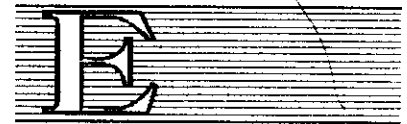


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CHALLENGES FACING THE AFRICAN PORTS IN THE NEXT MILLENNIUM

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EXECUTIVE SUMMARY

The global developments in trade, economics and environment are being marched by major changes in shipping business. This has resulted into complementary development of port facilities and international services which in turn are causing greater competition among ports and between water-based and other modes of transport. ECA has, for nearly two decades, been monitoring some of these changes through the implementation of the first United Nations Transport and Communications for Africa (UNTACDA I) which covered the period 1978-1988, and also through the on-going second United Nations Transport and Communications Decade for Africa (UNTACDA II) which was proclaimed by the United Nations General Assembly in 1988 for the period 1991-2000.

The issue of challenges likely to face ports in the next millennium has been given some attention in various meetings in the 1990s.

The UNCTAD Intergovernmental Meeting of Experts on Ports held in 1993 and 1996 recommended to governments to reflect on the importance of the role of their ports and their great potential for fostering trade and development. The conclusions drawn by the two meetings, especially the 1996 one, on challenges facing African ports in the next millennium indicated that areas of concern should include: labour reforms, funding of port infrastructure, management of port equipment, use of information technology, and satisfactory strengthening of port hinterland connections and relationship.

The International Association of Ports and Harbours (IAPH) meetings held in Bali/Jakarta in June, 1997 and the IAPH Conference held in London in September, 1997 emphasized that the last half of the 20th century has been dominated by the growth of the free market, and that globalisation is the driving engine of change in the 1990s and will be in the next century. In this regard, the two meetings identified global challenges for ports in the next millennium as follows: adoption of new telecommunications technology, political changes, reduction of restrictive practices, need for forward planning of port infrastructure and other facilities, private sector participation in port activities, and need to harness technological advances.

The Eleventh Meeting of the Conference of African Ministers of transport and Communications which was held in Cairo, Egypt in November, 1997 also deliberated on specific areas to be given special attention in the development of maritime ports in Africa for the years 1998 to 2000 and beyond.

The Conference recommended that emphasis should be given to: mobilization of resources for port developments, establishment of policies and measures for combating pollution, organization of sub-regional seminars on port safety, strengthening of cooperation through the various sub-regional port management associations, improvement of port management practices, support of activities related to transit transport to land-locked countries, strengthening of information systems, and collaboration between UN agencies in the development of the ports sub-sector.

In view of the above deliberations and the continuous monitoring of the African ports developments through the implementation UNTACDA programmes, ECA has identified the main challenges which African ports are facing in the next millennium as follows:

- promotion of institutional development;
- development of regional and sub-regional cooperation;
- improvement of the efficiency of port management;
- improvement of port technical services;
- improvement of the maintenance of port assets and infrastructure;
- promotion of human resources development;
- strengthening of relations between ports and their hinterlands; and
- adoption to new technological changes in maritime transport.

These challenges cut across the recommendations of past deliberations on the subject by UNCTAD, IAPH and ECA Conference of Ministers as highlighted above. The eight challenges identified by ECA are briefly discussed in Chapter Three of this report.

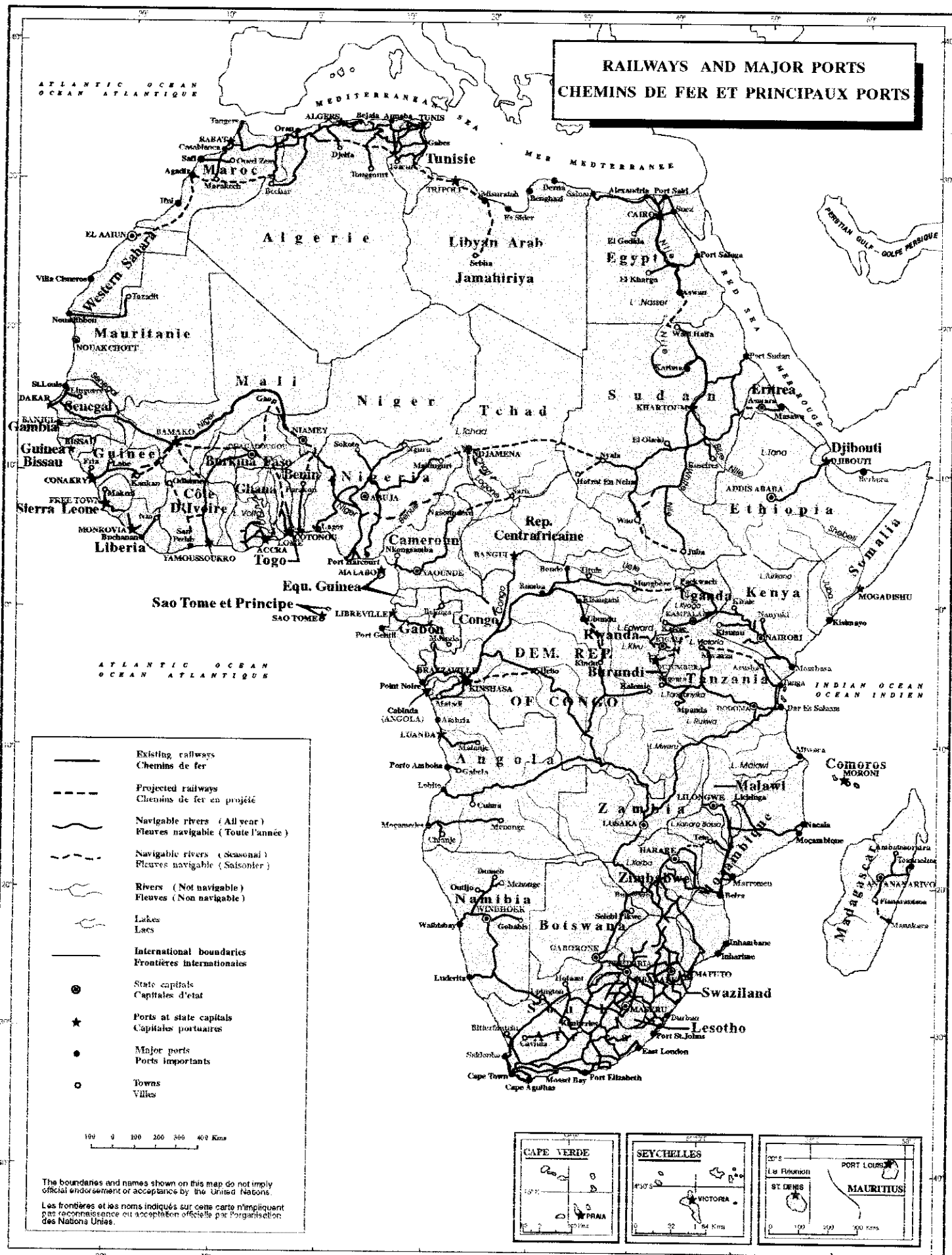
The concluding remarks in Chapter Four calls for this seminar to come up with a plan of action, at national and sub-regional levels, for tackling some of the challenges identified. It is also suggested that a follow-up regional seminar should be organized in the first quarter of the year 2000 to assess the progress made by various ports, NGOs UN agencies and international organizations in preparations for meeting challenges facing African ports in the next millennium.

