IMCAM and the CBD

An analysis of Integrated Marine and Coastal Area Management documents in relation to CBD objectives

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Ingvild Harkes

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Summary

As the CBD has identified Integrated Marine and Coastal Area Management (IMCAM) as an important tool to achieve its objectives in these areas, the extent to which available guidance documents on IMCAM concur with and elaborate on these objectives was evaluated. On basis of 21 criteria, based on established CBD objectives and decisions, a variety of documents was reviewed. Particularly provision of guidance on how to operationalise the objectives in IMCAM programmes was assessed.

On the basis of this extensive evaluation of 25 documents, the following main conclusions were drawn:

- Large differences exist among the documents in coverage of the CBD objectives.
- Although the majority of the criteria were well covered, several get very little attention in IMCAM documentation, e.g. the rehabilitation and restoration of degraded ecosystems and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.
- There were no documents found which cover all criteria.
- Hence, a guide with complete but concise coverage would therefore be a most useful contribution to furthering the objectives of the CBD in marine and coastal areas.

On basis of the analysis and conclusion the following recommendations are made.

1. A guidance document on the implementation of the CBD using IMCAM, paying systematic attention to the objectives of the CBD should be developed. The following aspects should be included in this guidance.
   a. The guidance should address both objectives and means of operation, at national and local scales, for IMCAM.
   b. It could be based on an elaboration of economic, ecological and social aspects of sustainable development.
   c. It should include a systematic elaboration of the ecosystem approach for coastal and marine management.

d. Annotated reference to existing guidance on specific topics would be an essential element of such a document.

2. In preparing further guidance on the implementation of the CBD using IMCAM, particular attention should be paid to the gaps identified in existing IMCAM guidance documents (specified in the Conclusions chapter).

3. General issues as conflict resolution, enforcement and participatory approaches, and economic sectors also deserve due attention.

4. Drafting of such a guidance document should be embedded within the framework of the CBD, and in particular its SBSTTA, in order to acquire maximum support. Involvement of relevant stakeholders in the further process should be actively sought. Collaboration with other international fora, such as the UNFCCC, Ramsar and GPA should be considered.

5. Both for the development and for the dissemination of guidance on ICMAM optimal use should be made of the opportunities that the internet offers. With this an enabling environment can be created to assist and support institutions to integrate the CBD objectives.

Introduction

Integrated Marine and Coastal Area Management approaches (such as IMCAM and ICZM) are recognised as the most effective tools for implementing the Convention on Biological Diversity (CBD) with respect to the conservation and sustainable use of marine and coastal biodiversity. In spite of this common agreement, it is still a challenge to find the right balance between biodiversity conservation and sustainable use of its components. The implications of existing IMCAM guidelines for the implementation of the Convention are not very transparent.

At its fourth meeting, the Conference of the Parties of the CBD adopted a programme of work on marine and coastal biological diversity. Under operational objective 1.1 of programme element 1 (Implementation of integrated marine and coastal area management (IMCAM)) of the work programme, the Executive Secretary was requested to review existing instruments relevant to IMCAM and their implication for the implementation of the Convention. The CBD Secretariat has identified and analysed the main existing sets of international (global) guidelines on integrated coastal zone/area management, as well as instruments developed and implemented within the framework of the regional seas convention and action plans. The results of this preliminary analysis, which were presented to the fifth meeting of COP in Kenya, 2000, indicated that the existing guidelines do not make adequate specific reference to the biological diversity of the resources being managed. The scope and scale of the present guidelines should be adjusted to implement specific decisions of the Convention and to fully meet the Convention's objectives. In addition, IMCAM guidelines should fully integrate the ecosystem approach thus addressing and balancing the three objectives of the Convention (the conservation of biological diversity; the sustainable use of the components of biodiversity; and the equitable sharing of its benefits).

The 5th meeting of the COP endorsed the conduct of further work on developing guidelines for coastal areas. It also endorsed the application of the ecosystem approach and recommended reviewing the incorporation of the ecosystem approach into various programmes of work of the Convention.

In this context and in view of its commitments to the implementation of the CBD, the Government of Netherlands is undertaking activities leading to better integration of the CBD objectives in IMCAM projects at regional, national and sub-national levels. The current report forms part of these activities. It should lead to a better understanding of the extent to which the CBD objectives are taken into consideration in existing IMCAM instruments and mechanisms and ongoing IMCAM projects.

In preparing this report various closely related approaches were studied without elaborating on exact definitions and distinctions. Thus in the evaluation of IMCAM related approaches were included documents using terminology such as Integrated Coastal Management (ICM), Integrated Coastal Zone Management (ICZM), Integrated Coastal Area Management (ICAM), and Integrated Coastal and Marine Area Management (ICMAM). In the text of this report we shall use either the CBD term IMCAM or the phrase used in the document under discussion.

The list of documents evaluated in this report was supplied by the Dutch National Institute for Coastal and Marine Management on basis of a literature survey to identify the main documents providing guidance on IMCAM. Besides true guidelines, the list includes handbooks and strategy documents. The full list of documents is presented in Annex 1.

Focus of this analysis is on documents on IMCAM. It should, however, be recognised that other documents and guidelines also provide substantial support to implementing the CBD in coastal and marine areas, *e.g.* on themes like special area management, environmental impact assessment, access and benefit sharing, and conflict resolution. Also literature on conservation and sustainable use in relation to various economic sectors, such as aquaculture, tourism and fisheries, to name some very relevant ones, can provide substantial support in furthering the goals of the CBD.

Work performed under other international frameworks, such as the Ramsar Convention, the UN Framework Convention on Climate Change (UNFCCC), the Global Plan of Action for the Protection of the Marine Environment from Land-Based Activities (GPA) and Regional Seas Conventions can also be of

great importance. Most these institutions have some form of collaboration with the CBD.

Methodology

For this study, the 25 documents presented in Annex 1 were reviewed. To this end, the following list of 21 main and sub-objectives and guidelines was established on basis of the text of the Convention on Biological Diversity and of the main decisions related to coastal and marine issues (CoP IV/5 and IV/6). These were used as criteria to assess the extent to which extent the IMCAM documents concur with and provide guidance for the implementation of the CBD objectives. For every criterion, a score was given to represent how the document addressed it. The following scores were used:

0 – no (significant) attention paid,

A – document concurs with the objective/guidance,

B – document elaborates on how to implement the objective/guidance,

* - special situation, *e.g.* criterion only partially fulfilled.

In addition, + and – were used to indicate extensive and marginal coverage of the criterion, respectively. To attain a B-score, it was checked whether indeed guidance was elaborated on how to operationalise each specific objective.

All documents were cross-checked by at least two reviewers to ensure consistency in the scorings.

List of criteria used, based on the objectives of the CBD

I. Conservation of biological diversity (art. 1).

I.1. Need to identify components of biological diversity important for its conservation and sustainable use (art. 7(a)).

I.2. Establishment and management of protected areas (art. 8(a), (b) & (c)).

I.3. Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas (art. 8(e)).

I.4. Rehabilitation and restoration of degraded ecosystems and promotion of the recovery of threatened species (art. 8(f)).

II. Sustainable use of the components of biological diversity (art. 1).

II.1. Need to monitor components of biological diversity (art. 7(b)).

II.2. Monitor, regulate and manage activities that cause significant adverse impacts on conservation and sustainable use of biological diversity (art. 7(c) & 8(l)).

II.3. Integrate consideration of the conservation and sustainable use of biological resources into relevant sectoral or cross-sectoral plans, programmes and policies and national decision-making (art. 6 (b) & 10(a)).

II.4. Protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements (art. 10(c)).

II.5. Support local populations to develop and implement remedial action in degraded areas (art. 10(d)).

II.6. Encourage cooperation between governmental authorities and the private sector in developing methods for sustainable use of biological resources (art 10(e)).

II.7. Adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity (art. 11).

III. Fair and equitable sharing of the benefits arising out of the utilization of genetic resources (art. 1).

III.1. Respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices (art. 8(j)).[1]

IV. Promote and encourage understanding of the importance of, and the measures required for, the conservation of biological diversity (art. 13 (Public Education and Awareness)).

V. Impact Assessment and Minimizing Adverse Impacts (art. 14).

V.1. Introduce appropriate procedures requiring environmental impact assessment of proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects and allow for public participation in such procedures (art. 14 (a)).

V.2. Promote national arrangements for emergency responses to activities or events, whether caused naturally or otherwise, which present a grave and imminent danger to biological diversity and encourage international cooperation to supplement such national efforts and, where appropriate, establish joint contingency plans (art. 14 (e)).

VI. The precautionary approach should be used as a guidance for all activities affecting marine and coastal biodiversity (CoP IV/5, Annex, § 4).

VII. Apply the ecosystem approach (CoP IV/6)[2].

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[1] Criteria II.4 and III.1 show some overlap in the sense that both points refer to local practices, III.1. however adding the element of equitable use. Hence, the score on both criteria will often coincide.

The criteria used in this review contain terminology that has not been in use as such over the whole period this survey covers. Indeed, the earliest documents of this review were published only shortly after the CBD was instituted in 1992. The precautionary principle came into use in the same time, while the ecosystem approach has come about in recent years only. The reviewers have taken this historical change in mind while assessing the criteria, by focusing on the content of the documents and not on the usage of exactly the same language.

[2] The description of the ecosystem approach as agreed by CBD and included in Annex 2 to this report was used as a checklist.

Analysis

This section describes the differences in the main focus of the documents analysed as they relate to the differences in the scope, range and detail to which CBD elements have been dealt with. It also discusses the extent to which the three objectives of the CBD and the actions, tools and principles encouraged and promoted by the CBD are covered in IMCAM guidance. Areas in which further guidance is necessary are identified. Basis for this analysis is formed by the review of the individual documents on basis of the criteria presented in the previous chapter. These individual reviews are presented in Annex 3. Table 1 exhibits a summary of the scores attributed to the documents for each of the criteria.

