



REPORT OF THE SECURITY COUNCIL SPECIAL MISSION  
ESTABLISHED UNDER RESOLUTION 326 (1973)

# **SECURITY COUNCIL**

## **OFFICIAL RECORDS**

TWENTY-EIGHTH YEAR  
SPECIAL SUPPLEMENT No. 2

UNITED NATIONS



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New York, 1973

#### NOTE

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S/10896 and Corr.1 and Add.1

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LETTER DATED 6 MARCH 1973 FROM THE MEMBERS OF THE SECURITY COUNCIL  
SPECIAL MISSION ESTABLISHED UNDER RESOLUTION 326 (1973) TO THE  
PRESIDENT OF THE SECURITY COUNCIL

We have the honour to submit herewith the report of the Security Council Special Mission prepared pursuant to paragraph 9 of resolution 326 (1973) and paragraph 5 of resolution 327 (1973).

(Signed) Chaidir Anwar SANI (Indonesia), Chairman

Peter JANKOWITSCH (Austria)

Javier PEREZ DE CUELLAR (Peru)

Rahmatalla ABDULLA (Sudan)

## I. INTRODUCTION

### A. Establishment of the Special Mission

1. In a letter to the President of the Security Council dated 24 January 1973 (S/10865), the Permanent Representative of Zambia to the United Nations requested an urgent meeting of the Council to consider "serious acts of aggression" against Zambia "committed by the white minority, illegal and racist régime in the British colony of Southern Rhodesia". The Permanent Representative further stated that, "in collusion with the fascist Government of South Africa, the panic-stricken illegal régime closed the border between the British Colony of Southern Rhodesia and Zambia and imposed an economic blockade" on Zambia on 9 January 1973. The illegal and racist régime had, since the economic blockade, committed numerous acts of subversion and sabotage against Zambia and its troops, reinforced by 4,000 others from South Africa, had been deployed along the 400 mile-long border. In the view of the Zambian Government, the foregoing constituted a serious threat to international peace and security.
2. In a letter dated 23 January 1973 (S/10866), the Permanent Representatives of Guinea, Kenya and the Sudan to the United Nations requested an urgent meeting of the Security Council to consider "the explosive situation along the Zambian border which threatens the peace and security of the whole area". The Permanent Representative of Yugoslavia to the United Nations addressed a similar request to the President of the Council on 26 January, to consider "the situation created on the borders of Zambia as a result of the economic blockade and military moves undertaken by the illegal, racist régime of Southern Rhodesia" (S/10869).
3. In a letter dated 26 January 1973 (S/10870), the Permanent Representative of the Republic of South Africa to the United Nations transmitted a message from the South African Minister for Foreign Affairs, which with reference to the above-mentioned communication of the Permanent Representative of Zambia dated 24 January 1973, drew attention to a statement by the Prime Minister of South Africa, Mr. B. J. Vorster, regarding the complaint by Zambia. The statement repeated an earlier denial that 4,000 South African troops had been deployed along the border between Zambia and Southern Rhodesia.
4. The Security Council considered the item entitled "Complaint by Zambia" at its 1687th to 1691st meetings, held from 29 January to 2 February 1973. In accordance with Article 31 of the United Nations Charter, the following Member States were invited to participate in the discussion, upon their request, without the right to vote: Algeria, Cameroon, Chile, Cuba, Egypt, Ghana, Guyana, Morocco, Senegal, Somalia, United Republic of Tanzania and Zaire.
5. At the 1687th meeting, speaking before the Security Council, the representative of Zambia stated that the closure of the border was an act of aggression by a rebel régime whose racist policies had been condemned and against which the United Nations had imposed mandatory sanctions. It was aimed at inflicting serious danger on the Zambian economy in order to stop Zambia from supporting the liberation movement and submit to the authority of the Smith régime. He added that the Salisbury authorities

had acted in collusion with the racist régime in Pretoria which had itself issued threats and committed violations against Zambia. Furthermore, land mines had been planted since 1964 by the two racist régimes in Zambian territory. South African troops were actually soldiers using military uniforms and carrying lethal weapons. They had repeatedly carried out military incursions into Zambia. He enumerated a number of recent incidents involving border crossings, the firing of shots against peaceful villagers and the planting of land mines in Zambian territory. These incidents had caused a number of deaths and injuries, and were likely to increase. The present trend, should it continue, would undoubtedly lead Southern Rhodesia to contemplate the bombing of targets in Zambia. The acts of Southern Rhodesia and its threat to use force represented a major escalation of the conflict in southern Africa. The representative of Zambia urgently requested that Southern Rhodesia be forced to stop its punitive raids into Zambia, and that South Africa be forced to remove its forces from Southern Rhodesia immediately. Referring to the mandatory sanctions against Southern Rhodesia, the Zambian representative stated that his Government had decided once and for all to establish permanent alternative routes for its imports and exports, and to abandon the southern route altogether so as not to allow any excuse for the non-application of mandatory sanctions.

6. In a letter dated 29 January 1973 (S/10877), the Permanent Representative of Zambia transmitted to the Security Council a message from Mr. Kenneth D. Kaunda, President of the Republic of Zambia, stating that tension continued to rise as more people were killed by land mines planted on Zambian soil by the Ian Smith régime and by South Africa. These acts of aggression underlined the grave threat posed to international peace and security. The message added that the British Government had replied with "a loud silence" on the aggressive activities of their illegal colony. He urged the Council to consider action to put an end to this critical situation and to ensure the withdrawal of South African troops, since their military presence in Southern Rhodesia was one of the major obstacles to the efforts designed to end the Smith rebellion.

7. At the 1690th meeting on 1 February, the representative of the Sudan introduced two draft resolutions (S/10875 and S/10876) co-sponsored by Guinea, Kenya, the Sudan and Yugoslavia. The representative of the Sudan stated that the first draft resolution contained proposals regarding primarily the political aspects of the complaint by Zambia, while the second draft resolution pertained to assistance to Zambia. At the 1691st meeting, the draft resolutions were amended. In addition, India and Indonesia joined as co-sponsors in these draft resolutions.

8. The Security Council then proceeded to vote on these draft resolutions. The draft resolution contained in document S/10875/Rev.1 was adopted by 13 votes to none, with 2 abstentions as resolution 326 (1973). The draft resolution contained in document S/10876/Rev.1 was adopted by 14 votes to none, with 1 abstention as resolution 327 (1973).

9. The operative paragraphs of the resolutions adopted by the Security Council read as follows:

#### Resolution 326 (1973)

1. Condemns all the acts of provocation and harassment, including economic blockade, blackmail and military threats, against the Republic of Zambia by the illegal régime in collusion with the racist régime of South Africa;

2. Condemns all measures of political repression that violate fundamental freedom and rights of the people of Southern Rhodesia (Zimbabwe), in particular, the recent measures of collective punishment;

3. Calls upon the Government of the United Kingdom to take all effective measures to put an end to such actions by the illegal and racist régime of Southern Rhodesia and that of South Africa;

4. Reprets that measures so far taken have failed to bring the rebellion in Southern Rhodesia (Zimbabwe) to an end;

5. Condemns the continued presence of South African military and armed forces in Southern Rhodesia contrary to Security Council resolution 277 (1970);

6. Demands the immediate and total withdrawal of South African military and armed forces from Southern Rhodesia and from the border of that Territory with Zambia;

7. Calls upon the Government of the United Kingdom, as the Administering Authority, to ensure the effective implementation of paragraph 6 of this resolution;

8. Requests the Security Council Committee established in pursuance of resolution 253 (1968) concerning the question of Southern Rhodesia to expedite the preparation of its report undertaken under Security Council resolution 320 (1972), taking into account the recent developments in Southern Rhodesia;

9. Decides to dispatch immediately a special mission, consisting of four members of the Security Council, to be appointed by the President of the Security Council after consultations with the members, to assess the situation in the area, and requests the mission so constituted to report to the Council not later than 1 March 1973;

10. Calls upon the Government of Zambia, the Government of the United Kingdom and the Government of South Africa to provide the mission with the necessary co-operation and assistance in the discharge of its task;

11. Decides to remain actively seized of the matter.

#### Resolution 327 (1973)

1. Commends the Government of Zambia for its decision to sever all remaining economic and trade relations with Southern Rhodesia in compliance with the decisions of the Security Council;

2. Takes cognizance of the special economic hardships confronting Zambia as a result of its decision to carry out the decisions of the Security Council;

3. Decides to entrust the special mission, consisting of four members of the Security Council, referred to in paragraph 9 of resolution 326 (1973), assisted by a team of six United Nations experts, to assess the needs of Zambia, in maintaining alternative systems of road, rail, air and sea communications for the normal flow of traffic;

4. Further requests the neighbouring States to afford the mission all co-operation in the discharge of its task;

5. Requests the mission to report to the Security Council not later than 1 March 1973.

10. Speaking at the conclusion of the 1691st meeting, the President of the Security Council referred to the provisions of paragraph 9 of resolution 326 (1973) stating that in response to the urgency of the situation, he would initiate consultations immediately with the aim of constituting the special mission and ensuring that it was dispatched to Zambia as soon as possible.

11. On 5 February 1973 the President of the Security Council, issued a note (S/10880), in which he reported that after consultations with the members of the Council in accordance with the terms of paragraph 9 of resolution 326 (1973), agreement had been reached on the following composition of the Special Mission: Austria, Indonesia, Peru, and the Sudan. The Special Mission was constituted as follows:

Mr. Chaidir Anwar Sani (Indonesia), Chairman  
Mr. Peter Jankowitsch (Austria)  
Mr. Javier Perez de Cuellar (Peru)  
Mr. Rahmatalla Abdulla (Sudan)

12. The following United Nations experts to assist the Special Mission in the implementation of its mandate under resolution 327 (1973) were designated by the Secretary-General:

Mr. Gordon Goundrey (Canada), development economist, former Senior Economic Adviser to the Government of Zambia, and Professor of Economics at the Memorial University of Newfoundland, Canada (team leader);

Mr. Claude Brisson (France), Senior Adviser in Transport Planning, Director at the Bureau Central d'Etude de l'Equipement d'Outre-Mer (BCEOM) and Adviser to the 1969 BCEOM Zambia Transport Planning Mission;

Mr. John Cella (United States), Senior Technical Adviser in Transport to the United Nations Development Programme;

Mr. Miloslav Dancak (Czechoslovakia), Interregional Air Economics Adviser with the International Civil Aviation Organization;

Mr. Stanley Hayden (United States), Senior Adviser in Management of Transport Operations with the Permanent Mission in Eastern Africa of the International Bank for Reconstruction and Development, Nairobi;

Mr. J. V. Mettam (United Kingdom), Expert in Port Facilities and Project Director of the UNDP/IBRD Dar es Salaam Port Study Project.

13. The Secretary-General also assigned Secretariat staff to assist the Special Mission and to accompany it on its visits.

## B. Terms of reference and procedure

14. The Special Mission's terms of reference as determined by the Security Council were set out in paragraph 9 of resolution 326 (1973) and paragraph 3 of resolution 327 (1973), namely "to assess the situation in the area" and "to assess the needs of Zambia in maintaining alternative systems of road, rail, air and sea communications for the normal flow of traffic".

15. Prior to its departure from New York, the Special Mission considered the question of its terms of reference and decided that in implementing its mandate under resolutions 326 (1973) and 327 (1973) it should be guided by relevant provisions of preambular and operative parts of these resolutions. The Special Mission understood that its tasks under resolution 326 (1973) included assessment of both political and military aspects of the situation in the area covered by this resolution, as well as of prospects for lessening tension and eliminating threats to international peace and security in this area.

16. The Special Mission also agreed on certain procedures and methods of work for the implementation of the terms of reference. It decided that it would visit the United Kingdom, Zambia, the United Republic of Tanzania and Kenya in pursuance of its mandate. During these visits the Special Mission would hold consultations with Governments and other authorities concerned, visit specific areas and receive oral or written statements and other documentary evidence which might be relevant to its mandate.

17. The Special Mission agreed that for the purposes of discharging its mandate under resolutions 326 (1973) and 327 (1973) it would address a communication to the Government of the Republic of South Africa. Furthermore it was agreed to address communications to the Governments of Malawi and Zaire in accordance with the provisions of resolution 327 (1973).

18. The Special Mission also agreed that it would seek the co-operation of two intergovernmental organizations in the fulfilment of its task, namely, the Commonwealth Secretariat in London and the East African Community in Nairobi and Dar es Salaam.

19. With regard to reporting to the Security Council under its resolutions 326 (1973) and 327 (1973) the Special Mission agreed that it should be done simultaneously, bearing in mind the interrelated nature of the issues involved.

20. In view of the complexity of the problems arising from the authorization to assess the needs of Zambia in maintaining alternative systems of communications, the Special Mission came to the conclusion that this assessment would not be done by 1 March 1973, as requested in resolution 327 (1973). In this connexion, on 20 February 1973 the Chairman of the Special Mission sent the President of the Security Council a telegram in which the Special Mission informed him that in view of the complex nature of its mandate under resolution 327 (1973) it could not report to the Council by 1 March 1973 and requested a postponement until 8 March 1973.

21. Following receipt of this telegram, the President of the Security Council held consultations with the members of the Council. As a result of these consultations, the members of the Council agreed to accede to the above request.

Accordingly, the date for the submission of the Special Mission's report was extended to 8 March 1973 (see S/10886).

### C. Record of activities

22. Before leaving New York, the Special Mission held two meetings at Headquarters on 6 and 7 February 1973, to discuss the issues arising from its mandate under resolutions 326 (1973) and 327 (1973) and to make the necessary preparations for its journey and its work programme. At the first meeting, held in the presence of the President of the Security Council, the members of the Special Mission elected Ambassador Chaidir Anwar Sani, Permanent Representative of Indonesia to the United Nations, as their Chairman. The Mission decided that its itinerary would include the United Kingdom, Zambia, Kenya, and the United Republic of Tanzania. The Special Mission also decided that it would go to Southern Rhodesia if the United Kingdom Government, as the Administering Authority, arranged such a visit.

23. Before his departure from New York, the Chairman of the Special Mission held consultations with the President of the Security Council and Permanent Representatives of several Member States concerned with the situation which the Mission had been directed to assess.

24. The Special Mission left New York on 8 February for London. In the morning of 9 February the Special Mission held discussions with officials of the British Foreign and Commonwealth Office, first with Lady Tweedsmuir, Minister of State, and later with a group of British experts and specialists on problems of southern Africa under the Chairmanship of Mr. A. Campbell, Assistant Under-Secretary. In the afternoon, the Special Mission held a meeting with a group of Commonwealth Secretariat officials headed by Mr. Arnold Smith, Commonwealth Secretary-General and Sir John Carter, Chairman of the Commonwealth Sanctions Committee.

25. The Special Mission left London on 10 February and arrived at Lusaka, Zambia on 11 February, where it was welcomed by Mr. E. H. K. Mudenda, Minister for Foreign Affairs, Mr. A. J. Soko, Minister for Trade and Industry and other high officials of the Zambian Government and the United National Independence Party. The Special Mission was also met by almost 3,000 people waving placards condemning racism and the illegal régime in Southern Rhodesia and calling on the United Nations to take speedy and effective action.

26. On 12 February, the Special Mission held a morning session with United Nations experts appointed under resolution 327 (1973) to make plans for their work programme. On the same day the Special Mission held meetings with officials of the Zambian Government. In the morning, it met in full session with a Zambian ministerial delegation headed by Mr. E. H. K. Mudenda, the Minister for Foreign Affairs and including the Ministers of Defence, Home Affairs, Finance, Power, Transport and Works, and Trade and Industry, as well as the Secretary-General to the Government. In the afternoon, the Special Mission received a briefing on the military situation on Zambia's borders from Mr. A. G. Zulu, Minister of Defence, assisted by officials of the Ministry. Experts of the Special Mission met a group of Zambian governmental economic officials under the chairmanship of Mr. A. H. Milner, Secretary-General to the Government. Later, the Members of the Special Mission visited the African Liberation Centre at Kamwala in Lusaka where



it was greeted by Mr. Banda, a Zambian government official in charge of the affairs of the liberation movements, and by representatives of the movements.

27. On 13 February, the Special Mission embarked on a two-day trip along the Zambian side of its western and southern borders in a special aircraft of the Zambian Air Force, accompanied by Mr. A. G. Zulu, Minister of Defence, Mr. L. Chanufu, Minister for Home Affairs and other senior officials. It first visited the Meheba refugee camp near Solwezi and then flew along the Zambian borders with Angola, Namibia and Botswana, as well as the eastern portion of the border with Southern Rhodesia. After spending the night in Livingstone at Victoria Falls, on 14 February, the Special Mission visited the nearby bridge connecting Zambia with Southern Rhodesia and toured the sites of three land mine explosions near the Zambian-Rhodesian border at Kazungula. It also inspected the area where the borders of Zambia, Southern Rhodesia, Botswana and Namibia meet. The group then reboarded its aircraft to fly along the remaining portion of Zambia's border with Southern Rhodesia and part of the border with Mozambique.

28. In the morning of 15 February, the Special Mission visited the Lusaka University Hospital, where it observed the victims injured in land mine explosions. After that, the Special Mission was taken by helicopter to Chirundu, where it inspected the site of an earlier land mine explosion and that of one which had occurred only 20 minutes before its arrival. It also visited Siavonga on the Kariba Lake, where it met the Governor of the district and saw the victims of this latest incident in the Mtendere hospital near Chirundu. Later that same day, the Special Mission was received by Mr. Kenneth D. Kaunda, President of the Republic of Zambia.

29. On 16 February, the Special Mission flew to Dar es Salaam, United Republic of Tanzania, where it was welcomed by the Junior Minister of Health, Mr. Nyangany, and the Principal Secretary to the Ministry of Foreign Affairs, Mr. A. B. Nyakyi. That afternoon the Special Mission met a group of Tanzanian governmental officials and economic specialists headed by Mr. Nyakyi.

30. On 17 February, the Special Mission was received for a discussion with the Prime Minister of the United Republic of Tanzania, Mr. Rashid M. Kawawa, accompanied by the Minister of Finance, the Junior Minister of Health and other high officials of the Tanzanian Government. Later the same day the Mission members made a tour by boat and car of the Dar es Salaam port facilities including the Ubungo Depot.

31. On 18 February, the Special Mission travelled by air from Dar es Salaam to Nairobi, Kenya, where it was welcomed on its arrival by the Chief of Protocol, Mr. Gachukia.

32. On 19 February, the Special Mission held a meeting with a group of senior officials of the East African Community headed by Mr. C. G. Maina, Secretary-General of the Community.

33. On 20 February, the Special Mission held two meetings with officials of the Government of Kenya: first, with Mr. Eboroge Mungai, the Minister for Foreign Affairs, and senior officials of the Ministry; and secondly, with Mr. Omolo Okero, the Minister for Power and Communications, and top officials of the Ministry.

34. On 21 February, the Special Mission having concluded its visit to the countries involved in the implementation of the Mission's mandate, left for New York.

35. The report prepared by the Special Mission under resolutions 326 (1973) and 327 (1973) was approved on 6 March 1973.

## II. VISIT TO THE UNITED KINGDOM

36. In view of the primary responsibility of the Government of the United Kingdom, as the Administering Authority, over its colony of Southern Rhodesia, the Special Mission began its activities with a discussion with the Government of the United Kingdom of the issues arising from resolutions 326 (1973) and 327 (1973), having in mind that resolution 326 (1973) specifically called upon that Government to provide the Special Mission with the necessary co-operation and assistance in the discharge of its task.

37. On 9 February 1973, the Special Mission held discussions with officials of the British Foreign and Commonwealth Office, first with Lady Tweedsmuir, Minister of State, and later with a group of experts under the chairmanship of Mr. A. Campbell, Assistant Under-Secretary.

### A. Meeting with Lady Tweedsmuir, the Minister of State, at the British Foreign and Commonwealth Office

38. At the meeting with Lady Tweedsmuir, the Special Mission indicated its interest in obtaining information from the United Kingdom as administering Power, with a view to assessing the situation, as specified in the Security Council resolution. It requested the assistance of the United Kingdom in carrying out its tasks and in exploring the possibility of visiting Southern Rhodesia.

39. The Minister of State stated that the United Kingdom had welcomed the reopening of the border by the Southern Rhodesian authorities. The fact that Zambia had itself decided to close the border was entirely a matter for its own decision. The closure was expected to bring some difficulties for Zambia, but the matter remained Zambia's internal affair. The United Kingdom was interested in the lowering of tension on the Zambezi river since any confrontation in that area had the seeds of a much more serious conflict in Africa. It had counselled moderation on the Smith régime, as far as it was able to do so, since it had no actual representation on the ground. The reopening of the border by Southern Rhodesia had greatly helped lessen the tension in the area. On the other hand, tension would be lessened if "terrorist" attacks could be kept in abeyance. In the long term, the elimination of tension depended on a freely agreed settlement within Southern Rhodesia, in accordance with the five principles advocated by the United Kingdom. Unless there was a settlement, the situation was more likely to lead to confrontation and violence. It was also stated, that, if no agreed settlement was reached, there would be a progressive movement towards apartheid in Southern Rhodesia. However, the presence in the border areas in the north of small numbers of South African police was not considered one of the major factors in that regard.

40. The Special Mission pointed to the presence of South African military and armed forces in Southern Rhodesia and drew attention to the provision of resolution 326 (1973), calling upon the United Kingdom to ensure the withdrawal of those forces. In reply, the Minister of State stated that they had heard the report

that 4,000 troops from South Africa were stationed in Southern Rhodesia. However, the South African Government had denied those reports. The United Kingdom understood that South African police might have been sent and had protested their presence. It continued to do so from time to time. The United Kingdom had no reason to doubt the denial of the South African Government concerning the presence of military forces. It would take very seriously the actual presence in Southern Rhodesia of a large number of South African troops. The number of police was considered to be smaller than 4,000.

41. The Minister of State recalled that the United Kingdom was trying to persuade the Rhodesian régime to agree to the 1971 Settlement Proposals. 1/ Although it had responsibility for Southern Rhodesia, it had had no responsibility internally for many years and could not force a settlement. It was for the "Rhodesians" themselves to try and get together in their own country and to discuss a solution to the problem. Mr. Smith had to meet the Africans within this own country for that purpose. The United Kingdom had encouraged contacts between the Rhodesian régime and all kinds of African opinion, including the African National Council. Contacts were beginning to be made and the Minister hoped that they would continue. All parties in the United Kingdom were united in their belief that the issue should not be settled by force, but by negotiation.

42. The Minister of State maintained that the United Kingdom was keeping the sanctions while many other countries were breaking them. She confirmed that a naval patrol was still being kept for the surveillance of the Port of Beira. The Beira Patrol continued to operate effectively even after the withdrawal of an air contingent which had been stationed at Majunga in Madagascar. No evidence existed that oil had reached Southern Rhodesia through Beira, although there might be other ways in which petroleum products were getting into Southern Rhodesia.

43. With reference to the request of the Special Mission to visit Southern Rhodesia, the Minister stated that such a request could not be implemented since the United Kingdom had no power on the ground. It was stated that Southern Rhodesia had had internal self-government since 1923 including the right to refuse entry to people. The unilateral declaration of independence by the Smith régime was a rebellion against the British Crown. In view of the state of rebellion, the United Kingdom Government was not in a position to provide entry for the Special Mission to Southern Rhodesia.

B. Meeting with Mr. A. Campbell, Assistant Under-Secretary and other officials of the Foreign and Commonwealth Office

44. Immediately after meeting Lady Tweedsmuir, the Special Mission held a morning session with the officials of the Foreign and Commonwealth Office under the chairmanship of Mr. A. Campbell, Assistant Under-Secretary. In the course of the meeting, these officials dealt mainly with the following points.

45. The United Kingdom officials stated that the United Kingdom contributed to the effectiveness of the sanctions through its participation in both the Commonwealth Sanctions Committee and the Security Council Committee established in pursuance of resolution 253 (1968) concerning the question of Southern Rhodesia.

46. The United Kingdom recognized the desire of the Zambian Government not to put Zambia and its economy at risk. It also recognized that Zambia's decision

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1/ See Official Records of the Security Council, Twenty-sixth Year, Supplement for October, November and December 1971, document S/10405.

contributed to the effectiveness of the sanctions and the implementation of the resolutions of the Security Council. However, it was for Zambia to decide what its needs were and what assistance it would require from the United Kingdom.

47. The United Kingdom was providing approximately £7 million in technical assistance to Zambia. That included the building of a power-house on the north bank of the Zambezi river. In addition, the United Kingdom had granted contingency aid to Zambia, including an airlift of oil. Although the United Kingdom did not feel bound to provide contingency aid at the present juncture, it would consider any requests to that effect from Zambia.