CHALLENGES FACING THE AFRICAN PORTS IN THE NEXT MILLENNIUM

I. INTRODUCTION

1. Over the last 30 years, significant changes in the world trade and transport have drastically transformed the structure and orientation of the transport industry especially the ports sub-sector. There has been growth in the volume of trade and an increase in the diversity of exporters and importers. The complementary development of port facilities and international services has created greater competition among ports and between waterbased and other modes of transport. Former state monopolies are now confronted with an environment in which the user has a much greater say in the operation of ports.
2. Ports are logistical platforms and are no longer merely passive modes or interfaces between land to sea transport. Their services are, therefore, no longer restricted to the traditional roles of stevedoring, quay transfer and receipt - delivery operations, nor are they operated in isolation. Their investments are consequently costly and technological progress gives them a shorter useful life than was the case in the past. This situation demands the utilisation of funds constantly for maintenance and improvement of their performance.
3. ECA has, in the past twenty years been monitoring some changes which have been taking place in African ports since the implementation of the first United Nations Transport and Communications Decade for Africa (UNCTAD I) which covered the period (1978-1988). The 1980s, was a period of rapid expansion in the seaports of Africa. The total berth capacity for ocean-going vessels in the region increased four fold from 150 to 600 berths in the 80 largest ports. There was, in particular, substantial investment in the construction of unitized and bulk terminals in most African countries to meet the demands of technological changes in shipping. The distribution of seaports in Africa has changed little during the last decade. Most investments continue to be diverted to the expansion of facilities at long established locations. Most of the African coastal states have few major ports (see map- next page), and these handle comparatively low traffic volumes by international standards, very few handle more than 10 million tons per annum.
4. This document highlights the challenges African ports are likely to face in the next millennium, based on ECA experience and those of other ECA partners since the launching of the UNTACDA I and through the implementation of the on-going second United Nations Transport and Communications Decade for Africa (UNTACDA II).

RAILWAYS AND MAJOR PORTS CHEMINS DE FER ET PRINCIPAUX PORTS



5. After this introduction, the report presents in Chapter Two a brief of deliberations conducted in 1990s on challenges for ports in the next millennium. Chapter Three examines the issues which ECA had categorised during the formulation of objectives and strategies of UNTACDA II as the main challenges for ports in the next millennium. These still remain regional challenges for the sub-sector mainly because the transport infrastructure, including those of ports, which were built during the immediate post-independent era has, to a large extent, deteriorated due to poor maintenance and lack of renovation. Steps to be taken by governments, ports, intergovernmental and international organizations in overcoming pressures which the identified challenges are likely to pose on ports and their users are highlighted. General conclusions and recommendations are in Chapter Four of the report.

II. PREVIOUS DELIBERATIONS ON CHALLENGES FACING PORTS IN THE NEXT MILLENNIUM

(a) UNCTAD Meetings in 1993 and 1996 of Intergovernmental Group of Experts on Ports

6. When considering the challenges facing African ports in the next millennium it is useful to recall the conclusions of the 1993 UNCTAD Intergovernmental Group of Experts on Ports:

"Ports - Preparing for the Millennium

- (i) *Over the last years, international transport, including sea trade and ports, has become increasingly important in the world economy. One single world market has emerged where production, transport, and distribution and consumption of goods are no longer concentrated in one limited geographical area, but are instead spread over the whole planet. These dramatic changes have been made possible through the development of sophisticated and integrated transport and distribution systems and networks, often controlled by mega-carriers and shippers, with the majority of goods moving by sea. These developments took and are still taking place in a competitive environment, resulting in great trade volatility generating risks and opportunities for ports. Risks are particularly high for countries and ports which have not anticipated these changes and are not prepared to take the strategic decisions, in particular, to adjust their management organization, facilities and services to the trade requirements.*

Opportunities come from the fact that, in the process of integration of the transport and distribution functions, a modern port has many assets to become one of the few nodal points of strategic importance for international trade.

- (ii) Ports must recognize that they play a key role in the transportation logistics chain and assure the effectiveness of their contribution by defining themselves broadly. Focus on functions within the boundary of the ports is insufficient.*
- (iii) The Group recommends reflection by Governments on the importance of the role of their ports and their great potential for fostering trade and development. In order to translate their support and to adopt appreciative port policies, the group recommends the use of long-term planning and strategic business planning methodologies to assist Governments and ports to translate objectives into policy, strategy and implementation steps, including performance goals and evaluation mechanisms. These must assure the inclusion of management, human resources, legal, financial and operational tactics, including managerial autonomy where appropriate."*

and also the conclusions of the 1996 Intergovernmental Group:

"Ports - an emerging partnership for development

- (i) The trends in the globalization of production noted in the conclusions of the first session of the Intergovernmental Group of experts on Ports in 1993 are continuing, with resulting dramatic demands made on transport services. In this highly competitive environment, the existence of an efficient port network, including transport and communications systems, is essential. Transport operators demand reliable and low-cost port services. Seaports are interfaces between the various transport modes and are typically combined transport centers. In addition, they are also multifunctional trade and industrial areas where goods are not only in transit but also handled, manufactured and distributed. In fact, ports are multidimensional systems which, to function adequately, must be integrated into global logistic chains. An efficient port requires not only adequate infrastructure, superstructure and equipment but also good communications and especially a*

dedicated and skilled management team with a motivated and trained work force.

- (ii) Over the last decades, there has been an evolutionary process through which a port organization passes from a wholly government-controlled body that is an instrument of economic policy to more efficient organization schemes, including the landlord organization scheme, coordinating private and public sector bodies, and sometimes the totally privatized organization. In all cases there is a need for government to provide a regulatory framework to address issues of national and international relevance such as safety and the environment and to act as coordinator for port development, including hinterland connections. There is an increasing trend towards separating regulatory and commercial activities, with the public sector retaining responsibility for the former and the latter being exposed progressively to free market forces. Rules of fair competition assume importance in cases where government is relinquishing involvement in the commercial aspects of port activity by assigning more responsibility to the private sector.*
- (iii) A pragmatic approach for port modernization, amongst others, is for Governments to encourage the private sector to participate in development and expansion projects. Investment of private capital through joint venture arrangements such as BOT (Build Operate Transfer) and BOO (Build Operate Own) represents a method of satisfying requirements for cargo-handling capacity and auxiliary services and can also provide an avenue for modernizing management skills. Such arrangements will assist in assuring the commercial viability of the project. However, experience so far has proved that it is unlikely that the private sector would be willing to invest in common infrastructure such as breakwaters and approach channels. Thus a partnership between the public and private sector for developments is an emerging and necessary trend.*
- (iv) The Group observes that while developed countries have succeeded in certain cases in implementing privatization because they have the necessary framework, developing countries should be encouraged to do so with caution since they may hardly have the logistical, legal and financial framework."*