Focus of the documents analysed

The documents analysed include IMCAM guidelines as well as handbooks, frameworks and other guidance documents setting out IMCAM policy. It is found that there is significant variance in the major focus of the documents. Several are guidelines written for the specific purpose of providing guidance to practitioners or policy makers. These include IUCN (1993), Clark (1995), IUCN (1996), World Bank (1996), Cicin-Sain and Knecht (1998) at the global level and OECD (1993) (for the OECD countries), UNEP-MAP (1994), UNEP-CEP (1996), Commission of the European Communities (1999 & 2000) and Council of Europe (2000) at a regional level. Even though these documents appear to share similar objectives and aims, the documents are diverse in terms of the level of detail and elaboration as well as in the range of IMCAM elements covered.

The other documents have more limited scope and objectives. For example, IUCN-Kelleher (1999) and IUCN - Salm & Clark (2000) are on marine protected areas (MPAs) and here it is found that coral reefs receive more attention than other marine ecosystems. IOC (1997) has a very narrow focus on organisation of environmental information and FAO (1998) is an effort to provide guidance on the integration of three potentially impacting sectors viz. agriculture, forestry and fisheries into IMCAM. GESAMP (1996) focuses on the linking of science to IMCAM and is aimed at providing guidance to those engaged in design and implementation and funding programmes as well as social and natural scientists participating in IMCAM.

Table 1: Scoring per criterion and document (in chronological order)

Criteria:	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
IUCN (1993)	0	A	0	0	0	0	0	A	A	0	0	A	0	0	0	0	A	0	0	0	0
OECD (1993)	A	0	A	A	0	A	B	B	A	0	0	A	A	A	A	A	A	A	0	A	A
UNEP-MAP (1994)	A-	0	0	0	A-	A	0	B	B	A	0	0	B	0	A	A-	B	B	B-	0	0
Clark (1995)	B	A-	B	B	B-	B	B-	B	0	B	0	0	0	0	B	B	B	B	B-	0	*
OECD – AID (1995)	A-	0	0	0	A	A	A-	B	A	0	0	0	B	0	0	A-	B	B-	A	A	*
GESAMP (1996)	A	A+	A	0	B	B	A+	A+	0	A-	*	A	A-	0	B-	B-	B	A	0	A-	B-
IUCN – CBD (1996)	B-	A	B-	0	0	B	A	A	0	A	A	A	A	B-	A	0	A	A	0	A	0
World Bank (1996)	A	A	0	0	0	A	0	A	B	A	A	B-	B-	0	A	A	A	A	A-	A	*
UNEP – Caribbean (1996)	A	A	B-	0	0	A	B-	B-	A	0	0	0	B-	0	0	A	A	A	B	0	*
WB – Africa (1996)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cicin-Sain *et al.* (1997)	A	0	0	0	0	A-	0	0	A-	0	0	B	B-	0	A-	A-	A-	0	0	A-	*
IOC (1997)	A	A	0	0	0	A	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0
Pullen (1997)	0	0	A	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0
ACOPS (1998)	0	0	0	0	0	0	0	0	0	0	0	0	B-	0	0	0	0	0	0	0	0

Criteria:	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Cicin-Sain & Knecht (1998)	B	B	B-	B-	A	B	0	B	B	A	0	B-	A+	0	A	B	B	A+	0	A	*
FAO (1998)	*	0	A+	0	0	B	A	B	B	0	A	B	B	0	0	A+	B	B	0	B	*
IADB (1998)	A	0	0	0	0	A	A-	0	0	0	0	0	A-	0	0	0	0	A	0	A-	0
CEC – EU demo (1999)	0	0	0	0	0	A	0	0	A-	0	0	A	0	0	0	0	0	0	0	A	0
IUCN – Kelleher (1999)	B	B	B	B	A	B	B	B	A	A	B	B	B	0	0	A	A	0	0	0	A+
UNEP-MAP (1999)	0	B	A	A	0	A	B	A	B	0	0	A	B	0	0	A	B	A	A	A	A
Vallega (1999)																					
CEC (2000)	0	0	0	0	0	A-	0	A-	A-	A	0	A	A-	0	0	0	0	0	0	A	*
Council of Europe (2000)	B-	A	A	0	A	*	A	*	B	0	0	A	B	0	B-	B-	B	B-	A-	A	*
IUCN - Salm & Clark (2000)	B	B	B	B	A+	B	A	A	A	A	B	A	B	A+	A-	B	A	0	*	0	A
Shine & Lefebvre (2000)	A	0	A	0	0	A	A	A	A	A	B	A	B	0	0	A	0	0	0	0	0
Van der Heijden & Van Zwol (2000)	A	A	A+	A+	A+	A	A	A	A+	A	B	0	A+	A	A	A+	B	A	0	0	A

Van der Heijden & Van Zwol (2000) is very broad in scope but as a guide for Netherlands personnel in its embassies, it does not offer very much elaboration. Finally, OECD (1995), World Bank (1996) and IADB (1998) have a clear focus towards funding and aid programmes.

The documents are presented in chronological order. It was expected that through the years, the documents would have a higher scoring on the CBD indicators as a result of the increasing awareness and use of these concepts. Although this is to some extent the case, the trend is not very clear. A number of recent document fail to provide constructive guidelines or are not comprehensive in that they deal partly or only with some of the CBD objectives. This is also a consequence of the very diverse nature of the documents reviewed, which obscures the influence of developments over time.

Overall, broadest guidance on biodiversity related issues in IMCAM can be found in Cicin-Sain (1998), IUCN-Kelleher (1999) and IUCN-Salm & Clark (2000).

It is important to note that one of the fundamentals of IMCAM is that there is not one way of implementing IMCAM. In each situation, the IMCAM programme needs to be tailored according to its political, governance and social conditions and needs. This would also apply for the national biodiversity strategies, as noted by IUCN (1996). Hence, guidance could and should never be very specific.

The main objectives of the CBD and the defined criteria

The objectives of the CBD are conservation of biodiversity, the sustainable use of biodiversity's components and equitable sharing of benefits arising out of the utilisation of genetic resources. This review indicates (cf. Table 1 and Annex 3) that most IMCAM guidelines, policies and initiatives recognise conservation of biodiversity and sustainable use of its components as important objectives of IMCAM. These documents clearly indicate that a primary reason for undertaking IMCAM is to achieve sustainable development of coastal and marine areas. The majority of the legislative and institutional arrangements as well as tools and techniques recommended are directly or indirectly aimed at managing and regulating human activities that potentially lead to the

degradation of the coastal and marine ecosystem and ensuring sustainable development of the coastal areas.

It should be noted that the term "biodiversity" has been in use widely only since the CBD was agreed in 1992. However, since its inception in the early seventies, IMCAM initiatives have always supported, and often initiated measures for the specific purpose of conservation of coastal and marine resources and habitats.

In contrast to the first two objectives of the CBD, IMCAM guidance pays hardly any attention to the third object of the CBD *viz.* equitable sharing of benefits arising out of the utilisation of genetic resources with only four documents paying attention to the issue. Genetic diversity within species is the least visible and least studied level of biodiversity. In general, the whole issue of genetic resources/diversity is rarely discussed in IMCAM documents.

Principles and approaches, tools and actions identified for implementing the CBD

The CBD identifies and promotes several actions, tools, approaches and principles that are appropriate and imperative for the effective implementation of the CBD. It is quite clear that some of these specific items have been defined in unambiguous terms whilst others have been formulated very broadly and need further elaboration to make them operational. In this analysis, the extent to which the selected documents provide guidance for implementing and operationalising these items was evaluated.

Principles and approaches

- Policy integration (criterion II.3)

- Respect and support local practices for conservation, restoration and sustainable use practices and encourage equitable sharing of benefits (criteria II.4, II.5 and III.1)

- Private sector participation in developing methods for sustainable use (criterion II.6)

- Preserve and maintain indigenous and local knowledge, innovations and arising from such practices (criterion III.1)

- Precautionary principle (criterion VI)
- Ecosystems approach (criterion VII)

In general, principles and approaches recommended by the CBD, other than policy integration, are not adequately addressed.

Although the need for private sector participation in IMCAM is acknowledged in many of documents, this is almost never elaborated in relation to developing methods for sustainable use, thereby neglecting the innovative power of the private sector.

Also the necessary involvement of local communities and their practices and in particular equitable sharing of benefits are not adequately dealt with in IMCAM guidance. This is however markedly better covered in recent documents (IUCN 1999, 2000a&b, Van der Heijden & Van Zwol (2000)), with some earlier attention in Clark (1995) and GESAMP (1996). Under the Ramsar Convention, guidelines[1] for establishing and strengthening local communities' and indigenous peoples's participation in the management of wetlands have been developed.

This issue is crucial to sustainable development, to achieve a balance in its ecological, economic and social facets and an effective implementation of plans. Recent trends towards decentralisation, community-based and co-management and use and respect of local and traditional resource management systems are inadequately incorporated in the available IMCAM guidance. For example, even reference to a basic tool like stakeholder analysis is rare.

The need for the adoption of the precautionary approach as specified by the CBD, UNFCCC and other prescriptions is described in majority of the documents but only FAO (1998) provides any kind of guidance and direction towards applying the principle.

[1] These were not included in the analysis.

The CBD encourages the adoption of the 'Ecosystems Approach' in its application. It is defined as a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. The CBD also recognises that there is no single way to implement the ecosystem approach, as it depends on local, provincial, national, regional or global conditions. Indeed, there are many ways in which ecosystem approaches may be used as the framework for delivering the objectives of the Convention in practice. The CBD defines 12 principles and 5 operational objectives to guide the incorporation of the approach. However, these are expressed in general terms, and measurable criteria to use in developing and evaluating specific conservation measures are yet to be developed. CCAMLR (Commission for the Conservation of Antarctic Marine Living Resources) is one of the few management arrangements that has ecosystem management as an explicit objective[2].

In the evaluation, criterion VII on the ecosystem approach was difficult to assess, as is clear from the high number of asterisks. This was mainly caused by the facts that 1) this approach is very broad ranging and difficult to catch in one criterion, and 2) it is defined within the CBD is rather general terms, which prevent a unambiguous assessment. In addition, it is a recent approach, hence the terminology is not yet commonly accepted and used. None of the documents uses the ecosystem approach as a basis, but many cover – to larger or lesser extent – its various elements.