48. The Officials of the Overseas Development Administration provided the Special Mission with more details on United Kingdom assistance to Zambia. They stated that the overriding requirement in recent years had been manpower. Because of the level of its mineral exports and the price of copper on the world market, Zambia did not qualify for capital aid to the same extent as other developing countries. The amount spent by the United Kingdom on expatriate officers working in education, training, etc. was approximately £4 million per annum. The expatriates whose number was 2,370 were directly employed by the Zambian Government. Discussions were held with the Government of Zambia regularly to decide on the number of categories of expatriate staff needed by Zambia. In addition, the United Kingdom sent a number of advisers to work in various capacities and received a number of Zambians for training in the United Kingdom. Some funds were allocated for research and other scientific work in Zambia. The Commonwealth Development Corporation which operated independently but drew most of its funds from the Overseas Development Administration had a considerable investment in Zambia. The United Kingdom had assumed responsibility vis-à-vis the World Bank with regard to the construction of the Kariba-North power scheme. This involved a commitment of £15 million over 15 years. In addition, the Government of Zambia had been relieved of certain pension obligations towards expatriate officers employed by it in the past.

49. The United Kingdom had discussed with the Zambian Government the effects of the latest developments and the economic difficulties faced by Zambia. While no final conclusions had been reached, the United Kingdom had every intention of maintaining its present programme of aid, as well as its long-term plans. Any requests which might be put to it by Zambia, given the new situation, would be considered. However, the United Kingdom had its restraints in the extent of aid. Every year a decision was made as to the amount of aid, after careful consultations and consideration of the requests made by all Governments.

#### C. Meeting with officials of the Commonwealth Secretariat

50. On 9 February, the Special Mission held a meeting with the Secretary-General of the Commonwealth, Mr. Arnold Smith, the Chairman of the Commonwealth Sanctions Committee, Sir John Carter, and other officials of that organization. The Mission conveyed its request for assistance in carrying out the mandate of the Security Council, noting that the Commonwealth Secretariat had recently had the opportunity of holding discussions with the Zambian Government on the situation obtaining in the area.

51. The Secretary-General of the Commonwealth pointed out that the Zambian Government had not taken the initiative in the new confrontation with the illegal minority régime in Southern Rhodesia. On the contrary, that régime had unilaterally introduced an economic blockade and then had lifted the blockade. The Zambian Government, very understandably, was taking the position that it could not be expected to rely, for essential imports and exports, on a route that could be opened and shut irresponsibly and without consultation. It wished, therefore, to develop further all alternative routes, thus allowing it to comply more completely with the sanctions policy reached at the meeting of the Commonwealth Heads of Government in 1966, and with the mandatory resolution of the Security Council.

52. In the past, the Commonwealth had taken steps to assist Zambia within the context of the Commonwealth Fund for Technical Co-operation. Following the establishment of the Commonwealth Sanctions Committee, a number of activities had been carried out, including an airlift, assistance on a road and building a pipeline, and the provision of trucks. These activities had, however, greatly diminished in recent years. During the recent consultations with the Zambian Government, the latter had submitted a list of its needs in transport equipment and other items. A meeting of the Commonwealth Sanctions Committee was to take place on 19 February, to consider ways in which Commonwealth members could assist the Zambian Government. The recommendations of the Sanctions Committee would be submitted to the Heads of Government. The Commonwealth officials considered that the assistance aspect of the Sanctions Committee's terms of reference might usefully be reactivated in the new situation.

53. The Secretary-General expressed the hope that as a result of the activities undertaken by the Special Mission, as well as by his own organization, members of the Commonwealth would do what they could to assist Zambia. The Commonwealth did not have machinery for multilateral capital assistance similar to IBRD, and capital aid was a matter for individual decision by individual Commonwealth Governments. However, as mentioned above, there was a multilateral Technical Assistance Fund, which was somewhat similar to UNDP.

54. Following the unilateral declaration of independence by the minority régime, an Aid to Zambia Sub-Committee had been established; the Sanctions Committee had also been active in that field. The Secretary-General hoped that the Commonwealth and the United Nations would combine their efforts in providing aid for Zambia and that at some stage, some machinery would be set up for co-ordination in that field. It was suggested that some liaison be maintained with the United Nations to determine how far the Commonwealth could provide assistance in response to the request submitted by the Zambian Government.

55. The evasions of the sanctions by certain powerful industrialized countries, as well as by Southern Rhodesia's neighbours, were quite significant. The sanctions had been introduced only piecemeal and rather slowly, and had not had the degree of effect that Governments hoped they would. In the long term, sanctions, particularly financial sanctions, had a cumulative and increasing effect. There was a need for examining practical ways in which the effective implementation of the sanctions could be improved. The Commonwealth Sanctions Committee had, from time to time, made suggestions to the Commonwealth Governments in that regard. For example, it had suggested the possibility of using technical experts in analysis of minerals or other products, to determine their origin. There were recommendations aiming at discouraging national carriers and the insurance of goods emanating from or going to Southern Rhodesia; other recommendations dealt with the examination of goods and

their certificates of origin, the prosecution of companies or individuals breaching the sanctions, etc.

56. The Secretary-General stated that the Commonwealth Sanctions Committee kept under review the operations of the sanctions and made recommendations, as appropriate. It also made recommendations, as the situation required, about methods of honouring the Commonwealth's undertaking to assist Zambia in meeting its special needs, because of its geographical location.

57. In the view of the Commonwealth officials, the decision of the Zambian Government to close its frontier with Southern Rhodesia had had some effects on the foreign exchange earnings of the minority régime. The diversion of traffic to other routes would have a significant effect on the economy of Southern Rhodesia. That would be in line with one of the basic objectives of the sanctions policy, and it illustrated the need for appropriate international assistance to Zambia, so that it could play its full part in implementing that policy.

58. The officials considered it was important that pressure should be exercised by the United Kingdom and a number of other States on countries evading the sanctions. Governments could be asked within the United Nations to give information on operations taking place in their own countries regarding Southern Rhodesia. Other members of the Commonwealth were already exercising the maximum amount of pressure on the United Kingdom in that respect. Furthermore, the Commonwealth Sanctions Committee had, from time to time, suggested that it would be desirable to have the Security Council consider specific points, such as making the sanctions more comprehensive.

### III. VISIT TO THE REPUBLIC OF ZAMBIA

59. The Special Mission stayed in the Republic of Zambia from 11 to 15 February 1973. The tasks of the Special Mission, while in Zambia, included mainly the discussions with the Zambian authorities regarding the issues involved as well as the examination of the situation along the border between Zambia and Southern Rhodesia, in order to gather information necessary for the fulfilment by the Mission of its mandate under resolutions 326 (1973) and 327 (1973).

#### A. Meeting with the Zambian Cabinet Committee led by Mr. E. H. K. Mudenda, Minister for Foreign Affairs

60. On 12 February, the Special Mission held a meeting with the Cabinet Committee of the Zambian Government. The meeting was chaired on the Zambian side by Mr. E. H. K. Mudenda, Minister for Foreign Affairs, and included Mr. A. G. Zulu, Minister of Defence, Mr. L. Changufu, Minister for Home Affairs, Mr. J. M. Mwanakatwe, Minister of Finance, Mr. F. M. Mulikita, Minister for Power, Transport and Works, Mr. A. J. Soko, Minister for Trade and Industry, Mr. A. M. Milner, Secretary-General to the Government of Zambia and Mr. P. J. F. Lusaka, Permanent Representative of Zambia to the United Nations. It was also attended by a number of other senior officers from the Zambian Government. The Minister for Foreign Affairs opened the meeting with a statement of the Zambian Government's position on the situation which the Special Mission had been sent to assess.

61. The Minister for Foreign Affairs said that Zambia greatly appreciated the timely response of the Security Council to Zambia's serious situation, which was creating a serious threat to international peace and security. He continued by stating the basic problem before his country. He said that Zambia believed in human equality, non-racialism and democracy, while in Southern Rhodesia the situation was different: the ruling clique believed in and practised colour discrimination - they were racists who did not believe in human equality. That was also the position in South Africa.

62. Zambia was a land-locked country bordered by Angola, South Africa, Southern Rhodesia and Mozambique, which were under hostile white minority régimes. That geo-political position made Zambia the natural demarcation line between free independent Africa and the vestiges of white minority rule, and it placed Zambia in an extremely vulnerable position for violations of her territorial integrity and sovereignty by those hostile régimes.

63. The Special Mission would be aware that it was not the first time Zambia had brought to the attention of the Security Council incidents of border violations and acts of aggression against Zambia by the minority régimes. It would be recalled that during the Security Council meeting, which was requested by Zambia in July 1969, the attention of the Security Council was drawn to incidents of border violations and acts of aggression against Zambia by Portugal. Twenty-four such incidents were reported to the Security Council at that time. However, several similar incidents had since taken place along the border. In 1970 there



were 82 border violations and in 1971 there were 58. Those violations had been carried out by various means such as over-flying Zambian territory, foreign forces crossing the Zambezi river in boats and landing on Zambian territory, and foreign forces deliberately crossing the border into Zambian territory on foot for the purpose of planting land mines.

64. The Foreign Minister said that the Special Mission would wish to know that even after the recent Security Council meeting, which had resulted in the establishment of the Special Mission, acts of aggression by Southern Rhodesian armed forces had continued to be carried out. For instance, on 2 February, a land mine explosion occurred at Chirundu seriously injuring a Zambian sergeant. That incident brought the number of land mine explosions to six since Southern Rhodesia closed the border with Zambia on 9 January 1973. Altogether a total of seven persons had been killed and over 14 seriously injured. In all those acts of aggression against Zambia, those which caused an immediate threat to international peace and security in the area were the ones committed by South Africa and Southern Rhodesia.

65. The Foreign Minister said that Zambia could not be expected to control its long border with countries under racist minority rule. If Zambia had had the capacity to do so, it would have prevented its enemies from crossing the Zambezi river to lay anti-personnel and anti-vehicle mines on Zambian soil. Zambia considered it foolish for Ian Smith to claim Zambia was responsible for the fighting on the eastern side of Zimbabwe, for, as the Special Mission knew, Zambia was not on the eastern side of Zimbabwe. It was the people inside Zimbabwe who were fighting for their freedom. Zambia had no control whatsoever over the people of Zimbabwe and, therefore, the question of allowing freedom-fighters to cross the Zambezi river did not arise. The rebel régime's decision to close the border with Zambia was based purely on desperation. Zambia had made it quite clear to the world that what was happening in Southern Rhodesia was the result of political consciousness on the part of the people of Zimbabwe in their quest for freedom. The freedom-fighters were based inside Southern Rhodesia itself. After Smith had closed the border, further skirmishes by freedom-fighters were reported. Zambia's commitment to the total liberation of Africa was well known; it was based on its obligation as a member of the international community.

66. The Foreign Minister continued that Zambia had made known, in terms of Articles 49 and 50 of the United Nations Charter, the difficulties it had been facing in implementing the mandatory sanctions against Southern Rhodesia imposed by the Security Council. The closure of the border by the illegal régime clearly demonstrated the absolute unreliability for Zambia of the southern route to Zambia. Zambia had therefore decided to meet the challenge and to comply with the various sanctions resolutions adopted by the Security Council. It was for that reason that, despite the reopening of the border by the rebel leader, Ian Smith, on 3 February, Zambia had kept its side of the border closed. Zambia's decision was based on the conviction that until majority rule was attained in Zimbabwe, the southern route via Southern Rhodesia would remain unreliable. By diverting its traffic from Southern Rhodesia, Zambia would thus contribute to bring about the downfall of the illegal régime in Southern Rhodesia.

67. Security Council resolutions 253 (1968) and 277 (1970) requested Member States of the United Nations, the United Nations Organization itself, the specialized agencies, and other international agencies in the United Nations system to extend

assistance to Zambia as a matter of priority with a view to helping to solve such special economic problems as it might face in carrying out the decisions of the Security Council.

68. During the discussion which followed the Foreign Minister's formal opening statement, he made several other remarks of importance to the Special Mission's mandate. The Foreign Minister said that the decision of the Zambian Government to implement Security Council resolutions by diverting traffic was really aimed at finding a political solution in Zimbabwe. If the international community assisted Zambia effectively to divert its traffic from Southern Rhodesia, it would be very difficult for Ian Smith and the rebels to continue for very long.

69. The Foreign Minister added that it was a fact that South Africa and Southern Rhodesia worked together. Security forces from South Africa were in Southern Rhodesia. That was no secret because Ian Smith made an announcement when two so-called South African policemen were recently killed in Southern Rhodesia. Therefore, there was no doubt about the co-operation between South Africa and Southern Rhodesia.

70. As far as the Portuguese were concerned, the position was very similar. The Portuguese were in the same habit of crossing the border and laying anti-personnel mines. Zambia had even been the subject of attack from the Portuguese-controlled territories. All those régimes were Zambia's enemies and created very much the same problems for Zambia.

71. Zambia was very grateful to Botswana, Kenya, Malawi, the United Republic of Tanzania and Zaire for the generous offers they had made; the use of those facilities depended on the extent to which the international community could help Zambia in giving it trucks and other required equipment.

B. Briefing by Mr. A. G. Zulu, Minister of Defence of Zambia, and representatives of the Ministry of Defence

72. On 12 February, the Special Mission held an afternoon meeting with representatives of the Ministry of Defence of Zambia. The meeting was opened by the Minister of Defence, Mr. A. G. Zulu. Then a representative of the Ministry of Defence briefed the Special Mission on the military situation on Zambia's borders with the minority régimes, confining himself mainly to the recent incidents which had started when Southern Rhodesia closed the borders.

73. He said that after the border closure, Zambia had discovered that about the same time as Southern Rhodesia had closed the border, it had sent troops into Zambia which planted mines in certain areas resulting in the loss of Zambian lives. The incidents were as follows.

74. On 11 January 1973 at Kazungula a civilian vehicle was blown up by an anti-vehicle mine. One man was killed and two other persons including a woman were injured.

75. The same day, 11 January, another incident took place at Chiawa, near Chirundu, where a 14-year-old girl was blown up by an anti-personnel mine, which caused her death.

76. The next day, 12 January, at Chirundu, an army troop-carrier was blown up in the same area. The explosion killed a Zambian soldier and seriously injured four others.

77. On the same day, 12 January, there was another land mine explosion at Kazungula. A civilian truck was blown up and the only occupant of the vehicle was injured.

78. On 26 January, a land rover was blown up by a land mine at Kazungula, killing three persons on the spot and injuring others, one of whom died later in hospital.

79. On 2 February, at Chiawa, near Chirundu, another army vehicle was blown up by a land mine, seriously injuring a soldier. During that same period there had been incidents on the river between Kariba and Feira, where Southern Rhodesian patrol boats had been violating Zambian waterways.

80. Very frequently Southern Rhodesian troops patrolling the border had violated Zambian territory and landed on the Zambian side of the Zambezi and poached game on Zambian islands, particularly in the Kariba area, intimidated innocent Zambians, molested them and taken away fish from defenceless Zambian fishermen by force. The violations continued even after the closure of the border. Zambian troops, in the circumstances, behaved in the most exemplary manner and did not retaliate.

81. Apart from those incidents there had been other incidents in the past involving not only acts of aggression by the forces of the illegal régime in Southern Rhodesia but also by those of the minority régimes in Mozambique, Angola and South Africa. The incidents which had been mentioned were only those which had caused a loss of life or involved serious attacks on Zambian citizens or property. Moreover, the incidents were continuing right up to the present Zambian air space and territory were being violated.

82. Regarding the Zambian border with Namibia on 6 October 1971, the Prime Minister of South Africa had made a pronouncement alleging that Zambia was allowing what he called "terrorists" to cross to molest the South Africans in Namibia, that South Africa was going to hit Zambia so hard that it would not forget, and that South Africa was going to pursue the terrorists to the places from which they came. South African troops had, in actual fact, crossed the border. On 8 October 1971, for example, a South African boat anchored on the Zambian side of the Kwando river and South Africans came ashore to plant mines along the tracks used by villagers and Zambian officials. Those mines killed two soldiers and two members of the para-military force in November. The mines were planted on 8 October 1971, two days after the South African Prime Minister said that he was going to follow the "terrorists" into the countries from which they came. Zambia had evidence that South African troops planted the mines in that area. Zambian villagers heard the South African boat and followed the footprints of the South Africans. Since then, more land mines were planted in the area, but the Zambian villagers were now security conscious and warned the officials who were able to discover the mines and blow them up.

83. The Zambian Government was aware of the recruitment of some Zambians by South African authorities, the majority of whom had been taken to Namibia on the pretext that they had been offered employment at the new Fiat factory in Livingstone.

Those people were known to be undergoing military training and brainwashing in order to fight against the Government of Zambia.

84. Many incidents had also occurred on the border with Mozambique and Angola. A number of land mine explosions had taken place killing and injuring innocent Zambians and causing extensive damage to property. Zambians had been intimidated and kidnapped from Zambian Territory; their property stolen or destroyed. Since 1966, the Zambia security forces had arrested some Portuguese soldiers who entered Zambia illegally. They were prosecuted in the court of law. Reference was made to two Zambian soldiers being held by Portuguese authorities in Mozambique. The two soldiers were said to have been among the patrol which may have strayed into Mozambique. If ever there was any violation by Zambia, it was emphasized that that was the only one.

85. In response to a question from a member of the Special Mission, the Minister of Defence said that the military forces in Angola, Mozambique and Southern Rhodesia were mixed, with Europeans as commanders and Africans as soldiers. The representative of the Ministry of Defence stated that Southern Rhodesia had been assisted by South African forces for a long time. The Minister then added that the so-called South African policemen were soldiers, although South Africa did not admit the fact, perhaps to avoid international repercussions. The representative added that if they were South African policemen, they were being used in a military role. All the patrol boats used on one part of the border had been South African. Two men who were arrested in Zambia when their boat caught fire admitted that they were South Africans helping Southern Rhodesia militarily. Thus, there were many facts which provided testimony to the presence of South African troops in Southern Rhodesia.

86. Although there had been continuing denials from South Africa, there had been contradictions. The Minister of Defence said that at one time the South African Chief of Police had stated that there were no policemen in Southern Rhodesia; the next day the Chief of Police had been in Southern Rhodesia and had visited the area where two military personnel had been killed. The South Africans entered Southern Rhodesia in September 1967. It was explained that the South African military contingent which had come in that year was different from the one engaged in operations against freedom-fighters in Southern Rhodesia at the time of the Special Mission's visit. The Smith régime and South Africa did everything possible to conceal the number of South African contingent forces assisting the rebel forces. Zambia was familiar with the denials of the South Africans and the illegal régime. However, it was accepted that South African forces had been in Southern Rhodesia since 1967 and were unlikely to leave without international action. They posed the greatest threat at the present moment.

87. In response to a question from a member of the Special Mission, the Minister of Defence stated that the number of South African forces in Southern Rhodesia was very difficult to determine, but he believed that the 4,000 troops mentioned in the newspapers recently represented an additional force beyond those which had been in Southern Rhodesia for several years. The representative of the Ministry of Defence concluded by saying that if a thing walked like a duck, looked like a duck and quacked like a duck, it must be a duck. These so-called policemen wore boots like soldiers, carried rifles like soldiers, rode in military vehicles and did military jobs, so they must be military men.

C. Briefing session on economic problems by Mr. A. M. Milner, Secretary-General to the Government and Government experts

88. On 12 February 1973, the Special Mission met Mr. A. M. Milner, Secretary-General to the Government of the Republic of Zambia, and representatives of various ministries. In his opening statement, Mr. Milner regretted the failure of the British Government to bring down the Smith régime. In order to strengthen the measures taken by the United Nations including the introduction of comprehensive mandatory sanctions as a means of quelling the rebellion, the Zambian Government decided, at great cost and with tremendous sacrifices to implement fully the United Nations sanctions policy by maintaining closure of its side of the border. The diversion of Zambian imports and exports from the southern route was therefore permanent until a more acceptable and popularly elected Government, based on the principle of one-man one-vote, was established in Southern Rhodesia.

89. Before independence the Zambian economy was closely tied to that of Southern Rhodesia. Most industries in Zambia were subsidiaries of the Rhodesian parent companies, a legacy of the Central African Federation. Zambia was similarly dependent on the south for trade routes. After independence, and especially in the wake of the rebellion in November 1965, the Zambian Government urgently embarked on the policy of diverting its trade routes from and reducing economic dependence on the south.

90. But Zambian imports coming by the southern route were still over 800,000 tons each year with exports of over 440,000 tons, principally copper. Zambia's problem was now to find alternative routes for this volume of imports and exports. This diversion would require: (a) new vehicles and spare parts to increase the transport capacity; (b) arrangements for facilities to be made available to Zambia on the new routes; and (c) meeting the increased costs from the diversion of imports. These developments would have the following long-term implications: dislocation of the Zambia Second National Development Plan, extra strain on the limited resources of the Zambian economy and higher costs of living.

91. The Secretary-General illustrated the increased costs to Zambia from diversion by mentioning higher transport costs on shipments of essential goods. Since Southern Rhodesia was a United Nations problem, the world community should give real support to Zambia to increase its capacity to implement the sanctions policy fully. The alternative routes which Zambia would use were the following: Dar es Salaam, Mombasa, Nacalla, Beira (via Malawi) and Lobito.

92. During the ensuing discussion, Mr. Milner added that Southern Rhodesia would lose millions of kwacha as a result of Zambia's diversion to other routes and that, if the border closure could be continued, it would deny the Smith régime much needed foreign exchange. In conclusion, Mr. Milner emphasized that the programme of finding alternative routes was massive and would entail great sacrifice for the people of Zambia and reallocation of Zambia's limited resources.

93. The discussion continued with the participation of Government experts from the Zambian side and the United Nations experts appointed under Security Council resolution 327 (1973). A number of specific statistics was supplied by the Zambian side and more details were promised for the following day in response to questions from the United Nations experts. The discussion included estimates of the capacities of various ports and routes, the various types of imports, their sources

and routes, the requirements for additional vehicles and handling machinery, the requirements for spares, servicing and maintenance, the increased maintenance costs for roads carrying additional traffic in both Zambia and neighbouring countries, the requirement for increased transshipment facilities at ports, the infrastructure which must be established, the greater administrative burden on Zambia, the need for more and faster communications, delivery dates for the necessary new equipment, the possibility of an air lift, the need for an alternative source of beef, the problems of carrying cooking oil by road, types and sources of supplies for the copper mines, and many other technical problems which would be created by the diversion of Zambia's shipments from the Rhodesian route.

94. The Zambian side emphasized that the decision to divert Zambia's shipment from the Southern Rhodesia route would have a very serious effect on the country's economy. The difficult problem would be imports, which would now have to come in by road; no major problems were anticipated with exports. The prices of imported commodities would inevitably rise, while the higher cost of shipping exports would reduce the earnings from them. There would also be a loss of revenue by the Zambia railways. The immediate problem was where Zambia could get the money to meet those increased costs. Unless the international community helped, Zambia would face an extremely difficult situation. The economic and also political effects would disrupt the normal life of the country. That was where the United Nations could play a vital role, either collectively or through its individual Members. The effects of the border closing and diversion decision would also have consequences for the Zambian Second National Development Plan and Zambia hoped for assistance in that regard from the international community.

95. Mr. L. M. Lishomwa, Special Assistant to the President of Zambia, concluded the discussion with an appeal to the Special Mission. He said that the strength of the Zambian case arose from the fact that the problem was the result of a world situation which was not of Zambia's making. He expressed the hope that assistance would be available without delay to alleviate any hardships to Zambia.

D. Other activities of the Special Mission in Zambia

1. Airplane trip along the borders of Zambia

96. At about 0930 hours on 13 February, the Special Mission, accompanied by the Minister of Defence, Mr. A. G. Zulu and the Minister for Home Affairs, Mr. L. Changufu, and other officials, took off by special aircraft from Lusaka to Solwezi in the north near the border of Zaire. Following a stopover during which it visited the refugee camp at Meheba (see paragraphs 114-116 below), the Special Mission overflew, starting at Loloma, the Zambian side of the border with Angola, Namibia, Botswana and Southern Rhodesia, arriving in Livingstone at approximately 1800 hours, after stopping for refuelling in Mongu and circling over Sisheke. The flight from Solwezi to Livingstone took about five hours.

97. On the next day, 14 February, after its visit to the Kazungula area by car, the Special Mission resumed its flight along the Zambian side of the border. The flight along the southern and western borders took it over the Kariba Lake,

Chirundu, Feira up to the Luangwa river near the border with Mozambique. The Special Mission arrived back at Lusaka late in the afternoon. According to information received, the total distance covered during two days of flying over the borders was around 1,800 miles or 2,880 kilometres.

98. According to the briefings given by the Minister of Defence during the flight, Southern Rhodesia had constructed a road not far from its border with Zambia, for military purposes. The Minister stated that, wherever there was abundant water supply available on the Southern Rhodesian side of the border, the Southern Rhodesian armed forces maintained a camp in that region in order to prevent the suspected freedom-fighters from using the water. He pointed out that the wild nature of the terrain and the great extent of the border, as witnessed by the Special Mission, made it almost impossible to exercise any control over the movement of people across the frontier. The Special Mission was able to obtain a clear view of the area covered and to observe its vast and unpopulated features.

