

APPENDICES

**with the advisory review of the
Integrated Coastal Zone
Management plan for the City of
Beira, Mozambique**

(appendices 1 to 8)


APPENDIX 1

Letter from the Royal Netherlands Embassy dated 14 September 1998 in which the Commission has been asked to submit an advisory review

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NETHERLANDS EMBASSY

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	Commissie voor de m.e.r. C3
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Ambassade van het
Koninkrijk der Nederlanden

Faxbericht

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Aan Dhr. Scholten,
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Datum 14 september 1998

Pagina's 2
(inclusief dit voorblad)

Betreft Bezoek van een delegatie van de Cie Mer aan Beira

Geachte Heer Scholten,

Op uitnodiging van de Ambassade in Maputo (brief dd 8-5-'98, MAP/OS-1084-98) heeft een delegatie van de Commissie voor de Milieu Effect Rapportage (Cie Mer), van 8 tot en met 12 mei jl., een bezoek gebracht aan Beira met als doel om ondersteuning te verlenen bij het proces voor het opstellen van een geïntegreerd kustbeheersplan.

Dit project, wat als doelstelling heeft om naast het opstellen van een geïntegreerd plan ook een aantal noodwerkzaamheden aan de kust uit te voeren, heeft een looptijd tot 14 oktober 1998. Teneinde de kwaliteit van het plan, alsmede dat van de uitgevoerde werkzaamheden beter te kunnen beoordelen wordt een delegatie van de Cie Mer nogmaals uitgenodigd om een bezoek te brengen aan Beira. Derhalve zou ik de heren Post en Negenman willen uitnodigen, om vanaf zondag 27 september 1998 tot en met donderdag 1 oktober 1998 een bezoek aan Mozambique te brengen.

De Terms of Reference (TOR) voor deze missie zijn als volgt:

- Het opstellen van een eindoordeel over het opgestelde kustbeheersplan, alsmede over de uitgevoerde noodwerkzaamheden. Als basis voor dit advies dient het door de Cie Mer opgestelde rapport (dd. 25-6-1998) aangaande genoemd project. Het advies wordt opgesteld voor de Ambassade in Maputo.
- Voor het opstellen van het eindoordeel zal de CieMer samenwerken met het Ministerie voor de coördinatie van Milieuzaken (MICOA) in Mozambique. De inzet van MICOA zal worden geregeld door de Ambassade.
- De missie zal worden uitgevoerd in de periode 29 september tot en met 1 oktober 1998.
- Het vervaardigen van een eindrapport waarin het oordeel wordt weergegeven. Het rapport zal worden opgesteld in de engelse taal en in tienvoud aan de Ambassade worden toegestuurd.

De accommodatie en het zakelijk vervoer tijdens het verblijf in Mozambique zal door de Ambassade worden geregeld, met dien verstande dat de Cie Mer reeds de reserveringen voor de vluchten heeft gemaakt. Voor deze dienstreis zal een kontrakt worden opgesteld tussen de Ambassade (als vertegenwoordiger van de Minister van Ontwikkelingssamenwerking) en de Cie Mer. Graag zou ik in dit verband zo spoedig mogelijk een voorlopige begroting van U willen ontvangen, alsmede de vluchtgegevens van de heren Post en Negenman.

Bij voorbaat dank voor uw medewerking.

APPENDIX 2

Terms of Reference for the ICZM plan

I Introduction and Background

Background and problem definition

The city of Beira is the second largest city in Mozambique, situated in the province of Sofala, along the coast of the Indian ocean. Beira is the most important harbour in Mozambique and is therefore of economic importance.

Beira is located at the mouth of the Pungue river, which flows on the western side of the city into the Indian Ocean. The water-flow through the Pungue river fluctuates considerably between seasons. Over the years the flow of the Pungue has been negatively affected by the construction of dams upstream. As a result, particularly in the dry season, there is a considerable infiltration of seawater into the river channel to the extent that currently the water-intake for the city of Beira is threatened by salinization.

At the mouth of the river lies a shallow coastal zone consisting of sandbanks and tidal channels. Tidal movement is an important feature for Beira. Particularly during spring-tides considerable differences in water levels occur with high current velocities. The coastal area in Beira has a complex morphology because of the interaction between the river-flow, the tide, the waves and the current along the coast. The influence which these phenomena have on the coast differs from place to place.

For years the coastline and the beach of Beira have been subject to erosion. Already in the 1940's several measurements were implemented to combat the erosion process. These infrastructural works, such as groynes, could not adequately be maintained. Consequently these works are currently in a dilapidated condition. As a result of the bad condition of the works, in combination with the natural wave-, tidal- and current movements, the erosion has presently progressed to the extent that buildings and infrastructure are being undermined and parts of the low-lying hinterland are permanently under threat of flooding. This risk is particularly eminent in the case of a storm combined with a spring-tide. The risk of inundation of the hinterland is further increased through the deterioration of the condition of the dunes, which only form a thin line protecting the lower lying coastal plain. The present bad condition of the dunes can be contributed to a number of uncontrolled activities (woodcutting, construction of settlements in the dunes and the use of x cars) which have disturbed the original ecosystem.

A channel, which was constructed in order to drain the storm-water from Beira, poses another threat of inundation. This drainage channel traverses the dune field and discharges into the sea. At the end of the channel sluices have been constructed to prevent the infiltration of seawater during high tide. However, these sluices are not functioning any longer and during high tide seawater flows freely into the channel causing problems of inundation, as well as salinization of the agricultural fields in certain parts of Beira. Furthermore, at the point where the channel discharges into the sea, considerable sand deposits do occur in front of the coast, causing a risk of blocking the drainage channel through siltation.

Overall the drainage system is not as effective as it should be, causing parts of the hinterland (agricultural fields and houses) to submerge during the rainy season when water cannot be removed quickly enough and, as indicated, because of the non-functional sluice compartments which allow infiltration of seawater.

Institutional setting

The City Council of Beira is officially responsible for protection and management of the Beira coastal zone. To this extent the city council created an organisation with specific responsibilities for coastal zone management. This includes the management of the mangrove forests. Over the years there has been a process of degeneration of the mangroves. The disappearance of these forests has considerable consequences for the coastal condition.

