANAFTEL network is required to be fully operational by the year 2000 and in accordance with the Abuja Treaty establishing the African Economic Community,

recognizing

- a) the need to keep subscriber tariffs for intra-African calls as low as possible in order to stimulate traffic;
- b) the need to use different transmission systems (satellite, terrestrial and submarine) in the routing of intra-African traffic in order to provide reliable and high-quality networks;
- c) the importance of involving African telecommunication administrations, subregional and regional organizations in the implementation of the PANAFTEL projects;
- d) the need to strengthen regional and subregional telecommunication organizations so as to enable them to undertake coordination and advisory tasks for the development of intra-African telecommunications,

resolves

that the PANAFTEL network be architected such that traffic routing is optimized, taking account, first the new switching techniques that offer transparent and direct routing possibilities between countries and different subregions of Africa, and second the basic teletraffic engineering principles concerning direct and transit routing,

requests the ITU/BDT and other development partners

to undertake the revitalization of the PANAFTEL network, integrating the various technologies and systems to ensure full interconnection of the continent,

requests the ITU/BDT

to support the re-establishment of the PANAFTTEL Regional and Subregional Committee and to help PATU gain the experience to coordinate the regional activities associated with the utilization of the PANAFTTEL network.

RESOLUTION 5

AFRICA ONE

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

considering

- a) that it is of great importance that the African continent should acquire modern telecommunication infrastructures of an appropriate technological level in order to achieve the provision of the desired quality of service;
- b) the need to encourage initiatives that will permit the mobilization of the necessary investment for the creation of these infrastructures;
- c) that the "AFRICA ONE" project has technological aspects and opportunities for interconnectivity at the continental and world levels capable of reinforcing planned and existing systems (the PANAFTTEL terrestrial network and the RASCOM satellite network) with a view to fostering the development of the African countries and regional integration,

having taken note

of the report submitted by the Coordination Committee established by the Consultative Meeting of African countries Members of the ITU on the Africa One project, held in Tunis on 20 and 21 November 1995, and of the conclusions of that report indicating that the AFRICA ONE project is viable and necessary,

mindful

of the need to continue study of the project in order to ensure:

- a) the effective integration of the proposed AFRICA ONE submarine fibre-optic cable system with planned and existing networks, in particular the PANAFTTEL terrestrial network and the RASCOM satellite network with a view to optimize the utilization of the enormous investments already made by the African countries;
- b) the provision of modern telecommunication services in all the African countries, including in rural and remote areas,

decides to invite the partners of the project

- 1** to confirm the composition and the mandate of the Coordination Committee with its possible extension to other African countries and organizations;
- 2** to constitute a special fund intended to cover the operating costs of the Coordination Committee,

expresses

- 1 the firm desire that the AFRICA ONE project should continue;
- 2 the wish that the rate of integration of the African countries be increased in terms of their participation in technical studies, manufacture, acceptance tests and operation of the system,

further invites

- 1 each country to appoint a coordinator to serve as the spokesperson in the Telecommunication Administration for replying to all questions relating to the project, including the supply of data needed for implementation of the project;
- 2 the African telecommunication administrations and the subregional, regional and international financial institutions to participate, according to their respective areas of competence, in the funding of the project;
- 3 the Coordinating Committee to continue its analysis work, on the basis of the Tunis recommendations, with due emphasis on aspects of integrating other projects in the AFRICA ONE project through contacts with the operators and promoters concerned.