Tools

- Environmental Impact Assessment procedures (criteria V & V.1)

- Economic incentives/disincentives (criterion II.7)

[2] It aims to ensure that harvesting activities are consistent with the health of not only the target species, but also the dependent and associated species, and with maintenance of ecological relationships. The convention area was specifically designed to align closely with the natural ecosystem boundary, in this case the northern limit of the Antarctic convergence or polar oceanfront.

- Marine and coastal protected areas and buffer zones (criteria I.2 & I.3)

Economic incentives/disincentives and environmental impacts are well covered in the IMCAM documents analysed, although not much elaborated. This can be attributed to the fact that these topics are dealt with specifically in several publications: Carpenter & Maragos (1989)[3], UNEP (1990)[4] Sorenson and West (1992)[5], ESCAP (1995)[6], Grange and Odendaal, (1999)[7] and Hambrey *et al*. (2000)[8] provide guidance on EIA and Hooten and Hatziolos (1995)[9], Emerton (1999)[10] and OECD (1999)[11] provide guidance on economic incentives and tools.

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[3] Carpenter, R.A. and Maragos J.E. *eds* (1989): How to Assess Environmental Impacts on Tropical Islands and Coastal Areas. A training manual prepared for the South Pacific Regional Environment Programme (SPREP).

[4] UNEP (1990): An Approach to Environmental Impact Assessment for projects affecting the coastal and marine environment. UNEP Regional Sea Reports and Studies No. 122. 35pp.

[5] Sorenson, J. and West, N. (1992): A guide to impact assessment in coastal environments. Coastal Resources Centre, the University of Rhode Island. 100pp.

[6] ESCAP (1995): Guidelines on Environmentally Sound Development of Coastal Tourism. Economic and Social commission for Asia and the Pacific (ESCAP), United Nations.

[7]Grange, N., and Odendaal, F. (1999): Guidelines for the Environmental Assessment of Coastal Tourism, An Environmental Assessment (EA) manual to assist government agencies tourism developers, non governmental organizations (NGOs) and community organizations published by SEACAM, Maputo, Mozambique.

[8] Hambrey, J., Phillips, M., Chowdhury, K, and Ragunath, B. (2000): Guidelines for the Environmental Assessment of Coastal Aquaculture Development. SEACAM, Maputo, Mozambique.

[9] Hooten, A. and Hatziolos M. (1985): Sustainable financing mechanisms for coral reef conservation: Proceedings of a workshop. Environmentally Sustainable Development Proceedings Series No. 9, The World Bank, Washington D.C.

MPAs and buffer-zones are covered very elaborately in IUCN-Kelleher (1999) and IUCN-Salm & Clark (2000). They are also dealt with in considerable details in other IMCAM documents such as Cicin-Sain (1998) and UNEP (1996 and 1999). MPAs are generally considered a subject of its own and hence a number of IMCAM documents do not deal with MPA.

Actions

- Promote public awareness and education (criterion IV)
- Restoration and rehabilitation of degraded ecosystems and (criterion I.4)
- Promote emergency response measures for events and activities that present a grave and imminent danger to biological diversity (criterion V.2)
- Regulation of activities that cause significant adverse impacts (criterion II.2)
- Monitoring of components of biodiversity and activities that cause significant impacts (criteria II.1 & II.2)

This analysis indicates that promotion of public awareness and education, monitoring and regulation of activities that cause significant adverse impacts are well covered. Monitoring specifically of components of biodiversity is less well covered.

Aspects that receive little coverage in the IMCAM guidance are:

- Restoration and rehabilitation of degraded ecosystems and promotion of recovery of threatened species(criterion 1.4), and

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[10] Emerton, L. (1999): Economic tools for management of marine protected areas in Eastern Africa. IUCN, Nairobi.

[11] OECD (1999): Handbook of Incentive Measures for Biodiversity. Paris. 176 pp. ISBN 92-64-17059-6.

- Promote emergency response measures for events and activities that present a grave and imminent danger to biological diversity (criterion V.2).

Clark (1995) and GESAMP (1996) deal with restoration and rehabilitation of degraded ecosystems and promotion of recovery of threatened species in some detail. This is also recognised in several other documents but does not receive elaborated guidance. It should be noted that some guidance is available for restoration and rehabilitation of specific ecosystems/habitats, for example, mangroves and coral reefs and for recovery of some threatened species such as turtles[12].

Similarly, emergency response measures for events and activities that present a grave and imminent danger to biological diversity receive little attention. It is dealt with by UNEP (1996) in respect to the Caribbean region, which is frequently threatened by coastal flooding due to hurricanes. Clark (1995) and UNEP-MAP (1994) also discuses this issues to a certain extent. In addition to these, there several guides and handbooks on coastal engineering and the recent coral bleaching event in the Indian ocean motivated development of guidance on management of bleached and severely damaged coral reefs (Westmacott *et al*. (2000))[13].

Under the UNEP Regional Seas programmes contingency plans for protection against maritime pollution have been prepared in several regions.

Other important aspects for guidance

It should be noted that other aspects than those covered above are of importance in providing guidance for effective implementation of the CBD in coastal and marine areas.

Firstly, this includes the general issues of conflict resolution and enforcement. Since no explicit direction on these topics is

[12] Such guidance is outside the documents included in this analysis.

[13] Westmacott, S., Teleki, K., Wells, S. and West. J.M. (2000) : Management of bleached and severely damaged coral reefs. IUCN, Gland, Switzerland and Cambridge, UK 36pp.

provided by the CBD, they were not included in the evaluation criteria. Their relation with participatory approaches (cf. the paragraph on local communities above) is also of importance.

Conflict resolution is recognised in a number of documents as an important element of IMCAM. In particular Clark (1995), Cicin-Sain and Knecht (1998) and FAO (1998) elaborate on this. In contrast, the important problem of enforcement was hardly encountered in the documents under review, certainly not in any detail.

Secondly, in addition to an integrated approach through IMCAM, sectoral guidance, *e.g.* for aquaculture, fisheries, shipping, and tourism, is obviously of great importance for implementing the CBD. This goes beyond the scope of the present study, but a number of documents reviewed provide a considerable amount of such advice. This includes Clark (1995), FAO (1998) and Council of Europe (2000).

Relations with other Conventions

Finally, it should be recognised that there are several international agreements and a series of regional and national agreements that are directly relevant to the conservation of marine biodiversity. These include agreements to regulate pollution resulting from maritime activity, control trade in endangered marine species, curb the hunting of endangered whales, protect coastal sites of universal value, trace the effects of climate change on marine ecosystems, and deal with pollution from land-based activities.

In addition, there are currently nine UNEP Regional Seas Conventions with their attendant protocols, which address marine issues of particular regional importance.

The CBD can build upon and work in collaboration with relevant provisions contained in these other international and regional legal instruments that address marine and coastal biodiversity. Within the context of IMCAM those multilateral agreements that have the most potential for synergy with the CBD are the Ramsar Convention (1971), the United Nations Convention on the Law of the Seas (UNCLOS) (1982), the Framework Convention on Climate Change (UNFCCC) (1992) and the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA)

(1995). All of these encompass provisions and guidelines of relevance for the protection of biodiversity in marine and coastal areas.

The **UNFCCC** explicitly addresses biodiversity conservation and maintenance. Three articles guide the parties to the UNFCCC on biodiversity conservation and maintenance.

The need to permit ecosystems to adapt naturally to climate change is recognised in the objectives of the Convention. Article 2 states:

> The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

Supporting this imperative for enabling ecosystems to adapt naturally is Article 1.1 that provides a definition for "adverse effects of climate change":

> "Adverse effects of climate change" means changes in the physical environment or biota resulting from climate change which have significant deleterious effects on the composition, resilience or productivity of natural and managed ecosystems or on the operation of socio-economic systems or on human health and welfare.

Article 4.1 obligates parties to the Convention to promote sustainable management, conservation and enhancement of sinks and reservoirs of greenhouse gases:

> Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems.

Article 3.3 on the "Precautionary Principle" provides also an opportunity for promoting the objectives of the CBD:

The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost. To achieve this, such policies and measures should take into account different socio-economic contexts, be comprehensive, cover all relevant sources, sinks and reservoirs of greenhouse gases and adaptation, and comprise all economic sectors. Efforts to address climate change may be carried out cooperatively by interested Parties.

Thus the UNFCCC quite explicitly obligates the parties to the Convention to prevent negative impacts of climate change on biodiversity as well as on ecosystem structure and functioning.

Another aspect that warrants consideration is the potential impacts of adaptation strategies undertaken to mitigate impacts of climate change, especially impacts of sea level rise, on coastal and marine biodiversity. These would include, for example, the effects of erosion management measures such as groynes, seawalls and sand replenishment and other measures such as restoration of habitats on adjacent coastal and marine areas. Such measures have the potential for both positive and negative impacts.

There is a significant link between the ecosystem approach promoted by the CBD and the adaptation strategies advocated under the UNFCCC. Both call for establishment of MPA, for flexible zoning of park boundaries, development of corridors and buffer systems, reduction of human impacts in the core zones and greater attention to natural disturbances such as floods.

The **GPA** focuses on providing practical guidance on how to deal with nine specific source categories of land-based pollution. It specifies how to identify problems and priorities and implement sustained action in regards to these source categories.

The GPA is designed to provide conceptual and practical guidance to national and/or regional authorities for devising and implementing sustained action to prevent, reduce, control

and/or eliminate marine degradation from land-based activities.

The GPA aims at preventing the degradation of the marine environment from land-based activities by facilitating the duty of States to preserve and protect the marine environment. It recommends that the States carry out the following tasks and provides a stepwise approach:

A. Identify and assess problems considering five factors *viz.* nature and severity of problems; contaminants; physical alteration; sources of degradation; and areas of concern.

