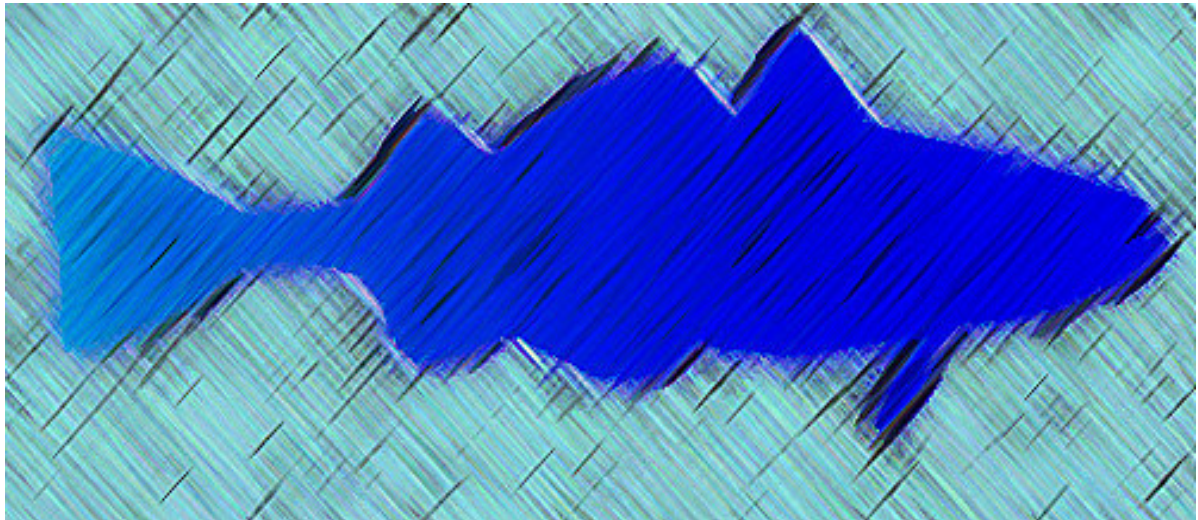


IMPLEMENTATION PLAN FOR BCLME REGIONAL AQUACULTURE POLICY OPTIONS

BCLME Project LMR/MC/03/01



PRESENTED TO:



BCLME Activity Centre for Living Marine Resources

PRESENTED BY:



ON BEHALF OF:



July 2006

EXECUTIVE SUMMARY

The current study forms part of the Benguela Large Marine Ecosystem (BCLME) Project LMR/MC/03/01: Development of Responsible Aquaculture Policy for the Region. In this report an “implementation plan for regional aquaculture policy options” is presented. This follows an assessment of the aquaculture policies and institutional capacity for aquaculture development in Angola, Namibia and South Africa, from which regional aquaculture policy options were identified.

The BCLME offers a favourable environment for aquaculture. The three BCLME partner countries have made a political commitment to the development of their aquaculture industries in the light of the expected growth in demand for aquaculture products and the need to create coastal livelihood opportunities. National processes to develop and implement national aquaculture policy, legislation and deployment strategies are underway in Namibia, Angola and South Africa. However, in view of the shared Benguela ecosystem and regional economy, it was agreed that a level of regional cooperation is required if the aquaculture sector is to develop in a sustainable manner which would minimise negative environmental and social consequences, and optimise the potential socio-economic benefits. The BCLME programme thus presented an opportunity to develop responsible aquaculture policy for the region. The regional aquaculture policy options that were identified included aquatic animal health, management of exotic species, aquaculture products and public health, research, sector management capacity building and sustainable industry development.

As aquaculture is a new sector with a range of management requirements, extensive capacity building will be required in order to implement the regional policy options. The formation of a regional organisational structure with capacity for promoting projects is proposed. At a workshop of aquaculture managers from Angola, Namibia and South Africa - where the regional aquaculture policy options were presented - it was recommended that a BCLME “aquaculture standing committee” with representatives from the three national departments responsible for aquaculture be formed, and operated under the auspices of the Benguela Current Commission (BCC). It is envisaged that the committee will be a forum for dealing with all regional aquaculture issues, which have implications for ecosystem health.