RESOLUTION 6

DEVELOPMENT OF A COMPUTERIZED SUBSCRIBER MAINTENANCE SYSTEM (CSMS)

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

considering

- a) that the Pan African Telecommunication Network PANAFTEL is experiencing profound technical changes from analogue systems to digital networks;
- b) that there are many initiatives for improving the infrastructure and the capacity of African telecommunication networks, *inter alia*, RASCOM, and other submarine cable projects like AFRICA-ONE, AFRILINK, SAFE and FLAG;
- c) that all these important activities concern switching and transmission infrastructures and that the outside plant is often pushed into the background,

recognizing

- a) that the outside plants, which are the portion of the network visible to the customer, are the Achilles' heel of the network;
- b) that in this situation, maintenance is often given little attention or priority;
- c) that nevertheless telecommunication network maintenance is of major concern to managers while the resources allocated for the purpose still fall short of actual requirements;
- d) that the customers increasingly want access to services with the requisite level of quality,

convinced

that an improved maintenance of the network and particularly of the outside plant will have multiplier effects on the customer satisfaction as well as on the operator's revenues,

having noted

that the first World Development Telecommunication Conference adopted a special programme for Least Developed Countries (LDCs) comprising, *inter alia*, maintenance activities and particularly the development of a guide on the introduction of a Computerized Subscriber Maintenance System (CSMS) and a pilot project for the CSMS,

having noted further

the interest of the operators for this project,

requests

that the CSMS Project activities in Africa should take into account the specific realities of this continent,

entrusts the Telecommunication Development Bureau (BDT)

to take all the necessary measures so that:

- 1 the guide on the introduction of a Computerized Subscriber Maintenance System be elaborated within one year to respond to the expectations of the countries;
- 2 appropriate software model(s) be developed for the benefit of the African countries;
- 3 the guide and software be widely distributed among the African countries;
- 4 African experts continue to participate in the CSMS Project;
- 5 development partners be involved in the CSMS Project and particularly in the financing and implementation of pilot projects in Africa;
- 6 a report on the implementation of this resolution be submitted to the African administrations, to the World Telecommunication Development Conference to be held in 1998 and to the next AF-RTDC.

RESOLUTION 7

TELEMEDICINE IN AFRICA

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

recalling

- a) Recommendation 1 from the World Telecommunication Development Conference (WTDC) in Buenos Aires, March 1994, which focused on the application of telecommunications to health and other social services;
- b) that the WTDC approved the establishment of two new Study Groups in the ITU's Development Sector and agreed a set of Questions for study by each of the two Groups and that one of those Questions concerned telemedicine and health care;

- c) that Study Group 2 which was entrusted with Question 6 to define the technologies most suitable for telemedicine's efficient dissemination to developing countries, studying the costs and benefits of different solutions, fostering the adoption of global standards and producing a telemedicine handbook;
- d) that the European Commission concluded a project under its Third Framework Programme in 1994 which was called EpiAim which analysed the use of health informatics and telematics in Africa and Latin America and which was carried out in cooperation with the World Health Organization;
- e) that the G7 Information Society Ministerial Conference held in Brussels in February 1995 established 11 joint pilot projects, one of which is on health care, with the objective of helping to create direct communications networks based on common standards; that the health care project has six sub-projects, one of which is aimed at improving health care cooperation and another of which is aimed at a Global Emergency Telemedicine Service,

considering

- a) that few African countries have any experience in the application of telemedicine, even in urban areas equipped with telecommunication infrastructures;
- b) that there is, nevertheless, an overwhelming need for the provision of medical and health care services, especially in areas outside the cities;
- c) that the provision of health care consumes a large portion of national budgets;
- d) that there is substantial experience and expertise with regard to telemedicine in developed countries such as those in Europe, Canada, the United States and Japan;
- e) that global satellite networks such as those provided by Inmarsat and Intelsat have already been used for the delivery of telemedicine services to remote and rural areas;
- f) that most African countries are members of these organizations and of RASCOM and have in place earth stations which could be used for such delivery,

recognizing

- a) that African countries cannot afford the very sophisticated telemedicine solutions involving ATM, virtual reality, etc. and that their most pressing need is for relatively unsophisticated, off-the-shelf, thin-route and low cost telemedicine applications;
- b) that telemedicine services and delivery in Africa should be affordable, practical, profitable, self-sustaining and available to as many people in need as possible;
- c) that telemedicine services could be an economical means of achieving national health policy objectives with regard to improvement and/or extension of medical and health care, especially to non-urban areas;
- d) that there have been many demonstrations of telemedicine but virtually no projects or trials sufficiently large in scope to lead to a sustainable service;
- e) that it would be desirable to see at least two large scale trials of telemedicine somewhere in Africa which would serve as "test beds" and, this Conference hopes, as models for the successful implementation of telemedicine in Africa;
- f) that telemedicine and telehealth care merit serious study by telecommunications and health administrations in Africa,

resolves

1 that African countries should support any initiatives which will help gain them practical experience in telemedicine and telehealth;