7. These recommendations should be borne in mind when considering the challenges facing African ports for the next millennium. Firstly it is difficult to rank which area should be given priority as each area must be improved if African ports are to become more market oriented Labour reforms are required as generally there is a surplus of labour which remains from the period when ports were often seen as a source of employment rather than an organization seeking to minimize costs to the user. At the same time there is a great need to improve the skills and knowledge of the labour force. Funding for infrastructure renewal and development will continue to be a problem. The private sector will play a greater role in the financing of equipment and superstructure but the port authority will retain the responsibility for the development of infrastructure. Higher priority should be given by governments to transport infrastructure and to innovative schemes for financing. Equipment management needs to improve, particularly to increase the availability of equipment. Often institutional procedures result in long delays in procuring needed spare parts which leads to long down times and an inadequate equipment fleet to service ships and cargo. Ports will above all have to make a greater use of information technology. This offers through EDI, the possibility to better plan ship working through advanced receipt of stowage/bay plans and to speed up the clearance of import and transit cargo. Computerized Customs and tracking systems exist which need to be more widely implemented along the transport chain to facilitate the control and rapid movement of cargo. Ports will also need to take the initiative to assure that hinterland connections by rail and road are satisfactory to handle both domestic and international traffic. Working with the other transport operators through Trade and Transport Facilitation bodies, these operators should first work towards streamlining procedures to reduce delays and cost with the existing infrastructure and then develop a national transports plan for the rehabilitation and development of infrastructure. Extending basic infrastructure networks and providing for their adequate maintenance are central to providing physical access to resources and markets, otherwise growth stagnates and poverty reduction cannot be sustained. Thus, ports have a key role to play in helping to alleviate poverty in Africa.

(b) IAPH Meeting held in Bali/Jakarta in June 1996

8. This African Ports Seminar is not the first occasion discussions on challenges facing the ports sub-sector in the 21st Millennium are under discussion in an IAPH-organized meeting. Some of you may have come across the keynote address made on 22 April 1996 by Mr. Robert Cooper, IAHF President to the Mid-Term Executive Committee Meetings of IAHF¹ held in Bali/Jakarta, Indonesia. The address gave

¹ Ports and Harbors, June 1996, Vol. 41 No. 5

a snapshot of the world in the remainder of the 1990s and the next millennium as follows:

- *Massive amount of capital moving around the globe at the touch of a keyboard on a computer. This capital will seek out the base rate of return without regard for location, energy, race, language or tradition.*
- *Private sector will drive economic growth as international investment grows and as governments seek new ways to finance infrastructure developments.*
- *Competition will intensify as private enterprises seek out the cheapest or most efficient place to do business and as countries reduce traditional barriers to their markets.*
- *Economic growth and political changes will continue to give visa to new world market - an international middle class with disposal incomes to spend. This burgeoning market of consumers will be able to use technology, such as satellite television and the internet, to share in the global market place*
- *The dazzling growth in telecommunications and information technology will continue. The change is completely re-writing the rules of international business and we should be mindful that a growing proportion of international "exports" are travelling by computer network."*

9. Since these trends have gained force in the last part of this century, they will take off in the next millennium with ports and harbours of the world at the heart of that trend.

(c) IAPH Conference held in London in September, 1997

10. The second time challenges to ports in the next millennium was again put on carpet at a regional level was the address delivered by Rt. Hon. Neil Kinnock, Transport Commissioner, European Commission, at the 20th IAPH Conference in London Working Session 4 on 5 September 1997².

² Port and Harbors, September 1997 Vol. 42 No. 7

11. The presentation identified the following requirements as prerequisite for productive change in the port sector:

- "
 - *the need to harness technological advances in order to be competitive in a rapidly changing trading environment;*
 - *the need to reduce restrictive practices which could act as barrier to the flow of cargo;*
 - *the need for forward planning of infrastructural and other facilities, not only to deal with the inevitable increases in volumes that will occur, but also to avoid the development of over-capacity;*
 - *the need for increasingly innovative political and economic measures to ensure great interoperability between the different modes of transport."*

(d) The Eleventh Conference of African Ministers of Transport and Communications held in Cairo, Egypt in November 1997

12. The second mid-term evaluation of UNTACDA II which was carried out in the second quarter of 1997 by ECA made recommendations on activities to be carried out in the ports sub-sector from the year 1998 to the year 2000 and beyond. The recommendations were considered and approved by the Eleventh Conference of African Ministers of Transport and Communications, which met in Cairo, Egypt from 26 to 27 November 1997. The Conference recommended that developments in maritime ports for the period 1998 to the year 2000 and beyond should give emphasis to:

- *organization and conducting of ports commercialization workshops in cooperation with subregional Port Management Associations;*
- *establishment of policies and measures for combating pollution in African ports;*
- *organizing of subregional seminars on Ports Safety and Efficiency;*
- *conducting of subregion seminars on Improvement of Human Resources for the Management of Ports;*

- *improvement of infrastructure in port and warehouses serving landlocked countries in Africa;*
- *development of common subregional policies for dredging;*
- *cooperation with Port Management Associations in the design of ports data-bases.*
- *giving support to transit and landlocked countries in the establishment and operations of inland dry ports (ICDs).*
- *Delivery of TRAINMAR workshops and seminars in Africa, including the development of TRAINMAR centres, teaching materials and faculty for various African subregions.*

III. THE MAIN CHALLENGES FACING AFRICAN PORTS IN THE NEXT MILLENNIUM

13. The above conclusions and recommendations of previous deliberations in 1990s on challenges facing African ports in the next millennium go hand in hand with what ECA categorized as the main challenges in the next millennium

14. The sea ports of developing Africa are noted for their low output, high operating and maintenance costs and generally poor quality of services to users. Such poor quality port services and their high costs are an impediment to the expansion of the external trade.

15. The overall sub-Saharan Africa's performance had continued to be characterised by low productivity, management problems, failure to diversify from a limited production and export base and high vulnerability to the external economic environment. In 1995, however, economic developments were made favourable, with exports expanding by 14.3 per cent in value and 7.5 per cent in volume over 1994 and imports increased by 11.8 per cent in value and 5.6 per cent in volume.³ At the same time, real GDP was estimated to have risen by about 5.0 per cent.⁴ These overall positive sub-Saharan Africa developments cannot conceal considerable differences in economic performance of individual countries. Statistical figures exist which give proof of the difficulties - sometimes due to

³ UNCTAD report on Review of Maritime Transport 1995

⁴ Total trade in goods and real GDP, IMF, World Economic Outlook, October 1995.

external failures - experienced by a number of African economies, including some of the largest ones among them, and also experience by the region's transport sector including ports.