## 2. Visits to frontier points

99. While in Livingstone, on the morning of 14 February, the Special Mission was driven to the crossing-point between Zambia and Southern Rhodesia at Victoria Falls consisting of a road and rail system both of which were not in operation. The members of the Special Mission and the Zambian Government officials walked over the bridge until they reached the middle, to the exact point where Southern Rhodesian security officers stood facing them on the other side. The Southern Rhodesian force consisted of two African policemen led by two Europeans. The Minister of Defence stated that the African policemen would, in no case, be allowed to be alone on the Southern Rhodesian side of the bridge.

100. On the same day, the Special Mission was also driven to the point on the Zambian side of the border facing Botswana, Southern Rhodesia and Namibia. It was able to see across the river, Southern Rhodesian soldiers, and what appeared to be some army barracks. The Minister of Defence informed the Mission about plans to construct a bridge across the river linking Zambia with Botswana. A ferry linking the two countries was unserviceable at the time of the visit.

## 3. Inspection of sites of land mine incidents

101. On 14 February the Special Mission was driven by car from Livingstone to the Kazungula area on the Zambezi river, bordering Southern Rhodesia. The purpose of the trip was to inspect three sites of land mine explosions reported to the Security Council by the Government of Zambia. The Minister of Defence explained that the Southern Rhodesian - South African forces had planted the land mines prior to the closure of the border on 9 January 1973. He stressed the fact that all the victims and vehicles destroyed in these explosions had been civilian.

102. Site No. 1. Along a dirt road adjoining the border, the Special Mission was able to observe a crater and a wrecked lorry blown up by an anti-vehicle mine. The incident had, according to the explanation by the Minister of Defence, taken place on 11 January 1973. The Special Mission was informed that one man had been killed and two other persons, including a woman, critically injured. The Minister of Defence described the circumstances as follows: while going to draw water from

the village of Munyana for the village of Lubinda, the lorry had hit the mine. The person who had assisted Southern Rhodesian soldiers to plant the mine was a Zambian, a simple villager, who had been told that the mine would only kill people in uniform and freedom-fighters. He had since been arrested, tried, convicted and sentenced to six years' hard labour with two years suspended sentence (see para. 117 below).

103. Site No. 2. Shortly thereafter, the Special Mission reached another crater caused by a land mine explosion. A few feet away, the Special Mission was able to inspect the wreckage of a land rover. The incident had occurred on 26 January 1973. The Zambian officials stated that the land rover was carrying Government employees on their way to pay other employees working on the road. The driver and two other civilians had been killed instantly, one had died later in the hospital and three had been seriously injured. A few others had received minor injuries and had later been released from hospital.

104. Site No. 3. Next, the Special Mission was taken to the site of the land mine explosion which occurred on 12 January 1973. The wreckage of a blown up dump truck was inspected. The Special Mission was informed that no one had been killed, although a number of people had been injured in the explosion. The Minister of Defence noted, in that connexion, that another similar incident had occurred on 12 January at Chirundu. He believed that those occurrences had been well-planned and that the troops from Southern Rhodesia had crossed the border and planted the mines so that the explosion would take place after the closure of the frontier.

105. In the morning of 15 February 1973, the Special Mission was flown by two Zambian Air Force helicopters to Chirundu. Upon reaching the village of Chiawa, the party was met by the Governor of the district and a large number of villagers who had been assembled at the site of a land mine crater to meet the Special Mission. The Special Mission was informed that on 11 January a young girl had been blown up and killed by an anti-personnel mine, while on her way to the river about 40 metres from her village. The villagers carried a number of placards condemning Southern Rhodesia and demanding protection against further incursions. The District Governor, Reverend J. M. P. Chipeso, made a statement deploring the loss of life and property among the people of the area. He asserted that the people of the district would one day retaliate, and he appealed to the Security Council to put an end to the illegal régime of Ian Smith. Addressing the crowd, the Minister of Defence urged them to co-operate with the Zambian forces patrolling the area, and report anyone they knew who was assisting the Southern Rhodesians in planting land mines. The Minister of Defence urged villagers to organize themselves into patrols for the defence of the area. He reiterated his appeal for their co-operation and asked them to report any person crossing the Zambezi river into Zambia from Southern Rhodesia.

106. The Special Mission was then flown to Chilimanga to inspect the site of an explosion which had occurred on 2 February. Upon its arrival, it was informed that a plastic anti-personnel mine had exploded at the site of inspection 20 minutes earlier, causing injuries to two women, one teen-age girl and two children. The victims had been rushed to Mtendere Hospital near Chirundu, 80 miles south of Lusaka and 50 miles north of the Kariba dam. The Special Mission was taken to the scene, where it saw the crater and debris caused by the recent explosion.



Next, it was transported to the Mtendere Hospital near Chirundu where it saw the five victims. Two of them, a woman and a child, with serious injuries, were flown by one of the helicopters to Lusaka. The Special Mission later learnt that the woman had had her leg amputated and that the child had lost an eye.

#### 4. Visit to Siavonga on the Kariba Lake

107. The Special Mission next proceeded to Siavonga in the Gwembe district where it was met by the Governor of the district. In a statement before the Special Mission, the Governor indicated that the armed forces of Southern Rhodesia had been violating the water space of Zambia since 1971. The violations had been carried out by patrol speed boats carrying from 10 to 12 men in army uniforms. He submitted a written list of violations committed by Southern Rhodesia, which is reproduced below:

14 February 1973

"On the undermentioned dates from 1971 to February 1973 Rhodesian soldiers violated Zambia water space. On all these occasions they were dressed in Army uniforms, carrying modern guns and numbering from 10 to 12 soldiers in their patrol speed boats.

"1. On 7 October 1971 at Kariba Dam Wall at about 0930 hours, they crossed to the Zambian side.

"2. On 31 January 1972, crossed over to Zambian side at about 1030 hours.

"3. On 25 February 1972, crossed over to Zambian side at 1000 hours over to Leisure Bay Motel.

"4. On 27 February 1972, crossed to Leisure Bay Motel at 1755 hours on the Zambian side.

"5. On 1 July 1972, crossed over to Namomba Fishing Camp about 1530 hours.

"6. On 31 July 1972, crossed over to Zambian side on foot, dressed in military uniforms carrying modern guns; came to Tunnel No. 5 Mitchell Construction Company and threatened two customs preventative assistants if they made any attempt at all to inform the authorities whilst at Tunnel No. 5, they would shoot.

"7. On 1 August 1972, crossed over to Namomba Fishing Camp at 1800 hours.

"8. On 4 September 1972, crossed over to Namomba Fishing Camp at 1900 hours.

- "9. On 5 September 1972, crossed over to Leisure Bay Motel at 1800 hours.
- "10. On 1 November 1972, crossed over to Government Harbour at 1400 hours.
- "11. On 18 January 1973, crossed over to Namomba Fishing Camp at 2030 hours.

"REPORTED BY EUARISTO MUSONDA MUTALE  
DISTRICT GOVERNOR  
GWEMBE DISTRICT"

#### 5. Visits to hospitals

108. In the morning of 15 February, the Special Mission paid a visit to the Lusaka University Hospital, accompanied by the Ministers of Defence and Health, in order to see some of the victims injured in earlier land mine explosions at Chirundu. The first victim visited was Private Namunkombwe, 20 years old, injured on 12 January. He had been thrown from the vehicle during the explosion, and, according to the doctor's report, had suffered a fracture of the cervical and dorsal spine. Despite an operation, he had remained paralysed from the waist down. The second victim was Sergeant Mulwanda, 27 years old, injured in the explosion on 12 January. His left leg was amputated and it was expected that the other foot would also be amputated.

109. As described in paragraph 106 above, the Special Mission also visited the Mtendere Hospital near Chirundu where it observed the victims of the incident which had taken place shortly before its arrival.

#### 6. Visit to the Liberation Centre in the village of Kamwala

110. On 12 February, the Special Mission went to the African Liberation Centre at Kamwala outside Lusaka. It was accompanied by a number of officials including a representative of the Ministry in charge of the affairs of the liberation movements, Mr. C. T. A. Banda.

111. On behalf of the liberation movements present at the Centre, the Administrative Secretary of Zimbabwe African National Union (ZANU), Mr. Mudzi, made a statement before the Mission: he referred to the humanitarian activities carried out by the Government of Zambia, and to the problems resulting from the continuation of racist oppressive rule in Southern Rhodesia. The various organizations represented at the Centre were the fighting forces in southern Africa; they needed assistance from the world community in the form of food, health and medical equipment. Mr. Mudzi also stressed the need for Zambia to be assisted in maintaining its economy in the face of the dangers from the colonial and minority régimes. A statement was also made by Mr. Gumane, a representative of COREMO, a liberation movement from Mozambique. He pointed out that the people in southern Africa themselves had decided to take up arms and fight the racists. All their weapons were inside their respective countries. The liberation movements had only offices in Zambia, they did not keep weapons there.

112. Subsequently, the South West African People's Organization (SWAPO) of Namibia, submitted a written memorandum to the Special Mission in which it indicated its

full support for the stand taken by the Government of Zambia with respect to the unprovoked acts of the Ian Smith régime. The unilateral closure of the border by Southern Rhodesia, the memorandum stated, was not an isolated incident; it was aimed at crippling the Zambian economy in collusion with South Africa. Since 1966, South Africa had committed acts of aggression from Namibia against Zambia. That year, South Africa had constructed the Mpatcha military base at Katima Mulilo in the Caprivi Strip, "a stone's throw from the Zambian border". The memorandum enumerated a number of incidents in 1967, 1968 and 1970, which had involved interception of Zambian ships, the landing of South African army helicopters and the planting of land mines on Zambian soil. Consequently, SWAPO felt very strongly that South Africa was the main culprit in the explosive situation which was building up in that part of Africa.

113. The memorandum further emphasized that the claims of South Africa, "Rhodesia" and Portugal to the effect that African freedom-fighters operating in the colonized territories maintained "terrorist training camps" in Zambia, were without foundation. The peoples of Namibia, Angola, Mozambique, South Africa and Zimbabwe were waging a struggle for liberation of their respective countries.

#### 7. Visit to the Meheba Refugee Camp

114. On 13 February, the Special Mission was flown from Lusaka to Solwezi on the northern border with Zaire, in order to visit the main refugee camp in the country at Meheba. It was accompanied by Zambian Government Ministers and officials, including the Commissioner for Refugees in the Ministry for Home Affairs, Mr. A. M. Mbanga. After a short stop at the provincial government house, it was driven to the camp where it was received by a welcoming committee. It went around the camp and observed a number of posters asking the United Nations for help in achieving freedom for Mozambique, Namibia and Angola.

115. According to information received by the Special Mission, there are three refugee settlements in Zambia, namely Nyimba in the Eastern Province, Mayukwayukwa in the Western Province and Meheba in the North Western Province. The total refugee population in these settlements, as of 31 January 1973, was as follows:

Meheba . . . .	6,300
Nyimba . . . .	2,900
Mayukwayukwa .	1,050
	<hr/>
	10,250
	<hr/> <hr/>

116. It was also believed that there were about 14,000 refugees living outside the settlements. The Zambian Government's policy was to encourage the refugees to be self-sufficient in food production; refugees were given plots in which they could grow their own food. The Meheba refugee settlement was the largest of the three and consisted of 89,000 acres. The large majority of the refugees were from Angola and Mozambique, with about 250 from Namibia. The settlement was jointly operated by the Government of Zambia, the Lutheran World Federation operating in Zambia under the name of Zambia Christian Refugee Service and the United Nations High Commissioner for Refugees.

## 8. Documentary evidence and other communications

117. During the audience which the Special Mission had on 15 February with the President of Zambia, Mr. Kenneth D. Kaunda, two prisoners were brought before it, and copies of their court records later handed to it. The two prisoners had been tried and convicted for collaborating with Southern Rhodesian soldiers and planting land mines, one in Kazungula and the other in Chirundu. The trial of the first prisoner, Mr. S. M. Sekeleti on charges of espionage and planting land mines had taken place on 26 January 1973; he had received a sentence of six years imprisonment with hard labour, two years suspended. The second prisoner, Mr. Y. M. Njovu, had been tried on similar charges and sentenced on 9 February 1973; he had received a sentence of nine years imprisonment with hard labour, three years suspended.

118. While in Zambia, the Special Mission received three communications through the Zambian Ministry of Foreign Affairs.

119. The first communication was a telegram from the Chairman of the Council of Ministers of the Organization of African Unity, addressed to Mr. Kenneth D. Kaunda, President of the Republic of Zambia. The message read as follows:

"Excellency, the twentieth session of OAU Council of Ministers supports fully the just and firm stand of your Government regarding the provocative measures of the minority racist clique of Salisbury in attempting to strangle the Zambian economy. The Council asserts that Zambia's struggle is also Africa's struggle and Smith's challenge to Zambia is equally a challenge to the OAU. OAU pledges full support and active solidarity to Zambia. Highest consideration and esteem.

"(Signed) Baba Hassane  
Chairman, Council of Ministers"

120. The second communication contained part of a resolution adopted by the Council of Ministers of the Organization of African Unity following the closure of the border by Southern Rhodesia. It read as follows:

"The Council of Ministers,

"...

"23. Vigorously condemns the criminal act of intimidation perpetrated by the rebel minority and racist régime of Smith against the brother country and people of Zambia.

"24. Strongly condemns the collusion of Great Britain and of the white minority racists of South Africa and Portugal for their patent and deliberate support of the shameful action of the minority régime of Salisbury.

"25. Pays a tribute to the people and Government of Zambia and to Zambia's President Kaunda for their courageous and heroic attitude in the face of Rhodesia's economic aggression and for their determination to support Liberation Movements' struggle, and extends to them its active solidarity and unflinching support.

"26. Declares that any attack upon Zambia or any other Member State near the combat zones is a direct attack upon all Africa.

"27. Pledges itself to give Zambia all necessary aid and assistance in the economic, political and military fields to enable it to deal with the situation."

121. The third communication contained an article published by the School of Humanities and Social Sciences of the University of Zambia, entitled "The Rhodesian blockade". In particular, the article gave an assessment of the economic gains and losses resulting on each side from the blockade imposed by the Smith régime.

122. A letter dated 13 February 1973 was received from the students at the Sesneke Secondary School, expressing support for the struggling people of Namibia, Zimbabwe, Angola and Mozambique; the letter appealed to the Special Mission to take action within the United Nations to obtain freedom and peace for the oppressed people of those countries.

E. Audience with the President of the Republic of Zambia,  
Mr. Kenneth Kaunda

123. On 15 February 1973, the Special Mission was received by the President of the Republic of Zambia, Mr. Kenneth D. Kaunda.

124. The President welcomed the Special Mission to Zambia and emphasized Zambia's desire to show the Mission as much as possible during its brief period in the country. The President stated that although some people, including some Zambians, believed the United Nations to be an impotent Organization, he himself and many others, valued it highly. They saw it as man's only hope in the complicated world of today. When something went wrong, when the United Nations did not react, they were more inclined to blame themselves than the Organization. This viewpoint was important because the Zambian Government and nation attached great importance to the United Nations which the Special Mission represented in Zambia. They saw it as the only effective instrument in the noble task which man had to perform - that of uniting the entire human race.

125. With regard to the Special Mission's mandate, there would be some people who would say, for example, that the land mines which were being laid by the rebel soldiers and their South African supporters were the work of Zambian dissidents. Others would tell the Mission that Zambia, by closing the border, was being impossible and had started the whole trouble. Others would say that if only Zambia could behave better, southern African problems would not escalate. But the members of the Special Mission would be able to see that those allegations were not in fact correct at all; they came from biased mouths which spoke on behalf of biased minds. With the South African situation as it was today, there was going to be no short cut. The answer was to be found in humanizing the policies in Angola, in Mozambique, in Zimbabwe, in Namibia and in South Africa proper. In southern Africa as a whole, one could see now the development of a conflagration which the President and his colleagues had spoken about ever since 1966. Their predictions were coming true: the situation was escalating, building up. And there could be no going back because the black man could not perpetually be the slave of the white man in southern Africa. The black man would never accept that situation and was now rising up.

126. Zambia wanted the members of the Special Mission to see the dangerous situation in southern Africa. Nothing short of independence, nothing short of majority rule

could stop the escalation towards catastrophe in southern Africa. That was the confrontation, and the meeting point was the Zambezi river. The problems of the land mines, the violation of air and water space, the kidnapping, killing and maiming of Zambians did not start the day Smith closed the border. There was a whole catalogue of people and instances from as far back as 1965. Bridges and petrol tanks had been blown up, there had been sabotage, and that had not been the work of Zambians. It had been the work of minority groups and their agents thoroughly trained and sent to Zambia to molest the population. Zambia had lost troops and police on the borders with South Africa and Namibia. Outsiders had crossed the border and planted mines inside Zambian territory; they were South African troops.

127. He criticized the attitude of the British Government with regard to the decision of Zambia not to use routes through Southern Rhodesia for transit purposes, which, according to him, called upon Zambia to resume the use of those routes after the Southern Rhodesian authorities had reopened the border. The British Government which had no control over Southern Rhodesia could not guarantee that the Smith régime would not close the border again.

128. The President said that the battle which Zambia was fighting was not solely a Zambian battle: it was a battle of the human race to put things right. And Zambia asked the international community, through the Special Mission, to listen. There was real fighting in Southern Rhodesia and it was on the rise. It was escalating because the freedom-fighters now had the support of the masses. The very fact that Smith said he would conduct a massive campaign of fines and punishment of anyone supporting the freedom-fighters was an indication that things were heating up inside the rebel territory. So Zambia could not go back and place all its eggs in the Rhodesian basket. It would be very unrealistic for Zambia. He said that with thousands of troops in Angola, Mozambique, Southern Rhodesia and South Africa, the régimes in those countries were unable to patrol the borders and stop the flow of freedom-fighters. They would like Zambia to do that job for them but it could not. It was a physical impossibility. Zambia also had refugees to care for and their numbers were swelling. When the fighting heated up in those countries, the refugees came out and Zambia was under an obligation to receive its unfortunate brothers and sisters.

129. The President stated that it was impossible for Zambia to go back to the Rhodesian transport route. Therefore, it was asking that the international community should rise to its obligation. Zambia would welcome whatever the United Nations could do. Moreover, he hoped that the Member States would come to Zambia's aid, because, he emphasized, it was not Zambia's battle alone, it was a battle for the cause of humanity, for the suffering masses in southern Africa. So the Special Mission's work was not for the people of Zambia alone. Every internationalist who believed in the United Nations must accept that what Zambia was doing was not its affair alone but a matter for humanity as a whole.

130. During the meeting, two persons were introduced to the Special Mission. The President said that they were convicted prisoners who had admitted their guilt in planting land mines at Kazungula and Chirundu, resulting in human casualties.

#### IV. VISIT TO THE UNITED REPUBLIC OF TANZANIA

131. The Special Mission stayed in the United Republic of Tanzania for two days -- 16 and 17 February 1973 - during which it held meetings with officials of the Government and was also received by the Prime Minister, Mr. R. M. Kawawa.

##### A. Meeting with Mr. A. B. Nyaki, Principal Secretary of the Ministry for Foreign Affairs

132. On 16 February, the Special Mission held a working meeting with Mr. A. B. Nyaki, Principal Secretary of the Ministry for Foreign Affairs. Also present were a number of high-ranking officials of the Tanzanian Government and the East African Community.

133. In his statement Mr. Nyaki welcomed the Special Mission as an indication of the desire and commitment of the international community, and the United Nations in particular, to move toward support for Zambia. Zambia needed real and positive assistance to enable it not only to survive but to defeat, once and for all, the rebels' blackmail and intimidation.

134. As Zambia's neighbour sharing common objectives, the United Republic of Tanzania felt a special responsibility. It had put at Zambia's disposal all the facilities which could be spared to ensure a smooth flow of traffic by air, rail, . . . sea and road and pledged continued support at whatever cost.

135. It was the hope of the people and Government of the United Republic of Tanzania that the Special Mission would fully brief the members of the Security Council on the implications for world peace and security of the new and dangerous situation that now existed between Zambia and the régime of Ian Smith.

136. The Government of the United Republic of Tanzania had noted that the United Kingdom Government had again declared that the Southern Rhodesian problem was a British responsibility. That was a statement with which the Tanzanian Government did not find any disagreement.

137. The United Republic of Tanzania hoped that the Special Mission's return to New York would be followed by a deeper understanding of the Southern Rhodesia tragedy by the members of the Security Council and that they would agree on new measures to deal with the new and grave situation in that part of the world.

138. Mr. Nyaki's statement was followed by a discussion of the economic problems and dislocations that would be caused by Zambia's diversion of its traffic from the route through Southern Rhodesia, as well as the measures which the United Republic could take to assist Zambia.

B. Meeting with Mr. R. M. Kawawa, Prime Minister of the United Republic of Tanzania

139. On 17 February, the Special Mission met the Prime Minister of the United Republic of Tanzania, Mr. R. M. Kawawa, who was accompanied by Mr. Lusinde, Minister for Communications and Works, Mr. Msuya, Minister of Finance, Mr. Nyanganyi, Junior Minister of Health, and Mr. Nyaki, Principal Secretary of the Ministry of Foreign Affairs.

140. The Prime Minister stated that any recommendations or conclusions reached by the Special Mission should take into consideration that the situation in Southern Rhodesia and its implications for Zambia had now reached a dangerous, explosive level and was getting worse. That stage had been reached because of the intensity, extent and success of the struggle for freedom and dignity being waged by the people of Zimbabwe. Ian Smith, in a desperate move to quash that struggle, had declared a permanent war on Zambia; Zambia had firmly refused to be threatened by Ian Smith, and the Smith régime had been forced to reopen its side of the border with Zambia. The firmness with which Zambia had dealt with Ian Smith in the successful struggle in Zimbabwe had deeply humiliated Ian Smith and his followers.

141. Therefore, bearing the above in mind, the Tanzanian Government would like the Special Mission to inform the Security Council there was no doubt that Ian Smith, in order to cover up his present humiliation and failures, would certainly intensify his military, economic and political operations against Zambia. In addition, Ian Smith would intensify his campaign against the people of Zimbabwe. As could be seen from recent developments inside Zimbabwe, the Smith régime had now resorted to some of the most savage forms of repression by instituting collective punishment of entire villages and communities on the pretext that they were helping and assisting the freedom-fighters.

142. Military co-operation between Portugal, Southern Rhodesia and South Africa had increased and would continue to grow, and that would further intensify the explosive situation, not only along the borders between Zambia and Southern Rhodesia but throughout the whole of southern Africa.

143. The Security Council and the United Nations system as a whole, therefore, had a moral and legal obligation, particularly within the framework of Article 50 of the United Nations Charter, to assist Zambia, materially and otherwise, in its present and future difficulties. By implementing the decisions and resolutions of the Security Council and the General Assembly on Southern Rhodesia, Zambia had had to undergo considerable sacrifices. It was therefore imperative that every effort be made to help Zambia. By so doing, the United Nations would help to increase Zambia's ability to implement decisions of the United Nations bodies on Southern Rhodesia.

144. The Government of the United Republic of Tanzania wished to draw the attention of the Special Mission to the fact that the United Kingdom Government had again declared that Southern Rhodesia was a British responsibility. The only alternative left was for the British Government to co-operate fully with the Security Council and the United Nations in their joint endeavour to end the Rhodesian problem.



145. For its part, the Government and people of the United Republic of Tanzania were committed to do all they could to assist Zambia. The Tanzanian Government hoped that the Special Mission would make appropriate recommendations with a view to urging the Member States to offer material assistance to Zambia, not only in the present circumstances but also to meet future developments.

C. Inspection of Dar es Salaam port and transit storage facilities

146. On 17 February, at the invitation of Mr. E. B. Bisamanyu, Director General of the East African Harbours Corporation, the Special Mission received a briefing regarding the port facilities in Dar es Salaam and then made a tour by boat and car to inspect those facilities at first hand. The members of the Special Mission also visited the Ubungo Depot, where goods destined for Zambia were held in interim storage.

147. Mr. Bisamanyu and other officials assured the Special Mission that they would do their utmost to expedite the additional Zambian goods traffic generated by the closure of the Zambia-Southern Rhodesian border. They stated that goods-handling could be made more efficient and transit time decreased if certain management practices were improved, particularly in the field of the handling of documentation.

## V. VISIT TO KENYA

148. On 19 and 20 February 1973, while in Nairobi, Kenya, the Special Mission met representatives of the Kenyan Government and of the East African Community.

### A. Meeting with officials of the East African Community

149. On 19 February, the Special Mission met high-ranking officials of the East African Community. Among those present were Mr. C. G. Maina, Secretary-General of the East African Community, Mr. P. K. Kinyanjui, Chairman of the East African Harbours Corporation, Mr. E. N. Gakuo, Director-General of the East African Railways Corporation, and Mr. A. S. Fundikira, Chairman of the East African Airways Corporation.

150. In his statement Mr. C. G. Maina, speaking in the name of the East African Community, assured the Special Mission that the Community would do whatever was within its capacity to help Zambia in its time of difficulty.