2 that African telecom organizations should discuss the utility, logistics and feasibility of telemedicine delivery especially in remote and rural areas of their country,

recommends

that there should be at least one expert on telemedicine in each of the telecom and health ministries,

invites the G7 participants

to ensure that the needs and economic realities of African countries are taken into account in planning global health care projects,

requests the Director of the BDT

to ask the European Commission and other appropriate funding bodies to support and fund two large scale telemedicine trials, involving say 500 "sites" (especially including doctors and paramedics who travel from village to village) in two different countries in Africa,

requests the BDT

1 to collaborate with the European Commission and other partners in organizing, monitoring and analysing the results of such large scale trials;

2 to organize a workshop or seminar on telemedicine to which representatives from African ministries of health as well as telecom organizations, the Organization of African Unity and the UN Economic Commission for Africa should be invited to consider and review the telemedicine report being prepared in the context of Question 6 and to consider the modalities for implementing the large scale telemedicine trials referred to above and that such a workshop be convened before the end of 1996 if at all possible,

appeals to the European Commission and other funding agencies

to respond favourably to this Resolution.

RESOLUTION 8

THE ROLE OF TELECOMMUNICATION AND INFORMATION TECHNOLOGIES IN THE PROTECTION OF THE ENVIRONMENT

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

recalling

Resolution 8 of the World Telecommunication Development Conference (1994) and Resolution 35 of the Kyoto Plenipotentiary Conference on the role of telecommunication and information technologies in the protection of the environment,

considering

- a) the important role telecommunication and information technologies could play in protecting the environment and in promoting development activities at low risk to the environment;
- b) that the application of the latest telecommunication and information technologies can be extremely useful in implementing and conducting environment protection activities;
- c) that the application of telecommunication technology can reduce paperwork saving the ultimate deforestation;
- d) that industries respecting the environment can be located in rural areas in order to reduce urban congestion;
- e) that there is the need to disseminate information on these technologies,

considering further

the results of the study undertaken by ITU-D Study Group 2 with regard to the terms of reference of Study Question 7/2 assigned to it by the WTDC and in collaboration with the competent international and regional organizations, as well as the results of the International Symposium on the application of telecommunication and information technologies in the protection of the environment (Tunis, 17-19 April 1996),

recommends to all the members of the Development Sector

- 1** that an initiative role be taken up by the respective telecommunication authorities to provide all the possible support directly or indirectly, in collaboration with the respective environmental authorities, in promoting applications devoted to the protection of their respective environment;
- 2** that space technologies be considered for use in environmental protection activities such as monitoring air, river, harbour and sea pollution, remote sensing, wildlife studies, forestry development and others;
- 3** that the need for existence of national environmental protection policies be taken into account with due emphasis on the role which telecommunications can play in providing such assistance;
- 4** that special awareness among the policy/decisions makers be created to gain a better understanding of the issue of telecommunications and environment;
- 5** that the importance of an integrated network for collecting, processing and disseminating environmental information at national, regional and international levels be recognized and all necessary steps be taken towards implementing such networks;
- 6** that the basic telecommunication needs of small communities be satisfied in order to help them establish industries thereby minimizing migration of communities into urban areas causing urban congestion;
- 7** that telecommunication networks and services be utilized in situations where reduction of energy consumption could be achieved such as substituting telecommunications for travel, teleconferencing and reduction of paperwork, thereby ultimately saving the environmental resources,