16. The challenges which the ports sub-sector is facing in the next millennium are discussed below within the framework of the overall difficulties which African countries themselves are facing. The main challenges are categorized under eight sub-headings as follows:

- (i) promotion of institutional development for ports;
- (ii) development of regional and sub-regional cooperation;
- (iii) improvement of the efficiency of port management;
- (iv) improvement of port technical services;
- (v) improvement of the maintenance of port assets and infrastructure;
- (vi) promotion of human resource development;
- (vii) strengthening of relations between ports and their hinterlands;
- (viii) adoption to new technological changes in maritime transport.

1. Promotion of the Institutional Development

17. Reform of present institutional inadequacies is of fundamental importance in improving the efficiency of ports. The relationship between port authorities and government ministries and departments needs to be improved, and the regulatory controls imposed by those bodies need to be eased, to provide greater autonomy and operational freedom. The reformed government/port relationship must be supported by the development of appropriate, measurable objectives and indicators, and by the adoption of information and managerial systems which allow government officials to set and monitor performance. Recent ECA studies in this field have indicated that unwillingness of governments to delegate authority has resulted into excessive control. The impact of these controls has varied from minor management inconvenience to seriously delayed decision-making particularly in financial matters. The de-motivating loss of management freedom was also apparent in some of the parts causing administrative wastes and higher unit costs.

18. Steps to be taken to overcome some challenges for promotion of port institutional framework should include:

1.1 Establishment of Maritime Executive Committees

19. The Maritime Executive Committees set up at the national levels, consisting of senior civil servants, port and shipping managers, and representatives of other relevant organisations should, be established to advise governments of the changes needed in existing current institutional structures and on the policies and strategies to be pursued to achieve those changes.

20. Some African countries already have sectoral reform committees which are in a position to handle all transport modes including maritime ports.

1.2 Preparation of suitable policy guidelines

21. Guidelines need to be produced to assist and advise African governments to formulate appropriate port management policies and to implement the necessary institutional reforms. The guidelines should consist of a generalised framework and model of the relationship between port authorities, governments and other regulatory organisations, and practical advice on how to carry out studies on institutional reform and implement the resulting recommendations. Activities for achieving this should include:

- (i) Development of model organisational structures which define the relationship between port authorities and regulatory bodies.
- (ii) Establishment of acceptable levels of control such that both entrepreneurial freedom and accountability are enhanced.
- (iii) Definition of the framework, scope and extent of regulatory controls and advise on their application.

22. The Southern Africa Transport and Communication Commission (SATCC) has evolved "Guidelines for the restructuring of State-owned Transport and Communications Enterprises" which among other things provide rationale for restructuring and identifies options for restructuring. The guidelines identify also the main actors in restructuring - their roles, responsibilities and accountability.

1.3 Preparation of comprehensive performance indicators

23. A comprehensive set of financial, operating, engineering, manpower and other primary performance indicators need to be prepared, for use in setting and revising port policies and objectives, and to enable senior government officials to monitor the ports' achievement of their development, corporate and performance objectives. ECA will be developing performance indicators for the ports sector to be ready

before the end of 1998 as part of the on-going regional transport data base which is being implemented in selected countries of sub-Saharan Africa. The example of Mozambique ports (Maputo and Beira) is a case in point where performance indicators are produced for monitoring port performance up to the level of the office of the vice-minister.

1.4 Technical assistance for institutional reform should be sought

24. Technical assistance is useful in helping governments revise and update port statutes and regulations, to strengthen public administrative procedures, and to establish effective monitoring systems. This assistance should be part of the broader programme to establish an effective maritime administration. Collaboration between UN agencies i.e. IMO, UNCTAD, ILO and ECA including the World Bank would help in drawing up guidelines for port reform.

1.5 Increase the participation of the private sector

25. Another step towards a successful institution reform is to increase the role and financial participation of the private sector in port development and management, involving port users more in policy formulation related to the management, operation and development of ports. African countries need a great deal of advice and technical assistance on how to encourage and expand the role of the private sector in the port transport industry.

26. Organise a series of subregional and national conferences and 'enterprise workshops' to inform entrepreneurs, senior civil servants, port executives and other members of the business community of the commercial opportunities in ports transport and its related industries, through joint ventures, equity financing, etc. A sub-regional port restructuring workshop has been organized by SATCC in collaboration with PMAESA for Eastern and Southern African ports in December 1995 in Dar-es-Salaam, Tanzania where eighteen countries participated.

27. It is logical that such a seminar should be followed-up with national seminars, therefore, ECA and PMAESA in collaboration with the Economic Commission of Latin America and Caribbean (ECLAC) organized a national seminar on port commercialization for the port of Dar-es-Salaam in July 1997. This will be followed by two more national seminars for Maputo (22-24 April 1998) and Mombasa (28-30 April 1998). It is expected that other sub-regions will in the near future conduct port commercialization seminars under their respective Port Management Associations to be followed by national seminars for selected ports.

2. Development of Sub-regional and Regional Cooperation

28. Regional collaboration on port development and expansion plans can prevent wasteful duplication and over-investment in port facilities, achieving an economic balance between demand and supply at the regional level. A regional (or subregional) approach to the planning of port capacity is essential during a period in which the pivot and feeder port concept will become a reality, if fierce and costly interport competition is to be avoided. Regional cooperation in the provision of specialised port services, such as dredging will also enable economies of scale to be achieved.

29. There are various forms of activities where ports can cooperate. Furthermore, port authorities, operations and port-related companies can benefit from a wide range of advantages through cooperation. They need to have a proactive attitude towards cooperation to benefit from the new trade and transport environment. Cooperation between ports is not restricted to a region but can be world wide. This Seminar is a typical example of inter-regional cooperation whereby IAPH Europe is cooperating with African port management associations. The 6th Cities and Ports International Conference which was held 18-22 November 1997 in Montevideo, Uruguay under the auspices of International Association of Ports and Cities is another case in point. African countries should actively participate in such meetings even if they are conducted outside Africa.

30. Through cooperation at subregional and regional levels, some illicit trade practices criminals can be eliminated (See box 1 below).

Box 1. Need for dialogue and cooperation in eliminating illicit trade

During the Somalia conflict one vessel, loaded with arms, was unable to penetrate the cordon and sought refuge in the territorial waters of neighbouring countries. Local crew employed to blend with the few foreign crew on board completed the camouflage and succeeded in avoiding suspicion and arrest on more than one occasion. Ultimately the vessel was discovered in Seychelles waters and subsequently arrested.

Although ship and cargo were ultimately confiscated, the culprits ran to ground and disappeared not to be traced. The crew was brought to trial with the master having to shoulder all blame and responsibility. The culprits got away scot-free.

Source: Ports and Marine Services Division, Seychelles

31. Lack of cooperation can prove to be detrimental to some maritime activities (See box 2 below).

Box 2: Need for dialogue and cooperation in handling criminal acts

Given the position of the islands in the Seychelles group, stowaways have been brought to port from time to time. On one occasion however two stowaways were dumped overboard onto a makeshift raft and left to drift off on outer islands. Luckily they were picked up by a fishing boat and brought to the capital.