151. A general discussion followed regarding the economic problems which Zambia would face as a result of its closure of the southern route and the measures that could be taken by the East African Community to assist with these problems. It was indicated that Zambia had already decided to channel some of its copper exports through the Kenyan port of Mombasa. Imports through Mombasa could be brought to Nairobi by rail and air-lifted from there to Zambia, could go to the United Republic of Tanzania by rail and thence by road to Zambia, could be shipped across Lake Victoria, or could go all the way from Mombasa by road.

152. The Chairman of the East African Airways Corporation indicated that there would be sufficient cargo-carrying capacity to carry any goods that could be sent by air freight to Zambia. The Kenya National Transport Company would help to handle the transport of goods by road to and from Zambia, although it would probably require additional trucks and would like to be assured of sufficient return cargo from Zambia.

153. The officials of the Community emphasized the need for Zambia to make a decision as to exactly what quantity of goods it would wish to ship through Kenya, in order to permit the necessary advance planning and effective use of existing facilities. It would not do to spend money on new facilities only to discover later that they would no longer be required. For that reason, Zambia should provide firm assurance of what traffic it intended to move through the facilities provided. It was emphasized that Zambia had made contact on the governmental level but not yet on the operational level to make those decisions. The question of the economics of the movement of Zambian goods by various routes was important because the Zambian importers and exporters would use the route that was most economic.

154. After considerable further discussion of the specific problems involved in these questions, Mr. Maina concluded the discussion by reiterating the commitment of the East African Governments and the East African Community to do whatever was possible to assist Zambia as soon as Zambia indicated what was desired. Emergency resources and facilities could be mobilized in a co-ordinated manner.

B. Meeting with Mr. Njorge Mungai, Minister for Foreign Affairs

155. On 20 February, the Special Mission met the Minister for Foreign Affairs, Mr. Njorge Mungai.

156. In his statement Mr. Mungai said that he considered the Special Mission's visit to be of importance to Africa. He stated that the threat against Zambia was against all Africa. If Zambia lost her pride or independence, all independent African States would lose their pride or independence. Africa could not exist with a minority régime dictating to an African State. The African States could not allow themselves to be divided by a white minority régime. Kenya considered that the threat to Zambia was a threat to Kenya. If African peoples were being oppressed by the might of the gun, any means should be used to free them.

C. Meeting with Mr. Omole Okero, Minister for Power and Communications

157. On 20 February, the Special Mission held a meeting with Mr. Omole Okero, Minister for Power and Communications.

158. The Minister opened the meeting by saying that he understood the discussion should concern the use of roads within Kenya for the purpose of assisting Zambia to transport its imports and exports. He emphasized that his Ministry was prepared to give any possible assistance to Zambia. However, he pointed out that no commitment could be made until he knew what Zambia wished to request. The doors were open for Zambia to request assistance, and then he would see what it was possible to give.

159. The ensuing discussion concerned primarily technical questions of the road routes between Kenya and Zambia, the number of trucks available and the additional number required, the efficiency of loading and unloading operations, the possibility of Zambia joining the East African Community, the need for an even flow of traffic over various routes to the various ports of the East African Community, and similar subjects.

## VI. REQUESTS TO THE PARTIES CONCERNED FOR CO-OPERATION

160. On 9 February 1973, the Chairman of the Special Mission addressed to the Permanent Representative of South Africa to the United Nations, through the President of the Security Council, a message which reads as follows:

"I have the honour to refer to resolutions 326 (1973) and 327 (1973) adopted by the Security Council at its 1691st meeting on 2 February 1973 following the consideration of the agenda item "Complaint by Zambia".

"As you are aware, in resolution 326 (1973) the Security Council established its Special Mission with the mandate to assess the situation in the area and to report to the Council not later than 1 March 1973. It also called upon the Government of South Africa to provide the mission with the necessary co-operation and assistance in the discharge of its task.

"By resolution 327 (1973) the Council, having commended the Government of Zambia for its decision to cover all remaining economic and trade relations with Southern Rhodesia, entrusted the Special Mission to assess the needs of Zambia, in maintaining alternative systems of road, rail, air and sea communications for the normal flow of traffic. Simultaneously, the Council requested the neighbouring States to afford the mission all co-operation in the discharge of its task.

"In this connexion, the Special Mission would request your Government to provide all relevant information on the steps which have already been taken with regard to implementation of paragraph 6 of resolution 326 (1973), which demanded 'the immediate and total withdrawal of South African military and armed forces from Southern Rhodesia and from the border of that Territory with Zambia'.

"However, if no such steps have yet been taken, the mission would be grateful for information on the deployment of South African armed forces in Southern Rhodesia and plans for their withdrawal, as well as any other information bearing on the present situation, a situation which, as was ascertained by the Council, 'seriously threatens the sovereignty and territorial integrity of Zambia and other neighbouring African States'.

"The Special Mission would also appreciate receiving any additional comments relevant to the discharge by the Mission of its tasks under Council resolutions 326 (1973) and 327 (1973)."

161. By a letter dated 14 February 1973, addressed to the President of the Security Council, the Permanent Representative of South Africa to the United Nations transmitted a message from the Minister for Foreign Affairs of South Africa, Mr. H. Muller. The substantive part of this message read as follows.

"You raised certain matters through South Africa's Permanent Representative in relation to Security Council resolution 326 (1973). At the outset, I wish to deal, from South Africa's point of view, with certain cardinal aspects of resolution 326 (1973) which formed the basis of the steps envisaged in that resolution.

"While the resolution takes note of Zambia's letter of 24 January 1973 (S/10865) to the President of the Council, it ignores South Africa's letter of 26 January to the Secretary-General (S/10870) in which it was made abundantly clear that no military forces had been sent to Rhodesia and that the allegation in the Zambian letter was unfounded.

"In spite of South Africa's letter, the seventh preambular paragraph of the resolution refers to 'the intensified military intervention of South Africa in Southern Rhodesia' and to 'the deployment of South African armed forces on the border with Zambia'. South African police forces and not military forces have been stationed in Rhodesia since 1967. We have never made a secret of this fact. They were placed there because of the threat which Zambian-based terrorists en route to South Africa posed to the Republic's own security. They will remain there only for as long as that threat remains. They have not been reinforced recently nor have military forces been sent to Rhodesia, as claimed by Zambia. The police forces were in no way responsible for the recent escalation of the situation on the Rhodesian-Zambian border. This situation was created entirely by increased activity on the part of the terrorists based in Zambia which led to increased counter-activity on the part of the security units on the Rhodesian side of the border. This must surely have been seen to be inevitable.

"The eighth preambular paragraph of the resolution expresses deep shock and grief at the loss of life and damage to property occasioned by Rhodesia and its so-called collaborators. We too are shocked and grieved at the loss of life but it appears that the Security Council takes no cognizance of the lives of innocent men, women and children lost through terrorist action.

"Paragraphs 1 and 3 of the resolution refer to South Africa as a 'racist régime'. This language can ill be reconciled with the call upon the South African Government in paragraph 10 to provide the Security Council Mission with 'the necessary co-operation and assistance'.

"Nevertheless, for the sake of clarity and to avoid misunderstanding, it is repeated, with reference to the question relating to paragraph 6 of resolution 326 (1973), that there are no armed forces in Rhodesia - only police units for the purpose set out above.

"As I have stated above, these police units will be withdrawn as soon as we are satisfied that the terrorists operating from foreign bases have ceased their activities. In the Fourth Committee, in October 1967, the South African representative said that '... those who train and equip the South African terrorists, who give them succour in other ways and allow them to operate from territory under their jurisdiction, need only stop those unlawful practices and the need to have South African police in Rhodesia will fall away'. This remains our position. Recent developments on the Rhodesian-Zambian border testify to the dangers actual and potential of trying to resolve problems by violent means. I trust very much that the proven futility of such means, and the misery which they produce, will impress upon all the urgent necessity of preserving peace and tranquillity in that area and of finding means for resolving the dispute in which violence plays no part whatever.

"With reference to Security Council resolution 327 (1973), I wish to say that South Africa does not believe in boycotts or counter-boycotts. This was clearly stated in my letter of 26 January 1973 to the Secretary-General. At no time during the recent trouble did the South African Government place a ban on trade with Zambia. I hope, as I stated in public at the time, that the reopening of the border will contribute to a return to normalcy and a reversal of the tense situation in the area as well as lead to the removal of the causes which originally gave rise to the closure of the border."

162. The Chairman of the Special Mission also addressed on behalf of the Mission identical messages to the Permanent Representatives of Malawi and Zaire to the United Nations, in which, with reference to resolutions 326 (1973) and 327 (1973), the Mission requested the Governments of Malawi and Zaire to provide it with any information which, in their opinion, might be helpful to the implementation of the Mission's mandate under Security Council resolution 327 (1973).

## VII. ASSESSMENT UNDER SECURITY COUNCIL RESOLUTION 326 (1973)

163. As a result of its consultations and visits described in paragraphs 36 to 162 above, the Special Mission deems it necessary to take the following conclusions as an assessment of the situation in the area, requested under Security Council resolution 326 (1973).

164. The Special Mission was able to ascertain that a considerable measure of tension continues to exist in the area covered by Security Council resolution 326 (1973), the origins of which do not stem exclusively from recent events on the Zambian-Southern Rhodesian border. It is necessary to bear in mind also the situation obtaining in the whole of southern Africa: the developments with which the Security Council has been seized are, in great part, a result of the denial of the right of self-determination for the majority of the African peoples, living under the domination of the racist, minority and colonial régimes of southern Africa. None the less, the state of tension has been heightened to a measurable degree following the provocative and aggressive acts committed by the illegal régime of Southern Rhodesia against the Republic of Zambia. The effects of these acts were reflected in the political, military and economic fields. The Mission was able to witness directly the existence in Zambia of a great number of refugees from neighbouring territories.

165. The Government of the Republic of Zambia has consistently maintained a policy of restraint, calm and moderation with regard to the hostile attitude of the neighbouring racist and colonial régimes to the south. The considered view of the Zambian Government is that it is unable to exercise any influence over the activities of liberation movements inside territories subjected to colonialism, racism and minority rule. It could not, therefore, be held responsible for developments occurring in these territories.

166. The tour of the border has provided the Special Mission with the opportunity to observe the military preparations confronting large portions of Zambia's frontier along the Zambezi river. This is obviously an important factor in increasing tension and a legitimate cause of concern for the Government of the Republic of Zambia. The state of tension was further aggravated by incidents along the border, especially in points which lie along former lines of communication between Zambia and Southern Rhodesia, such as Kazungula and Chirundu. A recurrence of these events could lead to a dangerous escalation of already existing tension and could have an adverse effect on the attitude of restraint adopted so far by Zambia.

167. The continued deployment of South African armed forces in proximity to the border with Zambia and their undenied presence in other neighbouring territories is a very important factor in the continuation of the current state of tension.

168. In fulfilling its mandate, the Special Mission sought to learn the views of the Governments concerned as to the best possible methods of reducing and eliminating tension in the area. In its assessment, the key to the solution of the problem dealt with in resolution 326 (1973) lies in the application of majority rule in the Territory of Southern Rhodesia, the strict implementation

of the mandatory sanctions against the illegal régime of Southern Rhodesia, and the implementation of relevant resolutions of the Security Council with regard to the whole area.

169. In this connexion, the measures taken by the Government of Zambia in deciding to implement the sanctions are in accordance with the Security Council resolutions. These measures are at the same time a safeguard against the hazards of insecure communications through Southern Rhodesia.

170. The Special Mission took note of the calm and determination shown in this respect by the Zambian Government and people, as well as the solidarity and expressions of firm support in both the political and economic fields of its African neighbours.



## VIII. ASSESSMENT UNDER SECURITY COUNCIL RESOLUTION 327 (1973)

171. As a result of its consultations, and in the light of the report of the team of United Nations experts, the Special Mission deems it necessary to give the following assessment of the needs of Zambia in maintaining alternative systems of road, rail, air and sea communications for the normal flow of traffic.

172. The normal flow of traffic amounts to approximately 120,000 tons monthly of imports (excluding pipeline traffic) and between 68,000 tons and 80,000 tons monthly of exports. Because the import tonnage is greater, and the imports are more bulky than the exports, alternative routes to carry the normal imports will have the capacity to carry the exports.

173. Some 75,000 tons of imports, previously brought into Zambia via Southern Rhodesia each month, will need to be diverted to alternative routes through Zaire, Malawi or the United Republic of Tanzania, or brought into Zambia by air.

174. Of the 120,000 tons of monthly imports required, the route through Zaire should be able to carry 23,000 tons of imports monthly, the route through Malawi some 17,000 tons of imports monthly and the route through the United Republic of Tanzania (including imports through Mombasa port) some 65,000 tons monthly if adequate assistance is provided. This would leave a shortfall of some 15,000 tons of imports each month that would have to be brought in by air to maintain the normal flow of traffic.

175. The overland routes can only carry the additional tonnage if facilities, equipment and manpower are provided in Zambia, Malawi and the United Republic of Tanzania, and with the co-operation and assistance of these neighbouring States. In this connexion, it was noted that the Tanzanian Government had expressed its intention of reserving additional port facilities in Dar es Salaam for Zambia. The requirements are for trucking units of various kinds, railway rolling stock for Zambia railways and Malawi railways, handling equipment, storage facilities, workshops and maintenance facilities, radio communications equipment, and drivers, mechanics and other personnel. The cost of these requirements is estimated at 77 million kwacha, or \$124 million.

176. Air freight to bring in the balance of the "normal traffic" - some 15,000 tons monthly - would probably cost some 4 million kwacha, or \$6.5 million, monthly. In any event, air freight will be necessary to ensure that essential materials and supplies are available in Zambia, to clear congestion from the ports and generally to assist in meeting the needs of Zambia until the alternative overland routes can be built up.

177. To assist Zambia in handling this major task of rerouting imports and exports, significant amounts of technical assistance, including operational personnel, will need to be provided.

178. In addition to the above needs, the higher transport costs from using alternative routes will amount to between 31 million and 39 million kwacha annually. These higher costs will increase the price level in Zambia, the cost

structure in the mining sector and the government deficit. In addition, the foreign exchange costs to Zambia of transporting imports and exports will nearly double.

179. In the next four to six months, the economy of Zambia will be significantly affected by shortages of imports, depletion of stocks, and higher costs. Copper production will probably suffer and there will probably be foreign exchange problems for Zambia necessitating rigid foreign exchange and import controls. Only adequate and timely assistance will make it possible for the economy of Zambia to continue to develop in a normal fashion.

## ANNEXES

### Annex I

#### REPORT OF THE TEAM OF UNITED NATIONS EXPERTS TO THE SECURITY COUNCIL SPECIAL MISSION ESTABLISHED UNDER RESOLUTION 326 (1973)

#### Introduction

1. By resolution 327 (1973) the Security Council decided to entrust the Special Mission, consisting of four members of the Security Council, referred to in paragraph 9 of resolution 326 (1973), assisted by a team of six United Nations experts, to assess the needs of Zambia, in maintaining alternative systems of road, rail, air and sea communications for the normal flow of traffic.
2. Mr. Robert Gardiner, the Executive Secretary of the Economic Commission for Africa, following consultations with the President of Zambia and the Security Council Special Mission, gave over-all guidance and direction to the United Nations experts.
3. The resident representatives of the United Nations Development Programme in each of the countries visited - Mr. A. C. Gilpin in Zambia, Mr. Peter Lowes in Malawi, Mr. L. Mattsson in the United Republic of Tanzania and Miss Suzanne Drouilh, deputy resident representative in Kenya - not only gave every assistance to the team but made arrangements by which all the experts from the United Nations and the specialized agencies serving in their respective countries were made available to consult with the team.
4. The team visited Zambia, and various members also visited Malawi, the United Republic of Tanzania and Kenya. The team leader had discussions with the President of the Republic of Zambia and a number of his ministers and officials. In addition, he attended briefings of the Security Council Special Mission in London and held technical discussions with Mr. Arnold Smith, Commonwealth Secretary-General, and with officials of the Commonwealth Secretariat.
5. The team held numerous meetings with officials of the Government of Zambia in order to determine the "normal flow of traffic" and to discuss what was needed to maintain it. Following this, the team made its assessment of the capacity of alternative routes to carry this traffic and what was needed to allow them to do so.

#### A. Description of the situation

##### The normal flow of traffic

6. It was not an easy task to arrive at an estimate of the normal flow of traffic, as Zambia has been faced during the past decade with a succession of special situations. In 1963, the Federation of Rhodesia and Nyasaland was dissolved, and the after-effects of the dissolution were still being felt when, on 11 November 1965, Southern Rhodesia illegally declared itself independent. The economy of Zambia

suffered significant disruption from this action, and from the attempts to divert trade in accordance with sanctions applied against the illegal régime. Succeeding years saw wide fluctuations in the price of copper, the major export, and a sustained drought which required heavy imports of maize, the staple food. In 1970, a disaster occurred at Mufulira Mine, causing the loss of many lives and a reduction of copper production. The rehabilitation of Mufulira had not been completed when the illegal régime in Southern Rhodesia closed the border to Zambian traffic on 9 January 1973. Throughout the period since 1963 the Government of Zambia had been following a policy of import substitution; and after 1965, a policy of finding alternative sources for goods previously imported from Southern Rhodesia. All these factors affected the flow of traffic, its size and its composition, and made it difficult to use a statistical definition of normal flow. Under the circumstances, the team met officials of the Government of Zambia, to arrive at an agreed definition.

7. After much discussion of alternatives, it was agreed that an acceptable definition of "normal flow of traffic" would be: "The amounts of imports and exports which would allow the citizens of Zambia to maintain their normal standard of living and allow the economy to develop in a normal fashion, i.e., as if the special situation had not arisen".

8. It was agreed that the estimated imports for 1972, adjusted for any significant abnormal movements, would appear to correspond broadly with the normal flow of imports in the immediate future. Excluding pipeline traffic this gives total imports of about 1,430 million tons "normally" carried as follows:

via southern route . . . . .	900,000 tons
via Zaire . . . . .	200,000 tons
via Tanzania . . . . .	300,000 tons
via Malawi . . . . .	20,000 tons
by air and other . . . . .	10,000 tons
	<hr/>
	Total 1,430,000 tons
	<hr/> <hr/>
Monthly . . . . .	119,000 tons (say 120,000)

The tonnage of imports could be expected to grow by about 5 per cent per year with the normal growth of the economy, but this should be absorbed by increasing operating efficiency of the transportation systems.

9. Appendix I gives the actual tonnages for the period 1969-1971 and estimates for 1972. It will be seen that the normal traffic flow as estimated above is broadly in line with the level in earlier years, and is close to the estimated tonnage in 1972. It was agreed that the 1972 figures included abnormal maize movements which were not expected to occur in 1973 or 1974.

10. It was necessary to look at exports in a slightly different way. The major "normal" exports, in tonnage and value, are copper, lead and zinc. Over the years development programmes have been worked out and set in train by the copper mining companies which indicate that under normal circumstances, the exports of copper would have grown from 700,000 tons (actual) in 1972 (the low figure reflects the Mufulira disaster) to 870,000 tons in 1975. Lead and zinc exports would continue at about 85,000 tons annually over the same period. The "normal" export flow therefore would appear to be as follows:

	<u>Copper</u>	<u>Lead and zinc</u>	<u>Total</u>
1972 (Actual)	700,000	85,000	785,000
1973 ...	735,000	85,000	820,000
1974 ...	810,000	85,000	895,000
1975 ...	870,000	85,000	955,000

11. It is thus clear that the major problem will be to carry the imports into Zambia, as not only will the export tonnage be substantially lower, but the bulk/weight ratio also favours exports. In other words, "alternative systems of road, rail, air and sea communications" to carry the normal flow of imports will have the capacity to carry all the normal exports.

12. An attempt was also made to establish the period of time over which the need to carry the normal traffic on alternative routes will persist. The two major developments in transportation routes available to Zambia which will come to fruition shortly are the completion of the rail link with Dar es Salaam (the TAZARA<sup>1</sup>, and the completion of the Cubal variant on the Benguela railway to Lobito. While it is impossible to give a single day on which such major projects will become fully operational, it appears that the former will not be available for about three years (say the end of 1975) and the latter for about 16 months (say mid-1974). Therefore, the alternative systems will have to operate for about three years, with the likelihood that the situation will be eased slightly by mid-1974.

13. In summary, then, the traffic to be carried would come to 120,000 tons monthly of imports. Alternative systems to carry this tonnage of imports will allow the exports to be carried with no difficulty.

#### Alternative routes

14. The major routes onto which the southern traffic will need to be diverted are as follows:

- (a) Through Zaire by rail;
- (b) Through Malawi by road (connecting to rail);
- (c) Through Tanzania by road.

15. Appendix II gives a detailed description of each of the ports involved, and appendix III deals with each of these routes. In summary the team estimates that it will be possible to carry some 23,000 tons per month of imports into Zambia through Zaire (corresponding to 38,000 tons per month of exports). Through Malawi, the team estimates that it will be possible to carry 17,000 tons monthly. Some 65,000 tons can be carried through Tanzania. This gives a total of 105,000 tons per month, leaving a shortfall of 15,000 tons per month to be made up by other means.

16. In addition to the 15,000 tons per month to be made up by other means, the team believes it will take some months to build up to the tonnages set out in paragraph 8 above. In addition to trucks, port handling equipment, road improvements, storage sheds and maintenance depots, substantial improvements in cargo handling will be necessary, documentation will have to be speeded up, changes in managerial practices will have to be introduced at all stages and there will be

a substantial lengthening of the supply pipeline. In the short run - say the next three to four months - an airlift would be necessary if normal tonnages were to be carried. Even though Zambia might be able to "tighten belts" and so reduce the necessary imports to an amount significantly below the normal flow, it will be necessary to utilize air freight to ensure that critically needed supplies are available, that port congestion is eliminated, and so forth.

17. Given a little time, the 15,000 tons per month shortfall might be handled in a number of ways. It might be possible to increase the traffic through Malawi - perhaps by another 5,000 to 10,000 tons per month. The balance - some 5,000 to 10,000 tons per month - could be brought in by one or more of the following:

- (a) Increased operating efficiency at Dar es Salaam;
- (b) Arrangements to obtain additional tonnage through Mombasa;
- (c) Airlift from ports with adequate airports (other than Dar es Salaam);
- (d) Use of Matadi and the "Voie Nationale".

#### The short term

18. The estimates given above are to a large extent theoretical. They are based on total tonnages on a monthly basis. They would seem to apply in about six months when arrangements have been made to divert the various types of cargo to the various ports and modes of transport best able to handle them. In the meantime, there are a number of essential considerations. These relate to (a) imports aboard ships diverted to Lobito, Beira, Dar es Salaam and Mombasa; (b) the pipeline of orders already placed; (c) the lengthening of the pipeline as a result of using new sources of supply and new routes; (d) the inward movement of the trucks and other supplies necessary to establish the new routes.

19. It is already clear that stocks of some materials and supplies in Zambia are inadequate to bridge the gap until new shipments are brought in by any of the above routes. Meat products, certain spares and supplies for the mines and for Zambia railways, medical supplies, yarns for the blanket factory, for example, are already in short supply. The Government of Zambia has initiated a major study of stocks on hand and when this study is completed, it will be possible to estimate immediate shortages having regard to the goods presently on board ships. These shortages will then have to be dealt with, either by special arrangements at ports or by utilizing air carriers as appropriate. Some air cargo will be utilized to clear ports, some will need to be used to bring imports from places of origin to meet critical shortages in Zambia. Rebuilding stocks will add to the "normal" tonnages given in paragraph 10 above.

#### Needs of Zambia to maintain the normal flow

20. The mission has made estimates of what will be necessary to handle 105,000 tons per month. These can be no more than an indication of actual needs, as specifications are unknown in some cases. The precise nature of any assistance will need to be discussed by the Governments and agencies concerned.

21. The Government of Zambia provided the team with the following assessment of their immediate needs:

<u>Item</u>	<u>Cost</u>
300 heavy vehicles with trailers . . . . .	K 8,100,000 <sup>a/</sup>
Additions to workshops and installations for trucking fleet. .	2,000,000
Manpower requirements . . . . .	1,000,000
Mobilization costs (including equipment hire). . . . .	1,000,000
Communications improvements. . . . .	100,000
Spare parts at K 200,000 per month for six months . . . . .	<u>1,200,000</u>
Total	<u>K 13,400,000</u>

<sup>a/</sup> All costs in the report are given in kwacha; the approximate rate of exchange is K 0.62 = \$US 1.

22. In the longer term, i.e., to maintain the normal flow of traffic, the Government of Zambia's preliminary assessment of needs was as follows (including the immediate needs in paragraph 21 above):

<u>Item</u>	<u>Cost</u>
1,200 heavy vehicles (various) . . . . .	K 27,000,000
Drivers . . . . .	4,800,000
Other manpower costs . . . . .	2,300,000
Housing for additional manpower . . . . .	1,484,000
Training costs . . . . .	1,000,000
Workshop installations - Dar es Salaam route . . . . .	2,000,000
- Malawi route . . . . .	500,000
- Other . . . . .	1,900,000
Storage facilities . . . . .	1,428,000
Handling equipment . . . . .	626,020
Zambia railways - 200 wagons . . . . .	3,000,000
- 4 locomotives . . . . .	<u>1,100,000</u>
Total	K 47,134,020
<u>Add storage and handling facilities for wheat and vegetable oils . . . . .</u>	<u>2,350,000</u>
Total	<u>K 49,484,020</u>

23. In addition, the Government of Zambia estimated that the additional costs of handling the normal traffic based on a preliminary study of selected commodities would be between K 31.9 million and K 35.9 million.