In order to implement the regional policy options, an active regional aquaculture projects component is envisaged, which will build on the regional aquaculture cooperation projects undertaken during BCLME I. It is recommended that a full time BCC Aquaculture Executive Officer be appointed to promote the required projects and processes.

A comprehensive list of recommended actions to implement the BCLME regional aquaculture policy is presented as is an indication of their priority.

CONTENTS

EXECUTIVE SUMMARY	i
ACKNOWLEDGEMENTS	iii
1. BACKGROUND AND PROJECT OBJECTIVES	1
2. SUMMARY OF AQUACULTURE POLICY OPTIONS AND THE NEED FOR AN IMPLEMENTATION PLAN	1
3. PROPOSED ORGANISATIONAL STRUCTURE	2
3.1 BCC Aquaculture Standing Committee	3
3.2 BCC Aquaculture Executive Officer	3
4. RECOMMENDED ACTIONS TO IMPLEMENT REGIONAL AQUACULTURE POLICY OPTIONS	4
5. REFERENCES	10

This report to be cited as:

Britz, P.J. 2006 - Implementation Plan for BCLME Regional Aquaculture Policy Options. Report BCLME project LMR/MC/03/01. Development of Responsible Aquaculture Policy for the BCLME Region. Prepared by Enviro-Fish Africa (Pty) Ltd. for the Benguela Current Large Marine Ecosystem Programme. 12p.

ACKNOWLEDGEMENTS

The author is grateful to Enviro-Fish Africa's BCLME partners and other individuals for providing documentation, information and comments on the BCLME aquaculture policy project reports, specifically:

Deputy-Minister Victoria Barros-Neto, formerly Director General of IIM, Angola

Dr Francisca Delgado, Director of INIP, who provided valuable insights into the history and potential of aquaculture in Angola

Mr Paul Nichols, Special Advisor to the Minister of Fisheries and Marine Resources in Namibia

Dr Ekkehard Klingelhoefter, Director of Aquaculture, Ministry of Fisheries and Marine Resources

Dr Grant Pitcher, Deputy Director, Aquaculture Section, Marine and Coastal Management, Department of Environmental Affairs and Tourism

Ms Bronwen Currie, NatMIRC, Ministry of Fisheries and Marine Resources

Dr Ben Van Zyl, NatMIRC, Ministry of Fisheries and Marine Resources

Mr Svein Munkejord, Special Advisor to the Deputy Director General, Marine and Coastal Management

Mr Ettiene Hinrichsen, Aqua-Eco Consulting

Ms Heidi Currie, Feike (Pty.) Ltd

Dr Larry Oellermann, Enviro-Fish Africa (Pty) Ltd

Prof Tom Hecht, Enviro-Fish Africa (Pty) Ltd

1. BACKGROUND AND PROJECT OBJECTIVES

The implementation plan for regional aquaculture policy was undertaken as part of the Benguela Large Marine Ecosystem (BCLME) Project LMR/MC/03/01: Development of Responsible Aquaculture Policy for the Region. The outputs from the project included:

- Development of draft aquaculture guidelines and a national policy for the Angolan Government (Hinrichsen and Britz, 2004).
- Assessment of existing regional policy and institutional capacity for aquaculture development (Britz, 2005).
- Recommendations on regional aquaculture policy options and strategies including recommendations for the harmonization of policies (Britz, 2005).
- A plan for implementation of the regional aquaculture policy options (Current report).

The project was executed by a consortium made up of Enviro-Fish Africa (Pty) Ltd (a consulting company based at Rhodes University), IIM (Marine Research Institute) Angola, and Ministry of Fisheries and Marine Resources, Namibia.

2. SUMMARY OF AQUACULTURE POLICY OPTIONS AND THE NEED FOR AN IMPLEMENTATION PLAN

The BCLME review of regional aquaculture policy and institutional capacity (Britz et al., 2005) revealed that regional cooperation guided by policy is required in two broad areas if aquaculture is to be developed in a responsible manner in Angola, Namibia and South Africa:-

1. Environmental management. This involves management of the environmental aspects of aquaculture such as the use of exotic species, and disease control.
2. Sustainable Industry development. Interventions are required to establish this new industry as a sustainable source of fishery products which is based on internationally accepted norms. These include technology development, manpower training, “best practise” protocols, zonation of suitable areas for aquaculture, shellfish sanitation and product health certification.