There is, however, also a provincial organisation (Maritima) which has to give official approval for all the works which will be executed at the coast. According to their statutes Maritima is responsible for management of the coastal zone from the water line up to 80 kilometres inland. Maritima answers directly to the Governor of the Province of Sofala. Furthermore the activities which the Beira harbour authorities undertake (dredging of the access channel etc.) also have an important influence on the management of the Beira coastal zone. The human resources- and financial capacity of the Beira City Council for coastal zone management are not adequate. Furthermore, the responsibilities, lines of communication and coordination between the parties involved in coastal zone management are not clearly defined.

Over the years the city of Beira has sought support in order to address the problems related to coastal erosion, sanitation and water supply and environmental management. In the last 10 years support was received from FINNIDA, the World Bank, the Netherlands Government and the cities of Gothenburg and Amsterdam.

The city of Amsterdam has an agreement with the city of Beira. In the context of this agreement a number of projects have been defined, among others this includes a project to define solutions for the coastal erosion. For this a number of reports have been produced. These reports do propose some solutions to the erosion problem, however, they are rather qualitative in nature. During missions executed by the city of Amsterdam a number of emergency measurements, to halt the coastal erosion and prevent the inundation of the hinterland, have been identified. Among others they include dune stabilization, repair of the sluices, beach recharge and the construction of groynes.

The municipalities of Beira and Amsterdam later decided that the nature of the problem, and consequently the resources required to prepare (let alone to implement) adequate solutions was such that it fell outside the scope of the city to city agreement. It was at this stage that the Netherlands Minister for Development Cooperation, during a visit to the city of Beira, in august 1997, decided to provide support for the preparation of an integrated coastal zone management plan for the city of Beira, which includes the implementation of some of the identified emergency works.

II Scope of Work

The principal objective of the consultancy will be to assist the municipality of the city of Beira in the formulation of an integrated coastal zone management plan covering the areas of coastal erosion, management of water supply, sanitation and drainage, management of the coastal environment and institutional capacity building.

With respect to the problem of coastal erosion the plan will have to identify alternative solutions which are quantified both in time as well as in monetary terms (investment and maintenance). In identifying the alternative solutions the consultant will have to pay due respect to the institutional and financial condition and possibilities of the municipality of Beira. This implies that the solutions should not only be of an expensive civil engineering nature and/or require specific expertise and equipment to maintain.

The secondary objective of the consultancy is to implement and/or supervise the

implementation of some of the already identified emergency works, which are: repair of the sluices, beach recharge, dune stabilization and the rehabilitation and/or construction of the groynes. Particular attention will have to be given to the repair of the sluices. The implementation of other emergency works depends on the remaining budget and the discussions with the counterpart. Some of the identified emergency works, such as the construction and/or rehabilitation of groynes, might require further studies and measurements conducted for the preparation of the overall management plan, before implementation.

If there are no objections to the implementation of the mentioned emergency works the consultant will have to prepare a detailed financial proposal for the execution of the works which will have to be compared to the available resources. It is the decision of the consultant whether part of the works will be subcontracted or whether the consultant will implement the total package of activities required for the execution of emergency works. In case the consultant decides to subcontract to a local contractor, the consultant will be entirely responsible for this process, ie. the preparation and formulation of tender documents, the bills of quantities (if applicable eg. for beach recharge) and the contract documents as well as for the supervision during the implementation of the emergency works.

The implementation of the emergency works will be executed simultaneously with the preparation of the coastal zone management plan since the two activities are closely related:

The Beira City Council has taken the initiative to create a forum of all parties who are responsible for coastal zone management in Beira. Through the City Council the forum will be the counterpart to the consultant during the entire process of implementing activities required to achieve the primary and secondary objectives. As an integral part of the duties the consultant will assist and advise the forum in creating an appropriate institutional framework required for adequate coastal zone management. In this respect will knowledge of the portuguese language be an advantage.

III Client

On behalf of the city council of Beira, the Minister for Development Cooperation of the Netherlands has commissioned the consultancy. The Minister will be represented by the Royal Netherlands Embassy in Maputo.

IV Terms of Reference

The consultant will undertake the following activities:

- A In relation to the primary objective ie. the preparation of a coastal zone management plan for Beira:
- Prepare an historic overview with regard to the coastal erosion problems;
 - Collect and analyze existing, relevant reports which will be used as the basis for this consultancy. Particularly reports produced in the context of the twinning arrangement between the city of Amsterdam and the city of Beira are relevant. These reports will be made available to the consultant.
 - Collect additional information if and when required eg. measurements, statistics etc.
 - Prepare an overview of the parties involved in coastal zone management forum and identify their respective mandates. Also present an opinion on the composition of the forum.
 - Prepare an assessment of the institutional strengths and weaknesses of the parties

- participating in the forum for coastal zone management in Beira;
- Prepare a proposal for institutional reform, including a training strategy for employees of the relevant departments, to create sustainable coastal zone management capacity;
- In cooperation with the forum, prepare a coastal zone management plan for Beira presenting alternative solutions to the problems of coastal erosion, the siltation and the management of the water resources, sanitation and drainage, the degeneration of the coastal ecosystem (specifically the degeneration of the mangrove forests) as well as the creation of a proper institutional framework for coastal zone management.
- Prepare a clear and transparent budget for the identified solutions (investment and maintenance);
- Identify possibilities for assistance and support from the city of Amsterdam during plan implementation;
- Identify possibilities for assistance from the Netherlands Institute for Southern Africa (NIZA) during plan implementation;

B In relation to the secondary objective ie. the execution of emergency works:

- Assess the relevance and urgency of the proposed emergency works and their effectiveness in relation to the integrated coastal zone management plan, as referred to under "A" above;
- Assess the possibilities for using sand from dredging operations in the access channel to the harbour, for beach recharge;
- Identify a set of emergency works for implementation starting with the repair of the sluices of the drainage channel;
- Prepare an adequate budget for the implementation;
- Implement identified emergency works, either under own management or through sub-contracting.

In case of subcontracting (part of) the works;

- prepare tender documents, bills of quantities and contract documents for the sub-contractor;
- negotiate and enter into a contract with the sub-contractor;
- provide the supervision during the execution of the works by the sub-contractor.

All activities will be carried out in close collaboration with the forum of parties, involved in coastal zone management in Beira.

V Timing of the Consultancy

The consultant is expected to start his activities on 1 April 1998.

The coastal zone management plan will have to be presented to the Netherlands Embassy in Maputo and to the Beira City Council as the representative of the forum, latest 31 September 1998.