24. The Government of Zambia also indicated needs for further improvement in the telecommunication system, totalling about K 1.7 million (at 1971 prices). No attempt was made to calculate the additional costs of air freight to maintain the normal flow of traffic.

25. In summary, the Government of Zambia's early assessment of the costs of maintaining the normal flow of traffic by alternative routes was as follows (excluding use of air freight):

(a) Additional equipment, manpower and other facilities: K 49.5 million;

(b) Additional costs of handling normal traffic: from K 31.9 million to K 35.9 million;

(c) Additional communications equipment: K 1.7 million.

The estimated total costs would therefore be between K 83.1 million and K 87.1 million.



B. Assessment by the team

26. After examining the various alternative roads the team believes that the traffic should, as far as possible, be carried by rail through Lobito, by road only through Dar es Salaam and Mombasa, and by road through Malawi. The possibility of using East African Railways from Mombasa or Dar es Salaam to Mikumi and then by road, or using rail to Kigoma then by lake to Mpulungu and then by road, should not be considered as primary routes, but should be kept as reserve methods of clearing the ports of Mombasa and Dar es Salaam. In the event that the congestion becomes critical the possibility of using the TAZARA for inward movement of goods and then trans-shipping to road was also examined but is not recommended. This would add to costs and to transit time and delay completion of the railroad. In any event at this time there is a serious shortage of rolling stock to carry this inward cargo on the TAZARA.

By rail through Zaire to Lobito

27. This is an all-rail route which can carry up to 38,000 tons monthly of exports and 23,000 tons monthly of imports. Because it is an established all-rail route, it should be used as far as possible for bulk commodities, and for heavy items not suitable for trans-shipment and road haulage. As the total tonnage of bulk commodities and heavy items will far exceed the inward capacity, great care must be taken to determine which imports should come through Lobito.

28. In order to carry the tonnage inward and outward, two things are necessary. First, there must be some additional equipment and supplies provided for Zambia railways; second, negotiations must be carried out to get agreement that Benguela railways will carry the kinds of tonnage offered and that appropriate facilities are available at the port. The team, in assessing the needs to allow this route to be utilized to capacity, finds that Zambia Railways requires 300 general cargo wagons, 65 refrigerator cars, 4 additional locomotives and some K 1 million of spare parts (these are so urgently required that some should be airlifted to Zambia even at substantial extra cost). In addition to the foregoing, up to 12 diesel electric shunting locomotives (750 to 1,000 h.p.) are urgently needed if the railway is to continue to operate efficiently.

29. In summary, the team estimates the following needs to make full use of the capacity on the Lobito route. It should be stated that many of these items will be useful well beyond the period of diverted traffic.

<u>Item</u>	<u>Cost</u>
300 general cargo wagons . . . . .	K 4,500,000
65 reefers . . . . .	1,600,000
4 locomotives . . . . .	1,100,000
12 diesel shunting . . . . .	1,080,000
Spares . . . . .	<u>1,000,000</u>
Total costs of additional equipment . . . . .	<u>K 9,280,000</u>

By road to Malawi, then by rail to Nacala and Beira

30. To carry 17,000 tons monthly on this route, the team estimates the following needs for Malawi Railways. Most of these items will be useful long after the present needs have been met.

<u>Item</u>	<u>Cost</u>
80 wagons . . . . .	K 960,000
70 tarpaulins . . . . .	5,600
2 shunting locomotives . . . . .	180,000
4 fork-lift trucks . . . . .	32,000
3 mobile cranes . . . . .	<u>75,000</u>
Subtotal	K 1,252,600
Additional road maintenance costs . . . . .	<u>60,000</u>
Total costs (excluding trucks) . . . . .	<u>K 1,312,600</u>

31. About 450 trucks appear to be needed for the Malawi route of which about 50 could be provided locally. This leaves some 400 trucks to be provided at a cost of K 9,000,000. In addition new workshop facilities and installations to handle the trucking to Malawi are needed at Balaka and Salima, totalling K 500,000. Additional storage will be necessary at Balaka (K 10,000) and Salima (K 18,000). Some 16 fork-lift trucks (K 144,480) and 8 cranes (K 272,000) will be needed for the trucking operations. These items total K 9,044,480.

32. In summary, the following is needed to carry some 17,000 tons of imports and 7,000 tons of exports via Malawi:

<u>Item</u>	<u>Cost</u>
Equipment and rolling stock . . . . .	K 1,252,600
Additional road maintenance . . . . .	60,000
Additional trucks . . . . .	9,000,000
Workshop facility . . . . .	500,000
Storage . . . . .	28,000
Fork-lift trucks . . . . .	144,480
Cranes . . . . .	<u>272,000</u>
Total (Malawi route)	<u>K 11,257,080</u>

The route through Tanzania

33. The major route to be used for both imports and exports is the all-road route from Zambia to Dar es Salaam and Mombasa. Other modes of transport will provide important reserve facilities if congestion at the harbours seems too great. The vastly expanded road traffic to these ports will necessitate improved facilities and management at the ports, excellent arrangements to clear cargo from the ports, maintenance facilities for the trucking fleet at various places along the routes, increased storage capacities, a major increase in the trucking fleet and the

personnel to handle the larger fleet, improvements in the communications system and a new management structure to handle imports and exports.

34. Improved facilities at the ports will be provided by a \$26 million harbour improvement programme being undertaken with the assistance of the Government of Canada and by a similar sized major construction programme being financed by the International Bank for Reconstruction and Development. These programmes are to be expedited as much as possible although it is unlikely that the latter can be speeded up. The Canadian programme will finance the construction of additional lighterage (to be built if possible in East Africa) and provide fork-lift trucks and mobile cranes. The original four-year programme to provide 98 diesel tow tractors (38 x 8T and 60 x 20T) and 440 flat-bed trailers is to be speeded up as much as possible. This assistance will do much to increase the ability of the ports in East Africa to handle the Zambian traffic.

35. Also needed is the new entrance road behind Berth 6 at Dar es Salaam Harbour, and the early completion of the Gerazani road. An emergency bridge, perhaps a Bailey bridge, just north of Tanga on the Mombasa road would permit the use of the shorter road for traffic to and from Mombasa. No estimate of this cost is available, but K 100,000 should cover the costs.

36. In order to clear goods from the ports, it will be necessary to have marshalling grounds outside the port area (Kenya National Transport Company has such a yard at Mombasa, and there is a transit store at Ubungo at Dar es Salaam). Additional yards and storage space will be needed at Dar es Salaam, however, and a fleet of vehicles available to carry cargo from the port. It is not possible to estimate the extent to which the tractors and trailers to be provided to the port authority will be used for this purpose. The team believes provision needs to be made for additional tractors and trailers to be stationed at Dar es Salaam. Some 50 tractors and 125 trailers, subject to the final disposition of equipment by the port authority and the availability of other equipment in the area of the dock, would appear to be necessary. The costs of these will approximate K 2,125,000.

37. The road connexion between Dar es Salaam and Zambia appears to be able to handle the expected traffic provided adequate maintenance is carried out and weight restrictions are rigidly enforced. The Great North Road within Tanzania has been completed except for 121 miles between Dar es Salaam and Morogoro, which are still under construction. The critical considerations in carrying the expected volume of traffic are adequate maintenance and a rigid enforcement of load limitations. It is impossible to overstress the importance of the latter, as any overloading might well lead to a breakdown of sections of the Great North Road.

38. The actual allocation of traffic between Dar es Salaam and Mombasa should be kept flexible in practice. For the purpose of calculating the needs of Zambia, however, the following tonnages were used:

Monthly tonnages via Mombasa: Imports 22,000 and exports 10,000

via Dar es Salaam: imports 43,000 and exports 20,000

Given the turnaround time which has featured the operations of Zambia Tanzania Road Services, adjusted for empty trips and downtime, the team estimates that 1,310 trucks (30 T) will be needed for the Dar es Salaam traffic and 760 trucks (30 T) will be needed for the Mombasa traffic. As some 820 trucks are now available or, we understand, on order, the addition to the trucking fleet to carry the traffic to Mombasa and Dar es Salaam will amount to about 1,250. These will cost approximately K 25 million. This number could be reduced if turnaround time could be improved.

39. The larger trucking fleet on the Dar es Salaam and Mombasa routes will necessitate additions to the existing workshop facilities. The Government of Zambia estimated the costs of these additions at K 2 million. The team discussed this estimate with the authorities in Zambia, including officials of Zambia Tanzania Road Services, and agrees that this estimate is reasonable.

40. Increased storage capacity will be needed either at Dar es Salaam or Mombasa for vegetable oils and inedible oils. These will cost some K 157,000.

41. In summary, the use of the routes through Tanzania will necessitate the following. Many of these items will be useful after the extraordinary situation is ended.

<u>Item</u>	<u>Cost</u>
Bailey bridge and approaches . . . . .	K 100,000
Additional tractors and trailers at Dar es Salaam . .	2,125,000
Additional trucks . . . . .	25,000,000
Maintenance facility . . . . .	2,000,000
Increased storage capacity . . . . .	<u>157,000</u>
Total	<u>K 29,382,000</u>

42. The above total does not include many other costs in Zambia, including the costs of necessary personnel, or the costs of any telecommunication equipment needed in Tanzania or Kenya.

Other costs

43. New workshops and facilities in Zambia needed to cater for the haulage through Malawi have been estimated to cost K 1.9 million.

44. Additional storage sheds in Lusaka will cost about K 900,000 and at Ndola and Kitwe additional storage will cost about K 500,000.

45. Inside Zambia, additional fork-lift trucks will be required at an approximate cost of K 70,000 and cranes will be needed costing some K 135,000.

46. Special problems will emerge in handling wheat and vegetable oils. For vegetable oils some 30 special road tankers will be required costing some K 1.2 million and storage tanks will be necessary costing some K 215,000. Grain silos will be needed costing some K 2.25 million.

47. In order to handle the traffic through Dar es Salaam and Mombasa, the telecommunications system must be radically improved. Zambia has two major projects in hand to improve external communications - an earth station and a microwave link to the Tanzanian border - but both will require at least two years to complete after commencement. The emergency needs are better served by high frequency radio links. The equipment required (see appendix IV) will cost about K 1.1 million, installation costs will add about K 600,000 to the cost. This cost - K 1.7 million - does not include any equipment needed in neighbouring countries.

48. A major additional cost will be to provide the manpower needed to operate the larger truck fleet. The experience of Zambia Tanzania Road Services has been that it takes from two to six months to train a driver depending upon his background, and about six months to train a semi-skilled mechanic. Developing a skilled mechanic takes about a year. The total manpower needs for a fleet of 500 trucks is about 2,500 men - of these about 1,425 are loaders, swampers, etc., about 450 semi-skilled mechanics and fitters, about 100 skilled mechanics and fitters, about 450 drivers and about 75 engineers and administrative staff.

49. The team believes that the trucking fleet should be operated in units of about 700 vehicles each. This would offer the advantage of allowing several sources of equipment supply without prejudice to a high degree of standardization, and would make the control and supply of spare parts (always a critical question) easier to handle. Financial problems might also be eased, a certain degree of competition would be introduced and flexibility in operating procedures could be established (e.g., leasing, subcontracting, etc.).

50. As some 2,000 additional trucks will be needed to handle the traffic, the approximate additional manpower requirements will be as follows:

<u>Item</u>	<u>Cost</u>
Drivers . . . . .	K 4,000,000
Loaders, etc. . . . .	3,800,000
Semi-skilled mechanics . . . . .	1,200 )
Skilled mechanics . . . . .	270 )
Engineers and administrators . . . . .	200 )
Total	<u>7,270</u>
	<u>K 12,300,000</u>

51. In Zambia it appears that housing units for skilled and semi-skilled staff will cost approximately K 2,000 per unit, for senior staff approximately K 15,000 per unit. If housing needs to be provided as part of the terms of service, housing costs for the additional manpower will be about K 5,940,000. It should be noted that such a construction programme might well add to import requirements. On the other hand these buildings will be useful long after the extraordinary situation facing Zambia has passed.

52. In summary, these other costs are as follows:

<u>Item</u>	<u>Cost</u>
Workshop facilities . . . . .	K 1,900,000
Storage facilities . . . . .	1,400,000
Fork-lift trucks and cranes . . . . .	205,000
Special tankers and storage for oils . . . . .	1,415,000
Silos for grain . . . . .	2,250,000
Manpower costs . . . . .	12,300,000
Communications equipment . . . . .	1,700,000
Housing for extra manpower . . . . .	<u>5,940,000</u>
Total	<u>K 27,110,000</u>

53. The needs to maintain traffic at estimated capacity of overland routes may be summarized as follows:

<u>Item</u>	<u>Cost</u>
To utilize the Zaire route to capacity . . . . .	K 9,280,000
To utilize the Malawi route to capacity . . . . .	11,257,000
To utilize Tanzanian route to capacity . . . . .	29,382,000
Other costs . . . . .	<u>27,110,000</u>
Total	<u>K 77,029,000 (say K 77 million)</u>

It should, however, be noted that much of the equipment and facilities included in this total would have been necessary in the normal course of development of Zambia, Tanzania and Malawi. To some extent the urgent needs reflect merely an earlier phasing of later developmental needs. This is true for most of the railway rolling stock, the housing needs, the storage facilities and the handling equipment. Even some of the trucks, tractors and trailers would have been needed in the years to come.

Air freight to carry the shortfall until land route capacities are built up

54. The best estimate the team could make of the costs of facilities, equipment and manpower required to use the alternative land routes at their capacity is given in paragraph 53 above. There is however a shortfall of some 15,000 tons per month of imports after utilizing the estimated capacity of each of these routes. If this additional tonnage is brought in by air freight (using the nearest suitable ports with available capacity), the cost is likely to be in excess of K 250 per ton - or an added bill of nearly K 4,000,000 monthly.

Additional costs caused by rerouting

55. Even if all the above facilities and equipment were provided, there would still be significant additional costs for carriage by the alternative routes. The team cannot improve significantly on the estimates of the costs provided by the Government of Zambia (see para. 23 above) - i.e., between K 30 million and K 35 million.

### C. General observations

56. The capacity figures of the various routes given in paragraph 15 above are estimates of what can be done if the needs set out in paragraph 53 above are met and given sufficient time, say four to six months, to get each of the routes operating effectively. If an immediate start is made, and specific attention is paid to improving the efficiency of operations, the needs might be reduced. But even if a concerted effort is made, the team believes that it will take many months and a great deal of effort and technical assistance to achieve "normal" monthly flows. Over the next six months, the tempo of activity in Zambia is bound to slow down; strict import and foreign exchange control will be necessary and government programmes will need to be rescheduled and modified.

57. The normal operations of government under such abnormal conditions will strain the administrative capacity of the public services, and necessitate senior officials devoting all of their time to the normal running of government. The added responsibilities involved in rerouting the traffic and in utilizing all alternate routes effectively will need to be met by special means and by technical assistance of various kinds.

58. It is very difficult under present conditions to make an accurate forecast of the points of entry into Zambia of the future imports during the period preceding the completion of the rail link with Tanzania. Any theoretical exercise tending to assign a specific tonnage to a specific route is certain to need major readjustments to fit the actual circumstances which will develop during this period. The variations in transport demand will be due to the pattern of Zambian requirements, variations of transport demand in neighbouring countries and unforeseen international circumstances.

59. A substantial amount of flexibility will need to be maintained in all areas of transportation, including ocean shipping, choice of receiving harbours, road or rail transportation, etc. In view of the urgency of the situation it is impossible to organize quickly and from scratch an efficient new organization to manage such a huge and complex problem. The team believes it would be preferable to rely on a single firm or consortium to deal with the management, handling, transporting and expediting of traffic moving in and out of Zambia. The terms of reference for such an organization should be carefully specified by the Government in authorizing its activities. All intergovernmental relations and negotiations should, of course, continue to be the responsibility of the Government of Zambia.

60. The reasons for suggesting the use of a single firm or consortium are the following:

(a) The necessity of making the best use of transport or storage capacity available to Zambia in both the public and private sectors;

(b) The necessity of world-wide contacts in shipping circles, and ability to establish offices, correspondents or liaison offices not only in Zambia and in the neighbouring countries, but also in any country trading with Zambia;

(c) The need to avoid congestion and expedite trans-shipment of goods to co-ordinate arrival of cargoes, to make optimum use of the land transportation available at any one time, and to take into account stocks and storage facilities;

(d) The necessity of centralizing and expediting custom formalities and other documentation.

61. The above organization should be concerned only with the national management of transporting goods to or from Zambia and should have nothing to do with the operation of the truck fleet and other transport systems. It should be the only authorized agency dealing with transportation companies, importers and government services. As far as the truck fleet is concerned, it seems clear that a number of operating units will be required. However, it would be dangerous to specify in detail the exact composition of the fleet and the exact assignment of units to any particular route. A wide margin should be left to the trucking operators to utilize their equipment with optimum efficiency. On the basis of the team's assessment, it appears that about 3,000 trucks and trailers will be in use, but this number may vary not only as demand fluctuates but also with the efficiency of management and the possible utilization of new routes (e.g. East Africa Railways, which could reduce the road requirements).

62. At the present stage it is not possible to foresee all the financial and economic consequences which will result from these new transport arrangements. There may be a need to subsidize certain commodities carried on certain routes, but the choice of routes should be made with full knowledge and in relation to the real costs, including overheads and amortization. Only in this way can it be hoped to avoid a permanent distortion of the use of established and future modes of transport, whether in Zambia or in neighbouring countries.

63. In addition to the management group referred to in paragraphs 58-62 above, there will be a need for additional specialized assistance. The Commonwealth Fund for Technical Co-operation has now provided a general transport co-ordination adviser and an expert on air-freight logistics. These experts will be in a position to work out over the next two or three weeks specific technical assistance needs. It should be emphasized, however, that while there would be a role for advisers, most of the requirements will be for operational and executive personnel.

64. The team understands that should it prove necessary to reduce the level of activity in Zambia - e.g., if imports should fall significantly below the normal level - the Government of Zambia has decided to give highest priority to basic necessities and the imports necessary for the copper mines and the agricultural programme. In view of this, the Government, in co-operation with the mining industry and the private sector, will need to give immediate attention not only to the necessary tonnages but also to the allocation of these tonnages, by commodity, to match the established priorities.

65. The team, however, wishes to stress that unless the above-noted needs are met, the economy of Zambia will suffer significantly. Already copper production is likely to slip below its planned figure for 1973, because delivery of necessary machinery and equipment is being delayed. Further slippage is almost certain, with serious effects on the balance of payments of Zambia, and on government revenue.

66. The annual balance of payments will be affected in a number of ways. If copper production slips below planned figures, exports will fall significantly. While rerouting traffic will reduce payments to Rhodesian Railways by some K 28,000,000 to K 30,000,000 <sup>2/</sup> (a foreign exchange saving for Zambia), the

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<sup>2/</sup> Of course the total loss to the Southern Rhodesian economy will be much greater.



corresponding payments across the exchanges for movements through Zaire, Malawi and Tanzania would be more than double this figure for traffic equal to what the team estimates to be the capacity of these routes. If air freight is used to bring in additional imports to maintain "normal" levels, the deficit on trade account would approximate K 115,000,000. Even payments for services will be affected by the need to increase the use of expatriate manpower to meet the emergency. Thus the total deficit on goods and services may be about K 120,000,000 for "normal" traffic, or K 80,000,000 to K 90,000,000 with limited use of air freight and the use of overland routes at the capacity estimated by the team. As the deficit on transfers is relatively fixed for the next few years at around K 75,000,000 annually, the total balance of payments deficit would seem to be about K 195,000,000 for the "normal" flow of traffic or K 155,000,000 to K 165,000,000 for traffic at the level of the estimated capacity of the land routes with limited use of air freight.

67. Recent improvements in copper prices may go some way to offset this large deficit, and may even offset part of the effects of a reduction in copper production. However, the recent upsurge in prices may reflect the markets assessment of the impact of diverting traffic in Zambia, and it would be dangerous to plan on the basis of significantly higher copper prices unless copper production is seriously affected.

68. The possibility of copper production being seriously affected should not be underestimated. Estimates of transport requirements for imports have been based in general on total tonnage estimates furnished by the Government broken down only into broad categories. Certain of the bulk commodity import requirements present special problems in handling and transiting. In the past such commodities have been carried from origin (if in southern Africa) or from the port of entry (if from outside Africa) to destination by rail. Under the changed circumstances only one direct rail link is available (via Lobito). As already noted, the total amount of cargo to be handled through Lobito is restricted by inland transport arrangements and the amount of bulk cargo limited by commercial considerations of the Benguela railway.

69. Particular attention must therefore be given to the routing of bulk commodities and to the provisions for handling them, especially at ports of entry other than Lobito. The principal commodities in this category identified by the team include:

<u>Item</u>	<u>Estimated annual tonnage required</u>
Coke . . . . .	80,000
Sulphur . . . . .	40,000
Timber . . . . .	35,000
Sugar . . . . .	15,000
Fertilizer . . . . .	112,000
Wheat . . . . .	95,000
Steel . . . . .	120,000
	<u>497,000</u> metric tons

70. In addition to the above items, such priority cargo as heavy machinery, refractory material, carbon black and vegetable oil must be considered. Total tonnages in these categories are at least twice the import capacity of the inland route from Lobito, and the problems raised of handling and hauling over the alternate truck routes will be considerable. As most of the bulk items are either essential to the mining industry, or basic food requirements, or needed for the agriculture programme, the problem cannot be ignored.

71. The Government of Zambia will find it extremely difficult to finance the deficit estimated above. Certainly Zambian foreign exchange reserves are not adequate to absorb these costs and the Government's budgetary position is already in deficit. Broadly speaking, in a country such as Zambia, the public deficit reflects the balance of payments deficit. The budget statement for 1973, which makes no allowances for the emergency situation caused by the border closure, estimated a very large deficit. But more than that, the team notes that significant revenue items (from mineral taxation, corporation taxes and import duties on luxuries and semi-luxuries) may well be reduced as a result of the programme to reroute traffic from Rhodesian Railways. These reductions in revenue may be particularly large if traffic falls below "normal" levels. These considerations emphasize the importance of Zambia receiving early and adequate assistance if the normal development of the economy is to continue.

72. As it will take some time to build up to the capacities of the various routes, and to provide all the facilities, equipment and manpower needed, the team has attempted to form an opinion of what should be provided at once, or as quickly as possible. In our view, the most urgent items are:

- (a) The organization of the import/export management unit (paras. 58-62);
- (b) Provision of telecommunications equipment (para. 47);
- (c) Expediting the supply of equipment for Dar es Salaam port (para. 34);
- (d) Spare parts, and at least part of the rolling stock for Zambian railways (para. 28);
- (e) About 500 trucks (para. 38);
- (f) Facilities and equipment for vegetable oils and inedibles (para. 46);
- (g) Tractors and trailers to clear cargo from Dar es Salaam port (para. 36);
- (h) A freight marshalling yard near Dar es Salaam port (para. 36);
- (i) Training arrangements for maintaining and operating all elements of the supply system (para. 48);
- (j) Arrangements to assist the Government of Zambia to meet the short-term financial strain and foreign exchange costs of the next three to six months (para. 55).

Appendix I

IMPORT AND EXPORT STATISTICS OF ZAMBIA

Table I

THE SHARE OF INDIVIDUAL ROUTES IN ZAMBIA'S EXTERNAL TRADE  
(Per cent of total)

	1969		1970		1971		1972 (1st half)		1972 <sup>a/</sup> estimate	
	EXP	IMP	EXP	IMP	EXP	IMP	EXP	IMP	EXP	IMP
Through TANZANIA border	28.1	11.4	29.9	12.3	27.7	14.4	28.0	16.0	28.0	15.3
Through RHODESIA border	56.5	64.0	46.9	64.0	48.8	51.1	53.1	45.0	53.1	47.6 <sup>b/</sup>
Through MALAWI border	0.9	2.7	0.7	0.9	1.1	1.4	0.5	1.2	0.5	1.1
Through ZAIRE border	14.2	5.8	22.1	5.8	22.1	13.1	18.4	10.3	18.4	9.8
Through PIPELINE	-	15.5	-	16.8	-	19.7	-	27.0	-	25.8
OTHER	0.3	0.6	0.4	0.2	0.3	0.3	-	0.5	-	0.4
GRAND TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: For 1969 and 1970 Zambia's CSO - Annual Statement of External Trade - 1970.

For 1971 and the first half of 1972 Zambia's CSO - Method of Transport Analysis.

<sup>a/</sup> Assuming that the volume of imports in the second half was the same as in the first half of 1972.