B. Establish priorities for action by assessing the five factors above.

C. Set management objectives for priority problems for source categories and areas affected on the basis of established priorities

D. Identify, evaluate and select strategies and measures to achieve these objectives.

E. Develop criteria for evaluating the effectiveness of strategies and measures.

Areas of concern are identified as critical habitats, including coral reefs, wetlands, seagrass beds, coastal lagoons and mangroves, habitats of endangered species, ecosystem components including spawning and nursery areas feeding grounds, shorelines, coastal watersheds, specially protected marine and coastal areas.

In the process of establishing priorities, it is recommended that States should (amongst others):

(a) Apply integrated coastal area management approaches, including provisions to involve stakeholders.

(b) Recognize the basic linkages between the freshwater and marine environment through, application of watershed management.

(c) Recognize the basic linkages between sustainable development of coastal and marine resources, poverty alleviation and protection of the marine environment.

(d) Apply environmental impact assessment procedures in assessing options.

(e) Integrate national action with any relevant regional and global priorities, programmes and strategies.

Although the GPA is legally non binding and hence falls within the category of 'soft law', it deals in a very comprehensive focussed way with a wide range of land-based activities and their effects on the coastal and marine environment. It contains many elements that can contribute significantly to the effective application of the CBD.

Overall, collaboration between CBD and other frameworks such as Ramsar, UNFCCC and the GPA is increasing and such collaboration could well be used in strengthening IMCAM's value to CBD's objectives.

Conclusions

The objectives of the CBD are conservation of biodiversity, the sustainable use of biodiversity's components and equitable sharing of benefits arising out of the utilisation of genetic resources. IMCAM has been identified as an important tool to achieve these for marine and coastal areas. This requires that IMCAM guidance addresses and elaborates on how to realise this. This study aimed to evaluate the extent to which this is covered and to identify needs and opportunities for improvement.

Although most of the evaluated documents provide guidance for IMCAM in some way, large differences are observed among them. Some are real guidelines; others are handbooks or strategy documents. There are major differences in the primary focus of each document, the aspects covered and the depth of coverage. The degree to which attention is paid to biodiversity in the various documents also varies greatly. In general, there is implicit reference, recognition and support to biodiversity *conservation*, but this is explicitly formulated or elaborated only in a minority of the documents. Sustainable use of biodiversity's components is a, perhaps even the, major focus of most IMCAM documents reviewed. But a clear focus on ecological processes and ecosystem integrity is rare. Sustainable development is often referred to, but an elaboration of sustainable development in terms of economically, ecologically and socially sustainable development is hardly observed in the IMCAM documents under review. Only few documents provide elaborated guidance on how to realise these objectives.

IMCAM guidance pays hardly any attention to the third object of the CBD *viz.* equitable sharing of benefits arising out of the utilisation of genetic resources with only four documents addressing this issue.

Broadest guidance on biodiversity related issues in IMCAM to date can be found in Cicin-Sain (1998), IUCN-Kelleher (1999) and IUCN-Salm & Clark (2000), although none of the documents encompasses all CBD related criteria. Since nature and scope of the documents vary widely, it depends on the particular question or situation under consideration, which document would offer the most appropriate guidance.

Clearly, promoting conservation and sustainable use of biodiversity through IMCAM involves a large range of topics to be covered and a multi-dimensional elaboration. Comprehensive guidance, based on the objectives and approaches of the CBD, is not yet available. In view of the scope of the subject, and of guidance available on portions of it, a guide with complete but concise coverage would be a most useful contribution to furthering the objectives of the CBD in marine and coastal areas. Such guide should refer to available literature for more extensive elaboration on specific subjects.

The analysis indicates that – next to such comprehensive guidance - in particular for the following topics further thorough guidance is required.

- Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas (criterion I.3)

- Restoration and rehabilitation of degraded ecosystems and promotion of recovery of threatened species (criterion I.4) as well as Support local populations to develop and implement remedial action in degraded areas (criterion II.5)

- Respect for customary use of biological resources in accordance with traditional cultural practices (criterion II.4)

- Fair and equitable sharing of the benefits arising out of the utilisation of genetic resources (criterion III)

- Respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities and encourage the equitable sharing of the benefits arising from the utilisation of such knowledge, innovations and practices (criterion III.1)

- Promote emergency response measures for activities and events, whether caused naturally or otherwise, that present a grave and imminent danger to biological diversity (criterion V.2)

- The precautionary principle (criterion VI)

- The ecosystem approach (criterion VII)

As regards the ecosystem approach, it would be particularly valuable to try to operationalise the integral concept for coastal and marine areas through inclusion in IMCAM guidance.

Other topics identified that should not be missed out in giving guidance for IMCAM are conflict resolution and enforcement, and their relation with participatory approaches and community-based management.

Developments within other international fora, in particular the UNFCCC, Ramsar and the GPA, should be taken into account and collaboration with these would be mutually beneficial.

Although an evaluation was beyond the scope of this study, guidance for specific sectors such as aquaculture, fisheries and tourism, is of great importance to an effective implementation of the CBD.

Recommendations

1. A guidance document on the implementation of the CBD using IMCAM, paying systematic attention to the objectives of the CBD, should be developed. The following aspects should be included in this guidance.

    a. The guidance should address both objectives and means of operation, at national and local scales, for IMCAM.

    b. It could be based on an elaboration of economic, ecological and social aspects of sustainable development.

    c. It should include a systematic elaboration of the ecosystem approach for coastal and marine management.

    d. Annotated reference to existing guidance on specific topics would be an essential element of such a document.

2. In view of the present gaps, there is a particular need to address within an IMCAM context:
    a. environmentally sound and sustainable development in areas adjacent to protected areas;
    b. restoration and rehabilitation of degraded ecosystems and promotion of recovery of threatened species as well as support to local populations to develop and implement remedial action in degraded areas;
    c. respect for customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements;
    d. fair and equitable sharing of the benefits arising out of the utilisation of genetic resources;
    e. respect, preserving and maintaining knowledge, innovations and practices of indigenous and local communities and encouraging equitable sharing of the benefits;
    f. promotion of emergency response measures for activities and events, whether caused naturally or otherwise, that present a grave and imminent danger to biological diversity;
    g. the precautionary principle.

3. General issues as conflict resolution, enforcement and participatory approaches, and economic sectors also deserve due attention.

4. Drafting of such a guidance document should be embedded within the framework of the CBD, and in particular its SBSTTA[14], in order to acquire maximum support. As a first step, this study should disseminated in relevant fora. Involvement of relevant stakeholders in the further process should be actively sought. Collaboration with other international fora, such as the UNFCCC, Ramsar and GPA should be considered.

5. Both for the development and for the dissemination of guidance on ICMAM optimal use should be made of the opportunities that the internet offers. Hereby an enabling environment can be created to assist and support institutions to integrate the CBD objectives.

[14] Subsidiary Body on Scientific, Technical and Technological Advice

Acknowledgement

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Annex 1: List of reviewed documents (chronologically)

Pernetta, J. & D. Elder (1993): Cross-sectoral, Integrated Coastal Area Planning (CICAP): Guidelines and Principles for Coastal Area Development. IUCN, Gland, Switzerland. 63 pp. ISBN 2-8217-0191-0.

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Annex 2: The ecosystem approach [from CoP Decision V/6]

Principles

The following 12 principles are complementary and interlinked.

Principle 1: The objectives of management of land, water and living resources are a matter of societal choices.

Different sectors of society view ecosystems in terms of their own economic, cultural and society needs. Indigenous peoples and other local communities living on the land are important stakeholders and their rights and interests should be recognized. Both cultural and biological diversity are central components of the ecosystem approach, and management should take this into account. Societal choices should be expressed as clearly as possible. Ecosystems should be managed for their intrinsic values and for the tangible or intangible benefits for humans, in a fair and equitable way.

Principle 2: Management should be decentralized to the lowest appropriate level.

Decentralized systems may lead to greater efficiency, effectiveness and equity. Management should involve all stakeholders and balance local interests with the wider public interest. The closer management is to the ecosystem, the greater the responsibility, ownership, accountability, participation, and use of local knowledge.

Principle 3: Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.

Management interventions in ecosystems often have unknown or unpredictable effects on other ecosystems; therefore, possible impacts need careful consideration and analysis. This may require new arrangements or ways of organization for institutions involved in decision-making to make, if necessary, appropriate compromises.

Principle 4: Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context. Any such ecosystem-management programme should:

a) Reduce those market distortions that adversely affect biological diversity;

b) Align incentives to promote biodiversity conservation and sustainable use;

c) Internalize costs and benefits in the given ecosystem to the extent feasible.

The greatest threat to biological diversity lies in its replacement by alternative systems of land use. This often arises through market distortions, which undervalue natural systems and populations and provide perverse incentives and subsidies to favor the conversion of land to less diverse systems.

Often those who benefit from conservation do not pay the costs associated with conservation and, similarly, those who generate environmental costs (e.g. pollution) escape responsibility. Alignment of incentives allows those who control the resource to benefit and ensures that those who generate environmental costs will pay.

Principle 5: Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.

Ecosystem functioning and resilience depends on a dynamic relationship within species, among species and between species and their abiotic environment, as well as the physical and chemical interactions within the environment. The conservation and, where appropriate, restoration of these interactions and processes is of greater significance for the long-term maintained conditions and, accordingly, management should be appropriately cautious.

Principle 6: Ecosystem must be managed within the limits of their functioning.

In considering the likelihood or ease of attaining the management objectives, attention should be given to the environmental conditions that limit natural productivity, ecosystem structure, functioning and diversity. The limits to ecosystem functioning may be affected to different degrees by temporary, unpredictable of artificially maintained conditions and, accordingly, management should be appropriately cautious.

Principle 7: The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.

The approach should be bounded by spatial and temporal scales that are appropriate to the objectives. Boundaries for management will be defined operationally by users, managers, scientists and indigenous and local peoples. Connectivity between areas should be promoted where necessary. The ecosystem approach is based upon the hierarchical nature of biological diversity characterized by the interaction and integration of genes, species and ecosystems.

Principle 8: Recognizing the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term.

Ecosystem processes are characterized by varying temporal scales and lag-effects. This inherently conflicts with the tendency of humans to favour short-term gains and immediate benefits over future ones.

Principle 9: Management must recognize the change is inevitable.