It is expected that the execution of the emergency works will also be finalized by 31 September 1998.

VI Project organisation and Work-method

The consultant will organize a team of experts who will be based in Beira for most of the duration of the consultancy. The team should consist of members with the following expertise:

- Institutional development (team-leader)

- Coastal zone morphology
- Geo-hydrology
- Civil engineering
- Environmental management of african coastal zones.

One team-member can be qualified in more then one field of expertise.

The consultant will (if appropriate) receive additional instructions from, and be directly answerable to the Royal Netherlands Embassy in Maputo. The Embassy will take final decisions in case of unforeseen problems and/or conflicts. In order to adequately monitor progress the consultant will produce bi-monthly technical and financial progress reports which will be sent to the Embassy and the Beira city council.

On a day to day basis the consultant will cooperate and work together with the city council of Beira and other relevant parties in the forum if required.

VII Required Outputs for the consultancy

The following outputs are expected:

- A coastal zone management plan with identified alternatives, phased in time and adequately budgeted (investment and maintenance costs). The proposed solutions to the problem should, whenever possible, be formulated using the following principles:
 - environmentally sound
 - socially acceptable
 - technically simple
 - not capital intensive
 - be implementable with local expertise and technology
- The plan submitted to the Embassy needs the approval of the Forum.
- A proposal for institutional reform and/or strengthening for the forum.
- A training strategy for the forum, with an accompanying training plan with identified courses;
- A proposal for further collaboration between the cities of Amsterdam and Beira;
- A proposal for further support from the Netherlands Institute for Southern Africa (NIZA);
- Implemented emergency works;
- Trained personnel in the parties involved in the forum for maintenance of the implemented emergency works.

The coastal zone management plan will be presented to the Commission for Environmental Impact Assessment in the Netherlands for its opinion on the quality of the plan and the implemented priority works.

Redacteur: J. Huesken

APPENDIX 3

Project Information

Proposed activity: The Netherlands' Minister for Development Cooperation decided to provide support to the City of Beira, Mozambique, in preparing an Integrated Coastal Zone Management plan (ICZM) for the Beira coastal zone. The implementation of emergency works to prevent further erosion of the coast line is included in the plan. The support to Beira takes the form of a project to be executed in six months, between April and September 1998. A work plan, describing the approach and time frame for ICZM-planning, is to be finalized by the end of April 1998.

Categories: Environmental protection activities, DAC CRS code 92100, Erosion control, DAC CRS code 92019, Water and sewerage, DAC CRS code 92010, Water supply, DAC CRS code 91087

Project numbers: The Royal Netherlands Embassy MAP/OS-1084/98; Commission for EIA 034

Procedural information:

Letter requesting advice: 8 May 1998

Site visit by the working group: 8 - 12 May 1998

Advice submitted: 25 June 1998

Site visit by a delegation of the working group: 18 - 26 November 1998

Significant details: In the Terms of Reference for (the tender of) the project, the Netherlands Embassy in Maputo mentioned that the Netherlands' Commission for EIA would be asked for its opinion on the quality of the ICZM-plan and the implemented priority works. At the time of the first site visit the work plan is not finalized. Therefore, in its advice, the working group focuses on the contents of the work plan, advising on the approach to follow for ICZM-planning and the main points of attention. The work plan, once finalized, does not reach the working group. A first draft of the final report of the project, containing the ICZM-plan, reaches the working group in September 1998. A second draft follows in November 1998. In the same month a delegation of the working group visits Beira and the emergency works under execution. The delegation attends the second meeting of the Forum that guides the project. A third draft final report reaches the working group in December followed by the final report in April. The Embassy asks the Commission to review the report keeping in mind that follow-up support for coastal zone management is considered. In the review, amongst other things, the Commission concludes that local government is insufficiently involved in the planning process and that it remains unclear whether the stakeholders 'own' the plan, that on coastal morphology a good problem analysis is presented but on other issues no problem analysis is given, that the institutional analysis is superficial and not very complete and that the action plan provides a useful checklist but that priority setting and budgeting are incomplete. The advice formulates recommendations for further action.

Members of the working group:

Mr E.W. Bijker

Mr J.W. Kroon (chairman)

Mr F. van der Meulen

Mr A.J.H. Negenman (with exception of the review of the final report, during which Mr Negenman acted as resource person)

Mr J. Rassul (locale resource person)

Secretaries of the working group: Mrs V.C.F. Tersteeg (advice on the ICZM-plan), Mr R.A.M. Post (advice on review of the ICZM-plan)

APPENDIX 4

Comments of the Commission on the first draft of the ICZM-plan for Beira dated 25 September 1998

Meeting of the Commission for EIA's working group for the Beira Coastal Zone Management Plan.

Present: Mr. Kroon, Mr. V. Meulen, Mr. Bijker and Mr. Post

1) The first point on the agenda is the mission and the tasks the mission is asked to do:

- Present a final opinion about the proposed Integrated Coastal Zone Management Plan
- Present a final opinion about the emergency works executed

It is concluded that the mission of Mr. Negenman and Mr. Post will do the necessary field reconnaissance and that the working group as a whole will formulate the opinions. An advice covering both aspects will be formulated after the field mission and after review of the final ICMZ-plan.

2) The second point on the agenda is the formulation of an opinion on the draft documents received.

To clarify the status of the documents received and the framework for review it is stated that:

- The ToR of the Embassy for the ICZM-plan as formulated by the Royal Netherlands Embassy define the required outputs of the order to the consultant. These ToR will be used in the review.
- The advice of the Commission of 25 June provides a further specification of these ToR on the issues related to the environment. The advice also provides recommendations for the work plan that was to be formulated in the first month of the project. This work plan would indicate the areas on which the project will concentrate and specify the process and activities which would lead to the formulation of the ICMZ-plan. Moreover this work plan would specify the emergency works. As the recommendations for the work plan also concern the final ICZM-plan, the advice of the Commission will also be used in the review.
- The work plan has not been submitted to the working group of the Commission. The working group is unaware of its contents

Seen the ToR and the Commission's advice, the working group must consider the chapters 2 and 4 received as the draft for the final ICZM-plan. With regard to this the working group observes:

- that chapter 4 is called a 'strategy' plan and not a 'management' plan;
- that the documents state that a CZM Master Plan will have to be developed 'post project';
- that a 'Master plan' normally precedes the 'Management plan'

In conclusion the working group observes that, not being the Management Plan, nor the Master Plan, the Strategy Plan is more or less similar to the 'work plan'.