Information retrieved from these two individuals were false where it concerned their identity. Information on the carrier, however was verified and found to be true. In an endeavour to apprehend the vessel and Master for their in-human act, no response was forthcoming from the subsequent port of call.

Regrettably, both vessel and Master remains free to date. The Stowaways themselves suffered a 4 year detention in Seychelles before finally being identified and thus repatriated.

Source: Port and Marine Services Division, Seychelles

32. In eastern and southern Africa, PMAESA is promoting cooperation in Port State Control (PSC). This is necessary to protect member ports from receiving and handling unworthy ships which do not conform to the required standards which can prove dangerous to handle (See box 3 below).

Box 3: Need for dialogue and Cooperation in port state control promotion

In mid January 1996, a tanker vessel called at Port Victoria to discharge a consignment of refined fuels. In the course of her call, the crew refused to sail the vessel on the grounds that their conditions of wages and living aboard ship were inadequate. A thorough inspection and investigation was undertaken by the Port Authorities in Seychelles. The vessel's conditions, however, was most unsatisfactory with visible cracks in hull, decks, ladders, vents combing, etc. to the extent that holds/tanks could only be loaded to 50% capacity. The crew's accommodation was appalling and in total deterioration.

Surprisingly, the vessel had completed dry-dock some six months earlier, with all certificates found to be in order. To make matters worse the vessel had broken down upon departure from her home base port only to be towed back, fitted with a third and sole operating portable generator on the after deck, the others standing by as relics.

The vessel was without the necessary tanker emergency equipment such as fire boxes, fire hoses, etc. After much rummaging an ancient fire plan (apparently not opened in years) was produced. How such a vessel was permitted to continue trading was indeed a mystery.

It was given a one way ticket to its base port and banned from Seychelles until such time that it would be able to withstand and pass a severe and thorough PSC inspection.

Two to three such ships in Port Victoria at any one time could pose a potential danger to a small port like Port Victoria.

Source: Ports and Marine Services Division, Seychelles

33. In western and central Africa, PMAWCA has initiated a number of activities in the field of port cooperation i.e. training and manpower development, environmental protection and also port state control.

34. Member countries should give support to their port managements associations on issues related to inter-port cooperation.

35. The importance of PSC should be given special attention by all ports and sub-regional port associations.

36. Effective cooperation could be achieved through:

2.1 Improvement of the effectiveness of port management associations

37. The management and policy-making abilities of the existing port management associations need to be improved. A variety of *activities* will contribute to that improvement are:

- (i) provision of training to improve the technical competence of those nominated to attend meetings of the associations;
- (ii) ensuring that delegates have the necessary authority and technical ability to commit their governments and organisations to a plan of action;
- (iii) ensuring that there is the political will to agree to the financing of sub-regional schemes in maritime ports;
- (iv) ensuring that adequate research and preparatory work precedes their regular meetings;
- (v) strengthen the establishment and research capability of the secretariats;
- (vi) making adequate funds available to enable the organisations perform their duties;
- (vii) establishing a reliable database for use in formulating policies aimed at greater regional collaboration⁵;
- (viii) establishing procedures for gathering and exchanging information;
- (ix) examine and, where appropriate, revise the objectives, constitution and administrative machinery of regional organisations, to enable port development issues to be discussed periodically.

⁵ ECA has elaborated the terms of reference of establishment of a ports data base at PMAESA headquarters. Implementation of the project is about to begin with the ports of Djibouti and Mombasa as pilot cases.

2.2 Organisation of sub-regional and regional cooperation seminars

38. A series of seminars should be prepared, organised and presented, aimed at senior executives and designed to promote regional cooperation. Topics should include: load-centring and its impact on the region's ports; regional port database and information systems; regional training policies and strategies; port competition

and commercial policies. The necessary *activities* should include:

- (i) preparation of curricula and training materials (printed and audiovisual) for selected topics on ports cooperation;
- (ii) presentation of the seminars subregionally, to all senior policy-makers, to members of intergovernmental organisations and staff of port management associations, and to senior executives of port authorities and operators, to promote the value of regional cooperation;
- (iii) participation in global seminars, symposia and conferences organised by IAPH, and UN agencies in the field of maritime ports and shipping.

3. Improvement of the Efficiency of Port Management

39. Institutional reforms and cooperation in port cannot be effective unless they are supported by organisational changes and improvements in management. The review and, when appropriate, the revision of management and organisational structures to reflect the changes taking place in maritime transport and commerce, should promote avertly commercial policies and should strengthen ports' marketing and customer relations activities. It should encourage steps to delegate authority, to make staff more accountable and to develop a "quality of service" and "customer oriented" working environment throughout the organisation.

A study conducted by ECA and UNCTAD in 1990 on human resources and institutional development in ports, covering ports in Kenya, Senegal, Côte d'Ivoire and Ethiopia, found that all these ports had undergone some re-structuring in attempt to create feasible and efficient organisation with a satisfactory measure of control by their governments. All the ports studied were found to be making a good contribution to the effectiveness of the transport systems of their countries and to the development of their international trade. But it was found that some of the ports studied had initiated excellent policy intentions of freedom to apply commercial operating principles but run into problems of implementation because they were still overloaded with government controls, making the management task

much difficult. The ports in Africa need to encourage restructuring more seriously through activities which include:

3.1 Restructuring of port management

40. The management organisation of many ports needs to be periodically revised to incorporate modern management principles and practices, and to enable it to respond promptly and effectively to changes in maritime technology and

commerce. In this context special attention should be given to:

- (i) preparation of guidelines to assist ports to adopt a modern organisational structure and modern management practices;
- (ii) preparation and presentation of workshops to explain, to policy-makers and senior decision-makers, developments in organisational and management practices and to promote the need for change;
- (iii) setting up a working party within each port authority, consisting of senior staff, to oversee and manage organisational change and the introduction of new management control systems;
- (iv) carrying out (with technical assistance where required) a management audit to assess the strengths and identify the weaknesses of the present organisational structure, and to recommend changes;
- (v) preparation and adopting of a revised organisational structure that incorporates such principles as delegation, clear lines of communication, individual accountability and responsibility;
- (vi) preparation of appropriate training materials and present training programmes for all staff, to explain the changes in organisational structure and working practices, and their roles in the revised organisation.

3.2 Application of modern management practices

41. A significant constraint on port management efficiency is the relative ineffectiveness of management control and reporting systems. Where these systems exist, they tend to be insufficiently comprehensive and reliable, and the information provided is inadequately distributed. If performance targets are to be set and monitored for each department, section and individual, effective control and reporting systems must be in place. Other aspects of modern management which

need to be introduced concern management philosophy, attitude and approach; a much more commercial, customer-orientated approach is required throughout the organisation, and all departmental activities must be based firmly on cost/revenue principles.