Key elements of the regional aquaculture policy options are:-

1. Harmonisation. The BCLME partner countries will endeavour to harmonise their aquaculture management protocols which have an effect on ecosystem health and align them with internationally accepted norms.
2. Information sharing. The BCLME countries will endeavour to share information about their aquaculture sectors which affects ecosystem health and management.
3. Opportunity to comment. The BCLME countries will provide their partner national departments with an opportunity to comment on decisions (e.g. the introduction of exotic species) which may have an effect on regional ecosystem health.
4. Joint actions and projects. The BCLME partner countries will endeavour to undertake joint actions projects, for example exotic species management, research and training, aimed at achieving responsible aquaculture development in the BCLME.
5. Public sector capacity building. In view of the scarce regional aquaculture management skills and research capabilities, the BCLME partners will endeavour to

jointly develop the necessary public sector management capacity to service the growing mariculture sector.

6. Sharing expertise. In view of the uneven distribution of skills in the region, the BCLME partner countries will endeavour to share specialist expertise and advice in order to promote responsible aquaculture development in the region.

The specific regional aquaculture policy options and recommended actions to implement them are outlined below in section 5.

Since aquaculture is a new sector with a range of new environmental management needs, a great deal of capacity building will be required to ensure that the suggested regional policy options are successfully implemented. A regional organisational structure and a suite of regional actions and projects are therefore proposed. The key elements of the implementation plan are therefore a regional governance structure, the proposed BCC Aquaculture Standing Committee, and enhanced manpower capacity (the proposed BCC Aquaculture Executive Officer) to promote regional projects aimed at achieving responsible aquaculture development.

An active “projects” phase is seen as an essential component of the implementation plan for the regional aquaculture policy options. During BCLME I, a suite of projects were undertaken aimed at implementing aspects of regional aquaculture management. These included:

- Harmonisation of Regulations for Microalgal Toxins for Application in Countries Bordering the Benguela Current Large Marine Ecosystem. BCLME Project EV/HAB/02/01 (Currie et al, 2004)
- A Proposed Benguela Region Shellfish Sanitation Monitoring Program. BCLME Project EV/HAB/02/01 (Louw, et al., 2005)
- Development of an Operational Capacity for Monitoring of Harmful Algal Blooms in Countries Bordering the Northern part of the Benguela Current Large Marine Ecosystem. BCLME Project EV/HAB/02/02a (Anderson et al., 2004)
- Classification of Coastline for Aquaculture Development. BCLME Project BEHP/MAR/04/01.

The experience gained in the execution of these projects has laid a useful foundation for ongoing collaboration between the three national departments. The aquaculture implementation plan provides an organisational framework for cooperation based on agreed goals, as well as a prioritised list of actions from which new projects may be formulated as part of BCLME II.

3. PROPOSED ORGANISATIONAL STRUCTURE

The regional aquaculture policy options drafted by the BCLME aquaculture project identify a range of specific issues requiring regional action, communication or coordination. The existing national aquaculture units or directorates are understaffed and often lack experience in aspects of aquaculture sector management. Furthermore, the aquaculture sector is growing rapidly placing an additional workload on the existing public sector aquaculture management personnel. It is therefore proposed that a support structure under the auspices of the Benguela Current Commission (BCC) be created to facilitate the implementation of the regional aquaculture policy options in partnership with the aquaculture units / directorates of the three BCLME countries.

3.1 BCC Aquaculture Standing Committee

When the BCLME regional policy options were workshopped with representatives of the three national aquaculture units, it was suggested that a regional “Aquaculture Standing Committee” be established enabling issues requiring regional attention to be discussed and appropriate actions formulated and executed.