If this plan has to be reviewed as ICZM-plan (as the ToR require), a negative judgement would be the result with regard to points other than that of controlling coastal erosion (which has been addressed in a fair way).

A quick screening of the draft chapters on the formal ToR make that clear. Eg:

- the ToR ask for a ICZM-plan while the documents represent a 'strategy to develop a ICZM-plan
- the document refers to a PROL project for all urban planning issues while the ToR ask to include them in the ICZM-plan
- there is no information in collaboration with Niza and Amsterdam
- no training strategy for the forum
- etc.

However, the working group has the opinion that within the time frame available it was impossible to formulate a broadly accepted ICZM-plan. Nevertheless, the working group would have expected to find in the documents an (accepted) broad outline of a Master plan addressing all issues mentioned in table 1 of the advice of the Commission. E.g.:

- A map specifying what will be done where.
- a map localizing sanitation and drainage problems and (alternative) plans to solve these;
- a plan for upgrading the Chiveve river area;
- an alternative temporary plan for upgrading the Chiveve river area for the period that no money is available for the solution proposed in the final plan (mentioned in the previous point).
- an accepted time schedule for further master planning and ICMZ-planning and execution.

From the draft documents received it remains unclear:

- what has been achieved at this moment with regard to the points mentioned in table 1 (attribution of tasks, commitments, institutional capacity and capability) ;
- what is going to happen when the project comes to an end, whether there will be a follow-up;
- what is the relation of the project with regional coastal zone planning (MICOA).

15.00 hrs, Friday, 25 September
Reinoud Post,
technical secretary.

APPENDIX 5

Comments of the Commission on the second draft of the ICZM-plan for Beira dated 6 November 1998

Opmerkingen ten aanzien van het tweede draft van het ICZM-plan voor BEIRA.

Opgemerkt wordt dat hoofdstuk 3 van het rapport en de bijlagen ontbreken.

De werkgroep ziet in de in de beschikbare tekst doorgevoerde aanpassingen geen aanleiding het eerder (per fax van 25 september) gegeven oordeel te wijzigen.

In aanvulling op dit oordeel merkt de werkgroep op:

Ten aanzien van de 'emergency works':

- de werkgroep kan uit de tekst van het draft niet op maken wat er feitelijk is gerealiseerd. Omdat is verzocht in de komende missie de uitgevoerde werkzaamheden te beoordelen is het strikt noodzakelijk dat vooraf bij de Commissie bekend is wat er waar is gedaan. De werkgroep heeft mij verzocht spoedshalve per fax aan ARCADIS te vragen het ontbrekende hoofdstuk van het rapport te verstrekken (waarvan wordt aangenomen dat het over de civiele werken gaat), danwel een beschrijving van deze werkzaamheden in twee A4-tjes. Een kopie van mijn fax aan ARCADIS gaat hierbij.

Ten aanzien van het ICZM-plan:

- Het is de werkgroep bekend dat er veel meer en ook goede basis-informatie beschikbaar is dan in het draft is vermeld (b.v. Alkyon rapport).
- Het draft geeft alleen aan dat alle voorgenomen taken zijn uitgevoerd. Niet op te maken valt wat die uitvoering van taken heeft opgeleverd aan bijv. awareness en commitment. De hoop/ het vermoeden bestaat dat er veel meer is bereikt dan uit de teksten is op te maken.

Concluderend kan worden gesteld dat:

- de werkgroep, het 'draft' gelezen hebbende, op dit moment niet goed in ziet hoe de Conselho Municipal dit rapport in het besluitvormingsproces kan gebruiken;
- er meer informatie is voor het opstellen van een masterplan dan het 'draft' aangeeft;
- de mogelijkheid bestaat dat er op het terrein van bewustzijn en draagvlak veel meer is bereikt dan de tekst van het 'draft' doet vermoeden.
- de draft kan worden gezien als een eerste stap in een planningsproces waarop kan worden voortgebouwd om te komen tot een meer voldragen plan.

Voor de missie van haar delegatie ziet de werkgroep de volgende taken weggelegd (passend binnen de ToR en de daarop door u mondeling gegeven aanvulling dat de review naar vervolgvactiteiten zal moeten kijken):

- beoordelen van de uitgevoerde civiele noodwerkzaamheden (na ontvangst van aanvullende informatie daarover);
- het in het veld aftasten van wat het project in het afgelopen halfjaar heeft bereikt (met name ook in de reeks van workshops welke werden gehouden);
- zich een beeld vormen wat in het vervolgtraject nog zal moeten worden gedaan om te komen tot een voldragen ICZM-plan.

Na terugkeer in Nederland zullen de bevindingen van de delegatie in de werkgroep worden besproken, waarna een advies zal worden uitgebracht. Daarbij acht de werkgroep het noodzakelijk dat over alle voorhanden zijnde informatie kan worden beschikt.

APPENDIX 6

Draft observations of the Commission on basis of the field visit dated 25 November 1998

In addition to what the working group of the Commission has observed in its faxes of 26 September and 6 November and having accomplished its mission, the delegation -in a first reaction- observes the following:

- Indeed, there is more information for master planning than provided in the drafts of the ICZM-plan.
- Indeed, important elements of the ToR for the ICZM-project were left to be carried out by the PROL project. These elements are especially localized in the Seaport, Urban Centre and Urban Lowlands subzones of Beira.
- The chapter three of the report is still not available.
- Before the Commission can accomplish its function, the final version of the report must be made available.
- Important elements of the ICZM-plan were to be discussed and decided upon in the forum.
 - status, tasks, competences, structure and operational budget of the proposed ICZM-authority.
 - Necessity of existence, composition, tasks and competences of the proposed forum.
- The forum did not come to conclusions with regard to these elements stating that the proposals were judged to lack a convincing motivation. The forum especially observed that there was no clear definition of the tasks and competences of the proposed institutional structures. (In this respect it is observed that there seems to be a typical chicken and egg situation. The Forum expected clear cut proposals as to task and competences. Project management seemed to expect the Forum to specify tasks and competences etc). The course of events confirmed the observation on the use of the draft plan for decision-making by the Municipal Council. (observation made by the Commission in its fax of 6 November).
- In a move to break the impasse, the first secretary of the Netherlands Embassy offered to finance an institutional survey that must lead to definition of clear cut proposals for an institutional structure for coastal zone management in Beira.
- In order to provide the necessary input to this institutional survey it would be recommendable that the ICZM-plan would provide
 - A proposal or draft ToR for this study
 - A prioritized plan of actions (short term, long term) for all tasks in coastal defence (including possible alternative choices, timetables, personnel required, investment budgets and maintenance budgets) It would be recommendable that the plan would include monitoring of effects of interventions and, in the prioritization would pay attention to the psychological effects on the residents.
 - A specification of the tasks the project team thinks the ICZM-unit should be doing in the field of coastal zone management (other than coastal defence).
 - A specification of the tasks and competences of the proposed forum and, related to that, its proposed composition.