3.3 Establishment of an effective Management Information System

42. The lack of an effective Management Information System (MIS) is a major constraint on port management effectiveness. It prevents the setting and measuring of performance criteria and targets and hinders the adoption of a responsive, commercial approach. A good MIS will cover financial and cost reporting, operating and engineering performance, manpower data and other areas. It needs to be carefully designed and, to be recorded, stored, retrieved and analyzed. To achieve this there is need to:

- (i) establish a working group of senior port staff to take responsibility for supervising and managing the introduction of the MIS;
- (ii) survey the adequacy of existing MIS, computing and Electronic Data Interchange (EDI) systems, and plan the introduction of improvements;
- (iii) develop a model MIS for African ports, with accompanying guidelines for its adaptation, introduction and maintenance;
- (iv) develop a set of software "shells" on the basis of the model, for ready adaptation for specific port applications;
- (v) prepare training materials and provide training courses (using computer assisted and embedded techniques) for all staff who will come into contact with the MIS;

3.4 Speeding up of the handling of documents

43. A major constraint to the efficient management of port business is the complexity of document handling. The quick and efficient turnaround of ships depends to a large extent on the speed and ease with which the documents are handled, and this has been made more difficult by the non-standardisation of documents and the procedures for handling them. A major advance would be the wide acceptance of international standards for document handling, and this would be considerably advanced by the adoption of the various international conventions which are of relevance to ports including sub-regional agreements, which promote speedy handling of documents. UNCTAD has carried out various activities in this field which should be promoted all concerned under ACIS programme.

4. Improvement of Port Technical Services

44. Port technical services has tended to be a neglected field. Many African ports do not have the facilities (tugs and other craft, navigational aids, pollution control equipment, hazardous cargo compounds, etc), regulations and controls (legislation, bye-laws and operational procedures) and skills (both technical and managerial) to perform this function to international standards. Given the current importance assigned internationally to maritime environmental issues, rectifying this situation is a major undertaking which should be carried out through:

4.1 Adoption of international conventions

45. As in the case of the international Conventions relating to shipping, many of the IMO Conventions dealing with safety and environmental protection in ports (eg MARPOL 73/78 and the International Maritime Dangerous Goods Code - IMDG) have remained unratified by many African countries. The first, urgent step in improving port technical services must be the acceptance, ratification and implementation of those Conventions.

4.2 Review and revise port bye-laws, rules and regulations

46. The bye-laws of many African port authorities originated in colonial times, since when there have been enormous changes in maritime technology which have increased the risk of accidents, their seriousness and the difficulties of responding to them. It is, therefore, important and urgent to revise, modernise and rationalise the byelaws, rules and regulations relating to port technical services.

4.3 Strict enforcement of safety regulations.

47. With the regulations on safety and environmental protection in ports in place, it remains for port authorities to introduce the necessary procedures and facilities, with the appropriate resources, to ensure their strict observance. Considerable promotional efforts will also be needed, throughout the ports, to make port employees constantly and fully aware of the need for vigilance, for strict adherence to the safety rules. A Port Safety Section within a major department, eg the Marine Department, will be the best means of enforcing the safety regulations and rules, and a Port Safety Committee will be the route through which the awareness programme should be implemented.

4.4 Improvement of navigational services

48. The approaches to ports - their entrance channels, turning circles and navigational aids - have to be maintained constantly. With recent and current

technological developments in shipping, improvements to the approaches to all ports have been necessary, in terms of specification and reliability. African ports have experienced difficulties in this respect, and many of them suffer from inadequate facilities and resources (including technical skills) for carrying out these functions effectively. In addition, many of them have navigational aids of obsolete design, thus difficult to maintain; these need replacing by modern, standardised and easily maintained types -conforming to the uniform system adopted by the International Association of Lighthouse Authorities (IALA). All related port technical services (dredging, hydrographic surveying, emergency and safety procedures) will have to be developed to meet current and future needs, through regional cooperation in hydrographic surveying, planning, funding and carrying out a programme of capital and maintenance dredging as already recommended by some studies concluded by the East and Southern African and the West and Central African Port Management Associations.

5. Improvement of the Maintenance of Port Assets and Infrastructure

49. Operationally, the most urgent problem already facing the ports of Africa is that of maintenance management. The present poor state of ports' infrastructure, floating craft and cargo-handling equipment is an issue of grave concern. Maintenance deficiencies exist in all branches of engineering - civil, marine and mechanical/electrical - but it is the poor quality of *equipment* maintenance that presents the biggest obstacle to achievement of acceptable levels of operational efficiency. Many factors contribute to the problem, but the root cause is the lack of a comprehensive set of policies, strategies and procedures for maintaining its assets. Measures to be taken should include following steps:

5.1 Carry out a comprehensive audit of the maintenance functions

50. To identify the institutional, organisational, manpower and technical constraints to improving port asset maintenance, the first step must be a comprehensive maintenance audit, on the basis of which a detailed workplan for a port can be drawn up. The audit should be an in-depth study of the port's ability to operate and maintain its assets, identifying the shortcomings and the steps needed to remedy them. It should cover institutional aspects, such as the exercise of government controls, organisational and planning issues, procurement and operations, as well as the organisation, facilities and procedures of the engineering department(s) and supplies management. It must also review management and manpower issues and the engineering MIS.

5.2 Reform the organisation of maintenance

51. On the basis of the conclusions and recommendations of the audit described above, a programme of action should be instituted, to reform the organisation of engineering services, including relaxation of restrictive government controls and regulations, changes to the status and structure of the engineering department (particularly the relationship between engineering and other port departments) and to staffing and conditions of work.

5.3 Improve maintenance facilities and resources

52. On the basis of the conclusions and recommendations of the maintenance audit, a programme should be initiated to ensure that each port engineering department has the appropriate range of maintenance facilities to perform its function effectively and that these are sensibly located. Workshop facilities, equipment, tools, services and supplies need to be improved, and the suitability and benefits of externally contracted services should be investigated.

5.4 Apply modern management procedures to maintenance

53. The primary objective of the maintenance function is to ensure that marine craft, civil works and equipment are available, in the right number and condition, to meet operators' requirements. The operational demand for facilities and equipment has to be reconciled with the need for preventive and corrective maintenance, which has to be planned for the most efficient use of workshop and staff resources. Work planning, scheduling and other maintenance procedures must be developed, introduced and rigorously applied.

5.5 Apply modern control and information systems

54. Central to the improvement of port maintenance management is a reliable and comprehensive information system covering preventive and corrective maintenance, supplies and asset management. The system must encompass continually updated records of operating performance, reliability, repair and maintenance schedules, supplies and costs. It must provide all the data necessary for monitoring operational and engineering performance and efficiency, and for making sound decisions on all aspects of asset maintenance and management. Based on the conclusions and recommendations of the audit, a programme should be implemented to establish such a comprehensive control and information system as an integral part of the port's management information system.