requests the Director of the BDT

- 1** to draw up and implement a comprehensive plan of action in the form of a global operational telecommunication-environment project on the development and use of telecommunication and information technologies for the protection of the environment and sustainable development, which will be an inter-regional project with regional and/or subregional components and will take account of the specific characteristics and needs of the different regions/subregions concerned;
- 2** to pursue preparation of the policy document begun by Study Group 2 for promoting the use of all kinds of telecommunication and information technologies, especially space technologies, for environmental protection applications;
- 3** to establish a framework for international cooperation which will enable all those concerned (governments of developed and developing countries, manufacturers and consumers of technology, private sector, international organizations, United Nations specialized agencies, etc...) to carry out, promote and develop projects to ensure optimum use of the most appropriate telecommunication and information technologies for the protection of the environment and sustainable development;
- 4** to organize seminars, regional workshops, training and research programmes, exhibitions and other activities in order to study the matter in greater depth and heighten awareness among all those concerned of the value of implementing multilateral and bilateral projects within the framework of international cooperation and consider, if necessary, holding an international conference with the aim, *inter alia*, of identifying and carrying out pilot projects in this area at regional, subregional and national level, in cooperation with international organizations and with the support of international telecommunication operators;
- 5** to develop and disseminate appropriate course material for conducting training programmes on the subject and disseminate information on telecommunication and information technology applications for the protection of the environment and sustainable development.

RECOMMENDATION 1

AFRICAN INFORMATION INFRASTRUCTURE

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

considering

- a) the document "*Africa's Information Society Initiative*", adopted at the thirty-first session of the ECA Conference of Ministers responsible for economic and social development and planning;
- b) Kyoto Resolution 31, "Telecommunication Infrastructure and Socio-Economic and Cultural Development", and particularly the paragraph to the effect that "the recent spectacular progress, and particularly the convergence of telecommunication and computer technologies and services, has transformed telecommunications into an agent of change for the information age";
- c) Programme 12 of the ITU/BDT Buenos Aires Action Plan on "Development of Telematics and Computer Networks" as well as the growing number of informatic initiatives and projects taking place in Africa,

recognizing

the growing strategic importance of information infrastructures and their potential for improving the quality of life for every African; promoting the economic integration of the region; and improving trade and other linkages with the global community,

urges administrations

to note the critical importance of telecommunication networks for the exchange of multimedia information and to facilitate and promote the development of electronic communications and networks such as the Internet by adopting the appropriate regulatory, tariff and service provision policies, and by making available appropriate infrastructures,

requests ITU/BDT

- 1** in collaboration with other development partners and in particular within the framework of the United Nations system-wide initiative in Africa to sensitize African governments about the relevance of information infrastructures, to assist in the establishment of national policies for information infrastructures in African countries;
- 2** to establish an appropriate mechanism for coordination among the administrations and the various partners involved (ECA, UNESCO, etc.) which will draw up an inventory of service requirements and associated constraints and formulate an action plan for the development of information technology in Africa;
- 3** in collaboration with the parties concerned, to pursue the "Africa's Information Society Initiative" with a view to producing a White Paper similar to the African Green Paper, as a thought-provoking document offering the African countries possible approaches for the development of their information infrastructures.

RECOMMENDATION 2

**TELECOMMUNICATION INFORMATION COLLECTION WITHIN
THE SCOPE OF ITU-D STUDY GROUPS**

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

considering

- a) the Strategic Plan of the Union for the period 1995-1999, endorsed by the Plenipotentiary Conference (Kyoto, 1994), which recognized that information exchange, particularly in the policy domain, would be a priority of the Union;
- b) the decision of the first World Telecommunication Development Conference (Buenos Aires, 1994) to establish a Buenos Aires Action Plan (BAAP) which includes a programme dedicated to policies, strategies, and financing and two study groups (Telecommunication Development Strategies and Policies - Study Group 1; and Development, Harmonization, Management and Maintenance of Telecommunication Networks and Services Including Spectrum Management - Study Group 2),

considering further

- a) that this programme has as an objective to facilitate the exchange of information and experiences among members of the ITU Development Sector and other development partners;
- b) that one of the main objectives of this programme is the development of documentation, through surveys, on national telecommunication policies, strategies, financing and regulations;
- c) that the terms of reference of the Study Group include maintaining databases, analysing policy, regulatory and financial models, and the production of guidelines and manuals to assist developing countries,