Ecosystems change, including species composition and population abundance. Hence, management should adapt to the changes. Apart from their inherent dynamics of change, ecosystems are beset by a complex of uncertainties and potential "surprises" in the human, biological and environmental realms. Traditional disturbance regimes may be important for ecosystem structure and functioning, and may need to be maintained or restored. The ecosystem approach must utilize adaptive management in order to anticipate and cater for such changes and events and should be cautious in making any decision that may foreclose options, but, at the same time, consider mitigating actions to cope with long-term changes such as climate change.

Principle 10: The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity.

Biological diversity is critical both for its intrinsic value and because of the key role it plays in providing the ecosystem and other services upon which we all ultimately depend. There has been a tendency in the past to manage components of biological diversity either as protected or non-protected. There is a need for a shift to more flexible

situations, where conservation and use are seen in context and the full range of measures is applied in a continuum from strictly protected to human-made ecosystems

Principle 11: The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.

Information from all sources is critical to arriving at effective ecosystem management strategies. A much better knowledge of ecosystem functions and the impact of human use is desirable. All relevant information from any concerned area should be shared with all stakeholders and actors, taking into account, inter alia, any decision to be taken under Article 8(j) of the Convention on Biological Diversity. Assumptions behind proposed management decisions should be made explicit and checked against available knowledge and views of stakeholders.

Principle 12: The ecosystem approach should involve all relevant sectors of society and scientific disciplines.

Most problems of biological-diversity management are complex, with many interactions, side-effects and implications, and therefore should involve the necessary expertise and stakeholders at the local, national, regional and international level, as appropriate.

Operational guidance for application of the ecosystem approach

In applying the 12 principles of the ecosystem approach, the following five points are proposed as operational guidance.

1. Focus on the relationships and processes within ecosystem.

The many components of biodiversity control the stores and flows of energy, water and nutrients within ecosystems, and provide resistance to major perturbations. A much better knowledge of ecosystem functions and structure, and the roles of the components of biological diversity in ecosystems, is required, especially to understand: (i) ecosystem resilience and the effects to biodiversity loss (species and genetic levels) and habitat fragmentation; and (ii) underlying causes of biodiversity loss; and iii) determinants of local biological diversity in management decisions. Functional biodiversity in ecosystems

provides many goods and services of economic and social importance. While there is a need to accelerate efforts to gain new knowledge about functional biodiversity, ecosystem management has to be carried out even in the absence of such knowledge. The ecosystem approach can facilitate practical management by ecosystem managers (whether local communities or national policy makers).

2. Enhance benefit-sharing.

Benefits that flow from the array of functions provided by biological diversity at the ecosystem level provide the basis of human environmental security and sustainability. The ecosystem approach seeks that the benefits derived from these functions are maintained or restored. In particular, these functions should benefit the stakeholders responsible for their production and management. This requires, inter alia: capacity building, especially at the level of local communities managing biological diversity in ecosystems; the proper valuation of ecosystem goods and services; the removal of perverse incentives that devalue ecosystem goods and services; and, consistent with the provisions of the Convention on Biological Diversity, where appropriate, their replacement with local incentives for good management practices.

3. Use adaptive management practices.

Ecosystem processes and functions are complex and variable. Their level of uncertainty is increased by the interaction with social constructs, which need to be better understood. Therefore, ecosystem management must involve a learning process, which helps to adapt methodologies and practices to the ways in which these systems are being managed and monitored. Implementation programmes should be designed to adjust to the unexpected, rather than to act on the basis of a belief in certainties. Ecosystem management needs to recognize the diversity of social and cultural factors affecting natural-resource use. Similarly, there is a need for flexibility in policy-making and implementation. Long-term, inflexible decisions are likely to be inadequate or even destructive. Ecosystem management should be envisaged as a long-term experiment that builds on its results as it progresses. This "learning-by-doing" will also serve as an important source of information to gain knowledge of how best to monitor the results of management and evaluate whether established goals are being attained. In this respect, it would be desirable to establish or strengthen capacities of Parties for monitoring.

4. Carry out management actions at the scale appropriate for the issue being addressed, with decentralization to lowest level, as appropriate.

As noted in the description of the ecosystem approach, an ecosystem is a functioning unit that can operate at any scale, depending upon the problem or issue being addressed. This understanding should define the appropriate level for management decisions and actions. Often, this approach will imply decentralization to the level of local communities. Effective decentralization requires proper empowerment, which implies that the stakeholder both has the opportunity to assume responsibility and the capacity to carry out the appropriate action, and needs to be supported by enabling policy and legislative frameworks. Where common property resources are involved, the most appropriate scale for management decisions and actions would necessarily be large enough to encompass the effects of practices by all relevant stakeholders. Appropriate institutions would be required for such decision-making and, where necessary, for conflict resolution. Some problems and issues may require action at still higher levels, through, for example, transboundary cooperation, or even cooperation at global levels.

5. Ensure intersectoral cooperation.

As the primary framework of action to be taken under the Convention, the ecosystem approach should be fully taken into account in developing and reviewing national biodiversity strategies and action plans. There is also a need to integrate the ecosystem approach into agriculture, fisheries, forestry and other production systems that have an effect on biodiversity. Management of natural resources, according to the ecosystem approach, calls for increased intersectoral communication and cooperation at a range of levels (government ministries, management agencies, etc.). This might be promoted through, for example, the formation of inter-ministerial bodies within the Government or the creation of networks for sharing information and experience.

Annex 3: Detailed analysis of the documents

In this Annex the analysis of the documents on basis of the described criteria is presented. The documents are treated in order of publication date.

Pernetta, J. & D. Elder (1993): Cross-sectoral, Integrated Coastal Area Planning (CICAP): Guidelines and Principles for Coastal Area Development. IUCN, Gland, Switzerland. 63 pp. ISBN 2-8217-0191-0.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
IUCN (1993)	0	A	0	0	0	0	0	A	A	0	0	A	0	0	0	0	A	0	0	0	0

Introduction

The objective of these guidelines is to "produce guidelines for the development of coastal area plans that can be applied at national level". It was produced by IUCN in the context of the Coastal Zone Management Sub-group of the IPCC (Intergovernmental Panel on Climate Change). The document describes amongst others "operational definitions", the impacts of climate change on coastal zones and approaches to IMCAM. It presents a framework for a coastal area planning process.

Annotations

I. & II. No particular attention is paid to conservation or sustainable use of biodiversity or its components.

Conclusion

This document mainly describes environmental problems in the coastal zone and places coastal zone management in the impacts of climate change. However hardly any attention is paid to objectives of IMCAM. Apart from presenting a planning framework for IMCAM, little further guidance is provided.

Organisation for Economic Cooperation and Development (OECD) (1993): Coastal Zone Management. Integrated policies. Paris. 125 pp. ISBN 92-64-13826-9.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
OECD (1993)	A	0	A	A	0	A	B	B	A	0	0	A	A	A	A	A	A	A	0	A	A

Introduction

The report is the result of a three-year study carried out by the Group on Natural Resource Management. It is based on country information papers (p.18) and case studies (p.16) that describe experiences, issues and problems faced by the OECD Member countries in their coastal zones. The report is to provide guidance to coastal resource managers and policy makers by identifying integrative policy instruments and institutional arrangements to achieve national and international objectives for ICZM.

Annotations

I. Coastal zone management is driven by market forces, not for conservation of biological diversity in particular (p.49, 63) Economic activities are prioritised over environmental issues. Maximum economic growth is required within the environmental framework (p.63).

I.1. Biological diversity as such is not mentioned. Living marine resources are exposed to a range of threats (p.85) and coastal zone management is considered for conservation purposes mostly.

I.2. Coastal land resources are allocated to activities providing net benefits taking into account the requirements for ecologically sustainable development (p.72) There is a need for protected areas, incl. protection zones. Restricted use (p.102). Land use zoning is undertaken for environmental reasons, but has to be effective in the planning sense and in the economic sense (p.74). Marine Protected Areas and other areas with a special status [...] can be established by all levels of government (p.77). Local land use planning does include local populations' interests, but not their involvement in decision-making.

I.3. The buffer zone not only serves to protect the core zone but also provides a mechanism for raising revenue to maintain the park (p.77)

II. Sustainable use is defined as availability of resources for future generations, however, this is the responsibility of the state.

II.1. Aside from an analysis of the natural system, an evaluation and analysis of the economic system is suggested (p.62).

II.2.There is a need to inventory, monitor and assess coastal zone resources. From here develop policy and objectives for CZM (p.85, 100). EIA is proposed (p.102), as well as environmental audit, but from the governments' perspective (p.70). Inventory used for Coastal Zone Management, not *Integrated* CZM (p.100). Where integrated is mentioned, it refers to the integration of different industries, i.e. fisheries, agriculture (p.103).

II.3. Actions are embedded into existing conventions and agreements (p.54).

II.6. Management responsibility is in hands of national agencies and the government (p.103). Private owners have to act within existing government regulations (p.80). The economic viability will be judged […] by the private sector. The demand on coastal resources […] should be judged […] on economic criteria […] but within a framework that ensures that economic development and environmental protection are equally considered (p.63). Tourism is very important and a growing economic activity (p.107).

II.7. Economic viability and compatibility are closely related to the environmental performance of new development (p.63). Rational pricing of natural resources is suggested (p.75). Economic and regulatory instruments (TAC, ITQs) are proposed to enhance marine protection (p.117). Whether these measures are socially sound is not an issue.

III. Equity and social self-determination are mentioned as criteria for decision-making, but are not further elaborated (p.50). Coastal management is geared towards ecosystem health and production, not towards social sustainability or equity (p.51).

III.1. Active recognition of the rights of indigenous people in management is only once mentioned (p.95).

IV. Human resources, capacity building and education are part of the preparation of an action plan, but with no further reference to local resource users (p.81).

V. Need for impact assessment of fishing activities on the marine ecosystem (p.95).

V.1. It is suggested to establish a Fisheries Agency. Co-operative organisations are mentioned as a future development from licensing to private rights (p.103).