5.6 Provide a comprehensive range of maintenance training

55. Training is central to management and manpower development and vital for the improvement of maintenance efficiency, especially at a time of rapidly advancing technology in maritime transport and cargo-handling. High priority needs to be given, to the status of technical training and to the range and quality of maintenance training. Extensive programmes need to be developed for all branches of engineering, at all levels, based on the conclusions and recommendations of the maintenance audit.

6. Promotion of Human Resources Development in Ports

56. Human resources are a key factor in port efficiency. Manpower plans must be prepared and implemented to ensure that the workforce meets the port's requirements in terms of numbers, skills and abilities. Manpower development and personnel policies must ensure that the port recruits suitably qualified personnel and that all employees are offered attractive career patterns. Training is of vital importance and employee motivation must be developed through financial and other incentives. Discipline must be maintained and accountability established for each member of a port's staff. Salaries, welfare and amenities must also be periodically reviewed, to ensure that they serve to attract and retain staff of the right calibre for a modern, efficient port. To meet some of the challenges in the next millennium ports will have to elevate the skills of port workers to that of a respected professions. Multi-skilling will become the name of the game.

57. Steps to be taken in the improvement of human resources development are:

6.1 Improvement of manpower planning

58. A manpower development plan is essential in a modern port, which needs to employ people with a wide range of skills and abilities - requirements which are changing rapidly in response to technological advance. The manpower plan sets out the port's formal policy, projected staffing levels, and strategies for achieving them, as well as defining recruitment, promotion and career development policies. Salaries, welfare and other amenities will need to be developed into a package that attracts and retains people with the required skills and qualifications, and promotes the right attitudes to their jobs.

6.2 Improvement of the quality of personnel management

Improvements in the quality of personnel management will be essential for an effective manpower development policy, as there is a lack of skilled personnel

managers in African ports - undoubtedly reflecting the perceived low status of the function. Personnel management skills must include the specifying of appropriate conditions of employment, the developing of staff appraisal schemes, occupational analysis and setting of individual performance targets.

6.3 Implementation of a supporting human resource development programme

59. A comprehensive training programme will be required, to support the institutional reform strategy, aimed at senior civil servants and government officials, senior port executives and staff involved in the collection, analysis and interpretation of information and statistics. Relevant *activities* should include:

- (i) Design and preparation of suitable training materials.
- (ii) Organisation of appropriate training resources and facilities in association with existing and developed national and sub-regional training institutions.
- (iii) Presentation of seminars, courses and workshops as appropriate.

6.4 Improvement of employment conditions in ports

60. Improvements in this area must be supported by the creation of attractive career structures, clear job descriptions, staff appraisal schemes, good training opportunities, improved working conditions and safety, and a range of welfare, medical and other amenities.

6.5 Improvement of training for port employees

61. Training remains a major issue and constraint throughout the maritime subsector, and there will inevitably be a huge demand for training from all parts of the industry in future. *Activities* relating to training should include the following:

- (i) Establish the principle of training as an essential and regular component of employment, at all levels, as the accepted means of preparing staff to perform their jobs efficiently and safely, and as the route for advancement and promotion.
- (ii) Provide regular training for all staff, in the form of induction, basic and advanced, on-job, refresher and retraining programmes, with particular emphasis on developing supervisory and managerial skills.

- (iii) Provide and/or upgrade port training facilities and resources (including training staff, materials and teaching media), appropriate to local needs and taking account of regional, national and other training establishments.
- (iv) Collaborate with and participate fully in international and regional training projects e.g. TRAINMAR, courses, to create a competent local training capability.
- (v) Maintain a training budget sufficient to provide a full range of training, following an annual training plan designed to meet fully the port's needs.

7. Strengthening of Relations between Ports and Their Hinterlands

62. For goods being imported to land-locked African countries from overseas, sea-ports are often the critical bottlenecks in the transit system. The land-locked countries, like other port users, require the following qualities: no port congestion and thus no congestion surcharge; adequate handling storage facilities for their cargo; facilities adopted to modern shipping and handling technology; minimal losses of cargo through loss, damage and deterioration, rapid transit through the port and reasonable charges for the services provided.

63. The challenge is that many projects are being undertaken in Africa ports used by land-locked countries to improve facilities, and to develop more commercial-oriented management practices. These actions will, as a corollary, benefit land-locked countries. Most African sea-ports are dependent on transit traffic and are aware that, in an era of increasing port-competition, it is necessary to develop as a service centre. Some of these ports have sought to improve the competitiveness of their services to land-locked countries.⁶ by responding more positively to the particular needs of land-locked countries with regard to issues as equitable financial arrangements for port services, and the clear allocation of responsibility for handling, storage and movement of cargo and adequate communications between sea-ports and inland commercial centres in land-locked countries. Specific problem-areas which will remain and challenge in this respect are merits for:

7.1 Storage facilities for cargo within and outside ports

64. Many ports provide storage facilities for their land-locked neighbours. Examples are: Dar-es-Salaam and Douala where facilities are outside the port area

⁶ There are seventeen corridors serving fifteen African land-locked countries.

for their land-locked Zambia/Burundi and Chad/Central African Republic respectively. The challenge in these cases is the number of days during which transit cargo can be stored free of charge, and the location of storage facilities and their utilisation. The crucial challenge is that when special facilities are provided the location has to be commercially viable for users and not involve financial losses for port authorities.

65. Some ports i.e. Abidjan and Lomé have established special organisations located in sea-port which take in storage function.

7.2 The development of dry-ports

66. A further initiative to improve port facilities for land-locked countries has been the development of dry-ports in transit and land-locked countries to facilitate through transit goods.

67. Some challenges in this area are that Government lack the co-ordinating and liaison mechanism and expertise required to spearhead the implementation by the dry-ports and to address effectively the legal/operational issues in order to ensure that their commercial viability would be guaranteed. Many countries in Eastern and Southern Africa namely: Kenya, Uganda, Tanzania, Botswana, Swaziland have made reasonable progress in establishment of dry ports.

68. Other issues that will remain a problem are the transit procedures and their facilitation and, coordination, customs transit regions, freight forwarding and related transit operations, transit insurance, and overall coordination of transit traffic.

69. Solution to these challenges should be through ports and their users' seminars and symposia at sub-regional/transit corridor levels. ECA plans to conduct in 1998 and 1999 a series of seminars on transit transport facilitation in collaboration with sub-regional organisations, corridor authorities and other UN agencies dealing with problems of land-locked countries.

8. Technological Changes

70. African ports will face major challenges in introducing appropriate port technology to meet changing trends in world shipping and cargo handling such as:

8.1 Introduction of mega-carriers

71. One of the biggest challenge that African ports will face in future is how to cope with the introduction of bigger vessels, notably the 5 000 and 6 000 TEU

ships and the services required for the growing market for the "hub and spoke" transshipment and the accompanied feeder operations. This will definitely have a negative effect on certain ports the status of which will have to be relegated from "main port" to "feeder port". The impact that mega-carriers will have on the transport industries, both international and domestic, for African countries will be significant.