recognizing

that by acting as a clearing house for the exchange of information on experiences in the restructuring process, ITU/BDT will be able to assist members in making their national policy choices and financing strategies regarding infrastructure alternatives, the role of competition, the private sector, licensing and restructured regulatory regimes, network planning, spectrum management, rural telecommunications and maintenance, financial modelling and planning, business and commercially-oriented management and negotiations,

requests BDT

- 1 to continue to survey countries on an annual basis and to prepare reports on trends in regulation, policy formulation and financing;
- 2 to establish appropriate mechanisms and modalities by which countries can access the information,

invites African administrations

to assist the BDT in its information collection process and in the ongoing work of the study groups by providing complete responses and updated information for the maintenance of the database.

RECOMMENDATION 3

TRADE IN SERVICES

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

considering

a) the document *The Development of Telecommunications in Africa and the General Agreement on Trade in Services: A Policy Study of Five African Countries* prepared by ITU/BDT together with the UNCTAD/UN-DDSMS Coordinated African Programme on Assistance in Services (AF-RTDC-96 Document 12);

b) the report of the fifth ITU Regulatory Colloquium relating to Trade Agreements on Telecommunications: Regulatory Implications (December 1995),

bearing in mind

a) the status of the WTO negotiations on basic telecommunications;

b) that as a result of new technologies and services, an increasing number of modern activities span international boundaries;

c) that these new technologies make it possible to reach distant places and bring us ever closer to a global village;

d) that despite technological advances, the majority of the world's population in general, and the African population in particular, does not have the resources or the infrastructure to access communication services and networks,

recognizing

a) that the emerging free trade regime of the WTO will have a significant impact on national telecommunication regulatory frameworks, as well as on the telecommunication industry in general;

b) that the GATS may open new challenges and opportunities,

recalling

that the Strategic Plan adopted by the Plenipotentiary Conference (Kyoto, 1994) recognized that ITU must play a "leading role in the information society of the twenty-first century",

invites governments

to pay particular attention to the following recommendations outlined in the document "*The Development of Telecommunications in Africa and the General Agreement on Trade in Services: A Policy Study of Five African Countries*", promoting their interests according to their own national situations with a view to:

- encourage the involvement of the private sector in the development of telecommunications by allowing for an appropriate level of competition and the infusion of private sector capital;
- reconcile the objective of universal service with the goal of providing modern telecommunication services essential to the conduct of business;

- consider making market access offers under GATS in a number of telecommunication service subsectors;
- make maximum use of the flexibility accorded to developing countries under the GATS, including a clause (Article XIX) allowing them to liberalize at a rate consistent with their level of development;
- strengthen or create an appropriate regulatory framework, including the establishment of an impartial Regulatory Body, consistent with each country's policies, and legal and administrative systems;
- guide information technology development by formulating information infrastructure development policies and strategies;
- ensure that governments better coordinate their internal mechanisms so that they may make more realistic assessments of what they can and cannot achieve under the GATS process,

recommends

that the CAPAS (Coordinated African Programme of Assistance on Services) project should:

- 1 expand the activities of the project to other African countries not currently involved in the project;
- 2 involve subregional and regional organizations in the activities of the project as a means to strengthen their ability to promote a process of regional integration that is supportive of the gains that can be accrued from liberalizing under GATS;
- 3 increase support to the national coordinators of the CAPAS project for more intensive dissemination of the findings of policy studies conducted under the project to a national audience and for better coordination between the trade ministries and other line ministries that are affected by the GATS negotiations, including telecommunication ministries,

further recommends

that in order to achieve greater success in WTO negotiations, African countries should consult and coordinate their positions prior to subsequent rounds of WTO negotiations,

requests ITU/BDT

- 1 to expand its assistance on GATS matters, including on the ongoing negotiations on basic telecommunications by means of more extensive dissemination to Member administrations of information regarding those negotiations and through regional and national seminars, workshops and forums for telecom policy-makers and executives as well as through forums involving the key ministries concerned with GATS matters;
- 2 to pay greater attention to the special needs of African countries in the area of regulatory reform and the strengthening of the regulatory environment for telecommunications, including the establishment of regulatory bodies,

further requests ITU/BDT

to circulate the document *The Development of Telecommunications in Africa and the General Agreement on Trade in Services: A Policy Study of Five African Countries* to the UNCTAD/UN-DDSMS, to WTO and among economic, financial, legal and planning bodies in the African region.