- a plan-focussed proposal for a training programme for technical staff of in the ICZM-unit
- Terms of reference for a pre feasibility study for the rehabilitation of the Chiveve river
- A proposal for actions to prevent developments that disable rehabilitation of the Chiveve river
- a monitoring and feedback programme for the operation of the Desaguadouro sluices.
- In addition to the ICZM-plan, the institutional survey is recommended to take into account the structure plan as produced by the PROL project (to be issued around 24 December 1998). The underlying information of this structure plan contains data that suit Integrated Coastal Zone Management and thus the implementing institutional structures.
- Also, it is observed that contact with the Goteburg/SIDA interventions on institutional development in the municipal institutional structures of Beira seems relevant, as a capacity for creation of public awareness has been developed by that project.
- It is observed that readjustment of the municipal institutional structure is due in the first days of March. It is recommended to make available the results of the survey at such a point in time that they can be taken into consideration in the readjustment process. This situates the survey somewhere in the first three weeks of January.
- The Commission for EIA is prepared to advise on the final result of all interventions.

APPENDIX 7

Report field visit of the Commission 18 - 26 November 1998

Woensdag 18 november

- 21.00 Aankomst in Maputo. Opgehaald door Jan Huesken. De heren Onderwater en Clark kwamen met hetzelfde vliegtuig van Johannesburg naar Maputo.
- 22.00 Hotel Terminus: Gesprek met Huesken, Clark en Onderwater over programma volgende dagen. Huesken overhandigt BEIRA programma. Dhr. Huesken geeft aan dat de reacties van de werkgroep op de drafts van het ICZM-plan naar de Conselho Municipal van Beira zijn gegaan en dat er een schriftelijke reactie van de Conselho Municipal van Beira op het draft ICZM-plan is.
- 23.00 Hotel Avenida: Gesprek met Jan Huesken. In dit gesprek maakte Huesken duidelijk dat een open benadering wenselijk is. De dingen moeten gezegd worden, helder op tafel komen. Daarna moet er worden gekeken hoe het project verder kan/ follow-up krijgt.

Donderdag 19 november

- 10.00 Ambassade: Kennismaking met Celia Jordao. Het werkplan (Inceptierapport) bleek wel degelijk te bestaan. Het was om onduidelijke redenen niet aan Cie. gestuurd. Te ambassade werd aangegeven dat men dacht dat het wel was verstuurd (ondanks bericht in de fax van de Cie van 25 september, waarin werd aangegeven dat het niet was ontvangen). Ook bleek er een tussentijdse rapportage van dhr. Clark te zijn. Deze is ook niet aan Cie. Gestuurd. Mevr. Celia Jordao toont verder een schriftelijke neerslag van de mening van werkgroeplid Rassul na eerste lezing van het ICZM-plan. Het inceptierapport en de reactie van dhr. Rassul worden aan de missieleden overhandigd.
- 11.00 Bestudering nieuw materiaal en bespreking Ton/Reinoud
- 11.30 Bespreking met dhr. Clark van de formele positie van de werkgroep en van een aantal van haar opmerkingen. Dhr. Clark overhandigt de annexes bij het ICZM-plan en de tussentijdse rapportage. Dhr. Clark geeft aan dat 55-60% van zijn tijd is gaan zitten in de emergency works. Er is een probleem in Macuti als gevolg van de storm van 7 / 8 november. Als bioloog kan hij geen technische uitleg geven en verwijst daarvoor naar de opzichter dhr. O'Sullivan en dhr. Onderwater.
Voor een deel van de in de ToR en het inceptierapport aangegeven taken had hij geen expertise beschikbaar, noch het geld om die in te huren. Hij zegt dat dat mondeling aan de Ambassade is meegegeeld. Met het PROL-project heeft geen afstemming plaatsgevonden. Wel heeft aan het PROL project de management needs voor de coastal zone doorgegeven. Volgens dhr. Clark zou de ambassade

moeten weten wat PROL doet. Hij meent dat het 2.5 jaar kost een ICZM-plan tot stand te brengen, dat de eerste stap een strategie is en dat gij die heeft opgesteld. Ook dit zegt hij mondeling aan dhr. Huesken te hebben gemeld. Hij geeft aan dat het niet de bedoeling was dat het eerste draft naar de Commissie ging! Verder geeft hij aan dat er een dame van het NIZO is geweest (Maaïke Blom) zonder mandaat en zonder commitment en dat niet tot afspraken kon worden gekomen. Ten aanzien van het forum geeft dhr. Clark aan dat het formeel niet bestaat en dat het sinds april niet bijeen is geweest. Doelstelling van hem was alle personen uit de werkgroepen ook in het forum opgenomen te krijgen. Ook het PROL ken een forum. Over de Desaguadouro zegt dhr. Clark dat er 150.000 mensen afhankelijk zijn van het beheer van de sluis, dat er 4-5 personen nodig zijn voor het beheer (onder de coastal zone management unit en niet, zoals nu, onder public works) en dat er een budgetlijn moet komen voor salarissen en onderhoud. Voor de hele unit zijn er zijns-inziens 12 man nodig. De unit heeft nu naast de chef 3 man die voornamelijk de krant lezen.

Dhr. Clark geeft aan dat er nog twee technische rapporten zijn. Het rapport van dhr. Salm (IUCN) over Biodiversiteit en het rapport over Long term Coastal morphology van Alkyon (beide rapporten zijn in Beira). Dhr. Clark stelt voor om vrijdag al naar Beira te gaan. Aldus wordt besloten. Dhr. Huesken zal zaterdag komen, mevr. Celia Jordao komt op maandag naar Beira.

