PN-ABR-810

TANZANIA HARBOURS AUTHORITY
(THA)

PROGRAMME FOR TRANSPORT SECTOR RECOVERY

PORT SECTOR

4th December, 1987

1. INTRODUCTION

1.1 This paper has been prepared in order to present the case of the Tanzania Harbours Authority (THA) at the Donors Conference in Arusha on 14th and 15th December, 1987, to discuss the Recovery Programme for the Transport Sector in Tanzania.

1.2 The World Bank and the Ministry for Communications and Works are the main instigators of the Conference and the basis for the proceedings and discussions is the Document "Programme For Transport Sector Recovery", dated December 1987.

1.3 In this Document are identified what are considered to be omissions from current development programmes which are considered of sufficient urgency and importance to be included in a crash programme of additional aid. While the Bank has indicated its readiness to contribute to this aid package it has made it clear that multi-donor finance is required and donor support for this is best canvassed at a special conference.

1.4 In this paper THA's comments on the Bank's treatment of the Port Sector are given and proposals are made for modifications to the THA element of the Economy Recovery Programme as outlined in the Document.

1.5 In order to give a better appreciation of the arguments presented in this paper a summary is given below of the main current development projects of THA.

2. DEVELOPMENT PROJECTS

2.1 All the main projects are currently at Dar es Salaam. Below these are summarised with sufficient detail to indicate omissions or shortfalls in funding which might reduce the effectiveness of the projects.

(i) Conversion of Berths 9, 10 and 11 to a Container Terminal together with the construction of Ubungo ICD and the Kurasini Depot

The Contract for conversion of Berths 9, 10 and 11 into a Container Terminal together with the development of an ICD at Ubungo and a warehousing depot at Kurasini was let to the Kajima/Mitsui Consortium of Japan in 1985.
The International Development Agency (IDA) of the World Bank is funding the project as part of its current loan. Owing principally to the unfavourable change in the exchange rate between the SDR and the Japanese Yen there is now a deficit in the funding available to complete this project which if not corrected urgently will lead to a halt in the project which is now about 75% complete.

(ii) Rehabilitation of Berths 1-8

The Contract for rehabilitation of berths 1-8 was awarded to the Swedish/Norwegian Joint Venture SKANSKA/NOREMCO in December 1987.
Construction period 42 months with effect from 1st February 1987.
The project, mainly consisting of civil/electrical works (new

paving of roads and storage areas, dividing of sheds etc) is financed by Sweden and Norway.
Available funds are 124,2 Million Swedish Kronor.
There is a shortage of funds of approximately 45-50 Million Swedish Kroner to complete the entire programme.
Sweden has been approached to bridge the deficit and discussions are to be held in the beginning of 1988 to secure additional funds.

(iii) Grain Terminal

The Grain Terminal is financed by Government of Netherlands.
Estimated investment cost 44,8 Million Dutch Florines.
Contracts for civil, electrical and mechanical works were awarded in the beginning of December 1987.
Construction period 21 months with effect from 1st January 1988.

(iv) Rehabilitation of the Lighter Wharf

The new transit shed was handled over to THA on 30th June 1987.
Tender documents for phase II - paving and services - are prepared in order to obtain competitive tenders from competent international contractors.

(v) Rehabilitation of Kurasini Oil Jetty

Phase I of this project - financed by Norway - was completed in May 1986.
Phase II commenced in February 1987, construction period 490 days.
Estimated final Contract Sum is approximately 30 Million Norwegian Kroner.

(vi) Equipment

DANIDA and FINNIDA are financing the Container handling equipment for the new Container Terminal in the port and the inland depot at Ubungo.
SIDA has financed the new equipment obtained for Copper handling and some equipment for General Cargo handling.
The Italian Government is supporting a package covering miscellaneous new port equipment
The UK Government (ODA) is funding the provision of additional fork lift trucks for all ports.

(vii) Bandari College

NORAD (with the cooperation of ILO) is funding refurbisment of the buildings and technical assistance for improving the services of the training college.
IDA is financing the provision of new equipment.

3. COMMENTS ON DOCUMENTS TREATMENT PORTS SECTOR

3.1 The basis for THA's comments is Chapter V of the Technical Working Papers in which the appraisal of the Port's Sector is given in more detail.

Present Port Capacity (5.02)

3.2 The present port capacity is reflected by current (1986) level of throughput, i.e. 1.7 million tonnes of which about 0.45 million tonnes was containerised. As the container terminal is developing the container capacity is being marginally increased but a major improvment will not be shown until the Container Terminal is completed.