Public participation is mentioned in the context of integrated management, at the selection of the final plan in the management process, but it is not further elaborated (p.51, 53). Task of the government: *provision* of a public participation process (p.66).
V.2. Regional and international cooperation is considered important (p.104) but with no specific reference to emergency responses.
VI. The precautionary principle should be used in decision-making (p.63, 101).
VII. Water, land and air are related and presented as an holistic system (p.100). A definition of the ecosystem approach is presented in the glossary (p.125).

Conclusion

The document presents policy suggestions for resource management, but geared towards economic purposes, not conservation of biological diversity in particular. Safeguarding resources for industry, fishing and the private sector (tourism) stands central. There is a strong role for the government in coastal management (p.65, 66). The primary tasks of the government as *owner* of the resources, are 'to get the price right' and to minimise externalities caused by extraction of resources [...], such as gravel and sand mining and oil extraction (p.79). Fishing is not mentioned as having a negative impact, but overexploitation is. Management is in the hands of the state and carried out through the allocation of quota (ITQs) and licenses within TAC. Local communities and their use of resources are not specifically analysed.
The OECD document is analytical rather than providing guidelines for Integrated Coastal Zone Management. Moreover, "integrated" in this context refers to the integration of economic interests and industries rather than the integration of local users and other stakeholders in resource management.

Brachya, V., F. Juhasz, A. Pavasovic and I. Trumbic (1994): Guidelines for Integrated Management of Coastal and Marine Areas with special reference to the Mediterranean Basin. UNEP-MAP-PAP/RAC, Split, Croatia.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
UNEP-MAP (1994)	A-	0	0	0	A-	A	0	B	B	A	0	0	B	0	A	A-	B	B	B-	0	0

Introduction

This document gives guidelines (at national level) for IMCAM, defined as “an adaptive process of resource management for sustainable development in coastal areas”. Therefore, it is required that “quantity and quality of coastal resources are safeguarded”. The guidelines are intended to offer a flexible approach and are not an exhaustive manual. Most attention is devoted to the stages of and instruments for IMCAM. Biological diversity is hardly addressed explicitly in the document

Annotations

I. Briefly mentioned in § 2.2.2.
I.4. It is just mentioned as one of the goals of ICAM (p. 16): “Renew or rehabilitate damaged resources for traditional or new uses.”
IV. Public education and awareness raising are briefly mentioned as part of IMCAM (§ 3.2).
V.2. A small section (§ 4.2.2.) is devoted to this subject.

Conclusion

The document provides significant guidance on a number of important IMCAM topics related to biodiversity. Certainly not all criteria are covered, though, and in particular attention for conservation and protected areas, involvement of the private sector, precautionary and ecosystem approaches is minimal.

Clark, J. (1995): Coastal Zone Management Handbook. CRC Press, Boca Raton. 694 pp. ISBN 1-56670-092-2.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
Clark (1995)	B	A-	B	B	B-	B	B-	B	0	B	0	0	0	0	B	B	B	B	B-	0	*

Introduction

This document is a handbook and reference source, not a guideline. It presents information on many different aspects of IMCAM (the book uses the term "ICZM"), but, due to its nature as a reference guide, in a somewhat fragmented way. Also - in line with the book's title - an integrated approach, although supported, is not a main emphasis. Although clearly advocating sustainable use of coastal resources, is does not have a particular emphasis on the conservation of biodiversity.

Annotations

I. The book recognises conservation of biological diversity as an "urgent coastal matter". It describes the need to include this in a strategy plan as well as methods and tools that can be used (pp.4 ff., 23, 38, 245 ff.).
I.1. This need as such is not explicitly recognised. However the need to identify important habitats is addressed (pp.102-104, 139).
I.2. Protected area management get due attention, including case studies.
I.3. This is explicitly addressed, while also more in general the concept of zoning is elaborated. (p. 214 ff.).
I.4. A brief description of this issue is given (p. 403).
II. Sustainable use of the coastal resources and giving practical advise on how to do this is the book's main emphasis.
II.1. Monitoring is well addressed, although not very well positioned as an integral part of management. Particular attention is paid to coral reefs (p. 326).
II.3. The book devotes little attention to policy integration.
II.6. Although public participation is addressed, no attention is paid to this specific issue.
V.2. Only contingency plans are briefly discussed within the context of the petroleum industry.
VII. There is no specific reference to the ecosystem approach, nor are its elements very well covered.

Conclusion

In conclusion, it can be stated that while biodiversity is not the main point of departure for this book, it well covers many aspects of conservation and in particular sustainable use of biodiversity. Taking an integrated approach, however, is not very strongly supported and hardly elaborated. A number of aspects are not or hardly covered.

Organisation for Economic Co-operation and Development (OECD) (1995): Guidelines for Aid Agencies on Global and Regional Aspects of the Development and Protection of the Marine And Coastal Environment. OECD Development Assistance Committee, Guidelines on Aid and Environment, No. 1. Paris. 51 pp.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.	VIII
Document:																						
OECD (1995)	A-	0	0	0	A	A	A-	B	A	0	0	0	B	0	0	A-	B	B-	A	A	*	0

Introduction

The document provides an overview of major issues relating to the marine and coastal environment and sets out various approaches for its protection including institutional management, economic and scientific approaches. In keeping with its objective to provide guidance to aid agencies, the document sets out a variety of recommendations for activities of aid agencies. Recommendations are made regarding activities in coastal areas, inland areas and marine areas and contain advice for better integration of marine concerns in environment and development activities.

Annotations

I. Only recognises the importance of coastal and marine resources.
I.4. Identifies rehabilitation of destroyed, damaged or radically altered natural features and habitats as a priority activity for financial and technical assistance by the OECD (p.17, 24).
II.2. Preparation and maintenance of data inventories on pollution sources, land based human activities and the need to regulate, prevent and reduce these activities are identified as priority activities for technical and financial assistance by OECD.
II.3. States that sectoral approach to problem solving will maintain its importance in dealing with specific issues, but it should be supplemented by an integrated and holistic approach.
IV. Public awareness is promoted as an approach to reach social consensus for political action (p.15).
V. Mentions the value of EIA and says that EIA is an example of the precautionary approach (p.17).

Conclusion

It is clear that the document was not prepared with the CBD in view as it makes only very marginal reference to the CBD in relation to the protection of endangered species. It recognises that projects aimed at development and conservation of coastal and marine environment should be developed in the general framework of an integrated management programme for the coastal and marine environment.

GESAMP (IMO/FAO/UNESCO-IOC/WMO/WHO/IAEA/UNEP Joint Group of Experts on the Scientific Aspects of Marine Coastal Protection) (1996): The Contributions of Science to Integrated Coastal Management. GESAMP Reports and Studies No. 61. ISBN 92-5-103856-2.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
GESAMP (1996)	A	A+	A	0	B	B	A+	A+	0	A-	*	A	A-	0	B-	B-	B	A	0	A-	B-

Introduction

The principal task of GESAMP is to provide scientific advice concerning the prevention, reduction, and control of the degradation of the marine environment to its sponsoring agencies. The report is offered as guidance to those responsible for the oversight and funding of ICM programmes, those engaged in the design and implementation of programs, and the natural and social scientists who participate in the ICM process. It focuses on the contribution of science to the IMCAM process.

Annotations

I. Develop a management plan [...] that constitutes the qualities of the environment to be achieved and maintained (p.6).

I.1. Some elements are mentioned, e.g.: Characterisation of significant habitats, species and biological communities (§ 3.1). What is the scale of habitat destruction? Identification of critical species (§ 3.2).

I.4. What are the natural processes that maintain habitat integrity. Restoration strategies on the basis of key-species (§ 3.2).

II. All over document, with special reference to local users and improve their quality of life through sustainable resource use.

II.1. Identification of trends in the condition and use of resources and amenities (§ 3.1). Monitoring is important in the implementation phase as to measure change (§ 3.4). Research and monitoring (§ 4.2). Hardly any particular attention for components of biological diversity.

II.2. The document focuses on the contribution of science to IMCAM, but gives little elaboration in relation to this criterion. Relationship between condition of marine environment and human activity; marine resources are vulnerable to over-exploitation (Ch. 1).
II.4. Although participation of local communities is supported, protection and encouragement of traditional practices is not explicitly supported or mentioned.
II.5. This issue is not specifically addressed, but both the input of science for habitat restoration and the need to involve local communities in general are described.
II.6. There are general references only: ICM is a process that unites government and the community, science and management, and sectoral and public interests [...], (§ 2.1); Involve stakeholders (§ 2.3).
II.7. Very little attention is paid to actual economic incentives as management instruments. Harmonise development investment in development with conservation of environmental qualities and functions (§ 2.3). Assess social and economic benefits (§ 3.2). Management control measures (§ 4.11).
III.1. Concern for equity issues (§ 2.3). Consider all relevant practices [...] in the context of the needs and aspirations of the communities (§ 2.3). Identification of stakeholders [...] their priorities and interests (p.5). Initial assessment of societal perceptions and their implications (§ 3.1).
IV. Public education mentioned (§ 3.4) and somewhat elaborated in § 4.12.
V. Impact evaluation elaborated with Cost-benefit analysis (p.9); Resource surveys (GIS), (p.13); Modelling (p.13); Economic assessment and valuation (p.3, 14); Legal and institutional analysis (p.14); Social cultural analysis (p.14).
V.1. Very brief attention to environmental impact assessments in § 4.5.
VI. Use of the marine environment and its resources shall not prejudice the use and enjoyment [...] by future generations (Ch. 1). Precautionary approach only mentioned as citation from Agenda 21(§ 2.2).
VII. Although the ecosystem approach as such is not mentioned many of its elements are supported by and elaborated in the document.

Conclusion

Very elaborate and encompassing document that is based on field experiences and offers clear suggestions and guidelines for each step in the formulation of an ICM program (Ch. 3). It argues for science-based management (Ch.1).

Four elements are distinguished in the integrated approach: geographical, temporal, sectoral, and political/institutional. ICM is presented as a dynamic policy process (§ 2.3).

