

**Advisory Guidelines on a two-step Approach
for selecting a Bulk Cargo Transport Option
for Southern Gaza Province**

- Mozambique -

4 April 2003

Adviesrapport van de Adviescommissie
voor de milieueffecten van de aanleg
van een bulkoverslagterminal op
de haven van Rotterdam

- Voorwoord -

1998

ISBN 90-421-1152-6

Utrecht, Commissie voor Milieueffectenbeoordeling

(1998)

**Advisory Guidelines on a two-step Approach for selecting a Bulk
Cargo Transport Option for Southern Gaza Province
- Mozambique -**

**Advice submitted to the Minister for Co-ordination of Environmental Affairs of
Mozambique (MICOA), by a working group of the Commission for
Environmental Impact Assessment in the Netherlands**

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Utrecht, 4 April 2003

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2. Project information
3. Programme of the mission
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MAIN POINTS OF THE ADVICE

The Netherlands Commission for Environmental Impact Assessment (NCEIA) recommends:

- 1) To adopt a two-step approach, of which
 - a) step 1 is a Strategic Environmental Assessment (SEA) to help decision-making on the transport infrastructure to be developed and on routing and siting of infrastructure elements and
 - b) step 2 is project EIA to help decision making on design alternatives and mitigation of environmental impacts.

The present advisory report focuses on step 1.

- 2) To apply participatory decision-making in step 1 by
 - a) including in the decision-making process all relevant sectoral authorities
 - b) representing in the decision-preparing process all stakeholder interests
- 3) To have professional facilitators guide the SEA process
- 4) To raise donor funding for the SEA process

1. INTRODUCTION

1.1 Description of the initiative

On 16 September 2002 the Ministry for Co-ordination of Environmental Affairs of Mozambique (MICOA) environmentally licensed the establishment and operation of a heavy mineral sands mining activity in Chibuto in the Gaza province of Mozambique. The activity includes the establishment of a high-tension power connection, the realisation of a rail link to Matola harbour and the establishment of a bulk cargo facility at the Matola harbour. The proponent of the activity is Corridor Sands Limited, a Maputo (Mozambique) based 100 % WMC Resources Limited (Australia)¹ owned mining company.

The proposed mining activity includes in the first phase the establishment of three smelter furnaces. Production is scheduled to start in 2007. Production forecasts foresee export of 375,000 tonnes of Titanium slag, 195,000 tonnes of high purity Iron (in pigs), 30,000 tonnes of Zircon and 12,000 tonnes of Rutile per annum from 2007 to 2010. In the second phase, it is planned that the number of furnaces will increase to 10 and annual export will increase to 1,000,000 tonnes of Titanium slag, 520,000 tonnes of high purity Iron, 110,000 tonnes of Zircon and 32,500 tonnes of Rutile in 2019. In addition, up to 200,000 tonnes of anthracite will be imported per annum as well as diesel fuel.

As an alternative and preferred option for export of the products, Corridor Sands Limited now proposes the realisation of a private Alternative Export Facility (AEF) composed of:

- A 56 km long private haul road from the smelter at Chibuto to Chongoene beach
- A private bulk cargo facility (Materials Handling and Stockpile Facility) behind the frontal dunes at Chongoene beach and
- A private open-lattice jetty, built perpendicular to the coast line, which would be 1,5 km long and approximately 20 meters above mean sea level.

Corridor Sands Limited is in favour of the AEF which, it indicates, would generate substantial savings in capital expenditure and operational costs of transportation and exportation of its products and required inputs, facilitate further expansion and minimise risks of down-time, as well as enhance the company's control of the operations (letter to MICOA of 16 January, 2003).

¹ WMC Resources Ltd is derived from the original company founded in Australia in 1933. Until November 1995, the company was known as Western Mining Corporation Holdings Ltd. In 1995 it changed to WMC Limited. In December 2002, WMC Limited split up into two separate companies: WMC Resources Ltd and Alumina Limited. WMC Resources Ltd is the full name of the company.

1.2 Mandate for this advice

The NCEIA considers poverty reduction the main objective of development assistance. It strives to play a positive role therein by assisting governments in assuring that development initiatives are environmentally sustainable.