Capacity of Container Terminal when completed (5.03)

3.3 The capacity of the terminal is more likely to be dictated by the fluidity of movements on shore rather than the performance at the ship/shore interface. For this reason we consider that the capacity of the container terminal is overstated. Our own current estimate is based on assumptions about terminal storage capacity and container dwell time. Although in theory the transit time of containers through the terminal can be reduced to much lower values than obtain today (i.e. less than 10 days instead of more than 30 days averaged over all containers) the factors which influence this are largely outside THA's direct control, i.e.

- inland transportation
- documentation
- customs procedures
- off-port storage

Capacity of General Cargo Berths (5.04 and 5.05)

3.4 While it is considered that the capacity of the Container Terminal may have been overstated it is THA's view that the capacity of the general cargo berths, 1-8, may have been undervalued. The reason is probably the low average gang performance. This is a figure which may be appropriate to general break bulk cargo worked across out of date facilities. It is not valid for modernised berths in which a reasonable proportion of the cargo will be in bulk or homogenous form (e.g. grain and fertilizers). An average throughput of 200.000t to 250.000t annual throughput per berth may be more appropriate to these berths, i.e. a total throughput of 1,6 to 2.0 million tonnes per annum. The capacity of the 11 deep water berths would then be 3.0 to 3.5 million tonnes (and up to 4.0 million tonnes if the Lighter Wharf is made fully operational).

Container Terminal Equipment (5.07)

3.5 Equipment being provided for the Container Terminal under present contracts is correctly stated. This equipment is not likely to sustain container throughput of more than about 80.000 TEU in the early years of operation, although with acquired profiency it might in due course be extended to about 100.000 TEU. However, this would presuppose a low downtime factor for equipment.

3.6 It is more than likely that the container traffic growth will demand the procurement of additional container handling equipment on both the port terminal and the THA depots (at Ubungo and Kurasini).

3.7 When the traffic exceeds about 100.000 TEU per annum (now forecast to be around 1991/92 there will be pressure to have a 3rd ship-to-shore crane. Additional RTG's will probably be needed by 1990 or very soon after. Depending on the proportion of rail traffic a second rail mounted gantry crane may be required in the Rail Container Terminal. Additional transfer vehicles and fork lift trucks will also be needed and some replacements for the initial provisions will become due in the early 1990's.

3.8 In the short, and even medium terms, THA considers it prudent not to assume that the average container dwell time can be reduced below about 20 days. The Terminal capacity should not, therefore, be considered to be more than about 75.000 TEU (or 0,75 million tonnes) for some years ahead unless the physical storage space is increased. This level of traffic is expected to be reached around 1990. It is important, therefore, that further development of the container terminal is implemented by this time (i.e. during the next two years).

3.9 It is relevant to note here that the 1982 Berths 9, 10 and 11 Study on which the present World Bank Loan was based recommended that Phase 3 of the project (the present loan covers Phase 1 and part of Phase 2) should be undertaken by 1990. It is also relevant to draw attention to the container traffic which is closely following the 1982 central forecast in total. See fig 1.

Technical Assistance and Training for New Equipment (5.08)

3.10 It is generally true that the technical assistance and training for new equipment being provided under the current port development programme is covered by various donors funding the equipment. However, some gaps have been identified)e.g. with the Kone ship-to-shore container gantry cranes) but arrangements are already being made for dealing with these.

Workshop Facilities for Equipment Maintenance (5.09)

3.11 The Bank has correctly identified a deficiency in the present development projects in respect of the Central Workshop. The additional funding required for the Central Workshop and the proposed new Satellite Workshops can, however, only be regarded as provisional as these matters are still under discussion. The intention is to set up a pilot Satellite Workshop and the experience of running this will decide wether to proceed with further similar or modified facilities.

3.12 The amount of money which the Bank has indicated for Technical Assistance for the Central Workshop will not be sufficient to meet the identified requirement at the February 1987 Donors Project Review Meeting.
It is estimated that an additional US $ 0.4 million will be required.

Rehabilitation of Existing Equipment (5.10)

3.13 A study was carried out in 1984 on the feasibility of rehabilitating cargo handling equipment. This study concluded that:

(i) no equipment more than 10 years old should be considered suitable for rehabilitation

(ii) mobile equipment to be rehabilitated should include 60 Hyster fork lift trucks, 4 Hyster container handling trucks and 11 Jones Mobile Cranes.

3.14 All the 60 Hyster fork lift trucks in this programme were acquired in 1977 and are now, therefore, more than 10 years old. Therefore the rehabilitation programme may need to be reveiwed.