Some indicators are not explicitly mentioned but clear from the text which has a strong orientation towards sustainable resource management that is economically and ecologically sound, and carried out by local users and other sectors. It has a strong accent on participation of local users in decision-making, access to knowledge, etc. A long time is planned for stakeholder analysis and their priorities and aspirations as to constitute a legitimate process. The philosophy of the article is clear from this statement: "ICM assumes continuously increasing knowledge of how ecosystems function and respond to anthropogenic forces. Equally important is an appreciation for the values and needs of human societies in question and the capabilities and interests of the institutions that will play roles in the management process." (§ 3.6).

The document includes a study of the governance process (decision-making etc.), including the factors and processes that regulate these characteristics (§ 3.2). It also mentions budget and (government) funding for scientific research accompanying the process (§ 3.5).
The article explicitly deals with scale (§ 2.4) and scope (§ 4.4). It furthermore identifies long-term and immediate action, as well as the identification of priority actions (§ 3.1).
It elaborates on the need for monitoring and impact assessments by presenting the need for: cost-benefit analyses (§ 3.3); resource surveys (GIS) (§ 4.6); modelling (§ 4.7); economic assessment and valuation (§ 4.8); legal and institutional analyses (§ 4.9); and social cultural analyses (§ 4.10).
The document is based on and illustrated by case studies from which lessons learned and best practices are synthesised (Ch. 5).
The broad perspective and balanced focus on human and ecological context make this document very useful for those involved in the planning and implementation and evaluation of ICZM.

De Fontaubert, A.C., D.R. Downes and T.S. Agardy (1996): Biodiversity in the Seas: Implementing the Convention on Biological Diversity in Marine and Coastal habitats. IUCN Environmental Policy and Law Paper No. 32. Gland, Switzerland. 82 pp. ISBN 2-8317-0338.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
IUCN – CBD (1996)	B-	A	B-	0	0	B	A	A	0	A	A	A	A	B-	A	0	A	A	0	A	0

Introduction

The document aims to promote effective application of the CBD in coastal and marine environment. It elaborates on eight Action Items, five of which are those identified in the Jakarta Mandate viz. Institute ICAM, establish and maintain marine protected areas, use fisheries and other marine living resources sustainable, ensure that mariculture operations are sustainable and prevent introduction of and control or eradicate harmful alien species. The other three items (viz. Identify priority components of biodiversity, monitor their status and threats and identify measures needed for conservation and sustainable use, build capacity to use and share benefits of genetic resources and take responsibility for transboundary harm and global threats to marine biodiversity) identify actions that support the Jakarta Mandate's five recommendations.

Annotations

For each item it provides background information and identifies the relevant obligations of the parties under the CBD. It also identifies the recommended action both at national level and at the regional/ international level.

I.1, II.1, II.2. Conduct of an analysis to identify: a) components of biodiversity that are valuable and should be protected, b) the nature of the threats to these components and c) the nature of the measures needed to protect these resources is recommended. Broad guidance on 'what' needs to be done and 'how' are mentioned (p.36-38). Also promotes ICAM.

I.3. Identifies the establishment of MPAs as one of the eight Action Items to conserve ecosystems together with their

functions and their resources. And outlines the benefits of MPAs. For detailed guidance the document recommends the existing MPA guidelines such as Kelleher 2000 (p.15-17).
II.1, II.2. See above. In addition guidance on use of fisheries and other marine living resources and sustainable mariculture are included.
II.4, II.5, II.6, II.7. Mentions the importance of these items and encourages wide consultation, public participation, traditional local knowledge and provision of financing, but offers no guidance on how these can be achieved.
LII. Action Item 7 is devoted to building capacity to use and share the benefits of genetic resources. Actions that can be taken at the national level and at the regional/international level are defined (p.40-42).
V, VI. The need for inclusion of EIA and the Precautionary Approach is mentioned but not discussed in any detail (p.56).

Conclusions

The recommendations at the national level are useful and outlines the different steps that each party need to take to implement the Action Items. At the same time, it recognises that the Convention is designed to allow parties flexibility in implementing its requirements according to their cultural, political, biological and other circumstances. Therefore the recommendations are necessarily defined in general terms. The general recommendations are illustrated by specific examples drawn from different countries.

Post, J.C. & C.G. Lundin (Eds.) (1996): Guidelines for Integrated Coastal Zone Management. Environmentally Sustainable Development Studies and Monographs Series No. 9. The World Bank, Washington, D.C. ISBN 0-8213-3735-1.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
World Bank (1996)	A	A	0	0	0	A	0	A	B	A	A	B-	B-	0	A	A	A	A	A-	A	*

Introduction

The guidelines are a conceptual presentation of how Integrated Coastal Zone Management may be applied to contribute to evolving practice of environmentally sustainable development.

Annotations

I. Disappearance of biological diversity is regarded as a problem and the basis to undertake action towards ICZM (p.7).
I.1. Highlights population pressure on coast and need for sustainable resource use (p. v).
II. Principle of ICZM is to preserve and protect the productivity and biological diversity of coastal ecosystems (p.5), but there is very little specific reference to biodiversity or its components.
II.2. Identification of management issues that triggered ICZM (p.7, 11). ICZM effort is continuously monitored, including performance (p.13).
II.3. Harmonise activities in such a way that all of them are consistent with and support a broader set of overarching national goals for the coastal zone (p.2). In the framework of existing conventions (p.2). If at a particular location a problem occurs, the local government can get involved in ICZM before the national government does by drafting an initial concept paper which specifies the approach and specifics for a new ICZM program (p.7, 8). Decisions concerning the ICZM program fall under the responsibility of a sectoral agency, national planning office, or higher, depending on the scale of the program and responsibilities within the government structure (p.8). ICZM and national development plans, funding, and international aspects are considered (p.13).
II.4. Some of the management actions selected will involve strengthening of institutional arrangements and empowerment of local communities; reiterating customary rights and strengthening community organisation [...], (p.6).

II.6. Ensure input of all important stakeholders in policy formulation (p.5). Ideally the preparation of a concept paper should be a collaborative effort among government agencies (local and national), while coastal stakeholders should be invited to review the proposal (p.8). Elaboration on page 12.
II.7. Enforce regulatory measures to control new entrants to the coastal zone fishery; curtailing destructive fishing practices (p.6). Adopt strong regulatory measures such as "the polluter pays" and "precautionary" principles (p.6). New economic opportunities are part of the ICZM program (p.10). Elaborated on page 12.
III. Objective of ICZM is to establish policies for equitable allocation of space and resources in the coastal zone (p.5). Intergenerational equity is mentioned as one of the starting points based on Agenda 21 (p.6).
III.1. ICZM should be uniquely suited to a nation with respect for [...] its traditions, cultures and economic conditions (p.5). Information required in the ICZM program includes the cultural context and traditional coastal activities of indigenous people (p.11).
IV. Promote awareness of the concepts of practice of sustainable development at all levels of government and in the affected communities (p.6). > Important is the mention of an attitude change of government! Public education and community participation will be required [...] (p.6). Public should be well-informed as to counterbalance the ever existing opposition (p.9).
V. Environmental Impact Assessment and other mitigating measures will require convincing justification (p.6). Also page 12.
V.1. Sound responses to reduce the vulnerability of coastal communities and resources to global climate and sea level changes requires long lead times for planning purposes. Thus, even though the effects of some of these changes may be decades away, now it the time to consider proper action (p.4). Proactive approach (p.5). Precautionary approach adopted in concordance with Agenda 21 (p.6).
V.2. Refers to function of ICZM to protect human and natural resources from eventualities of climate change (p.4). Unanticipated events that will occur are included in the ICZM program (p.6). Even stronger, a major crisis can precipitate action (p.7).
VII. Asserts to include the entire coastal zone and its full range of resources (p.1). ICZM seeks to manage the coastal zone as a whole using the ecosystem approach (p.5). Multi-discplinary and holistic systems perspective (p.5).

Conclusion

This concise document provides a well-documented set of guidelines for Integrated Coastal Zone Management. Central in the design of ICZM is participation by those affected (p.1). It emphasises to find the optimum balance between

resources as valuable endowments that need to be preserved and the physical and biological opportunities for human use (p.3). Population growth increases pressure on the coastal zone (p.3). This will lead to conflicts that will intensify social and economic development problems (p.4). Climate change will also affect coastal resources (p.4). The document stresses the economic value of natural resources: The intrinsic value of coastal resources represents a "capital" investment for humankind by nature (p.4). ICZM could prepare for eventualities and minimise resource and human losses (p.4). An ICZM program should be the result of a process so that it can deal on a reactive basis as well. The process though should not take too long as to not lose interest of the stakeholders and government agencies (p.6).
The government is the ultimate decision-maker concerning coastal resources for the benefit of the people. Private resource ownership, however, is accepted as beyond their authorization (p.8). In an ICZM program, important roles will continue to exist for specialised agencies at both the national and local government levels, for research institutions, for users and owners of the coastal zone and its resources (stakeholders), and for the general public (p.8). Stakeholder involvement at the local level, as well as the involvement of various government levels are elaborately discussed (p.9).

The document elaborates on the steps to put an effective ICZM program in place (p.9, 10). It fully acknowledges the rights and needs of local stakeholders, including the private sector, however, traditional local regulations and management efforts are not mentioned.
In brief, the document provides sound guidelines and is useful in discussions about and in the development of Integrated Coastal Zone Management.

UNEP (1996): Guidelines for Integrated Planning Management of Coastal and Marine Areas in the Wider Caribbean Region. UNEP Caribbean Environment Programme, Kingston, Jamaica. 141 pp.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
UNEP-CEP (1996)	A	A	B-	0	0	A	B-	B-	A	0	0	0	B-	0	0	A	A	A	B	0	*

Introduction

These guidelines are aimed at providing and strengthening institutional competence to prepare and implement ICAM in the region. It is therefore intended to help and organise ICAM at the national level and also identifies the need for some selected regional approaches. The report focuses on institutional and legal arrangements, development and implementation of ICAM programmes and tools and techniques for implementation. The document is not very accessibly structured and unfortunately lacks an index.

These guidelines are targeted to the decision-makers and governmental and non-governmental organisations in general and those interested in the planning process related to the management of marine and coastal resources.

Annotations

I. Preservation and protection of productivity and biological diversity of coastal ecosystems is one of three operational objectives for ICAM in the region (p.72).