Recommendation: *It is recommended that a “BCC Aquaculture Standing Committee” be created.*

It is suggested that the membership of the BCC Aquaculture Standing Committee initially comprise the head (or delegated official) of the aquaculture unit or the directorate of the responsible national department in each BCLME country and the BCC Aquaculture Executive Officer (see 4.2 below).

The functions of the BCC Aquaculture Standing Committee would be to provide a forum for:

- Information sharing and the discussion of aquaculture management options with regional implications.
- Formulation of proposals for the harmonisation of national management actions and protocols.
- Proposing and reviewing aquaculture projects of a regional nature.
- Recommending joint regional actions or management interventions to protect ecosystem integrity.
- Formulating advice to national departments on aquaculture matters with ecosystem implications.
- Appointing regional sub-committees or task teams to deal with specific issues, for example, research, training etc.

3.2 BCC Aquaculture Executive Officer

Implementation of the BCLME regional aquaculture policy options (see section 5 below) will require the launching of several new projects, adequate funding, and the involvement of multiple institutions. This is a substantial undertaking and it will thus be necessary to appoint at least a full time Executive Officer to manage and drive the required processes.

Recommendation: *It is recommended that a “BCC Aquaculture Executive Officer” be appointed”*

The responsibilities of the BCC Aquaculture Executive Officer would include:

- Facilitation of the implementation of the BCLME Regional Aquaculture Policy Options
- Secretarial role to BCC Aquaculture Standing Committee.
- Liaison with funding agencies and executive agencies such as BCMLE II and BENEFIT.
- Project conceptualisation (based on the recommended actions in Section 5 below), budgeting and tender document preparation.
- Networking with regional and international role-players.
- Dissemination of information to industry and other stakeholders.
- Reporting to the BCC executive and “BCC Aquaculture Standing Committee” on project progress.
- Liaison with the private sector to promote the development of the sector in the region.

4. RECOMMENDED ACTIONS TO IMPLEMENT REGIONAL AQUACULTURE POLICY OPTIONS

In this section, the BCLME regional aquaculture policy options (Britz, 2005) are presented with recommended actions for implementation. The actions present a comprehensive list of requirements which will take time to implement. Therefore a priority ranking for each action is indicated so that the most important interventions are undertaken first.

The Use of Exotic Species for Aquaculture

The BCLME countries will endeavour to:

1. **Policy Recommendation:** Appoint a contact person within each country to deal with the management of exotic species. If required a liaison committee comprising the three country representatives will be convened to deal with specific issues that may have regional implications.
Action: BCC Aquaculture Standing Committee to facilitate with respective national departments.
Priority: Urgent.
Comments: The members of the proposed BCC Aquaculture Standing Committee would logically be national contact persons.
2. **Policy Recommendation:** Conduct a review of procedures used to evaluate and conduct proposed new species introductions and adopt harmonised national processes that are aligned with international guidelines (i.e. FAO Code of Conduct for Responsible Fisheries – Article 9 (Aquaculture Development) (FAO, 1997), ICES Code of Practice).
Action: Consultant Project. BCC Aquaculture Executive Officer to formulate a project terms of reference for approval by the BCC Aquaculture Standing Committee.
Priority: High.
Comments: This is a pressing issue as exotic species form the basis of aquaculture in the BCLME countries and represent a significant threat to the ecosystem
3. **Policy Recommendation** Establish national databases on introduced aquatic organisms documenting their location, use, invasive status and management, and share this information with BCLME partner countries.
Action: Consultant Project. BCC Aquaculture Executive Officer to formulate a project terms of reference for approval by the BCC Aquaculture Standing Committee.
Priority: Medium.
Comments: Could be a web-based database.
4. **Policy Recommendation:** Inform BCLME counterparts when considering new species introductions, provide details on the evaluation procedure followed and request comment. The outcome of the evaluation procedure for the introduction shall be made known to BCLME partner countries.
Action: BCC Aquaculture Standing Committee to facilitate with respective national departments.
Priority: Urgent.
Comments: None

5. **Policy Recommendation:** Promote public sector assessments of certain key exotic species that would benefit the development of the regional aquaculture sector. This would include the zonation for the use of such candidate species.