<sup>b/</sup> Based on the data provided by Zambia Railways for the rail transport.

Table II

ZAMBIA'S IMPORT ROUTES

(In metric tons)

	1969	1970	1971	1972 (1st half)	1972 estimate <sup>a/</sup>
Through TANZANIA border	240,973	248,212	294,910	152,440	304,880
Through RHODESIA border	1,359,181	1,293,204	1,048,066	427,461	946,922 <sup>b/</sup>
Through MALAWI border	56,166	18,385	29,121	11,164	22,328
Through ZAIRE border	121,546	117,654	268,929	98,050	196,100
Through PIPELINE	328,554	340,348	403,230	256,939	513,878
OTHER	12,970	3,833	6,593	4,416	8,832
GRAND TOTAL <sup>c/</sup>	2,119,390	2,021,636	2,050,849	950,470	1,992,940

Source: For 1969 and 1970 Zambia's CSO - Annual Statement of External Trade - 1970.

For 1971 and the first half of 1972 Zambia's CSO - Method of Transport Analysis.

<sup>a/</sup> Assuming that the volume of import in the second half was same as in the first half of 1972.

<sup>b/</sup> Based on the data provided by Zambia Railways for the rail transport.

<sup>c/</sup> Of which maize = 1969    1970    1971    1972    (1st half)  
 71,100    31,100    261,700    66,200    (in tons)

Table III

ZAMBIA'S EXPORT ROUTES

(In metric tons)

	1969	1970	1971	1972 (1st half)	1972 estimate <sup>a/</sup>
Through TANZANIA border	243,694	253,420	221,410	112,708	225,416
Through RHODESIA border	189,725	398,515	390,010	214,359	428,718
Through MALAWI border	7,793	5,749	8,879	2,396	4,792
Through ZAIRE border	123,419	187,291	176,256	74,272	148,544
OTHER	3,182	3,630	2,160	5	10
GRAND TOTAL	867,813	848,605	798,715	403,740	807,480

Source: For 1969 and 1970 Zambia's CSO - Annual Statement of External Trade - 1970.

For 1971 and the first half of 1972 Zambia's CSO - Method of Transport Analysis.

a/ Assuming that the volume of exports in the second half was the same as in the first half of 1972.

Table IV

METHOD OF TRANSPORT OF ZAMBIA'S IMPORTS

(In thousands of metric tons)

	1969	% of total	1970	% of total	1971	% of total	1972 (1st half)	% of total	1972 estimate <sup>a/</sup>	% of total
By RAIL - total	1,377	65.0	1,341	66.3	1,100	53.6	415.9	43.8	923.8	46.3
of which through RHODESIA	1,255	59.3	1,221	60.5	831	40.5	318.0	33.5	728.0 <sup>b/</sup>	36.6
By ROAD - total	401	18.9	338	16.8	543	26.5	273.6	28.8	547.2	27.5
of which through RHODESIA	103	4.8	71	3.5	217	10.6	109.5	11.5	219.0	11.0
By PIPELINE	328	15.5	341	16.8	403	19.7	256.9	27.1	514.0	25.9
OTHERS	13	0.6	2	0.1	4	0.2	4.0	0.3	8.0	0.3
GRAND TOTAL	2,119	100.0	2,022	100.0	2,050	100.0	950.4	100.0	1,993.0	100.0

Source: Data for 1969 and 1970 are based on Zambia's CSO - Annual Statement of External Trade - 1970.

Data for the first half of 1972 are based on Zambia's CSO - Method of Transport Analysis.

a/ Assuming that the volume of imports in the second half was the same as in the first half of 1972.

b/ Based on the data provided by Zambia Railways for the rail transport.

Table V

## METHOD OF TRANSPORT OF ZAMBIA'S EXPORTS

(In thousands of metric tons)

	1969	% of total	1970	% of total	1971	% of total	1972 (1st half)	% of total	1972 estimate <sup>a/</sup>	% of total
By RAIL - total	611.8	70.5	582.9	68.6	535.0	67.6	288.0	71.3	576.0	71.3
of which through RHODESIA	488.4	56.3	395.4	46.5	386.0	48.8	214.0	53.0	428.0	53.0
By ROAD - total	254.8	29.4	265.7	31.4	256.4	32.4	115.7	28.7	231.4	28.7
of which through RHODESIA	1.6	0.2	3.2	0.4			0.1	...	0.2	...
OTHER	1.2	0.1	...	...	...	...	...	...	...	...
GRAND TOTAL	867.8	100.0	848.6	100.0	791.4	100.0	403.7	100.0	807.4	100.0

Source: Data for 1969 and 1970 are based on Zambia's CSO - Annual Statement of External Trade - 1970.

Data for the first half of 1972 are based on Zambia's CSO - Method of Transport Analysis.

<sup>a/</sup> Assuming that the volume of exports in the second half was the same as in the first half of 1972.

Table VI

ZAMBIA'S EXTERNAL TRADE VOLUME

(In metric tons)

	1969	1970	1971	1972 (1st half)	1972 a/ estimate
Imports	2,119,390	2,021,636	2,050,849	950,470	1,992,940 <sup>b/</sup>
Exports	867,813	848,605	798,715	403,740	807,480
Balance	1,251,577	1,173,031	1,252,134	546,730	1,185,460

IMPORTS - WITHOUT PETROLEUM PRODUCTS  
TRANSPORTED THROUGH THE PIPELINE

	1969	1970	1971	1972 (1st half)	1972 a/ estimate
Imports	1,790,836	1,681,288	1,647,619	693,531	1,479,062
Exports	867,813	848,605	798,715	403,740	807,480
Balance	923,023	832,683	848,904	289,791	671,582

Source: For 1969 and 1970 Zambia's CSO - Annual Statement of External Trade - 1970.

For 1971 and the first half of 1972 Zambia's CSO - Method of Transport Analysis.

a/ Assumed that the volume of import in the second half was the same as in the first half of 1972.

b/ Based on the data provided by Zambia Railways for the rail transport.



Table VII

THE SHARE OF SELECTED HARBOURS IN ZAMBIA'S EXTERNAL TRADE  
(In thousands of metric tons)

	EXPORT		IMPORT	
	1970	1972 (1st half)	1970	1972 (1st half)
LOBITO	73.3	143.4	92.3	109.4
BEIRA	154.5	231.2	116.6	708.8
LOURENCO MARQUES	34.4	121.5	28.5	26.6
DAR ES SALAAM	112.5	252.5	181.4	299.8
OTHER	-	2.9	3.1	8.4
TOTAL	374.7	751.5	421.9	1,153.0

Source: For 1970 Zambia's CSO - Annual Statement of External Trade - 1970.  
For the first half of 1972 Zambia's CSO - Method of Transport Analysis.

Table VIII

ZAMBIA'S IMPORT COMPOSITION  
TRANSITING RHODESIA  
IN 1970

	<u>In thousands of kwacha</u> <u>(f.o.b.)</u>		
	BY RAIL	BY ROAD	TOTAL
Food	17,596	1,961	19,557
Beverages and tobacco	82	72	154
Crude materials	3,108	215	3,323
Mineral fuels	4,077	147	4,224
Oils and fats	3,108	2	3,110
Chemicals	12,717	2,408	15,125
Manufactures classified by materials	17,986	8,547	26,533
Machinery and transport equipment	31,202	36,095	67,297
Miscellaneous manufactured articles	1,309	943	2,252
Miscellaneous transactions	10	49	59
TOTAL	91,195	50,439	141,634

Source: Zambia's CSO Annual Statement of External Trade - 1970.

## Appendix II

### CAPACITY OF VARIOUS PORTS TO CARRY REALLOCATED TRAFFIC FROM ZAMBIA

The allocation of traffic between the various ports given in the following table has been examined on the basis of visits to the ports of Dar es Salaam, Tanga and Mombasa to assess the problems. The assumed quantities are given in tons per month:

<u>Ports</u>	<u>Import</u>	<u>Export</u>	<u>Total</u>
Lobito	35,000	30,000	65,000
Beira	5,000	-	5,000
Nacala	12,000	7,000	19,000
Mtwara	-	-	-
Dar es Salaam	43,000	20,000	63,000
Tanga	-	-	-
Mombasa	22,000	10,000	32,000
	<u>117,000</u>	<u>67,000</u>	<u>184,000</u>

Although it is not proposed to divert any Zambian traffic through Mtwara and Tanga, both these ports have been considered because they may be of importance. In the case of Mtwara it might perhaps be possible to use this port for an airlift. In the case of Tanga, the Tanzanian Government has proposed the diversion of Tanzanian traffic from Dar es Salaam to free capacity for Zambian traffic. Each port is now considered in the sequence referred to in the above table.

#### A. LOBITO

No direct approach has been made by the team to port authorities in Lobito to obtain information. The proposed diversion of traffic involves an increase of the order of two to three times the traffic previously handled for Zambia. It is understood that this amount of traffic is small compared with the total through-put of the port, and there would seem to be no reason to doubt the ability of the port to handle it. These are capacity restraints on the railways, and this is discussed separately in arriving at the probable export/import capacity of the Lobito route (estimated at 23,000 tons of imports and 35,000 tons of exports).

## B. BEIRA

In 1970, this port handled a total of 231,200 tons of Zambian exports and 708,800 tons of imports. It is now proposed to move through Beira only the traffic that can be handled by road and rail through Malawi.

Although no visit has been made to the port, there can be no doubt that the traffic will be within the capacity of the port. However, if it is intended to continue to handle vegetable oil through the port, the change in method of transport will create problems of storage, loading and movement of this commodity.

## C. NAKALA

Information available indicates that there will probably by now be four deep-water berths operating in the port. Traffic approaching 2 million tons is indicated, but much of this is probably oil or other cargoes, so the general cargo capacity cannot be deduced. It is known that further expansion up to a total of 10 berths has been planned, and there may well be one further berth completed during this year and two next year. The exact timing of the completion of these berths and provision of equipment for them has not been confirmed. However, it seems unlikely that the proposed traffic will be too much for the port to handle. It seems likely that the amount of traffic that can be allocated to this route will be limited primarily by the road and rail connexions through Malawi.

## D. MTWARA

The port of Mtwara has two excellent deep-water berths (or berths for three smaller ships), with ample back-up space and storage. The East Africa Harbours Corporation (EAHC) assesses the capacity of the port at 320,000 tons per year and does not expect the normal Tanzanian traffic to amount to more than 150,000 tons during the next year. This port could therefore handle additional traffic if required. However, there is no rail connexion, and the road connexions are extremely poor. The port can therefore only be expected to contribute to the movement of Zambian traffic if an airlift is operated from Mtwara to Zambia. Because of the small number of berths it may be advisable to consider the peak capacity less than 320,000 tons per year as ship delays will be high if the port works to a high-berth occupancy. A figure of 250,000 tons per year or slightly more, however, is a safe assumption.

## E. DAR ES SALAAM

As a result of discussions between the Government of Tanzania and the Government of Zambia, the Government of Tanzania has issued instruction that imports for Tanzania should, in future, be routed through Tanga, so that the maximum possible capacity can be made available for handling Zambian traffic.

The EAHC has some reservations about the feasibility of diverting a large proportion of the Tanzanian traffic, both because of the difficulties of rerouting parts of the cargo of ships which carry cargo for both countries and because of the limitations of Tanga.

The port authorities now feel that they would be able to handle the proposed Zambian traffic without diversion to Tanga. Their estimate of the likely traffic in the next year on this assumption is given in the following table.

EAHC estimate of possible traffic  
through Dar es Salaam 1973 - tons

<u>Route</u>	<u>Import</u>	<u>Export</u>	<u>Total</u>
Zambia . . . . .	515,000	240,000	755,000
Zaire )			
Rwanda ) . . . . .	70,000	130,000	200,000
Burundi)			
Tazara Railway construction	130,000	-	130,000
Tanzania . . . . .	<u>550,000</u>	<u>350,000</u>	<u>900,000</u>
	<u>1,265,000</u>	<u>720,000</u>	<u>1,985,000</u>

(The above figures relate to general cargo and do not include the petroleum products landed at the oil berth or crude oil at the single point mooring.)

The EAHC considers that a total traffic of 2 million tons per year can be handled through the port without diversion to Tanga, provided that clearance from the port area is carried out quickly in order to avoid a build-up in the port, which is now extremely short of storage space because of the works that are being carried out.

The relevant facilities in the port consist of a lighter wharf, which is due to be modernized during the next two years, and eight deep-water berths.

Four of the deep-water berths have been in operation for some years. Berth 1 has a separate transit shed, and one large combined shed is available for berths 2, 3 and 4.

Berths 5, 6, 7 and 8 have recently been constructed. Transit sheds at berths 5 and 6 are now under construction and probably will be completed by July 1973. The single large transit shed proposed for berths 7 and 8 may be available by September or October of this year, but the back-of-port areas will not become available for about a year. All four of these berths will therefore be operating under considerable difficulties during the coming year, with very inadequate storage space.

Despite the above difficulties, these berths have been handling quite large quantities of cargo during recent months. Total through-put i.e., exports and imports together, at each of the eight berths have been calculated for the latter part of 1972 and are given in the table below.

General cargo handled over deep-water berths at Dar es Salaam

	1972 - last quarter		
	(tons)		
	October	November	December
Berth 1	16,400	16,100	17,300
2	14,000	19,200	11,000
3	10,600	11,600	12,800
4	6,700	8,600	3,200
5	9,800	8,200	11,700
6	9,900	11,300	10,900
7	6,800	16,200	12,000
8	12,400	9,700	13,000
TOTAL	86,600	100,900	91,900

(Combined total 280,000 tons in three months, equivalent to 1.1 million tons per year of EAHC estimated maximum capacity of 1.4 to 1.5 million tons per year.)

It will be seen that the cargo handled over berths 7 and 8 has been of the same order as that handled at berths 1, 2 and 3. This has been achieved by using these berths primarily for such cargoes as the construction materials for the Tazara and arranging direct loading on to road vehicles for immediate removal from the port. This has reduced as far as possible the amount of traffic that has to be carried along the narrow aprons to the main transit shed at berths 2, 3 and 4. Use of berths 5, 6, 7 and 8 for this type of traffic, including Zambian traffic, which can be removed directly to the transit store at Ubungu, will be essential if the maximum use is to be made of this part of the port. It will also be essential that sufficient road vehicles should be made available immediately they are required for removal from the transit sheds at berth 1 and berths 2, 3 and 4 of any Zambian cargoes that have to be stored in the docks.

Since the exact time of arrival of ships carrying Zambian cargoes and the time required for documentation cannot be foreseen, quick removal can only be guaranteed if a reservoir of vehicles ready for loading is kept available close to Dar es Salaam.

The EAHC has indicated that it anticipates handling a total of 2 million tons per year on the basis of approximately 500,000 to 600,000 tons per year by lighters and from 1.5 to 1.4 million tons per year on the eight deep-water berths. This requires handling of an average of about 180,000 tons per year on each of the eight deep-water berths. This is not unreasonable compared with the cargo handled during 1970, when only three deep-water berths were operational. These, together with the lighter wharf, handled 1.265,000 tons. If the same through-put can be achieved on those three berths, it will only be necessary for the other five berths

to handle about 150,000 tons each during the next year. This should be feasible, but berth occupancies are likely to continue to be very high, and there will be appreciable delays to ships waiting for berth. Delays in 1970 averaged 1.5 days per ship. As already mentioned, the shortage of storage space makes it essential that vehicles should be available for rapid clearance from the docks and from Ubungu and also that delays due to documentation should be kept to a minimum. On this basis it is considered reasonable to expect the port to handle up to 20,000 tons of exports and 43,000 tons of imports for Zambia each month, with little or no diversion of Tanzanian cargoes to Tanga. However, it seems likely that the required improvement in availability of vehicles can only be achieved if some centralized control of the movement of traffic for Zambia is established to keep track of the cargo as it approaches the port, is discharged, moved through the port and carried up to Zambia.

As already mentioned, there is considerable traffic congestion in the port area, so that it is important that some steps should be taken to improve the situation. Two points mentioned by EAHC are important.

The first is that it is constructing a new entrance road behind berth 6. Once this is built, the main dock entrance behind berth 4 can be used for out-going traffic only, and this should improve the flow of traffic, particularly in the critical area at the back of the transit shed at berth 4. The construction of this new access road is behind programme, and the EAHC is having difficulty with the contractor (the Tanzanian Government-owned company Mecco). It may be that some intervention by the Tanzanian Government will be necessary to produce a quick solution to this problem.

The second point mentioned by EAHC is that road movement could be improved by completion of the partly constructed Gerazani road. Because this road is not completed, quite a lot of traffic enters the docks by the gate behind the lighter wharf and travels through the most congested part of the docks and out by the main entrance to save taking a detour through the town. No exact statistics are available for the amount of traffic that is misusing the dock area in this way, but it is probably substantial.

Another way in which the flow of traffic out of the main dock entrance could be improved would be to streamline the arrangements for checking out-going vehicles. There are two check points where checks are made separately by the customs authorities and by the police. If arrangements could be made for the two checks to be carried out jointly, the flow of traffic could be improved and the development of queues of lorries at the first check point (which is close to an important junction behind berth 4) could be eliminated.

The UNDP port study for the port of Dar es Salaam has only just started, and will take 12 months to complete. One problem that will form an important point of that study is an analysis of the movement of traffic in the existing docks. In addition to studying minor improvements like those mentioned above, it is intended to make a detailed study of the whole question of railway operation in the port. The present port is laid out as a railway port, and a considerable number of railway wagons are in the port at any given time. Railway tracks are provided on the apron of each of the deep-water berths. This has necessitated the adoption of a somewhat unsatisfactory layout for some of the transit sheds, making movement of vehicles difficult. For the new berths 6, 7 and 8, which are now being completed, and for berths 9, 10 and 11, which are about to be started, the

adoption of a railway-oriented layout is being continued, with the added complication that both the East African Railways and the Tazara Railway, which have different gauges, are to be accommodated in the same area. A detailed study is to be made of the effectiveness of the port operations. The risk of prejudging the results of that study should be mentioned. EAHC indicated that it expects the entire export traffic from Tanzania to be brought to the berths by road and no more than 20 per cent of the Tanzanian imports to leave the docks directly by rail. In addition, most of the traffic for Zaire, Rwanda and Burundi normally moves from the docks by rail (generally from berth 1). On this basis, it would appear that the amount of space occupied by the railways in the docks is not justified and that the congestion of the port could probably be considerably eased by stopping rail movements inside the docks altogether or very largely. This part of the port study was not due to begin until about May of this year, and it may be difficult to bring it forward; the possibility, however, is being considered by the consultants, Bertlin and Partners.

EAHC indicated that a considerable amount of additional equipment was needed for the port. Under a Canadian loan, some \$26 million of port equipment is due to be provided over the next four years. In addition to this, discussions have been going on between the Canadian and the Tanzanian Government for an additional \$6-8 million of equipment, which may be provided quickly. The position regarding this equipment and the expediting of some of the equipment under the main loan is now under urgent examination by the Canadian authorities. One of the most urgent requirements is the provision of extra lighters. Their construction in East Africa is being studied.

A number of road improvements are being carried out in Tanzania under United States aid. Some 20 miles of the road between Dar es Salaam and Morogoro are likely to be completed very shortly. The remaining 112 miles are scheduled for completion in October 1974, but it may be possible to bring this forward by about six months. The most important road from the point of view of clearance of the port is a new route to join the port to the main road near Ubungu. The design studies for this section of road have not yet started but should start soon. They would probably take about 12 months because of the difficult river crossing and crossings over the East African and Tazara Railways. It seems unlikely that the construction will be completed in much less than three years.

#### F. TANGA

The present through-put of the port of Tanga is about 240,000 tons per year, and much of this is sisal export, which is declining. EAHC estimates that the through-put can be increased by about 10,000 tons per month with the present equipment by working additional shifts. Any further increase will depend upon the provision of extra lighters and other equipment, which they do not think could be made available in less than six months.

One ship carrying 10,000 tons of cement has been diverted from Dar es Salaam to Tanga, and discharge commenced last week. The port manager was very doubtful whether East African Railways would be able to match the maximum rate of discharge of about 1,000 tons per day that he thought could be achieved. He thought that 500 tons per day might be the limit of the railway capacity.



In view of this and the very limited storage available in the port, it is considered doubtful whether diversion of more than about 10,000 tons per month can be envisaged, for at least six months.

Mention has been made of the fertilizer jetty at Tanga. This has been described as a multipurpose jetty, and it has been suggested that some diverted general cargo could be handled over the jetty. The layout of the jetty is very awkward, and vehicle movements are extremely restricted, so that even the movement of fertilizer raw materials, for which the jetty was designed, is very slow and difficult. There is also no storage space nearer than the lighter wharves. It is therefore not considered practical to handle diverted cargo at this jetty.

#### G. MOMBASA

The port of Mombasa has 13 deep-water berths and a lighter wharf capable of handling the equivalent of one additional deep-water berth. Two more berths are under construction and expected to be in operation late in 1974.

The normal traffic of the port for 1973 is expected to be about 2.4 million tons. The diversion of 22,000 tons of Zambian imports and 10,000 tons of exports monthly will bring the annual total to about 2.8 million tons.

Presently, the port operates two shifts on all the berths, and a third shift is operated on a selective basis on about one third of the berths to clear ships that are just finishing or just beginning discharge and to work on individual hatches that are out of phase.

If a third shift is worked on all the berths, no problem is envisaged in handling 2.8 million tons, provided that this is cleared reasonably quickly.

The port appears much more satisfactorily laid out than that of Dar es Salaam. It is primarily a railway port, and some 60 per cent of imports move by rail direct from the docks. Some additional traffic also goes by road to warehouses for loading onto rail.

The port has already established a copper yard capable of handling 10,000 tons per month of exports, and a further site is available which could handle double this quantity after it has been resurfaced, fenced and lit. This work would take about three months.

Conditions in the port are much more satisfactory than at Dar es Salaam, and it is not considered that the handling of 2.8 million tons per year would present any difficulty. If any further quantity of traffic has to be added to Mombasa or Dar es Salaam, we would strongly recommend that the extra traffic should be routed through Mombasa rather than Dar es Salaam.

The required equipment is being provided under the Canadian programme, and, if the supply can be accelerated, the increased capacity should be possible quite soon.

Mombasa is the only port in East Africa with any facilities for handling bulk vegetable oils. The question of diverting Zambian traffic through this installation was raised. The entire 4,000-ton storage capacity is leased to UNILEVER. It is understood that the Government of Kenya has contacted UNILEVER about the possibility of subletting some of the tank capacity to Zambia. There is also a plan for expanding the capacity by two 500-ton tanks.

UNILEVER has also been considering the installation of vegetable oil tanks in Dar es Salaam, and meetings are being held on the subject at the moment. The question is related to the provision of molasses tanks for exports.

In considering movement of vegetable oil by road, the problem of temperature is important. Even in Mombasa, the oil is heated to 105°F. to make it pumpable. Heating at the discharge point in Zambia would also be necessary, and there is normally a restriction on raising the temperature by more than 30°F. in 24 hours. This could make road movement difficult. Petroleum tanks are not suitable, because the baffles in the petroleum tankers make it very hard to get vegetable oil out of the tanks and to clean them. By comparison, the most optimistic timing for the provision of facilities for vegetable oils in Dar es Salaam is about 12 months.

#### H. CONCLUSION

The conclusion from this brief study of port capacity is that the ports of Lobito, Beira and Nacala appear unlikely to present any serious problems in relation to the allocation of cargo now envisaged, although other restraints may be critical.

The port of Mombasa can also undoubtedly be expected to handle Zambian traffic of the order of 10,000 tons per month export and 22,000 tons per month import. It is necessary, however, to ensure that imports are cleared from the port efficiently.

The port of Dar es Salaam is more of a problem. For many years it has been handling more cargo per berth than Mombasa, and it has been suffering somewhat greater delays to ships. New berths needed to break out of this situation have not yet been completed, and half of the eight deep-water berths now available have no back-of-port space or transit sheds, so that cargo has to be moved directly from the quay. EAHC has been surprisingly efficient in arranging this.

EAHC is satisfied that it can handle about 2 million tons per year of total general cargo, with a similar degree of congestion and delays as was experienced in 1970. This assumption is based on handling between 500,000 to 600,000 tons by lighterage (this has been achieved previously) and the balance on the eight deep-water berths.

From the EAHC estimates of the traffic through the port in 1973, this should allow Zambian cargo to be handled at the rate of about 3/4 million tons a year without any diversion of traffic from Dar es Salaam to Tanga.

The EAHC estimate of capacity could not be confirmed on a short visit, because the data on port operations was not available in sufficient detail. This sort of information will be collected during the next 12 months during the UNDP port

study, which unfortunately has only just started. On the information made available during the visit, it does appear that a total through-put approaching 2 million tons per year should be feasible, with extremely good arrangements for clearance of cargo on the port. It would also be advisable to direct to Dar es Salaam a high proportion of bulk or heavy commodities, which can be cleared direct from the quay apron at berths 5, 6, 7 and 8.