14.00 Gesprek met dhr. Rassul. Op verzoek van Tom komt dhr. Rassul op maandag ook naar Beira.

15.00 Voortzetting van de gesprekken met John Clark.

Vrijdag 20 November

06.00 Vertrek naar Beira

12.00 Kennismaking met dhr. O'Sullivan (opzichter van de werkzaamheden aan de sluis). Dhr. Clark overhandigt op ons verzoek de verslagen van de workshops en het Biodiversity rapport. Dhr. Onderwater overhandigt ALKYON rapport.

14.00 Dhr. Onderwater laat ons de emergency works zien. Hij geeft aan dat de door de oktober-storm aangebrachte schade nu geen grote reparatiewerkzaamheden zullen vergen en dat de strekdammen goed werken. In een later stadium zal afgezet zand naar boven kunnen worden geschoven om de gaten in de duinen (door achterloopsheid) op te vullen.

18.00 Diner en gesprek met dhr. Ross Palmer en mevr. Caroline Pitt van het PROL project (opstellen van een structuurplan voor Beira, wereldbank). Dhr. Palmer laat zich erg lovend uit over dhr. Clark. Met name de participatieve aanpak van het CPP heeft het PROL-project ten voorbeeld gestaan. Het PROL project houdt zeker in

eind maart 1999 op. Er worden geen vervolgaactiviteiten voorzien. Dhr. Palmer overhandigd een summary van het eindrapport dat naar hij zegt eind december klaar zal zijn.

Zaterdag 21 November

- 09.00 Hotel Studie van de ontvangen documenten
- 10.00 Bespreking met dhr. Huesken over bevindingen van de voorgaande dag.
- 12.00 Op afspraak met dhr. Clark en zijn mensen (wegens laag water) is de missie op Ponta Gea. Dhr. Clark en zijn mensen laten het afweten.
- 13.30 Kantoor Clark Gesprek met dhr. Clark en dhr. Huesken. Dhr. Clark meldt dat in de ochtend in de vergadering van de uitvoerders, opzichters en dhr. Onderwater is besloten strekdam 33 op te hogen en bij de strekdammen 33, 35 en 36 benedenstrooms gabians te plaatsen om de onderloopsheid in te dammen.
- 14.30 Lunch op Club Nautico
- 15.00 Bezoek aan fysieke werken met opzichters, uitvoerders en dhr. Onderwater. Dhr. Clark vertrekt na bezichtiging van twee strekdammen. Dhr. Onderwater geeft aan dat ophogen van dam 33 niet nodig is. Ook bij het plaatsen van de gabians heeft hij (geloof ik) vraagtekens. Hij ziet meer in het met het beschikbare geld aanpakken van enkele andere strekdammen. Het repareren van de sluis licht achter op schema door het niet beschikbaar zijn van droog hout voor de deuren door het onder water staan van een zagerij. Men is bezig met de roosters. Ook de dikke balken (beton en hout) liggen klaar voor plaatsing.

Zondag 22 November

- Hotel Studie documenten. Afstemming met Jan Huesken.
- 19.00 Afspraak met dhr. Clark om forum-meeting voor te bespreken. Komt niet opdagen.

Maandag 23 November

- 09.00 Dhr. Rassul komt aan.
- 09.30 Municipio Gesprek (Ton, Jan en Reinoud) met Dhr. Philipe Azinheira, substituut burgemeester (presidente) en wethouder voor de spoorwegen. (verzoekt om even geduld en vertrekt naar andere afspraak)

- 10.00 Gesprek met mevr. Caroline Pitt (PROL). Heeft veel informatie en kaarten. Zegt deze toe. Het PROL-Project (600.000 US\$) houdt 31 maart 1999 echt op. Structuurplan wordt door project in samenwerking met werkgroepen uit een forum (150 personen) gemaakt. Er liggen nogal wat technische studies aan ten grondslag. Het structuur-plan wordt door twee planologen in Maputo vastgesteld en dan aan de Conselho Municipal van Beira gegeven. De (structuur)planningfase is 25 december afgerond. Dan volgt een training voor gemeentemedewerkers over de vertaling van het plan in concrete activiteiten. Beira maakt jaarlijks een sociaal-economisch plan. Het laatste Physical plan dateert van 1992 maar werd nooit gelegaliseerd noch uitgevoerd. De huidige Presidente van de CMP is gekozen terwijl slechts 15% van de bevolking ging kiezen. PROL houdt zich buiten de vaststelling van definitieve plannen (prioriteitenstelling) en onthoudt zich van opmerkingen over de consequenties voor de institutionele structuur.
- 11.00 Gesprek met substituut presidente dhr. Azinheira. Het betreft vooral een beleefdheidsbezoek dat ook dient om hem in te lichten over forumbijeenkomst (morgen) die hij zal openen. Dhr. Azinheira deelt mee dat de presidente zelf terug komt.
- 13.00 Bigues Lunch met dhr. Onderwater en dhr. Clark. Op Clark ingesproken om forumvergadering goed voor te bereiden, omdat vermoed wordt dat deze anders niets oplevert.
- 15.00 Municipio Gesprek van Ton, Mario en Reinoud met Dhr. Paolo Lourenzo, wethouder voor milieu en gemeente diensten. Met dhr. Lourenzo wordt over de institutionele setting voor coastal zone management gesproken. Per maart gaat de hele gemeentelijke organisatie op de schop. Duidelijk is dat er nu te veel mensen werken. CZM wordt volgens hem steeds belangrijker en moet goed worden ingekaderd. Hij geeft echter niet aan hoe dit moet. Wel wordt duidelijk dat de gemeente gaat meedelen in inkomsten uit de haven en de spoorweg en dus ruimer in de middelen komt te zitten.
- 17.00 Hotel Gesprek met dhr. Rassul over zijn opinie over de emergency works (te weinig zichtbaar, geen psychologisch effect) en het ICZM-plan. Hem gedwongen zijn mening op papier te zetten.
- 19.00 Club Nautico Gesprek met dhr. Onderwater over het Alkyon rapport.
- Dinsdag 24 November
- 08.30 Municipio Bijeenkomst van het Forum (zie voorlopige bevindingen voor beoordeling).
- 14.00 Mislukt reisje naar Savana
- 16.00 Hotel Werkgroep hoe verder. Opstellen voorlopige bevindingen van de delegatie van de Commissie.