72. At the opposite extreme, attempts by African countries to exclude such services in order to protect outdated, and therefore uncompetitive, transport operators and systems will only be detrimental in the long run to the commerce and economies of African countries. It will also push countries into less competitive operation positions relative to developed countries.

73. In spite of predictions that mega carriers would soon dominate world transport the fear that they will out-perform all other transport providers and therefore threaten their existence, may be premature.

8.2 Increasing dimensions of loading units on combined transport

74. A number of ECA surface transport activities during the last two decades have attached importance to combined transport which was seen by every African governments as one of the possibilities to release at least some pressure from the increasingly overburden road works. In the Economic Commission for Europe (ECE) region governments, in the last decade, were increasingly concerned about a proliferation of large than standard containers which could often be transported inland without conflicting with railway loading gauges, road traffic regulations and technical characteristics of inland waterways. Studies have been conducted all over the world in the early nineties to assess and explain the interests of some governments in questions linked to the standardization of a second generation of freight containers (ISO series 2).

75. The issue was discussed at seminar organised in Geneva in 1992, under the auspices of ECE, to consider the results of the studies undertaken world-wide in the economic and social consequences of the introduction of larger than assisting ISO standard containers and to determine whether standardization at the global level of new container generation, as discussed by ISO, would be justified on economic and social grounds or whether other possibly regional solution would be preferable.

76. The seminar recommended that the following principles should guide Governments and international organizations concerned in their approach towards acceptance and standardization of new dimensions of loading units which would be acceptable to shippers and the transport industry world-wide as well as to Governments responsible for inland transport infrastructure:

- (i) external dimensions of maritime and inland loading units should be compatible with each other and in line with future inland transport regulations in order to ensure an economic use of transport equipment in inland transport;
- (ii) external dimensions of loading units should, so far as possible, be compatible with foreseeable inland transport infrastructure for all major transport corridors;
- (iii) the intermodality of all loading units should be ensured for the total transport chain in order to allow easy transshipment between all modes of transport;
- (iv) internal dimensions of maritime and inland loading units should be based on internationally standardized packaging modules;
- (v) dimensional standardization criteria for application on a global level should be based on the requirements of a considerable proportion of cargoes transported and should not respond to specific trade needs only;
- (vi) loading units should allow mechanized or automatic loading and unloading procedures as modern production and distribution systems will increasingly require such features;
- (vii) new standards for loading units should be compatible, as much as possible, with existing standards and should be maintained over long periods of time so as not to jeopardize investments made in transport infrastructure, rolling stock, vessels and handling equipment;

77. The seminar concluded that for the foreseeable future the regular inland transport of loading units (containers, swap-bodies, etc.) with a length of 49' (14.90 m) and a width of 8'6" (2.60 m) would be virtually excluded in most countries in Africa, Asia, Europe and Australasia. Equally the 24'6" (7.43 m) half-size container proposed by the ISO would not be acceptable because of its width. It was also agreed that the report of the seminar be brought to the attention of all member countries as well as to the competent international organization, in this regard ECA prepared a document titled "**The Impact on Transport Systemes in Africa of New Dimensions for Containers**" (TRANSCOM/537 of November, 1991) and distributed it to all African countries for considerations and comments.

8.3 Changes in statistical and information developments

78. Every port should undertake an assessment of its statistical needs before the beginning of the next millennium and also plan to carry out periodical reviews in future. The assessment should look at data needs, priorities and physical, human and financial resources required to meet such needs. In particular, it should also examine the overall organisation of a port statistical system including that of how it fits into the national statistical services.

79. ECA conducted a comprehension study on transport data in 1992 for all modes including ports sub-sector. A report was prepared highlighting problems found when collecting, processing and disseminating transport data. The overall objective of the study in the case of ports was to improve the quality reliability and relevance of the system as a basis for better decision-making in support of operations and investment. As expected, the extent and quality of data collection and analysis was found to greatly between the various African ports. The majority of ports were found to be compiling basic data and performance indicators for the purposes of port management, control and planning. From the point of view of inter-country comparability, serious problems existed and still exist related to the fact that the scope of port activity, that is, the division of work between the Port Authority and Contractors varied. For example at that time Mombasa have been operating an authority port, responsible for cargo handling, thus the employment count produced by that port was a complete measure of human resources used to operate the port. At the other extreme, Abidjan was a "landlord" authority port, with all its cargo handling carried out by private companies. Also the definitions adopted by different ports varied.

80. To overcome some of the problems identified it is recommended that there is need to specify data needs and key indicators for ports. It would be vague to achieve that objective to disseminate the best practices and to encourage the adoption of practices and indicators adopted in the UNCTAD Manual on Uniform System of Port Statistics and Performance Indicators. The Port of Mozambique is a case in point when the UNCTAD approach is being successfully applied.

81. It should be noted that unless the problems of ports data collection and processing is solved, new technologies in information system such as internet and fido-net cannot be fully exploited by African ports although many African countries already have these systems in place.

IV. CONCLUSIONS AND RECOMMENDATIONS

82. Although some African ports are among the world's least efficient, there are examples where recent modernization and privatization have led to impressive improvements in port operations. Dissemination of good examples will encourage other governments to adopt similar measures. Port services cannot be considered independent from other distribution chain activities, but part of a system and the resulting system must be optimized. International trade has changed from commercial exchanges between nations to such exchanges in a much more integrated global context. Technologies are the birth certificates of port services because they determine those that can be offered, the markets in which they can participate and the institutional or regulatory framework needed. The regulatory framework can no longer give predominance to sociopolitical goals over those of a commercial nature. Market mechanisms and legal regimes must be joined to constitute a regulatory basis which controls the national economy instead of public-sector supervision. The continuous improvement of the quality port services will promote the competitive advantage of a port that would result in savings on the part of all sectors involved in the trade and transport activities. These and many other factors emphasize that ports have evolved from national to international industries.

83. It is recommended that while considering challenges facing African ports in the next millennium we must bear in mind that in today's deregulated, intermodal and electronically connected distribution functions, ports must have an institutional framework which permits the attainment of commercial objectives, facilitates private sector investment, allows users to have a voice in port matters, provides for managerial autonomy, improves the authority of directors to make commercial decisions, assigns performance accountability, rationalizes labour requirements, ensures that realistic investments are being made and promotes inter port and intraport cooperation.

84. It is, therefore, proposed that this seminar should possibly come up with an action plan covering the years 1998 to 2000 for tackling the challenges facing African ports in the next millennium. It is also suggested that another African Ports Seminar be held in the first quarter of the year 2000 to assess the extent to which African ports will be ready to meet challenges of the next millennium. In this regard, the ports should address fairly quickly those challenges relating to institutional reforms as well as those relating to maintenance, and safety as these could yield speedy results which will encourage further investments in ports infrastructure development.

ANNEX

LIST OF REFERENCE DOCUMENTS

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