RECOMMENDATION 4*

FINANCING STRATEGIES AND POLICIES

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

noting

Recommendation 6 on "Economic, financial and tariff issues in the African Green Paper on Telecommunication Policies for Africa",

recognizing

- a) the vast financial needs required to lift African telecommunication infrastructures and services to more appropriate levels in the worldwide context;
- b) that sound financial management structures and operations are the prerequisites for attracting investment by the reallocation of existing resources and from new sources, both private and public, as well as national and international savings;
- c) that within the context of the global tendencies towards free capital flows and telecommunications liberalization, it is imperative for Africa to participate in the combined drive in technology, convergence and competition as Africa has the potential to join the other continents in growth and trade expansion;
- d) the relevance of the policy views of multilateral and bilateral agencies,

considering

- a) the leverage effect of telecommunications for economic and social development in the least developed countries;
- b) the financial implications of a variety of innovative regional projects and the need to coordinate all projects;
- c) the new policy of traditional institutional development banks and the increasing role of the private sector;
- d) that the ITU/BDT is concerned and has been already deeply involved in identifying policies and ways for financing telecommunications infrastructure (BAAP, Kyoto Plenipotentiary Conference, Study Groups);
- e) that at the request of the African countries a Colloquium on financing telecommunications in Africa was held in Abidjan (25-29 March 1996) in preparation for the AF-RTDC,

welcomes

"Initiative 2000"(working title) aimed at strengthening training institutions and projects in Africa, including: infrastructure development, new technologies and applications and projects for countries in special need, LDCs and projects for emergency situations,

* This is a consolidated set of five Recommendations.

recommends

- 1** that Administrations, in collaboration with ITU/BDT:
 - a) urge multilateral and bilateral financial institutions to continue direct lending, both for the financing of projects and of studies on structural reform;
 - b) take steps to attract other interested financial institutions, both in the public and private sectors, to the African telecommunication sector;
 - c) urge various consortia to finance and to lend support to the implementation of regional and/or subregional projects;
 - d) give high priority to the financing of rural telecommunications taking into account appropriate modern technologies;
 - e) consider the development of new configurations for joint ventures and revenue sharing schemes and of temporary licensing arrangements for providing services which are proposed or have been piloted,
- 2** that governments:
 - a) encourage telecom operators to adopt a business-like approach of financial policy and strategy-making and to have modern management;
 - b) give high priority in setting tariffs in line with economic realities, taking into account the relevant costs;
 - c) take into account, for the telecommunication sector, the financial and economic implications of the GATS which could create a new international trade policy environment;
 - d) participate in WTO negotiations and other critical negotiations, with appropriate ITU/BDT support and advice, for the benefit of all and in particular the least developed group of countries,

requests

- 3** that ITU/BDT be responsive to demands received from the countries in order to:
 - a) take appropriate measures to assist them in the formulation of their financial policies and strategies, to implement structural organizational reforms and technological development, with due regard for the specific telecommunication sector structure that countries wish to implement;
 - b) offer rapid and competent financial and investment planning assistance in particular via expert missions, country and inter-country workshops, case studies and guidance material, financial databases within the framework of the main BDT database and counselling;
 - c) organize expert meetings and training that will focus on the numerous practical new tasks confronting African financial telecommunication managers in the current transition period to increase their awareness of competition, commercialization and collaboration with the private sector;
 - d) facilitate partnerships with and among public and private entities, in line with its objective to strengthen telecommunication development;
 - e) evaluate and disseminate the comparative merits and demerits of new configurations of joint ventures, revenue sharing schemes and licensing arrangements;