3.15 Refurbishing of the Jones Cranes is currently under discussion with British ODA.

Operational Strategy (5.11)

3.16 The strategy outlined by the Bank is good but its effective implementation may take longer than expected. The problems of documentation have still to be solved for transit cargoes. Dwell time in the port may still be high even if wagon availability is improved. There is still no sign of efficient container services to be introduced on either railway system in the near future.

Warehousing of General Cargo (5.12 and 5.13)

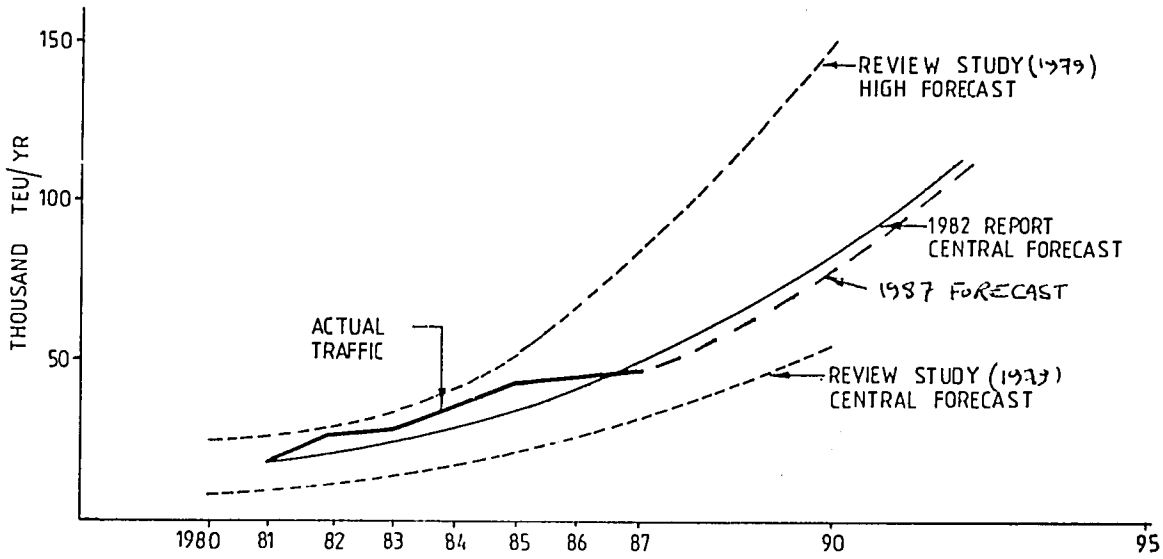
3.17 THA agrees with a policy of providing warehousing outside the port and to use port storage for fast moving transit cargo only. In addition to depots or cargo centres belonging to landlocked countries (e.g. Zambia and Malawi) port users and institutions like the railway authoritis are urged to provide their own facilities outside the port for both general cargo and containers. Particularly useful would be off-port empty container storage facilities.

Lighter Wharf (5.14 and 5.15)

3.18 Although the justification for including the rehabilitation of the Lighter Wharf in the World Bank Loan was made on the basis of it providing additional port capacity during the redevelopment of Berths 9, 10 and 11 it should not now be regarded as an unnecessary project.

3.19 The programme for the rehabilitation of Berths 1 to 8 will take place starting within the next year and extending over about 4 years. The urgent completion of the Lighter Wharf is, therefore, required to cover berths which are taken out of commission during this period.

3.20 The role of the Lighter Wharf has been seen in recent years to be that of a saftey valve to accomodate periods of excess traffic to avoid port congestion. The continuing uncertainty about additional transit traffic diverted from the frontline



DAR ES SALAAM PORT CONTAINER TRAFFIC FORECAST

Fig. 1

states makes this role even more important to the region.

Port of Tanga (5.16)

3.21 The Bank has seen fit to propose the inclusion of the cost of urgent repairs to the lighter quay and to the fertilizer jetty in the Recovery Programme. The cost of urgent improvements are, however, omitted, the argument being that a proper feasibility study needs to be undertaken before this work can be covered. THA belives that this programme will mean that severe problems continue at Tanga for a number of years, particulary with regard to the handling of container traffic. As most of Tanzania's coffee exports go through Tanga the effect on Tanzania economy could be serious.

3.22 The West German Government has shown an interest in funding improvments to this coffee export corridor and is reported to be arranging a study. THA, however, has no confirmation that this study will take place or wether it will lead to essential improvements.