Action: Consultant Project. BCC Aquaculture Executive Officer to formulate a project terms of reference for approval by the BCC Aquaculture Standing Committee.

Priority: Medium.

Comments: This action could save a lot of time and effort in evaluating proposals for introductions and give direction to industry as to what governments require in terms of the management of exotic species.

Aquatic Animal Health

The BCLME countries will endeavour to:

1. **Policy Recommendation:** Indicate a competent authority or focal point in each country to deal with aquatic animal health issues.

Action: BCC Aquaculture Standing Committee to facilitate with respective national departments.

Priority: Urgent.

Comments: In order to comply with international standards and best practice it is important that the respective states appoint a competent authority responsible for aquaculture health issues.

2. **Policy Recommendation:** Share available information on the presence and prevalence of diseases and parasites in cultured aquatic organisms.

Action: Consultant Project. BCC Aquaculture Executive Officer to formulate a project terms of reference for approval by the BCC Aquaculture Standing Committee.

Priority: Medium.

Comments: This is an easily achievable project which could be set up as a web-based database.

3. **Policy Recommendation:** Harmonize aquatic animal health policies, legislation and procedures and align them with those of international trading partners.

Action: Consultant Project. BCC Aquaculture Executive Officer to formulate a project terms of reference for approval by the BCC Aquaculture Standing Committee.

Priority: Long term.

Comments: The low levels of aquaculture production and the lack of aquaculture veterinary skills in the BCLME countries will make this a difficult project to fully implement in the short to medium term.

4. **Policy Recommendation:** Establish a disease surveillance and monitoring program to support reporting to the Office International des Épizooties (OIE).

Action: Consultant Project. BCC Aquaculture Executive Officer to formulate a project terms of reference for approval by the BCC Aquaculture Standing Committee.

Priority: Medium term.

Comments: This is a logical extension of point 3 above, and desirable international best practice. However, the low levels of aquaculture production and the lack of aquaculture veterinary skills in the BCLME countries will make this a difficult project to fully implement in the short term.

5. **Policy Recommendation:** Notify each other of the occurrence of any new diseases or parasites, which may infest cultured organisms in the respective countries or possibly infest marine organisms in the BCLME.
Action: BCC Aquaculture Standing Committee to facilitate with respective national departments.
Priority: Urgent
Comments: It is important that the occurrence of new diseases and parasites of aquaculture species be reported in order to formulate actions to prevent their spread through the BCLME region.
6. **Policy Recommendation:** Jointly formulate management actions and contingency plans to control the spread of diseases or parasites if required.
Action: In the event of a disease or parasite outbreak which requires joint action the BCC Aquaculture Standing Committee will facilitate the necessary regional interventions.
Priority: Implement when required.
Comments: If such an event occurs, international expert assistance will probably be required. It would thus be advisable to establish linkages to suitable international organisations.
7. **Policy Recommendation:** Adopt regional protocols on the treatment of diseases and parasites, which would include the use of acceptable chemicals, medications and standardized Minimum Residue Levels (MRL) for such medications.
Action: Consultant Project. BCC Aquaculture Executive Officer to formulate a project terms of reference for approval by the BCC Aquaculture Standing Committee.
Priority: Medium.
Comments: This action is largely aimed at making the BCLME countries compliant with international aquaculture best practice both in respect of ecosystem impacts and product health standards.
8. **Policy Recommendation:** Provide advice or short term specialist services to BCLME partner countries requiring specific assistance in dealing with aquatic diseases or parasites.
Action: Facilitated by the BCC Aquaculture Standing Committee.
Priority: Medium.
Comments: Aquatic health expertise is unevenly spread across the BCLME countries; therefore it makes sense to share regional skills in the interests of promoting ecosystem health.

Aquaculture Products and Public Health

The BCLME countries will endeavour to:

1. **Policy Recommendation:** Develop harmonised monitoring methods and regulations for microalgal toxins.
Action: This policy objective has largely been achieved through the BCLME harmful algal bloom project (Projects EV/HAB/02/01, Currie et al., 2004). The nature of ongoing collaboration in support of this policy objective will be decided by BCC Aquaculture Standing Committee
Priority: N/A – project completed.