Woensdag 25 November

- | | | |
|-------|-------------------|--|
| 10.00 | Hotel | Uitchecken. |
| 10.30 | Bureau dhr. Clark | Bespreking met dhr. Clark van de bevindingen van de delegatie. Dhr. Clark gaf aan steun te hebben aan de bevindingen van de delegatie. Overhandiging voorlopige bevindingen missie aan Dhr. Huesken. Deze overhandigt ze informeel aan dhr. Clark. |
| 12.00 | Miramar | Laatste inspectie van werkzaamheden aan de Desaguadouro. Twee openingen zijn nu afgesloten. |
| 14.00 | Vliegveld | Inchecken |

Donderdag 26 November

- | | | |
|-------|-----------|--|
| 08.00 | Ambassade | Bestudering project proposal van IUCN voor een kenniscentrum m.e.r.. Het betreft een voorstel voor een onafhankelijk kenniscentrum / commissie voor m.e.r. Voorbespreking van het proposal met dhr. Huesken. |
| 09.30 | MICOA | Bespreking met SG van MICOA, dhr. Fransisco Mabjaja. Deze geeft aan dat het voorstel voor een m.e.r.-regeling het in de ministerraad weer niet heeft gehaald. Met name omdat men de investeerders geen enkele belasting wil opleggen. Er is geen politiek draagvlak voor milieu-bescherming. De WB maakt een rapport over de m.e.r.-implementatie. Wil donoro-verleg, met of zonder medewerking van MICOA. Dhr. Mabjaja ziet wel wat in een Nederlandse actie om meer lijn in de activiteiten van MICOA te brengen. Hij stelt een workshop voor van 1 à 2 dagen tussen 10 en 15 januari. In oktober zijn er verkiezingen in Mozambique en hij zou wel eens minister kunnen worden. |
| 11.00 | IUCN | Bespreking van het IUCN-proposal met dhr. Chonguiça, country representative van IUCN in Mozambique. Er zijn veel vragen van de delegatie. Waarom is IUCN voor dit initiatief de geschikte organisatie. Mevr. Celia Jordao geeft aan dat het voorstel vooral bedoeld is om een vastgelopen situatie vlot te trekken. Op basis van alle gesprekken komt de delegatie tot de conclusie dat Mozambique en MICOA op milieugebied volkomen stuurloos zijn, dat er geen visie is. |
| 12.00 | Ambassade | Bekijken van twee video's over Nederlands convenantensysteem in kader mogelijke managementcontract van hoogovens voor de staalfabriek bij Maputo. Van Cie. secretaris wordt verwacht dat hij parallellen legt naar de mogelijkheden voor Mozambique en de mogelijke rol van de ambassade. Secretaris ziet allen mogelijkheden als er een rol door de ambassade wordt gespeeld om het contract voor hoogovens binnen te slepen. Dit blijkt later niet het geval. Ambassadeur en hoofd |

**ontwikkelingssamenwerking spelen advocaat van de duivel
in discussie over gewenste gewicht van het genereren van
werkgelegenheid en het gewenste gewicht van het sparen van
het milieu.**

APPENDIX 8

Some specific comments on the strategy plan

The CZM Strategy plan states (§ 4.1.1., volume 3) that "it is the role of the consultant to facilitate the ICZM plan formulation process, but the ownership of the final product is to reside fully with the Beira City Government".

1. FACILITATING THE ICZM PLAN FORMULATION PROCESS:

The CZM Strategy plan states (§ 4.1.2., volume 3) that the strategy plan considers problems and opportunities regarding resources, coastal protection, economic development activities, environmental health and societal needs and devises a strategy to accomplish the ICZM-objectives.

Inventory and analysis of problems

An attractive participatory approach was used to identify the problems. The inventory of problems, however, was not followed by further analysis to deepen the knowledge on these problems. A quantitative, qualitative and geographical specification of the problems identified has adequately been given for coastal erosion issues.

For the other issues identified no adequate problem analysis is presented. The Commission specifically observes that the drainage regime and water levels, Beira runoff, waste water treatment and disposal, suburban sanitation, surface and ground water availability, and solid waste disposal (controlled dumping) are issues that are not addressed in sufficient detail as to base a strategy for ICZM. For these issues the report refers to another project (PROL). Results of this project are not addressed.

Analysis of opportunities, action planning

For coastal erosion the problem analysis has led to identification and motivated selection of alternative options, resulting in selection of priority actions (to combat erosion). However, the Commission fundamentally questions some choices made (see § 4.1. of this advice).

As a consequence of lack of in-depth analysis of the issues attributed to the PROL project (drainage, waste water treatment, surface- and ground water availability and solid waste management) the following actions proposed in the action plan lack proper motivation, basic data and detail:

- development of a protocol for operation of the Palmeiras outlet and a feedback system for operation results in the hinterland;
- the plan for upgrading the Chiveve river area;
- an accepted time schedule for further master planning and ICMZ-planning and execution.

No action at all is foreseen for:

- sanitation of the low lying urban Lowlands Subzone;
- waste water treatment;
- surface water and ground water availability;
- river water allocations and uses;
- controlled dumping;
- an alternative temporary plan for upgrading the Chiveve river area for the period that no money is available for the solution proposed in the final plan (mentioned in the previous point);

- alternative solutions, especially to stop the degradation of the mangroves (ic their restoration);
- embedding of the Beira ICZM situation into the national CZM policy.

2. THE INSTITUTES HANDLING THE ISSUES AND SWOT ANALYSIS

Method

A SWOT (Strength, Weakness, Opportunities, Threats) survey has been conducted of provincial and city agencies of relevance for coastal management activities. To that purpose a letter of inquiry was sent to each agency identified for the survey. The letter contained a questionnaire which formed the basis of a follow-up interview. Interviews were held with agency representatives at their offices. Eleven (11) agencies were interviewed.

The results of the inquiry forms and interviews were described in a 3 page summary in Volume One of the Consultants report, Part II, § 2.9; General Investigations; sub § 2.9.3 Institutional Analysis (SWOT) (pages 55, 57 and 58). In Volume Three, page 12, of the Consultants report an overview table is given of twenty (20) institutions involved in coastal zone aspects and their specific areas of interest. In Volume Three, § 4.2.3 a proposal has been developed for reform of the coastal zone management institution focused on creating a Directorate of Coastal Protection. In Volume One, page 53, an organization chart of the Beira Municipality is given (Figure 2.24) with no further explanation (it seems that the Figure is misplaced as it is referred to on page 52 under the item "recommendations for primary dunes and associated vegetation": all derelict structures be removed and the dunes at these points restored (Figure 2.24)).