The proposed AEF has considerable bio-physical, social and economic (including socio-economic impacts) and is subject to Environmental Impact Assessment under Mozambican environmental legislation. MICOA is the government agency competent to provide the environmental licence for the AEF. In addition, MICOA has to approve the guidelines (Terms of Reference) for the EIA on the activity.

Considering the complexity of the issue in relation to the decision to be taken, MICOA has asked the Netherlands Commission for EIA (NCEIA) to assist MICOA in this EIA procedure (see appendix 1). The NCEIA provides its assistance in the form of non-binding advice. The NCEIA publishes its advisory reports.

1.3 Expert working group and visit to Mozambique

In order to formulate advice, the NCEIA has fielded a working group composed of specialists in the fields of ecology - biodiversity, marine law - coastal zone management - social aspects, civil engineering, port and bulk facility environmental aspects and economics (see appendix 2). The NCEIA visited Mozambique from 5 to 11 February 2003 (see appendix 3 for the programme) and held broad consultations with both provincial and central governmental and parastatal bodies, the proponent, proponents EIA consultant, representatives of the Netherlands Embassy and NGO's. The NCEIA visited the proposed site of establishment of the AEF and the port of Matola-Maputo.

2. SUGGESTED APPROACH

The NCEIA has the opinion that the selection of transport options that will impact on the economic and social development of the whole region of southern Mozambique shouldn't only be based on a straightforward and mono-focal EIA procedure that is limited to the comparison of two options proposed by one single private company that (rightfully) represents its company interests. The NCEIA has the opinion that considerations and choices of a strategic nature, based on plans and forecasts for economic development of the southern Mozambican region and sound national and regional economic analyses - taking into account sustainable development principles-, should underlie and substantiate the choices between a possibly wider range of transport options that would serve the Mozambican economic development as a whole. Hence, the NCEIA suggests addressing the issue in a two-step approach.

The first step would be a strategic environmental assessment (SEA) that assists in making the fundamental choices of which transport option to develop. This step will also help in defining the optimum corridor for the

transport option from a national development and environmental policy point of view.

The second step, is project level EIA to support decision-making on the selected transport option's detailed routing, design, and environmental (bio-physical, social and economic) management aspects. If the decision is to develop the rail link as already licensed, no second step will be needed.

The consequence of this advice is that the NCEIA also advises that decision-making on the Terms of Reference for the EIA for the AEF option be postponed until the results of the SEA are available and decisions on the transport option have been made.

The NCEIA has been able to consult many interested parties but did not carry out an exhaustive survey of documentation. However, sources of information appear to be remarkably rich and relevant for spatial analysis and zoning. Due to the ease of availability and relative wealth of information, the NCEIA assumes that a time period of 4 month will suffice to provide MICOA with a reasonably reliable strategic study.

3. JUSTIFICATION FOR THE SUGGESTED APPROACH

The NCEIA considers the proposed approach to be justified because:

- The NCEIA considers it of importance that the transport infrastructure to be developed should be consistent with Mozambique's suite of policies, strategic plans and spatial plans [economic, transport, tourism, mining, spatial planning and land use, environment, mining]. There are strong indications that future transport needs in the region will not be limited to the transport needs of Corridor Sands Limited only and that growing needs for transport to the coast to support ongoing and expected development initiatives and major investments will emerge in the near future. The NCEIA is of the opinion that infrastructure planning should anticipate on these developments and optimise routing and siting of new transport infrastructure. SEA facilitates transport infrastructure planning in such a way that the infrastructure serves a multitude of development and poverty reduction objectives in various governments sectors (win-win options).
- In addition, the NCEIA considers it important to assess the implications of the different alternatives for Mozambique's public transport network, and potential benefits to the country in general, southern Mozambique in particular as well as to landlocked neighbouring states.
- The NCEIA is convinced that macro-economic implications of alternatives are of critical importance, as the mining of heavy sands is seen as key industry to contribute to the development of Mozambique and its people.
- The SEA will generate knowledge on the implications of alternatives for biodiversity conservation in the long term, and test these

implications against Mozambique's biodiversity conservation objectives as well as boundaries set by ratified international agreements.

- The SEA will generate knowledge on sectoral and regional planning, as it will identify areas that need priority attention in planning. The Xai-Xai and Chongoene, virtually untouched coastal zones of great beauty, are formally reserved for tourism development. MICOA itself is already busy preparing a spatial plan for the Gaza Province. In this context, the idea to first perform a strategic assessment for the transport options in that province must be considered timely.