Comments: The governments of Namibia and South Africa are actively implementing harmonised monitoring methods and regulations aligned to European Union standards.

2. **Policy Recommendation:** Collaborate to develop operational capacity for the monitoring of harmful algal blooms

Action: This policy objective has partly been achieved through the BCLME harmful algal bloom project (Projects EV/HAB/02/01, Currie et al., 2004). The nature of ongoing collaboration in support of this policy objective will be decided by BCC Aquaculture Standing Committee.

Priority: Medium – depends on needs of partner countries.

Comments: Operational capacity has successfully been developed in Namibia in support of its emerging shellfish culture industry. In Angola where no shellfish industry exists, operational capacity has not yet been established.

3. **Policy Recommendation:** Collaborate to develop a shellfish sanitation model in consort with the micro algal toxins component.

Action This policy objective has been achieved through the BCLME Projects EV/HAB/02/01 and BCLME Project: EV/HAB/04/SHELLSAN (Currie et al., 2004). The nature of ongoing collaboration in support of this policy objective will be decided by BCC Aquaculture Standing Committee

Priority: N/A – project completed.

Comments: None

4. **Policy Recommendation:** Share database and general information on harmful algal blooms and the monitoring of water quality for shellfish health certification.

Action: Frequency and nature of reporting by BCLME member countries to be decided by BCC Aquaculture Standing Committee

Priority: Medium.

Comments: There is well established informal communication between the personnel in the national departments responsible for monitoring and shellfish sanitation. This will make implementation of this policy recommendation relatively simple.

5. **Policy Recommendation:** Provide advice or the short term services of specialists to neighbours requesting specific assistance in dealing with HAB, shellfish sanitation or other product safety issues.

Action: As required facilitated by the BCC Aquaculture Standing Committee.

Priority: N/A.

Comments: HAB and shell fish sanitation expertise is unevenly spread across the BCLME countries; therefore it makes sense to share regional skills in the interests of promoting ecosystem health.

Aquaculture Research

The BCLME partner countries will endeavour to:

1. **Policy Recommendation:** Identify critical regional aquaculture research needs so that these can be addressed in a cooperative manner.

Action: BCC Aquaculture Executive Officer to organise a stakeholder workshop to identify research priorities and potential collaborative opportunities at an institutional level.

Priority: Urgent.

Comments: Private sector research focuses mainly on production technologies. The state on the other hand has the responsibility for public good research such that the sector can develop in an orderly and responsible manner.

2. **Policy Recommendation:** Promote joint public/ private aquaculture research projects particularly for the development of culture technology for species indigenous to the BCLME.

Action: Regional Project. BCC Aquaculture Executive Officer to formulate a project terms of reference for approval by the BCC Aquaculture Standing Committee.

Priority: High.

Comments: The development of technology for indigenous species is a key strategy for achieving sustainable aquaculture practices in the BCLME region. The project is envisaged as a major stand-alone project undertaken in collaboration with the private sector.

3. **Policy Recommendation:** Attract international research expertise and network with the international aquaculture community.

Action: BCC Aquaculture Executive Officer to facilitate the establishment of appropriate international linkages. International linkages could form part of the research project terms of reference

Priority: Medium.

Comments: Since aquaculture capacity is relatively low in the BCLME countries, international expertise is seen as vital to the success of aquaculture sector development.

4. **Policy Recommendation:** Actively disseminate public good research findings in the region.

Action: BCC Aquaculture Executive Officer to facilitate the dissemination of research results by means of appropriate media including workshops, seminars, courses, and reports.

Priority: Medium.

Comments: It is important to focus on industry when disseminating research results.

Aquaculture Sector Management Capacity Building

The BCLME partner countries will endeavour to:

1. **Policy Recommendation:** Identify aquaculture management capacity building needs in the public sector, and the mechanisms by which these can be addressed.

Action: This is a major long-term project requiring a needs analysis, review of existing capacity and identification of required interventions, projects and potential funders. The BCC Aquaculture Executive Officer should organise a stakeholder workshop to initiate the process. A consultant or contracted in-house officer could then be appointed to drive the roll out process.