The project also conducted 10 workshops, involving the members of the Forum for coastal zone management in Beira. This was done within the scope of the ICZM planning process. Although no part of the SWOT survey, the workshops might have provided ample opportunity to evaluate the knowledge, awareness, and commitment of Forum members with regard to coastal management issues. The report gives no proof that this has been done.

Quality of the analysis

Considerable time and effort has been devoted to the SWOT survey and relevant information was collected. A number of relevant agencies has been interviewed. However, it is not clear what the response rate is on the letter of inquiry. Have more letters of inquiry been sent and only eleven were interviewed? Of the 20 agencies implicated in various coastal problems, 11 agencies were interviewed, including the Office of Coastal Protection. Relevant agencies such as Gabinete das Zonas Verdes, Servico das Estradas, Caminhos de Ferro and EMODRAGA were not surveyed.

The letter of inquiry asked relevant and informative questions. One essential question was not to the point: e.g.: the name of the interviewed person was filled in under the item "Chefe da Agencia (Nome)" which precluded describing the formal position of the interviewed person in his/her organization (Director, Chefe, Director Provincial etc.), thus, missing the opportunity to provide information on the type of organization, its hierarchy and to find out who is in charge. Other relevant questions were missing: particularly related to formal mandates of the relevant agencies, their definition of responsibilities and their possible role in the Forum.

An initial step has been set to gather information for an institutional analysis but not enough to allow for an in-depth analysis of the strengths, weaknesses, opportunities and threats with regard to the function of these agencies in coastal zone protection and management.

The sections in the report which refer to the SWOT and the Institutions reflect the weak information base. A rather straightforward transcript is given from the information collected via the letters of inquiry.

A real institutional analysis has not been conducted: lines of communication and coordination, limitations of responsibilities, gaps in responsibilities, effectiveness, review of finance streams to agencies, review of mandates, changes in local politics because of the governments regionalisation policy and the recent elections etc., these are all aspects which have been touched upon a very limited scale.

In the report, in the SWOT Section, there is no direct reference to the Forum and its development. The impressions of the interactions with the Forum in the 10 workshops has not been an input for the SWOT thereby missing the important opportunity of focusing the SWOT on the Forum, which was the original idea.

Relevance of the conclusions and recommendations

The presented conclusions of the SWOT survey are relevant for the eleven agencies interviewed. The conclusions regarding the Office of Coastal Protection are also relevant: insufficient support is given by the City of Beira and the Provincial Authorities to the different agencies, weakening their effectiveness.

The report proposes the creation of a Directorate of Coastal Protection through upgrading the present Office of Coastal Protection to the Directorate level. This means upgrading by two levels, as the Office of Coastal Protection is now part of the Servicos de Estradas e Proteccao Costeira. The argumentation is to create a more autonomous unit with more staff and facilities.

This recommendation is relevant in its meaning to define an organizational unit which is solely responsible for Coastal Protection with its own capacities and resources. The issues at stake in Beira with regard to coastal protection deserve such an organizational unit. But does the Municipality of Beira also think so?

No specific recommendations were given for the further organization, development, strengthening and functioning of the established Forum which is a serious omission in the report as it was a planned activity and suggested as being completed (Volume One, page 5, § 1.3 Planned activities of project, A: Forum Development).

3. OWNERSHIP

A good impression of the commitment of the Beira Municipality for creating a Directorate for Coastal Protection was obtained during the Forum meeting on November 24, 1998 in which the working group secretary and two working group members (institutional and natural resources experts) participated.

Although arguments for creation of a separate organizational unit were presented by the project, in the Forum meeting no exhaustive discussion took place and no decision was made. The idea of creating a Directorate still received little commitment from the direct responsible aldermen of the Beira Municipality and the Director of the Direccao de Construcão and Urbanizacão, the Directorate under which the coastal protection unit operates presently.

To breakthrough the impasse, the Royal Netherlands Embassy proposed to support an institutional analysis to further develop together with the Municipality of Beira the idea of a separate organisational unit for coastal protection and management. This institutional analysis should also develop proposals for Forum development and strengthening.

No impression can be obtained with regard to the ownership of the document presently under review.

4. ENVIRONMENTAL QUALITY

Dune restoration

Annex 4 to the CZM Strategy Plan should be altered somewhat. For example: the use of non-indigenous dune plants like prickly pears and yuccas as barbed wire should be avoided as much as possible; it is better to use natural fences (dead branches, palm leaves). The planting of Casuarina trees should be restricted to recreation areas only; palm-leave umbrellas are a good alternative which don't use precious scarce ground water resources.

Mangroves

Mangroves should be given more attention. As a first action, the mangroves along the Chiveve river should be restored to improve the quality of the green lungs of Beira city. Restoration of some drainage through the river channel is necessary.

5. INACCURACIES

The report contains a small number of inaccuracies:

- in fig. 2.3 the groyne 18B is absent and other numbers are not correct. The Alkyon report provides the correct numbers.
- The doors in the sluice (2.2.2.) are 'lift gates' instead of 'slide doors'. In 3.4.1 the correct name is used.
- In 2.2.3 the report states 'updrift of groyne 13' while this should be 'downdrift'.
- In 2.2.6. it is stated that the waves come from SE to NE. This is not correct. At full sea, the waves come from SE to E. On the shore, which is important for the project, they come from ESE to SE. Under point c it is stated that Pt. Gea must be maintained. This must probably be "the coast immediately west of Pt. Gea".
- Alternatives pointed at in the third paragraph of 2.8 cannot be judges as they are not indicated in fig. 2.19.
- 2.9.1 refers to fig. 2.20. This reference cannot be understood.
- The third paragraph of 3.1 quotes that the designs are based on international standards. This is incorrect.
- The second paragraph of 3.4.4. refers to fig. 3.11. This must be 3.10.
- Its seems somewhat early to conclude after a few months that the gabions have proved their effectiveness.
- There is a discrepancy between table 4.1 and fig. 4.1. Table 4.1 gives reasonably good criteria for zone classification. Fig. 4.1 deviates (on good grounds) from these criteria. This should be motivated.