4. RECOMMENDATIONS FOR STRATEGIC LEVEL DECISION-MAKING (STEP 1)

In the following paragraphs, NCEIA provides an outline of a process for the proposed SEA. This outline sets out from the assumption that no established or active inter-ministerial planning mechanism exists for transport infrastructure development in Mozambique. The outline proposes the ad-hoc establishment of such a mechanism. The proposed mechanism integrates stakeholder participation. In addition, the outline suggests the consecutive steps of an iterative process that integrates planning and environmental assessment.

4.1 The structure

The ad hoc mechanism proposes three actor groups: the group of competent authorities, a decision preparing platform and experts. The group of competent authorities is composed of the six central governmental authorities (represented by national directors) that are considered most relevant for integrated decision making on the transport option to be developed. The decision-preparing platform (10 to 15 persons) includes the authorities from the group of competent authorities (represented by [subordinates of] national directors), supplemented by representatives of all interests at stake. The experts are independent specialists that, on an ad hoc basis, will be asked by the platform to provide their services.

4.1.1 Group of competent authorities

As far as it can be judged now, the following planning contexts are relevant for the decision-making process:

- The proposed decision-making is on transport options. Inherently, the **transport sector** (roads, rail, shipping) is to be included.
- The bulk of the products to be transported will be mining products. This means that the **mining sector** is to be included in decision-making.
- The flood plains of the Limpopo and Changane rivers have high agricultural potential that might generate significant transportation

needs, in excess of present transportation needs. The **agricultural sector** will have to be included in decision-making.

- The Limpopo Valley Spatial Development Initiative (SDI), in which the sustainable development of the area, including transport routes, is a core component. Key authorities in the **SDI** (authorities involved in economic planning) would have to be included in decision-making.
- Within the Limpopo Valley SDI, the tourism sector development is important. This SDI considers international as well as local tourism, aided by the establishment of the Great Limpopo (Gaza-Kruger-Gonarezhou) Transfrontier Park, and seeks to promote strong links between “Bush” and “Beach” type of tourism. In the Tourism Sectoral Paper of the Limpopo Valley SDI, the Chibuto area plays a central role in tourism development in the study area. The **tourism sector** would have to be included in decision-making.
- Next to the already licensed rail link option, MICOA will have to environmentally license any other option. **MICOA** would have to be included in decision-making.

Further in country context analysis by MICOA will have to make it clear whether other sectors must be included as well.

4.1.2 Decision-preparing Platform

The six previously mentioned authorities are stakeholders and, therefore, have to be represented on the platform. In addition, the Commission suggests that the following interests be represented on the platform: the Gaza and Maputo Provincial governments, the Chibuto City Council, local affected population (fishermen, smallholders, entrepreneurs), the Corridor Sands mining company, the two other concession-owning mining companies in the Chibuto / Xai Xai region, Mozambique Ports and Railways (CFM), the World Bank, the EU, USAID, NGO's (WWF) and the Nature Conservation authorities. To keep it workable, the Commission suggests that the number of representatives on the platform be limited to 15. Some of the representatives may represent more than one interest.

The Platform would have to manage the budget for the SEA. It would decide on expert studies to be commissioned or experts to be consulted. The NCEIA recommends that MICOA provides the necessary administrative support.

In order to keep momentum in the SEA process and get results in matter of months, the NCEIA advises that the Platform meets frequently (biweekly).

4.1.3 Experts

The Platform would commission expert studies or expert hearings on an ‘as needed’ basis. Experts would have to be independent (must not represent any interest in the proposed activities). In the SEA process, the experts provide the knowledge (the assessment part). The NCEIA recommends that the experts’ contributions are independently reviewed by appropriately qualified parties.

4.2 Facilitating the process

The Group of Competent Authorities and the platform need a highly professional facilitator. One facilitator might facilitate the functioning of both structures. By preference, the facilitator would be Mozambican. The Commission suggests that the Mozambican facilitator should be backed up by a Portuguese speaking ex-pat facilitator, experienced in SEA.