- f) compile and disseminate the information on case studies in financing of rural telecommunications for use by administrations, telecommunications operators and others as well as in various workshops and fora; and to concurrently discuss ways and means with manufacturers and suppliers in order to reduce installation, operation and unit costs;
- g) undertake and review studies on community-based telephone services offered in areas with low population densities in particular cooperatives, etc.;
- h) continue to give necessary support and coordination on studies regarding costing and tariffs, and on strengthening regional or subregional tariff groups, (e.g. TAF Group), and to put into place relevant information gathering systems on experiences of countries where competition exists,

further recommends

4 that with regard to financing of technical cooperation programmes and projects, BDT:

- a) implement the above actions given priority under the BAAP programme and as well as under the work of the Development Sector Study Groups;
- b) give priority to project funding and financing issues;
- c) analyse the financial feasibility and economic implications of projects and disseminate these data concurrently with policy and technical discussions and studies in various ITU forums, in particular those of the ITU-D,

requests the BDT

- 5 a) to implement "Initiative 2000"; and
- b) to put in place the related mechanisms and mobilize the required resources.

RECOMMENDATION 5

IMPROVEMENT OF HUMAN RESOURCES MANAGEMENT AND DEVELOPMENT (HRM/HRD) IN AFRICAN TELECOMMUNICATION ADMINISTRATIONS

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

noting

- a) the important role of human resources in the process of telecommunication development;
- b) the existence of management, operational and maintenance problems affecting the quality and availability of telecommunication services,

recognizing

- a) that poor management is the main cause of the shortcomings with respect to the supply of high-quality services;
- b) the vast training needs required, both in technical and management aspects, to support the development of telecommunications in the near future;

- c) the consequences of operators and regulators in the Region lacking the required skills in human resources;
- d) that the ITU/BDT is aware of the needs of countries and has already been deeply involved in the development of human resources of the countries:
 - using traditional and innovative methodologies; and
 - promoting the joint participation of the regional organizations and the private sector in this process;
- e) that activities to improve the quality of management are primarily targeted at senior management,

recommends that Administrations

- 1** should establish or inject dynamism into the policies, structures and appropriate means/tools for the management and development of human resources;
- 2** should provide themselves with an effective management information system incorporating the human resource data and indicators necessary to the forward-looking management of resources;
- 3** should derive the maximum benefit from training centres through:
 - developing a policy for the marketing of training;
 - the specialization of training centres with a view to their operation within a training framework;
 - the use of distance-learning technologies;
- 4** to make, with the assistance of the ITU/BDT, the necessary efforts to transform the regional training centres of the Region, in particular ESMT and AFRALTI, into Centres of Excellence able to provide expertise and support to the countries in order to develop their telecommunication networks;
- 5** with national training centres, in coordination with the regional training centres mentioned above:
 - make the necessary efforts to modernize their methodologies to train people, using as much as possible the facilities provided by the information technologies and telecommunication networks;
 - be active in joining the Virtual Training Centre of the ITU/BDT; and
 - become members of the Global Telecommunication University/Global Telecommunication Training Institute,

recommends that the ITU/BDT

- 1** should take steps to make senior management in telecommunication administrations aware of the need to involve itself directly in the improvement of human resources and in the modernization of the management process with a view to introducing, *inter alia*, the principles of total quality management and benchmarking;
- 2** should assist Administrations in the setting up of appropriate structures and tools, particularly the elaboration of human resource and vocational training development plans, in collaboration with financial backers and development partners in the telecommunication sector;

- 3** should promote cooperation between Administrations and training centres through the organization of regional meetings aimed at achieving agreement on the harmonization of management, training and training programme methods;
- 4** should continue its efforts (through the Teleproject and MANDEVTEL activities of the BAAP Programme No. 2: HRD) in training top and middle level managers in management techniques. In this effort, external resources through agreements with ITU need to be incorporated in the process of training managers;
- 5** should continue to assist countries in the areas of Human Resource Development, organizing relevant meetings, workshops and seminars. In this effort, regional associations and private organizations are encouraged to join the ITU/BDT to establish partnerships in line with their objectives of strengthening the human resources in the Region.