To ease the flow of traffic in the docks, the new entrance gate behind berth 6 should be opened as soon as possible and the arrangements for checking outgoing vehicles should be streamlined. The new Gerazani road should also be opened as soon as possible, because the delay in completing this road is causing an unnecessarily large amount of traffic to use the port area as a short cut.

It is also recommended that consideration should be given to reducing the amount of rail traffic in the port and making some of the areas now occupied by rail trucks available for open storage and vehicle movement.

It is not considered likely that the port of Tanga can handle more than about 10,000 tons per month of Tanzanian traffic diverted from Dar es Salaam until a substantial number of additional lighters and more equipment have been made available. This would take six months or longer.

If about 10,000 tons of traffic per month can be diverted to Tanga, and the Dar es Salaam traffic is thereby reduced to less than 1.9 million tons per year, the delays and congestion in the port should be appreciably reduced.

Until more equipment can be made available at Tanga and more sheds and back-of-port space made available in Dar es Salaam, it is not considered advisable to route more than 3/4 million tons of Zambian cargo through Dar es Salaam. Some additional traffic, however, might be routed through Mombasa.

In addition to the total Zambian traffic of about 400,000 tons per year which EAHC has said that it can handle easily at Mombasa, it might be possible to handle a further 200,000 tons, provided that extremely good arrangements are made for clearance from the port.

Appendix III

ALTERNATE ROUTES

I. ROUTE THROUGH ZAIRE

A. Zambia-Lobito Route

The Zambia-Lobito railway line offers the most advantageous alternative route for Zambian export-import traffic. While substantially longer than other alternatives, it avoids both trans-shipment of goods and road transport entirely.

From an operating standpoint, the route may be divided into four sections:

1. Zambian railways (Diesel traction): Zambia to Sakania
2. KDL (Zaire) (Diesel traction): Sakania to Lubumbashi
3. KDL (Zaire) (Electric traction): Lubumbashi to Dilolo
4. CFB (Angola) (Wood-fired steam locomotives): Dilolo to Lobito.

The present capacity of the route (controlled in fact by the capacity of the CFB) is about 2,000,000 tons per year of export traffic. In comparison, expected traffic is as follows:

Angola, internal traffic . . . . .	1,000,000 T/year
Zaire, export traffic . . . . .	600,000 T/year
Zambia, export traffic (expected 1973 level) . . . . .	456,000 T/year
Total . . .	2,056,000 T/year

For all practical purposes, the line is operating at full capacity.

The major bottle-neck hampering increased line capacity is the escarpment, near Lobito, where steep grades and bad alignment seriously hamper operations: only a few cars at a time can be moved in the west-east direction over this section. Although the CFB has 10 recently acquired Diesels on line, the Zambian share of the traffic will remain restricted to 1,000 cars per month for the next 15 months or so.

A major line relocation is under construction to ease operating conditions on the escarpment. This work is not scheduled for completion until April 1974, and the increased capacity is not immediately available.

Due to the volume/weight ratio of metal exports and general cargo or bulk imports, the critical problem faced by the railways is the transport of imported goods. Line capacity in the west-east direction is therefore the limiting factor. This maximum capacity of the Lobito-Zambia connexion has been established at 23,000 tons per month of imports (corresponding to 38,000 tons per month of metal exports) or 1,000 railway cars per month.

One other substantial (and still unresolved) difficulty is the proportion of bulk and general cargo that will be accepted by CFB. The Lobito route is capable of handling bulk cargo (coke, sulphur, wheat etc.) more efficiently than other available routes. The tendency of the mining companies is therefore to route the major part of their bulk requirements through Lobito. However, (a) CFB is unlikely to accept too great a proportion of bulk traffic on its lines, as such traffic is not profitable, and (b) the bulk requirements of Zambia far exceed the railway capacity. Thus some compromise must be worked out with CFB, and the remaining bulk and general cargo rerouted to other ports.

### B. Voie Nationale (Zaire)

The Voie Nationale in Zaire (Lubumbashi, Ilebo (Port Francqui), Kinshasa, Matadi) seems to have some capacity which could be made available to Zambia. This capacity, which the team could not investigate, is worth exploring. However, the route has serious disadvantages: two trans-shipments (rail-to-river at Ilebo, and river-to-rail at Kinshasa); relatively high costs in comparison with Lobito or other routes; slowness due to river transport and to organizational difficulties of the Zaire railways; and finally, chronic congestion of Matadi harbour. There also appears to be a power shortage on the KDL electrified lines.

Nevertheless, a study should be carried out so that any capacity existing on the Zaire route could be utilized for general cargo in order to relieve the strain on road transport and the congestion in eastern African harbours. In this connexion, the possibility of some of the Zaire traffic presently using the Lobito route being diverted to the Voie Nationale should be explored, as there is a major project to improve the Voie Nationale being undertaken by IBRD and UNDP.

### C. Zambian Railways

The network has its difficulties, after years of indifferent management and insufficient maintenance. The present management is fortunately competent, dedicated and vigorous but is facing a difficult task of rehabilitation and reorganization. The main difficulties seem to stem from delayed rolling stock and track maintenance and lack of sufficient skilled labour. Track renewal cannot be implemented at this time owing to lack of capital resources; in any event the effects of track modernization would have no immediate impact on the present situation. The team therefore concentrated its attention on rolling stock.

1. Railway cars

A comparison has been made of the rolling stock situation before and after the closing of the border with Rhodesia:

	<u>1972</u>	<u>1973</u>	
Zambia Railways, all-purpose cars . . . . .	1,200	1,200	
Pooled cars (Rhodesia, South Africa):			
general cars . . . . .	4,241	3,200	
Reefer cars . . . . .	72	8	(on lease)
Tank cars . . . . .	42	81	
Explosives cars . . . . .	55	26	(4 on lease)
	<u>5,610</u>	<u>4,515</u>	

2. Present traffic: car needs

The railway provides important internal transport services, such as coal to the smelters, metals and concentrates within the copper belt, cereals etc. Domestic traffic now amounts to 5,000,000 tons per year, which leads to the following car requirement calculations:

5,000,000 T/year, or 420,000 T/month

$$\frac{420,000}{30} = 14,000 \text{ T/day}$$

At 30 T/car estimated loading:

$$\frac{14,000}{30} = 460 \text{ cars}$$

$$460 \text{ cars} \times 8 \text{ days turnaround} = 3,680 \text{ cars (see note below)}$$

Some provision must be made for distribution by railway of goods arriving in Zambia by the various truck routes. This is estimated at 20,000 tons per month. On the basis of an 8-day turnaround time and a 24-ton load per car, additional needs are 220 cars.

Finally, the railway must provide for the Lobito route an additional 1,000 cars.

It would then appear the Zambian railways, in order to continue operations, would need about 300 general cargo cars and 65 reefer cars.

The reefer cars are badly needed, since the main source of supply is the south, and the main consumption areas in the copper belt. As far as the explosives

cars are concerned, a number of them were destroyed in an explosion two years ago. While it is expected the insurance claim will cover the damages, the case is in litigation, with no settlement in sight. In the meantime, it is believed Zambia will become self-sufficient in explosives in the very near future. The 22 explosives cars remaining in the network should be ample to insure transport of blasting accessories.

Note:

It is estimated that from 10 to 15 per cent of the car fleet is down for repairs or maintenance at any given time. Thus a similar percentage should be added to the total of 3,680 cars needed to meet traffic demand. It is felt, however, that the following factors need to be considered:

(a) Railway operations (except for the Lobito run) are now restricted to domestic traffic and are therefore under the jurisdiction of Zambian Railways. Improved operations and remedial measures now in train should reduce turnaround time.

(b) Railway equipment has a long economic life, and the incidence of the Tazara railway (scheduled for commissioning in about three years) on rolling stock requirements is not known. Caution should therefore be exercised, in order to avoid unnecessary capital investment which might be more usefully employed somewhere else.

(c) A limited number of cars now in use for specific purposes will become available to general traffic. For instance, 22 of the tank cars will be assigned to haulage of Bunker-C oil from the refinery to the mine, thus releasing upwards of 60 coal cars for other uses.

It would seem reasonable to expect that the diversion of over 700,000 tons per year to the road sector would result in an excess of rolling stock. However, the following considerations apply:

(a) The 1,000 cars assigned to the Lobito route will experience a turnaround time, which is roughly double (30 versus 15 days) that prior to closure of the border.

(b) The cars inherited by Zambia from the former pooled equipment have a 5-year delayed maintenance liability. Thirty to 40 per cent of the equipment is more than 30 years old and should be retired. Continued use results only in loss of efficiency, added burden on the maintenance and repair shops and added operational costs.

### 3. Freight locomotives

Zambia railways operates 42 Diesel electric (G.E. 2,000 HP) locomotives - 22 units are 1967 models, and the balance are new (1970).

The 22 older units are some two years overdue for their first major overhaul. This lack of maintenance is beginning to have serious operational consequences, and the network currently experiences three to four line breakdowns per day. This,

of course, aggravates the situation for those locomotives remaining on line. Yet the demand is such that the locomotives cannot be spared.

Due to insufficient skilled labour in the shops, a major overhaul currently takes six months.

While the railway readily admits concentration of labour and of training could more than halve this delay, there are not enough spare parts to undertake a major overhaul programme. The railway has had difficulty obtaining the necessary import and foreign exchange licences and financing their needs, and the spares backlog now amounts to over K 1,000,000.

It would then appear that four additional locomotives are urgently needed, as well as all the spares on order. In fact, a substantial percentage of the first priority spares on order will require airlifting, if a gradual breakdown of the system is to be avoided within the coming 12 months or so.

Note:

In addition to its own internal traffic, Zambia Railways also furnishes hauling service (locomotives only) for some 300,000 tons per year of coke and general cargo traffic from Rhodesia to Zaire with some return cargo that is likely to continue for the near future.

4. Shunting locomotives

While this is a problem not previously mentioned, there is an urgent need for shunting locomotives. The railway owns 18 Henschell 750 HP, Diesel-hydraulic shunters, nine of which are currently out of service. Hydraulic traction is totally unsuitable for railway operations, and some old steam locomotives have been taken out of moth-balls for shunting operations. However, there are no parts for these, and some permanent solution must be found within the next few months. The mission estimates that 12 Diesel electric shunters (750 to 1,000 HP) are needed immediately. The Henschells now out of service should be decommissioned and cannibalized for spare parts in order to keep the remaining units in service for the next two or three years, and the remaining units retired as they break down and the slim supply of parts becomes exhausted.



## II. ROUTE THROUGH MALAWI

### A. Highways

#### 1. In Zambia (from Lusaka to Chipata and Mchinji at the Malawi border - 396 miles)

The Great East Road is a Class 1 B highway, built since 1967, which is now a completely asphalted, two-lane carriageway, 22 feet wide. There is no problem of capacity, daily traffic of about 205 ADT, of which 55 per cent are trucks. Bridges have been reconstructed to the British standard 153 H A loading. The Luangwa bridge, which is a 1,000 feet steel girder-bridge (2 lanes), has been constructed for normal traffic: heavy equipment and exceptional convoys require capacity verification in accordance with exact specifications and load distribution.

#### 2. In Malawi

From the border to the railway there are two possible routes:

(a) Mchinji to Lilongwe and Salima (137 miles)

(b) Mchinji to Lilongwe and Balaka (219 miles)

Mchinji-Lilongwe. This section (71 miles) is a gravel road. The last 8 miles from the airport turn-off to the new capital site are asphalted.

The existing alignment has 4 to 5 per cent gradients, and the present traffic averages 75 vehicles a day (22 trucks) between the border and Namitete; 150 vehicles a day (20 trucks) between Namitete and the Lilongwe airport turn-off, and 300 ADT after that point.

This section is properly maintained and can be considered an all-weather road. A new alignment and other improvements are being considered, and a feasibility study is being made by British consultants under a UNDP project. The United States Agency for International Development (USAID) contemplates financing this section, if the feasibility survey shows that it is justified. One of the variants under consideration follows a totally new alignment, saving some distance and avoiding the present short stretch which crosses Zambian territory. The consultant is to deliver the feasibility report in April. It is assumed that construction would require about two years after a decision is made to proceed with the road.

Lilongwe-Salima (66 miles). The road has a 12-foot wide single lane with bituminous surface treatment, with wide shoulders to allow vehicles to pass. Although it is a light treatment, the surface is not in a too bad condition, except certain passages which are badly pot-holed. Maintenance of this section raises the problem of keeping the shoulders graded evenly with the surfaced strip - the normal problem on single-lane pavements when traffic exceeds the design capacity.

Lilongwe-Balaka (148 miles). The road has been recently reconstructed as an asphalted 22-foot wide, two-lane Class 1 road. The road is in very good condition and can support heavy traffic, if axles are normally loaded: the surface consists of a 3/4-inch layer of asphaltic concrete, which would be badly damaged by overloads.

## B. Railways

The Malawi Railways give a connexion to the two Mozambique harbours of Beira and Nacala. The rail mileage between the Malawi border and Beira is 206, and from the border to Nacala 384 miles. The Beira line and the Nacala line intersect at Nkaya. From Nkaya the line extends to Balaka (11 miles north) and to Salima (108 miles north). Rail mileages from Salima are 496 miles to Beira and 554 miles to Nacala. The section between Balaka and Salima (97 miles) is in very poor condition, and both speed and axle loads (which cannot exceed 11 tons) are severely restricted. Distance from Balaka to Beira port is 399 miles, and to Nacala 457 miles. On the Beira line the escarpment gradients are about 2.5 per cent.

### 1. Capacity of railway

The present capacity of the various sections of the line according to the present condition of the track and motive power availability is shown in the table at the end of this section.

The total present daily capacity one way to or from Salima is limited to 1,000 tons by the Nkaya-Balaka section, a monthly capacity of 30,000 tons.

The railway will receive in May, from Canadian aid, four new diesel locomotives (leaving New York early in March). This will increase the capacity of sections 2, 3 and 5 to the following number of trains each way:

Section 2 = 2 double-headed and 4 single-headed

Section 3 = 4 trains

Section 5 = 7 trains

giving the following gross and net tonnage capacity per day each way:

Section 2 = 3,600 gross (1,200 net)

Section 3 = 3,000 gross (800 net)

Section 5 = 5,250 gross (1,400 net)

The limiting factor to or from Balaka and Salima will still remain the Nkaya-Balaka section, with 1,400 tons daily or 42,000 tons per month.

The 1972 statistics for tonnage received at Salima and Balaka (see table for 11 months of 1972 at the end of this section) show the peak month to be September,

with around 18,000 tons. This leaves 24,000 tons capacity for Zambian import traffic, provided the railways have the corresponding wagon capacity available.

## 2. Wagon capacity

The capacity of the Malawi Railway's rolling stock at the end of 1971 is reported as 20,218 tons, the breakdown being as follows:

Covered wagons . . . . .	327	with	11,833	T capacity
High-sided wagons . . . . .	56	with	2,184	T capacity
Low-sided wagons . . . . .	138	with	5,411	T capacity
Pallet wagons (for tea) . .	<u>20</u>	with	<u>800</u>	T capacity
Total. . . . .	541	with	20,218	T capacity

(average 37.37 T/per wagon)

In addition, in 1971 the balance between foreign wagons working in Malawi and Malawi wagons working outside gave an average extra capacity of 8,355 tons (224 wagons), or a total capacity in Malawi of 28,573 tons.

The assumed internal traffic of around 480,000 tons a year or 40,000 tons a month, requires approximately 400 wagons. <sup>3/</sup> This leaves 141 Malawi Railway wagons for the import/export traffic.

To these wagons one must add the wagons of the other railway networks (Mozambique, Southern Rhodesia, South Africa), whose number can fluctuate. The authorities of Malawi have indicated that they could cope with an extra traffic of 17,000 tons imports in transit to Zambia for a short period of time but would require additional new wagons if this level of traffic has to be maintained for a longer period. From the information provided in Blantyre, it is understood that 17,000 tons would necessitate the procurement of at least 80 new wagons. Should Mozambique railways be unable to provide for the traffic, Malawi railways would need an additional 125 wagons.

## C. Storage, marshalling and trans-shipment facilities in Balaka and Salima

(a) Salima offers very good facilities for trans-shipment. Manpower is available, and the sheds are easily accessible by rail and road. Eight trucks can be simultaneously loaded from the sheds.

---

<sup>3/</sup> On the basis of 100 tons per wagon per month.

The present equipment includes:

3 fork-lifts (2 x 6,000 lbs. + 1 x 5,000 lbs.)

1 mobile crane (5 tons)

1 gantry 10 tons (hand-operated)

(b) Balaka, on the contrary, offers limited facilities, except for the Zambian plot with a 9,600 sq. feet modern shed. The railway sheds are old, and access for trucks is bad, but it appears possible to extend the present facilities and to create new shed capacities (on the Zambian plot the shed area could be doubled).

At present the equipment includes:

2 fork-lifts (6,000 lbs.)

1 mobile crane (5 tons)

1 gantry 10 tons (manually operated)

Manpower is also readily available in Balaka.

It appears that the storage and trans-shipment capacity in Salima can easily cope with a traffic of 7,000 tons a month and can probably be doubled without great investment. In Balaka there are undoubtedly at present limited possibilities, but the volume handled can certainly be greatly increased in a short period of time.

Malawi Railways has no plan for extending the Balaka facilities but indicates the necessity of 2 shunting locomotives for the marshalling in Balaka and Salima plus 4 fork-lifts and 3 (8-tons) mobile cranes.

#### D. Mozambique railways

The team made no detailed assessment of the capacity of the railways in Mozambique. Malawi authorities have assumed that these railways could easily increase their traffic to cope with new Zambian demands. During 1972, CFM suffered from a lack of motive power, as some were blown up in the Tete area. It has been stated <sup>4/</sup> that they have now recovered their motive power by buying new locomotives and transferring some units from other railway lines.

The rolling stock available will be affected by the capacity freed by suppression of traffic to Zambia through Rhodesia.

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<sup>4/</sup> Source: Nacala Port Traffic Advisory Committee, Blantyre, 30 January 1973.

## E. Beira and Nacala harbours

### 1. Beira

Beira is the traditional port for rail entry into Malawi as it was for the Rhodesian route to Zambia. It is not necessary to go into any description of Beira facilities, as they are well known, but the following should be noted:

(a) During the past year (1972), Beira has suffered congestion with freight destined for Zambia, Southern Rhodesia, Cabora Bassa and Malawi. The FRELIMO activities on the Tete routes to Cabora Bassa are causing difficulties.

(b) Beira was one of the most frequently used harbours for Zambian traffic. Therefore, capacity exists for Zambia in Beira, and shipping agents are well aware of the conditions for handling traffic in Beira.

(c) Lead, zinc, and copper being bottom cargoes could be more easily loaded in Beira, as this port is served by the South East Conference for ships going to or coming from Europe.

### 2. Nacala

The Bay of Nacala offers exceptional conditions for a port: there is a vast sheet of water sheltered from wind and currents, with good natural depth, so that any ship may enter (the channel is 60 metres deep and 900 metres wide). There is practically no limit to the possibilities of harbour works and extensions. The port at present comprises:

2 quayside berths with a depth of 10.00 metres (312 metres long)

1 quayside berth with a depth of 7.5 metres (111 metres long).

The berths can accommodate 2 ocean-going vessels and one coaster simultaneously.

At present, 613 metres of new quays are under construction (408 metres with 15 metres depth and 205 metres with 7.5 metres). Contractors are expected to complete the first 100 metres by June/July 1973, thus giving accommodation for one more ocean-going vessel.

Nacala offers good handling facilities:

#### Lighters:

6 lighters of 100 tons each

3 lighters of 120 tons each

1 x 400 tons landing craft, self-propelled.

Railway sheds:

4 sheds of 3,000 square metres each

1 shed of 2,400 square metres

Electric cranes:

10 x 5 tons

1 x 10 tons

1 x 20 tons

(A further 20 electric cranes have been ordered)

1 floating crane 25 T capacity

Mobile cranes (2 to 7 tons)

Fork-lift (2 x 4 tons)

Shunting and power tractors

Nacala port performances<sup>5/</sup>

(a) <u>Ship arrivals</u>	<u>Coasters</u>	<u>Ocean-going</u>	<u>Total</u>	
November 1972	15	23	38	
December 1972	9	16	25	
(b) <u>Port tonnages</u>	<u>Total</u>	<u>Malawi imports</u>	<u>Malawi exports</u>	<u>Total Malawi traffic</u>
November 1972	50,991	4,052	3,100	7,152
December 1972	82,868	4,214	18,203	22,417
(c) <u>Annual tonnage:</u>	1971 ...	655,819 tons		
	1972 ...	718,309 tons		
(d) <u>Delays to ships</u> (December 1972)				
	Nil . . . . .	19 ships		
	1 - 2 days . . . .	3 ships		
	2 - 3 days . . . .	2 ships		
	5 - 6 days . . . .	1 ship		

<sup>5/</sup> Source: Nacala Port Traffic Advisory Committee, Blantyre, 30 January 1973.

### Current disadvantages of Nacala

Nacala is the last port for the European Eastern Africa Conference. Ship arrivals in Nacala are often delayed due to delays in other ports. Recent instances of ships arriving up to 16 days late have been mentioned, and it is still difficult to induce ships to go to Nacala.

### Advantages of Nacala

The main advantage of shipping through Nacala is that the railway line and port facilities are not congested and that goods arrive in Malawi within one week of discharge. Reported delays were caused by the poor turnaround of railway wagons over CFM during 1972 and in early January this year, but the situation is reported to be back to normal. The problems, as in Beira, had arisen from lack of sufficient motive power, but now that two diesel locomotives have been loaned to CFM this situation may have been remedied. It is also stated that CFM expects to be fully dieselized by the end of 1973, which should significantly improve the motive power position.

### Capacity offered to Zambian traffic

Nacala harbour does seem to offer good possibilities for Zambian traffic; indeed an increase of imports could be an inducement for ships to frequent the port. However, if copper exports to Europe are contemplated, it will be necessary to discuss with the Conference possible new schedules for ships with some vessels calling first at Nacala.

### F. Over-all capacity of the Malawi route

The Malawi Government has offered a capacity of 17,000 tons for imports to Zambia, of which 12,000 tons would be imported through Nacala and 5,000 tons through Beira. Transit would be 7,000 tons through Salima and 10,000 tons through Balaka.

The monthly exports over the Malawi route would be 7,000 tons through Balaka (lead and zinc) to Beira.

In addition, the Malawi route will be used during the next eight months to import some 56,000 tons of fertilizer (i.e., 7,000 tons a month) coming from South Africa as a special arrangement. This tonnage does not raise problems of wagons capacity, as the wagons are being provided by South African railways. This traffic would be transited through Balaka giving a return freight for the trucks bringing the zinc and lead exports.

The above tonnages are not unreasonable, provided that:

- (a) Truck capacity is available;
- (b) Trans-shipment conditions in Balaka are improved;
- (c) Wagons are made available for Malawi railways;

(d) The maintenance budgets for the Salima-Lilongwe and for the Lilongwe-Zambia border sections of the roads are increased;

(e) Trucks to and from Zambia respect the existing limitations of axle loads in Malawi.

The Malawi Government has estimated the investments corresponding to points (b) and (c) at K 1,252,600, broken down as follows:

80 wagons	K 12,000 each . . . .	960,000
70 tarpaulins	80 each . . . .	5,600
2 shunting locos	90,000 each . . . .	180,000
4 (6,000 lbs.) fork-lift trucks	8,000 each . . . .	32,000
3 (8-ton) mobile cranes	25,000 each . . . .	75,000
	TOTAL	<u><u>K 1,252,600</u></u>

For extra road maintenance costs the road department has made an estimate for the Lilongwe-Zambia border section amounting to K 30,000. No estimate has been made for the Salima-Lilongwe section.

The road division estimates for extra road maintenance costs (made on the basis of the cost of regravelling) have been checked by using curves relating annual maintenance costs per mile to average daily traffic used by the British consultant presently studying the feasibility of improving the Lilongwe-Mchinji road. The order of magnitude is correct, and we think that K 40,000 a year would be adequate for this section, but we have no estimate of the problems raised by the Lilongwe-Salima section. A first approximation would be about K 20,000 a year.

#### Trucking capacity between Malawi and Zambia

On the Malawi side, it is currently proposed that the tonnage be divided, 50 per cent for big companies and 50 per cent for small ones. The latter do not provide the guarantees needed to cope with international traffic. For example, loaded trucks have been delayed because the transporters had omitted to secure passports for the drivers to cross the border. The role of small truckers has to be examined, otherwise a bottle-neck could come from deficiencies in the trucking capacity of Malawi transporters.

#### G. Rates through the Malawi route

It has not been possible to calculate the exact cost of the transport from Lusaka to the seaports through the Malawi route. Highway costs can be calculated on the basis of six ngwe per ton per mile, but it will certainly depend on the exact composition of traffic, which is not known at the present moment. Railway rates have to be negotiated with Malawi and Mozambique.