Priority: High.

Comments: Public sector skills development and training is the key to achieving sustainable aquaculture sector management in the BCLME.

Responsible Industry Development

The BCLME partner countries will endeavour to:

1. **Policy Recommendation:** Zone suitable sites or “development nodes” within the BCLME that are economically, socially and environmentally best suited to aquaculture development.

Action: This policy objective is addressed by BCLME Project BEHP/MAR/04/01: Classification of Coastline for Aquaculture Development.

Comments: The Project forms a component of the mapping subsection of the Biodiversity Ecosystem Health and Pollution suite of BCLME projects administered by BENEFIT.

Priority: N/A – project underway.

2. **Policy Recommendation:** Undertake joint action to overcome non-tariff trade barriers to aquaculture export products from the region.

Action: To be facilitated by the BCC Aquaculture Standing Committee.

Comments: Certification of the health of products from the BCLME ecosystem for export is a common regional issue.

Priority: Medium.

5. REFERENCES

- Anderson P., Currie, B., Louw, D.C., Anderson, D.M., Fernández-Tejedor M., McMahon, T., Rangel, I., Ellitson, P. and Torres, O. (2004) *Feasibility study for cost-effective monitoring in Namibia and Angola with an analysis of the various options for implementation of Shellfish Safety Programs. Final report, BCLME project EV HAB/02/02a: Development of an Operational Capacity for Monitoring of Harmful Algal Blooms in Countries Bordering the Northern part of the Benguela Current Large Marine Ecosystem: Phase 1 – Design*
- Britz, P.J. (2005) *A Review of Aquaculture Policy and Institutional Capacity in the BCLME Region with Recommended Regional Policy Options. Report BCLME project LMR/MC/03/01. Development of Responsible Aquaculture Policy for the BCLME Region. Prepared by Enviro-Fish Africa (Pty) Ltd. for the Benguela Current Large Marine Ecosystem Programme. 70p*
- Currie, B., Anderson, D. M., Anderson, P. S., Louw, D., Fernández-Tejedor, M., Da Sliva, A. and I. Rangel (2004) *Review and assessment of existing policies and approaches regarding Harmful Algal Bloom management, marine water quality, and shellfish sanitation in Angola, Namibia and South Africa. First report, BCLME project EV HAB/02/01: Harmonization of Regulations for Microalgal Toxins for Application in Countries Bordering the Benguela Current Large Marine Ecosystem.*
- FAO (1997) *Aquaculture Development. FAO Technical Guidelines for Responsible Fisheries (5). FAO, Rome. 40p.*
- Hinrichsen, E. and Britz, P.J. (2004) *Draft Angolan Aquaculture Policy. Report BCLME project LMR/MC/03/01: Development of Responsible Aquaculture Policy for the BCLME Region. Prepared by Enviro-Fish Africa (Pty) Ltd. for the Benguela Current Large Marine Ecosystem Programme. 25p.*
- Louw, D., Currie, B., Anderson, D.M., Anderson, P.S., Fernández-Tejedor, M., McMahon, T., Rangel, I. and P. Ellitson (2005) *A Proposed Benguela Region Shellfish Sanitation Monitoring Program. Report BCLME project EV/HAB/02/01: Harmonization of Regulations for Microalgal Toxins for Application in Countries Bordering the Benguela Large Marine Ecosystem.*



**United Nations Office for
Project Services**

The Chrysler Building
405 Lexington Avenue
New York, NY 10174 USA
Telephone: +1-212 457-4000
Fax: +1-212 457-4001
E-mail: unops.newyork@unops.org



**BCLME Activity Centre for Living
Marine Resources**

C/o Ministry of Fisheries and Marine Resources
Strand Street
PO Box 525
Swakopmund
Namibia

ENVIRO-FISH AFRICA (PTY) LTD

22 Somerset Street
Grahamstown
6139, South Africa
Telephone +27 046 622 8241
Fax +27 046 622 7950
Email: info@envirofishafrica.co.za



FEIKE



UNIVERSITY OF
CAPE TOWN



tralac



THE CONSORTIUM