RECOMMENDATION 6

REGIONAL AND SUBREGIONAL COOPERATION

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

considering

- a) that there exists a multitude of organizations participating in the development of the telecommunication sector;
- b) that, in practice, several among these organizations are encountering difficulties in fulfilling their mission;
- c) Resolution 6 concerning cooperation between ITU/BDT and regional organizations, adopted by the World Telecommunication Development Conference (WTDC-94) held in Buenos Aires, Argentina, in March 1994, which resolved, *inter alia*:
 - "to encourage the BDT to exchange information on planned projects and activities in the respective regions so as to avoid duplication between the regional telecommunication organizations and the BDT";
 - "that the ITU-D identify appropriate mechanisms and studies which address the priority issues as identified by the regional organizations with the intention of developing appropriate recommendations for the next WTDC",

recalling

that it is essential for the countries of the African region to recognize the similarity of their objectives and the complementarity of their needs, to combine their resources in order to obtain better results and, collectively, to take maximum advantage of the region's resources,

recommends

that the members of the African region, with possible assistance from BDT:

- 1** should examine in depth the mandates and operational structures of the African regional and subregional organizations in the telecommunication sector in order to avoid any duplication and, if necessary, reduce the number of such organizations;

2 draw up a strategy for multilateral and bilateral cooperation among international, regional and subregional organizations and States involved in the development of telecommunications in Africa, taking care to ensure that all actions taken contribute to the same objective and are conducted at the lowest possible cost;

3 request ITU/BDT to collaborate more closely with the regional and subregional telecommunication organizations in Africa so that it can better define a programme which is relevant to the development needs of the African countries;

4 intensify cooperation among the developing countries, with the assistance of ITU-D, and request ITU-D to carry out periodic evaluations of this type of cooperation in order to improve its efficiency,

recommends that administrations

provide all possible assistance to PATU so as to enable it to fulfil its role in coordinating the development of telecommunications in Africa.

RECOMMENDATION 7

IMPLEMENTATION OF MANAGEMENT INFORMATION SYSTEMS FOR TELECOMMUNICATIONS

The African Regional Telecommunication Development Conference (AF-RTDC-96)
(Abidjan, 6-10 May 1996),

considering

a) the objective of Programme No. 11 "Information Services" of the Buenos Aires Action Plan of the BDT, which is to establish a detailed and comprehensive database covering the telecommunication sector for the use of partners, and of Programme No. 7 "Improvement of Maintenance", including the implementation of management information systems to monitor quality of service;

b) the Recommendation made in 1991 by the PANAFTTEL Steering Committee inviting the African administrations to give priority to the establishment of effective means of exchanging information as an essential precondition for improving telecommunication services in Africa,

noting

a) that the BDT has continuously, particularly since the adoption of the Buenos Aires Action Plan, been expanding its cooperation activities in the Africa region towards the establishment of modern management tools such as the computerized management information system, for which the pilot project is being undertaken in Africa;

b) the importance for African telecommunication managers of being able to base their decisions on objective assessments of network performance and the major efforts already made by the administrations of the region in respect of management information system implementation at national level,

recommends that administrations

1 should, at the national level, each set up a management information system based on a procedure standardized at the regional and subregional levels;

2 should, at the regional and subregional levels, devise a management information system project which takes account of national systems with a view to:

- enhancing regional and subregional network performance;
- improving network utilization and efficiency;
- reducing operating and investment costs,

requests the ITU/BDT

1 to provide the administrations with a formal framework for the development of national management information systems, together with a prototype system;

2 to assist the administrations and regional organizations in the development of subregional and regional management information systems with access to a comprehensive and reliable database;

3 to promote regional and subregional cooperation by helping to define a common strategy for improving quality and by facilitating the exchange of experience between administrations.