The Malawi Government wishes to increase the export tonnages in order to improve the return load factor and is anxious to export some copper in addition to lead and zinc. However, there are problems in using Nacala for copper that would likely be exported through Beira. This may not be consistent with any



limitations on tonnage to and from Beira, to keep open capacity for Blantyre and Limbe traffic. Thus it is not clear that an export copper quota through Malawi would be a satisfactory arrangement.

The Government of Malawi obviously favours the use of Salima 6/ for two reasons:

(a) Justification for the rehabilitation of the Balaka-Salima railway track presently being undertaken with Malawi Railway funds;

(b) Existence of good storage facilities in Salima and the poor condition of the railway sheds and trans-shipment facilities in Balaka.

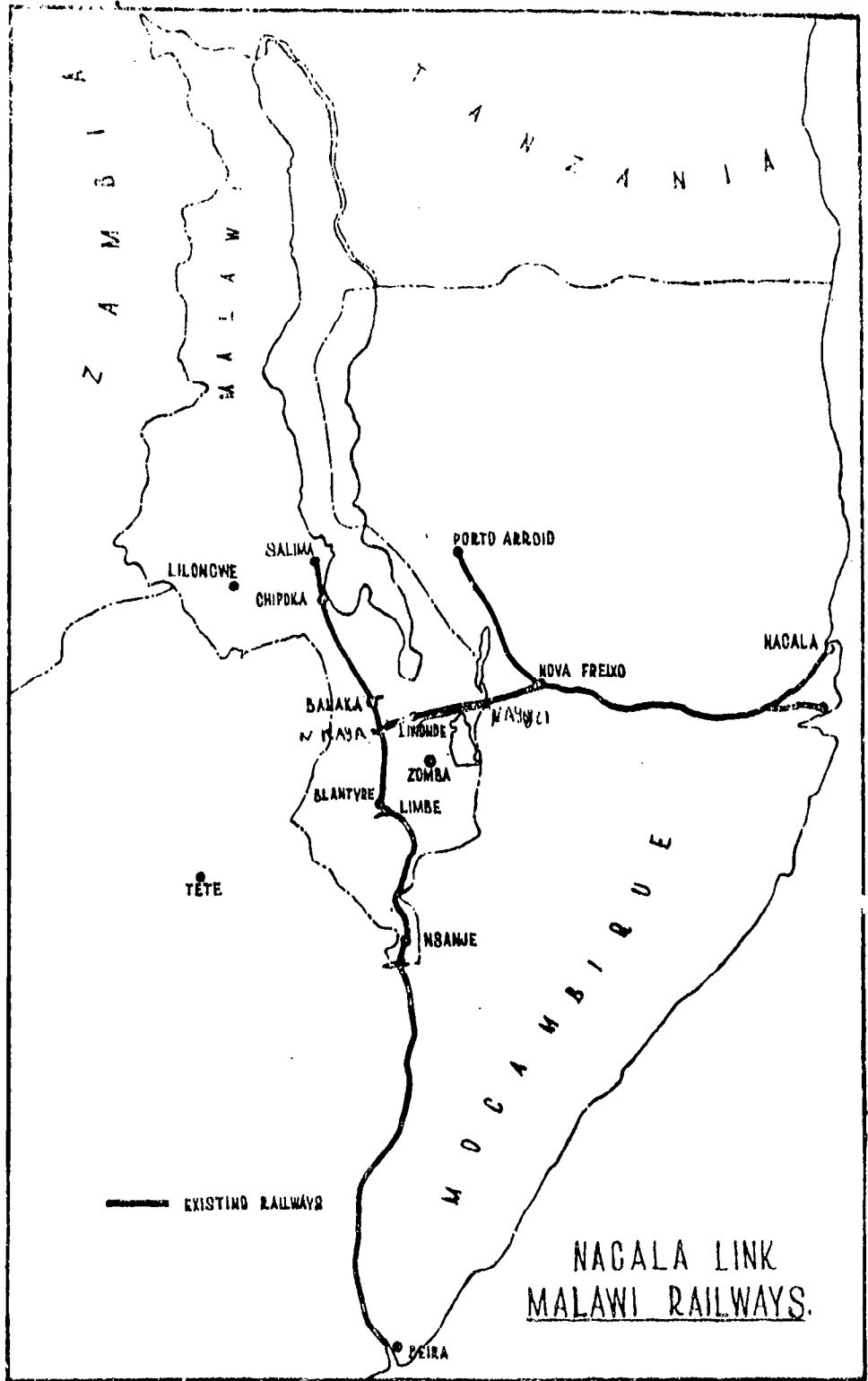
The use of Balaka instead of Salima would save rail wagon capacity, and, as the highway section between Salima and Lilongwe is in poor condition, it is strongly recommended that consideration be given to the improvement of Balaka station.

Extension of Malawi route capacity beyond 17,000 tons import

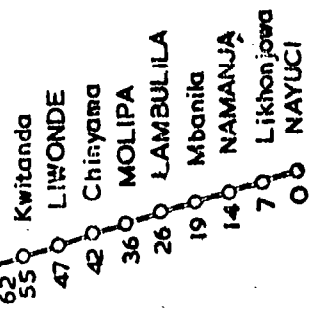
The bottle-neck is the railway track capacity and rolling stock. It does not seem reasonable to consider the extension in the immediate exercise.

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6/ In an exercise for offering a possible capacity for 27,000 or 37,000 tons import to Zambia, the increase of traffic has been assumed to go mainly to Salima.



SALIMA	496
Lifidzi	486
CHIPOKA	479
Ngodzi	471
NTAKATAKA	461
Mua	458
GOLOMOTI	447
KASINJE	438
SHARPE VALE	431
BWANJE	427
PENGA PENGA	417
BILILA	413
FARINGDON	410
Khwisa	406
BALAKA	399
Bazala	392
NKAYA	
UTALE	384
SHIRE NORTH	376
Gwaza	372
NAMATUNU	367
Mirale	365
LIRANGWE	359
MALEULE	348
BLANTYRE	335
MUDI	334
LIMBE	329
Malabvi	323
NANSADI	315
Makandi	308
LUCHENZA	302
KHONJENI	296
Makapwa	287
SANDAMA	285
TEKERANI	276
Tukutu	269
SANKULANI	264
MAKANGA	255
CHIROMO	253
BANGULA	250
Pokera	246
TENGANI	237
Nyamula	230
NSANJE	222
BORDER	206



55/63<sup>A</sup>

CAPACITY OF MALAWI RAILWAYS

Section	Practical line <sup>a/</sup> capacity trains per day each way	Movement capacity (in trains per day each way with present locomotive fleet)	Gross train load per section in short tons	Gross tonnage per day	Net b/ tonnage per day (short tons)
(1) Border SANKHULANI	11	4	1,100	4,400	1,500
(2) SANKHULANI LIMBE	6	6	450	2,700	900
(3) LIMBE NKAYA	9	3	750	2,250	600
(4) NAYUCI NKAYA	12	2	1,200	2,400	800
(5) NKAYA BALAKA	10	5	750	3,750	1,000
(6) BALAKA SALIMA	6	5	375 single diesel hydraulic	1,875	650

Source: Malawi Railways, February 1973.

a/ Considered as 60 per cent of theoretical section capacity according to length, crossings and gradients.

b/ Assuming present pattern of commodities transported, giving same loading factor, for wagons.

TONNAGES FORWARDED AND RECEIVED

1972 (Total)	Salima		Balaka	
	Forwarded from	Received at	Forwarded from	Received at
January . . . . .	1,044	7,515	1,432	4,631
February . . . . .	1,252	7,286	1,637	1,730
March . . . . .	783	8,434	2,354	2,097
April . . . . .	1,244	6,804	5,812	1,732
May . . . . .	1,864	6,042	2,628	1,516
June . . . . .	4,066	6,887	2,678	3,556
July . . . . .	6,805	7,787	5,241	3,003
August . . . . .	5,889	13,025	8,367	3,865
September . . . . .	9,300	11,334	13,809	6,499
October . . . . .	4,599	11,442	8,985	4,297
November . . . . .	8,148	9,226	10,175	4,413
TOTAL (Malawi and Zambia combined)	44,994 <sup>a/</sup>	95,782 <sup>b/</sup>	63,118 <sup>c/</sup>	37,339

Source: Malawi Railways, February 1973.

- a/ From which 3,414 tons from Zambia.
- b/ From which 2,449 tons to Zambia.
- c/ No traffic from or to Zambia.

### III. ROUTE THROUGH THE UNITED REPUBLIC OF TANZANIA

The route through Tanzania runs from Lusaka to Dar es Salaam and Mombasa along the Great North Road. The Tan-Zam Highway, with the exception of the section in Tanzania between Morogoro and Dar es Salaam (about 121 miles), still under construction, is a two-lane engineered asphalt surface highway as far as Dar es Salaam. The road to Mombasa leaves the Tan-Zam Highway at Chilenze and runs northward to Moshi. The shorter route, via Tanga to the Kenya/Tanzania border is not usable owing to a bridge construction project. As a result trucking must follow the route through Moshi and then eastward to Voi in Kenya and thence to Mombasa along the main Nairobi/Mombasa highway. The route now used from the Tan-Zam Highway to Mombasa is in good condition, and the alternate, shorter route would be serviceable if the bridge construction could be expedited. The Kenya authorities have suggested the possibility of installing a temporary Bailey bridge to open the route, and the team suggests that this approach is worthy of consideration.

Maintenance of the route within Zambia is generally adequate and the increase in number of vehicles is not likely to overstress the road as long as adequate control of axle loadings is exercised. On the Tanzanian side there is at present little or no maintenance activity on the Tan-Zam Highway or on the route to Moshi. The increased traffic will cause distress, unless the loads are within the highway design limits and unless adequate measures for routine maintenance are established immediately by the Tanzanian Government.

Traffic will be restricted on the Morogoro/Dar es Salaam stretch during the remainder of the construction time and additional maintenance effort (and costs) will undoubtedly result from any increase in traffic. This stretch will also cause delay in truck passage to avoid undue interference with the construction work.

In Kenya, the maintenance effort is generally adequate and, except for the foregoing stricture on axle loading, there should be little undue stress on the road.

Appendix II on port capacities discusses the problem of port access. The need to remove cargo quickly from the port areas has been discussed, and the need for relief roads from the ports and the establishment of adequate off-port assembly areas defined.

Trucking requirements for the route through Tanzania (and for the Malawi route described elsewhere) are based on the following team estimate of port tonnage allocations:

<u>Port</u>	<u>Imports</u>		<u>Exports</u>		<u>Total</u>	
	<u>Annual</u>	<u>Monthly</u>	<u>Annual</u>	<u>Monthly</u>	<u>Annual</u>	<u>Monthly</u>
Lobito <sup>a/</sup>	276,000	23,000	420,000	35,000	696,000	58,000
Beira/Nacala <sup>b/</sup>	204,000	17,000	84,000	7,000	288,000	24,000
Mombasa <sup>c/</sup>	264,000	22,000	120,000	10,000	384,000	32,000
Dar es Salaam <sup>d/</sup>	516,000	43,000	240,000	20,000	756,000	63,000
<u>Total</u>	<u>1,260,000</u>		<u>864,000</u>		<u>2,124,000</u>	

a/ Exports through Lobito are restricted by the rail capacity of the CFB. An allotment of 1,000 cars per month is made and loadings are restricted inward by gradients of the line.

b/ Beira/Nacala traffic is restricted by the capacity of the two rail lines to Malawi.

c/ The Government of Kenya has indicated that at the present time Kenya requirements will allow imports and exports of 22,000 tons per month in and out.

d/ The Government of Tanzania has offered to make the total theoretical capacity of Dar es Salaam available for Zambian imports by diverting Tanzanian cargo to Tanga. The team believes that problems of inland routing from Tanga, as well as practical constraints on achieving the theoretical capacity at Dar es Salaam, will not allow the full utilization of rated capacity. However, the mission does believe that Dar es Salaam can, with adjustments, handle both the Tanzanian and Zambian requirements (see appendix II on port capacity).

#### A. Truck requirement calculations

The following calculations of truck requirements are based on current operating statistics and target forecasts of the Zambia Tanzania Road Services (ZTRS) for the Zambia/Dar es Salaam run.

<u>Days</u>	<u>Offload</u> <u>copper</u>	<u>Service</u> <u>Dar</u>	<u>Load</u> <u>gen.</u> <u>cargo</u>	<u>Offload</u> <u>gen.</u> <u>cargo</u>	<u>Service</u> <u>Kitwe</u>	<u>Load</u> <u>copper</u>	<u>Road</u> <u>time</u> <u>return</u>	<u>Total</u>
Current	2.0	2.0	3.0	3.0	2.0	2.0	9.0	23.0
Target	1.0	1.5	3.0	3.0	1.5	1.0	8.0	19.0

Trucking time to Mombasa is estimated by ZTRS at two days over Dar es Salaam time and to Malawi at two days less than Dar es Salaam. Twenty-five per cent of the fleet is estimated to be out of service at any one time for servicing, maintenance and repairs. Allowable loads are 30 metric tons per unit for exports (copper) and 20 tons per unit for imports.







Appendix IV

NEEDS IN THE FIELD OF EXTERNAL TELECOMMUNICATIONS

A. SITUATION

Until recently Zambia's external telecommunications have comprised:

ZAMBIA/UNITED KINGDOM . . . . .	4 telephone channels ) 10 telex channels )	Via HF radio
ZAMBIA/EAST AFRICA . . . . .	4 telephone channels ) 4 telex channels )	Via HF radio
ZAMBIA/MALAWI . . . . .	3 telephone channels ) 2 telex channels )	Via open-wire landline (carrier)
ZAMBIA/SALISBURY . . . . .	92 telephone channels ) 16 telex channels )	Via open-wire landline (carrier)
ZAMBIA/SOUTH AFRICA . . . . .	Telephone channels routed via Salisbury	

Zambia has two major projects in hand for the improvement of external telecommunications, namely, the construction of an earth station, for which a contract is about to be signed, and the construction of a microwave link from Lusaka to the Tanzanian border and thence to Dar es Salaam. Both of these projects are medium-term and will require some two years from commencement. They will, therefore, do nothing to relieve the immediate situation.

B. IMMEDIATE REQUIREMENT

The present requirement in support of the rerouting of Zambia's main trade and supply routes northwards is the establishment of telecommunications to the alternative ports of entry and the reinforcement of telecommunications to the north generally. This is a short-term need to cover the situation over the next two years. Consequently, speed of procurement and installation is of the essence. It appears that HF radio links would be best for this purpose. The links needed are:

ZAMBIA/TANZANIA (Dar es Salaam) . .	8 HF ISB radio telephone channels (6 telex)	(2 HF terminals)
ZAMBIA/LOBITO BAY . . . . .	2 HF ISB radio telephone channels (1 telex)	(1 HF terminal)
ZAMBIA/GABORONE . . . . .	4 HF ISB radio telephone channels (1 telex)	(1 HF terminal)

ZAMBIA/EAST AFRICA . . . . .	Increased existing radio telephone channels from 4 to 8 and 4 additional telex channels (2 HF terminals)
ZAMBIA/MALAWI . . . . .	Increased existing radio telephone channels from 3 to 24 by means of increased provision of multiplex equipment
ZAMBIA/BEIRA . . . . .	2 HF ISB radio telephone channels + 1 telex (1 HF terminal)
ZAMBIA/ZAIRE . . . . .	Provide 100 km microwave link to connect with the Zairian system

C. IMPLEMENTATION

Implementation will require the following:

(a) Agreement with the other administrations will be necessary in order to implement the above links.

(b) It will be necessary to secure the supply of equipment not only for Zambia but most probably for some of the other administrations in order to speed up provision of the necessary circuits.

(c) In the case of the HF radio telephone links, the equipment, which should be supplied by air freight, should comprise for each terminal and each relation, one 7 1/2 Kw transmitter with four ISB drives, antennae and towers, Lincomplex equipment, ARQ equipment, auxiliaries for termination of the channels, telegraph channeling and telex equipment. Further details of equipment can only be supplied on the basis of an on-the-spot survey. Information provided to the team suggested the need for equipment similar to or compatible with the following:

- (i) Marconi H11303, 7.5 Kw TX with drive unit plus feeder;
- (ii) Marconi H5512, RTT terminal plus Lincomplex;
- (iii) Marconi H1103, filter for TVI;
- (iv) Log periodic aerials;
- (v) RACAL LA 1005 RTT terminal;
- (vi) ARQ terminal including six AB diplexers, subdividers and VFT rackside;

(d) With regard to installation, the suppliers should supply installation teams to carry out the work on a turnkey basis.

D. COST

A very preliminary estimate of the cost of the above proposals is given below. This figure should be treated with considerable reserve, being based on 1971 quotations.

Equipment

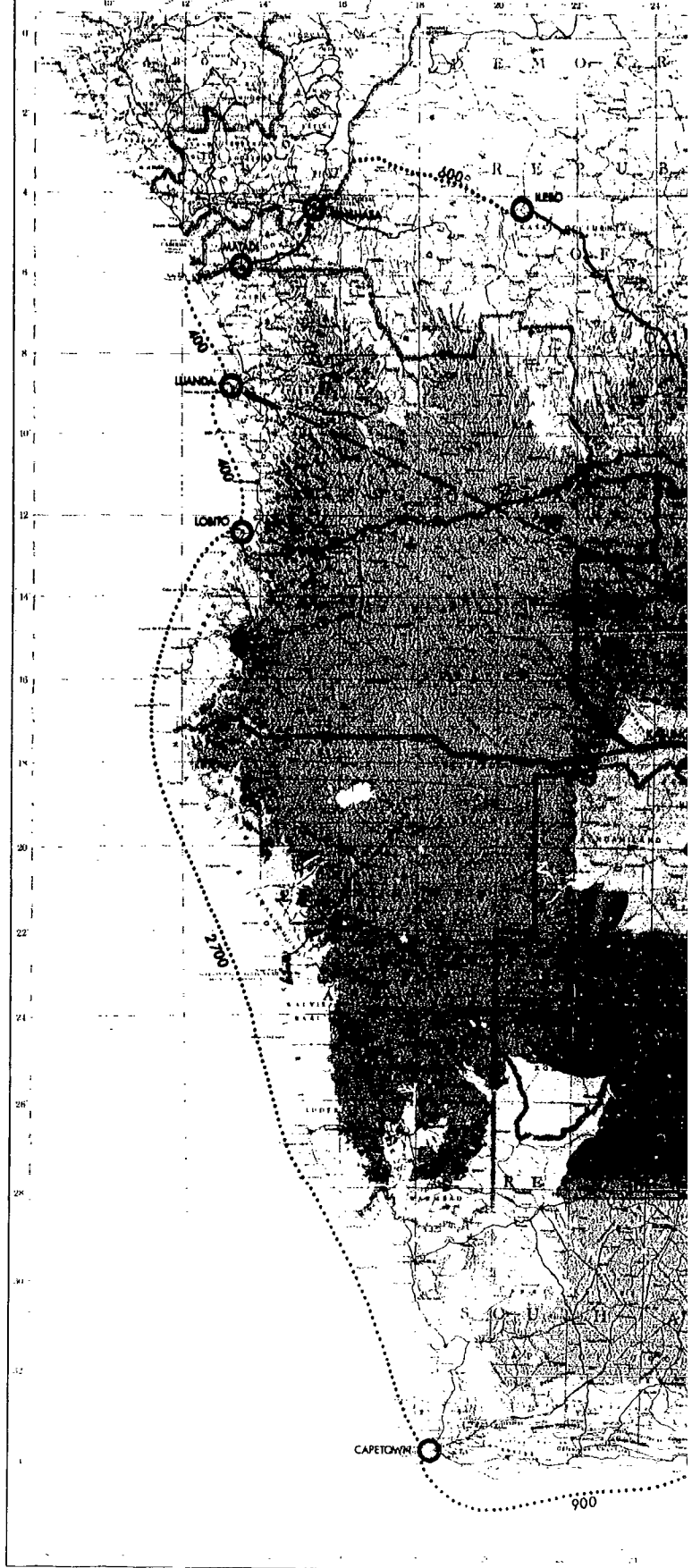
(a) <u>HF radio terminals</u>	
7 terminals at, say K 150,000 per terminal . . . . .	1,050,000
(b) Additional multiplex equipment for Lusaka/Blantyre to replace existing 3-channel equipment 48 channel ends at K 400 per channel end . . . . .	19,200
	<u>1,069,200</u>
(c) <u>Microwave link Zambia/Zaire</u>	
2 receivers + 2 repeaters, say . . . . .	K 400,000

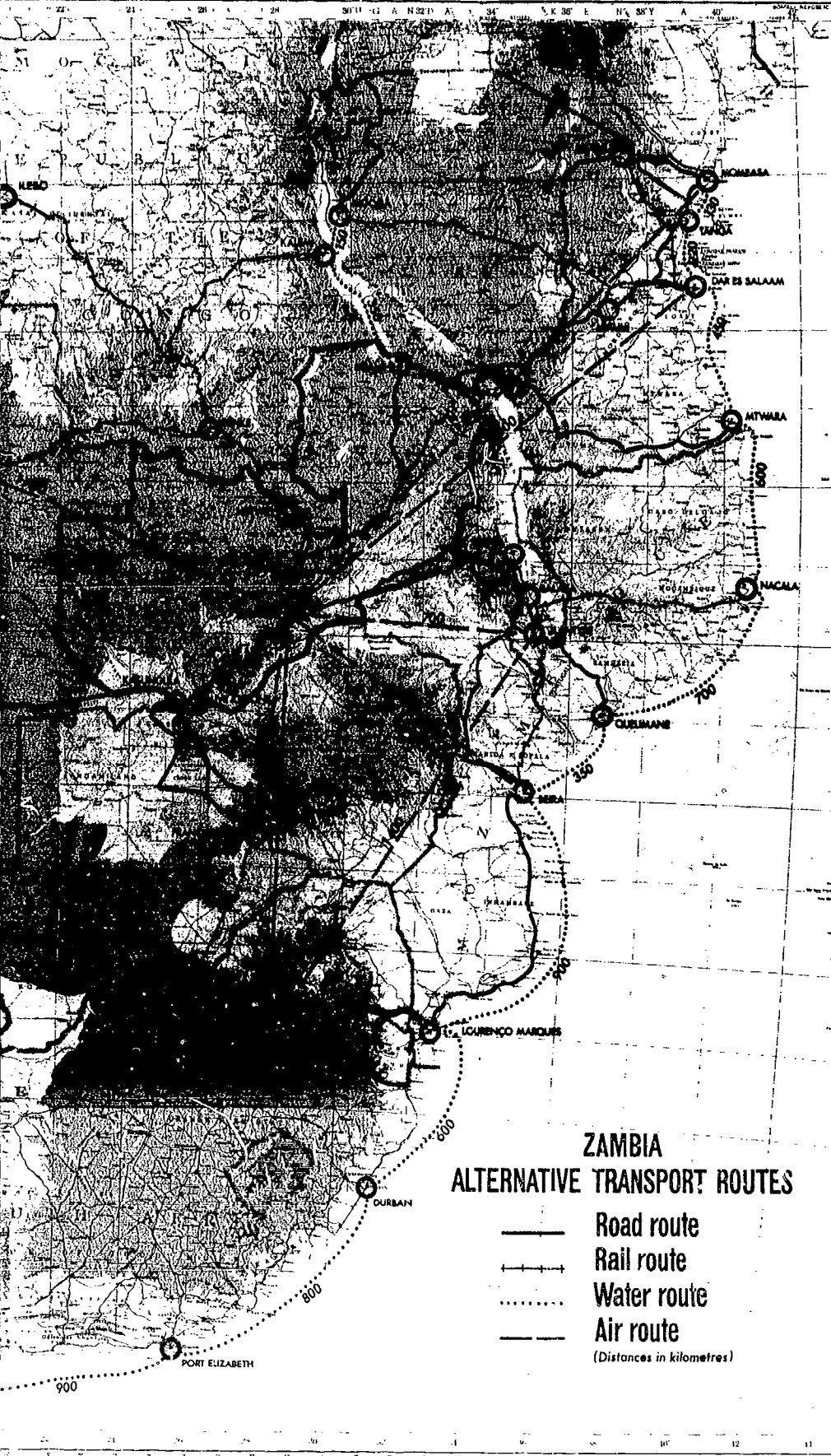
Installation

(a) 18 man-months at K 2,000 per month . . . . .	K 160,000
(b) Fares . . . . .	K 20,000
(c) Travelling and subsistence . . . . .	K 50,000
(d) Local transport . . . . .	K 40,000
	<u>K 1,739,200</u>

It must be emphasized that the foregoing measures would only be considered to meet a desperate need for the immediate future and that the success of the enterprise depends entirely on the rapid procurement and installation of equipment. The medium-term measures for providing permanent telecommunications mentioned earlier should, in any case, proceed.

These needs do not include any equipment for mobile communications between operating bases and trucking units for the supply management group and the trucking agencies. Depending on the method of traffic control adopted, there may well be need for additional radic telephone equipment.





**ZAMBIA  
ALTERNATIVE TRANSPORT ROUTES**

- Road route
- +—+— Rail route
- ..... Water route
- - - - Air route

(Distances in kilometres)

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