4.3 The process

4.3.1 **Step 1: Obtaining commitment to the process and its results**

It is essential that all competent authorities are committed to the proposed SEA-process and to the use of its results in decision-making. If any of the authorities cannot commit, there is no use in embarking on the process. The first process step is the generation of commitment for the SEA process from the group of competent authorities. This is the task of MICOA.

4.3.2 **Step 2: Defining limits to the freedom to take a decision**

Prior to start-up of the SEA-process, each of the competent authorities in the group must formulate a preliminary position on the transport option to be developed and provide a written guideline for the platform. This guideline must provide explicit objectives, goals, criteria and considerations it deems important, as well as the scope, timing and priority areas for the SEA. Moreover, it must, for itself, develop its position with regard to possible solutions (alternatives) that it would not find acceptable (the bottom-line for negotiations).

4.3.3 **Step 3: Defining the problem and objectives of and guidelines for the process**

The problem can probably be defined as: a decision has to be made on the transport option that must be developed to transport bulk products, including mining products totalling at least 1.6 million tons per annum, from the Chibuto region in Southern Gaza province to the coast in such a sense that the chosen option contributes as much as possible to the sustainable development of Mozambique in general, and the southern Mozambique in particular.

Assisted by a professional facilitator and departing from the preliminary positions formulated under step 2, the group of competent authorities will have to agree on the problem definition, on the objectives of the SEA process, sustainability goals and indicators and thresholds to be used, and on guidelines for the platform. A set of generic guidelines on SEA for the transport sector will be used for orientation of the discussions. The output of this step is a detailed request (guidelines) to the platform to advise on alternatives to be considered in decision-making for the transport option to be developed. If no agreement can be reached on the contents of the request, the SEA-process stops.

A consistency analysis² of objectives and guidelines must secure the feasibility of the SEA process after agreement has been reached.

If MICOA considers it relevant, the request can be submitted to the National Council for Sustainable Development (CONDES) for endorsement.

4.3.4 Step 4: Formulating advice through joint fact finding

The Platform is a fact finding and negotiating platform. It considers alternatives and assesses the bio-physical, social and economic consequences of these alternatives. In order to broaden its view on possible options and to assess the impacts of options considered, the platform consults experts and commissions studies. subsequently, it may eliminate alternatives, informing the decision-making group thereon.

The logical steps on the platform's agenda include:

- development of alternatives to be evaluated
- assessment of the bio-physical, social and economic impacts of each alternative
- identify and propose mitigating and compensation measures and attribute responsibilities for their implementation
- comparison of the alternatives on their bio-physical, social and economic impacts
- formulation of and advice for the decision-makers group.

4.3.5 Step 5: Quality review

The group of competent authorities may decide to ask for independent external review of the quality of the process, the information underlying decisions made in the course of the process and information underlying the advice as formulated (an independent external review of the specialists' contributions to the process).

4.3.6 Step 6: Decision-making

The group of competent authorities, considering alternative solutions proposed by the Platform, decides on which alternative it prefers, justifies why it prefers the particular alternative above the others and prepares decision-making at the higher level (the Council of Ministers, CONDES or other).

² A consistency analysis checks whether or not objectives are mutually exclusive and guarantees that win-win options are not overlooked.

4.4 Funding

As the need for specialist studies and expert advice cannot be predicted (at the discretion of the platform), a detailed budget for the SEA cannot be prepared. A very rough estimation, however, indicates that a guarantee for the availability of 150,000 € would be required. This budget would cover Platform functioning, specialist studies, facilitator fees and possible assistance by the NCEIA. Due to legally fixed terms on MICOA decision-making, funding must be found quickly. Parties potentially interested to fund the process might be: the World Bank (involved in privatisation of port and railway management in Mozambique) on Netherlands trust funds, the DGIS, USAID (involved in rehabilitation of the Mozambican railway system).

4.5 Support of the NCEIA

At the request of MICOA, the NCEIA can assist in selecting the facilitators.

At the request of MICOA, the decision-makers group or the Platform, the NCEIA can provide independent review expertise during the SEA process.

5. PROJECT LEVEL EIA (STEP 2)

The result of SEA is open. It might be that a transport option is selected for which no project EIA has been done so far. In that case, a project EIA will have to be done for decision-making on design alternatives and on mitigation of environmental impacts. If an option is chosen for which a project EIA has been done already, a step 2 may not be necessary.