4. PROPOSED AMENDEMENTS TO THE RECOVERY PROGRAMME FOR THE PORT SECTOR

Container Terminal and ICDs

4.1 The completion of Berths 9, 10 and 11 Container Terminal, associated depots and Dockyard Access Road is essential to the effectiveness of this project. The approximate shortfall in funding of US $ 8 million must be found as a matter of urgency if this work is not to be halted. If it is delayed the deficiency in funding will be even greater.

4.2 The present development of Berths 9, 10 and 11 was expected to be followed by another phase of development before 1990. Growth of container traffic is expected to exceed the capacity of the new terminal before this date. In the absence of the next phase of development it will be essential to provide some additional capacity within the scope of current project. This can must readily be done by carrying some additional paving including another container block stack.

4.3 One of the technical deficiencies of the new Container Terminal is now considered to be the quay fendering. Improvments to this are recommended to safeguard the major investment in Ship-to-Shore container gantry cranes. The engineering analysis has not been carried out but a preliminary allowance of US $ 0.7 million is advised.

Rehabilitation of Lighter Wharf

4.4 The rehabilitation of the Lighter Wharf is only partially completed. Without the pavings and services the project is rendered useless and new equipment is needed to make it operationally viable. Completion of this facility in time to benefit the port during the redevelopment of Berths 1-8 considered to be of vital importance. The foreign currency element of the civil works is about US $ 1.2 million and for a minimum requirement of floating craft (lighters and tugs) US $ 3.3 million would be required.

Navigational Aids for the Port

4.5 Navigational aids for Dar es Salaam Port were originally included in the Italian aid package together with other port equipment. The scope of this aid has had to be reduced and the provision of navigational equipment is no longer certain. The lack of good navigational marks and light in the Entrance Channel limits its use and would be a bottleneck were traffic through the port to increase. This item should therefore be included in the Recovery Programme in the event Italy is unable to provide adequate funding. The equipment is estimated to cost US $ 1.7 million.

Technical Assistance to Central Workshop

4.6 The Technical Assistance for Central Workshop, estimated at US $ 0.41 million is now considered inadequate to cater for all essential requirements. The updated cost is now estimated to be US $ 0.8 million.

Storage facilities for equipment spare parts

4.7 Storage for cargo handling equipment spare parts has emerged as a deficiency in a number of current projects. The Container Terminal Workshop only has provision for parts required during normal servicing of equipment but not for large items and those for which the need does not arise frequently. Most equipment spares are at present stored outside the port at Ilala and at Gerazini and this is one factor in the present inefficient performance of the Central Workshop. This deficiency can be largerly remedied by providing a central equipment spare parts store adjacent to the Central Workshop making use of the existing BP shed. The project has not been planned in any detail but an allowance of US $ 0.5 million should cover all modifications to the shed and to the surrounding area. The project is urgent in view of the container handling equipment which is now being delivered to the Container Terminal and related to other current port developments.

Kurasini Oil Jetty

4.8 The Kurasini Oil Jetty rehabilitation has some deferred work which was part of thr original project but which has been omitted due to insufficient funding. US $ 1.0 million would be needed to complete the present phase of the project. Discussions are still being conducted with NORAD to include all the deferred work.

The total requirement for the Port Sector of the Recovery Programme is as shown on Annex 1.

ANNEX 1

TANZANIA HARBOURS AUTHORITY

PROPOSED ADDITIONAL INVESTMENT FOR THA

Items	Estimated Costs (US $ Million)
1. Programme as on PTSR Document	
1.1 Construction of Satellite Workshops	0.70
1.2 Equipment for Satellite Workshops	0.50
1.3 Additional Equipment for Central Workshop	0.20
1.4 Technical Assistance to Satellite Workshops	0.53
1.5 Technical Assistance to Central Workshop	0,41
1.6 Urgent Repairs of Port of Tanga	2.10
1.7 Feasibility Study of Port of Tanga Development	0.30
1.8 Regional Containerisation Development Study	0.30
Sub Total	US $ 5.04 Million
2. Additional Identified Requirements	
2.1 Completion of Berths 9,10 and 11 (Civil Works & Consultancy Services)	8.00
2.2 Rehabilitation of Lighter Wharf - Paving and Services	4.50
2.3 Central Workshop - Spare Parts Storage facilities	0.50
2.4 Additional Technical Assistance to Central Workshop	0.40
Sub Total	US $ 13.40 Million
TOTAL	US $ 18.44 Million

NOTE

Items discussed in para 4.2, 4.3, 4.5 and 4.7 not included above.