I.2. MPAs are recognised as a tool for ICAM and some guidance is offered in § 5.2.

II. Promoting rational development and sustainable utilisation of coastal resources is an operational objective applicable for the region.

II.1, II.2. These are to some extent covered in the guidance provided for the implementation of ICAM. The sections on resource characterisation and problem definition discuss the need to and how to identify components of biodiversity current status and projected status and reasons for decline (4.2).

II.3. An ultimate objective of an ICAM programme should be that it will become a functioning part of the national development planning process (3.6).

II.7. Economic instruments are discussed, but not specifically addressing biodiversity use (§ 5.5.2).
IV. Some discussion.
V.1. Both benefits and pitfalls of the EIA procedure are outlined and strategic environmental assessment is promoted as a means of overcoming some of the problems. However, detailed guidelines are not provided (5.3).
V.2. Discusses the importance of coastal hazard mitigation and the policy challenge that lies in striking a balance between coastal development and hazard mitigation, between economic growth and public safety. Risk (both ecological and disaster) assessment and management are also dealt with in some detail (3.10 & 5.6).

Conclusion

These ICAM guidelines have many elements that could provide for the implementation of the above identified objectives of the CBD. Conservation and sustainable utilisation of coastal and marine resources are emphasised in the ICAM agenda in the region.

World Bank (1996): Africa: A Framework for Integrated Coastal Zone Management. Washington DC.

	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
WB - Africa (1996)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Introduction

This document was prepared to provide "a rationale for incorporating ICZM into the post-UNCED strategy for sustainable development" that was being developed for Sub-Saharan Africa. A second and a key objective was "to provide a framework for World Bank investment in the sustainable management of marine and coastal resources in the region as a part of the Bank's larger programme for ICZM." Hence it includes profiles of the coastal zones of the West and East Africa including a detailed examination of the major technical and institutional issues threatening sustainable economic development along each coast. It also includes a review of the past efforts of the World Bank and other donors to address some of these issues and attempts to outline the needs for progress towards a better future. Finally a framework is presented for promoting ICZM in Africa as part of an overall investment strategy for the Bank.

Annotations

The framework for ICZM in Africa presented in Box 4.1 merely mentions some elements related to biodiversity issues.

Conclusion

In view of the above objectives of the document, it does not pay any significant attention to the CBD objectives as such and hence provides no guidance for the implementation of the CBD.

Cicin-Sain B., C. Ehler, R.W. Knecht, R. South and R. Weiher (1997): Guidelines for Integrating Coastal Management Programmes and National Climate Change Acton Plans. In: International Workshop: Planning for Climate Change through Integrated Coastal Management, Volume 1: Summary Report. Taipei, China, 24-28 February 1997.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
Cicin-Sain *et al.* (1997)	A	0	0	0	0	A-	0	0	A-	0	0	B	B-	0	A-	A-	A-	0	0	A-	*

Introduction

The document is the result of a workshop on Planning for climate change through Integrated Coastal Zone Management. It is contained as one of the chapters in the Workshop Summary Report. The document deals with certain aspects that are deemed to be significant for successful implementation of ICZM and integrating national climate change actions plans and their management strategies with coastal management plans. It deals with improving the scientific and information base, improving institutional capabilities, participation and consensus building, education, training and outreach and financing the implementing Management strategies. For these aspects, recommended actions and processes are defined and in certain cases, some guidance (e.g. possible options) is provided on how to make the recommended actions operational.

Annotations

I. Acknowledges the productivity of the coastal ecosystems and the significance of their natural functions. It states that biodiversity of the rare and fragile ecosystems and endangered and threatened species should be protected and protection of the living resources and their habitats should be given priority over exploiting nonliving resources. However, there is no elaborate guidance on how to accomplish this.

II. Sustainable use is not explicitly addressed but it recognises several features that an ICM programme should include to ensure sustainable development of coastal areas.

II.1, II.2. Monitoring is addressed under the Scientific and Information Components of ICM but focus is more on climate change data and information.

II.3. Recognises that ICM should be integrated into the general government structure (p.30) focuses on how an interagency mechanism can be developed (p.25).
II.4. Only identifies the need to recognise claims of indigenous people and follow their practices is recognised (p.22).
II.6, II.7. Roles of major stakeholders (p.28) and public/private partnerships (p.31) are mentioned. Some economic incentives for inducing desirable actions and some options for obtaining direct funding are identified (p.32) and public-private partnership is recognised as a means of reducing the financial burden for the state sector for ICM implementation (p.32) and ensuring stakeholder participation.
III.1. "Wherever possible, historically based claims of indigenous peoples to coastal/ocean space and ocean resources should be recognized, and their practices of living in harmony with ocean resources should be followed." (p.22)
IV. A brief section on Education, Training and Outreach focuses more on education and training than on public awareness. The need for an informed public through educational programmes is also identified (p.29).
VII. Many elements of the ecosystem approach are supported, although this phrase itself is not used.

Conclusion

None of the above aspects covered by the criteria are dealt with in any detail or high level of elaboration. However, as they relate to improving the implementation of IMCAM projects and programmes most of the recommendations and guidance provided can be adopted for operationalising CBD objectives.

Intergovernmental Oceanographic Commission (IOC) (1997): Methodological Guide to Integrated Coastal Zone Management, Manuals and Guides No. 36. Paris.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
IOC (1997)	A	A	0	0	0	A	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0

Introduction

The objective of this methodological guide is to assist in the organisation of environmental information and thereby to contribute to the concerted preparation of management plans which should be implemented by all the relevant actors viz. Decision makers, users and scientists. It comprises of six stages of information organisation which is finally expected to contribute to the definition of the real management strategy and provides a framework for organising the information.

Conclusion

It acknowledges that conservation of the natural integrity of the ecosystems (criteria I) and multiple uses (criteria II) but offers only a methodology for organising the information on these aspects.

Pullen, J.S.H. (1997): Protecting Marine Biodiversity and Integrated Coastal Zone Management. In: Marine Biodiversity. Patterns and Processes. R.F.G. Ormond *et al.* (Eds.). Chapter 17. Cambridge University Press. ISBN 0521552222.

	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.	VIII
Document:																						
Pullen (1997)	0	0	A	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0

Introduction

This paper describes the threats/impacts on the marine environment and highlights the fact that assessing effects of above threats on the marine biodiversity is not easy as many processes are not fully understood and due to taxonomic difficulties. The paper deals briefly with measures identified by CBD for inclusion in the National Biodiversity Strategies and highlights the need to integrate these separate measures with each other through mechanism such as ICZMC. Finally it describes the typical elements of ICZM and discusses some policy considerations but does elaborate or provide any guidance as such on any of the criteria selected.

Annotations

I.2. The need for and selection of MPAs is described (p. 404).
II.4 Discusses the role of indigenous people in ICZM briefly (pp. 406, 407, 409).

Conclusion

The article promotes MPA as a priority for conserving marine biodiversity but recognises that it is important to regulate the exploitation of biological resources outside MPAs. It also mentions the need to consider the role of local and indigenous people and the involvement of the local community, but does not pay any further attention to these aspects.

ACOPS (Advisory Committee on Protection of the Sea) (1998): Report of the Workshop Development and Implementation of Economic Instruments for the Protection of the Marine and Coastal Environment by Local Governments. 45 pp.

	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
ACOPS (1998)	0	0	0	0	0	0	0	0	0	0	0	0	B-	0	0	0	0	0	0	0	0

Introduction

The document includes the "Lisbon Charter" and a background paper on the Development and Implementation of Economic Instruments for the Protection of the Marine and Coastal Environment by Local Governments, and Guidelines for the Application of Economic Instruments in Coastal Areas.

Annotations

II.7. Use of economic instruments by local governments in the subject of this report. Hardly any attention is paid to social consequences.

Conclusion

The document presents a rather superficial overview of economic instruments.

Cicin-Sain, B. & R.W. Knecht (1998): Integrated Coastal and Ocean Management: Concepts and Practices. Island Press Washington D.C. 517 pp. ISBN 1-55963-603-3.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.							
Document:																												
Cicin-Sain & Knecht (1998)	B	B	B-	B-	A	B	0	B	B	B-	B-	A	B	0	B	B	A	0	B-	A+	0	A	B	B	A+	0	A	

Introduction

The intent of this book on Concept and Practices of "Integrated Coastal and Ocean Management" (ICM) is "to present an account of the concept of ICM and to illustrate how it can be accomplished". It contains both a description of "fundamental concepts" and a "practical guide" for ICM.

Annotations

I.2. Only very briefly addressed (pp. 222-229).
I.3. Discussed in terms of zonation (pp.222-229).
I.4. Hardly any elaboration (p. 230).
II. Cf. above under general, this is a very important element of the book.
II.2. Regulation and management of such activities are well covered, however no significant attention is paid to monitoring thereof.
II.3. This topic, too, is well covered.
II.4. Cf. III.1.
II.6. Although both sustainable use and the need and methods for public participation and involvement of stakeholders are addressed, little attention is paid to the role of private actors in promoting sustainable use (pp. 130 – 133).
II.7. Economic incentives are only very briefly touched upon, in general context without specific reference to biodiversity protection. It is stated that ""relatively little experience with most of these approaches has been reported in the context of ICM."

III.1. Although as one of the guiding principles is stated "The historically based claims of indigenous peoples to ocean space and ocean resources should be recognized and their traditional practices of dealing with ocean resources from a perspective of kinship and harmony should be followed whenever possible" the subject receives hardly any further attention. Participation of local communities is well covered, however (p. 56, 85).
V.1. EIA is mentioned as a tool and references for more information are given (pp. 186/7, 289).
VII. Phrase not used; most elements covered, not all.

Conclusion
Biodiversity as such is only very briefly mentioned. Conservation of biodiversity is not the book's main angle and is therefore scattered.
However, sustainable management of coastal and marine areas is the book's main theme, including the aims of maintaining essential ecological processes, life support systems and biological diversity. It mentions all international obligations (p.77 ff., 97 ff.). Hence, although biodiversity is rather under-exposed, the document provides a wealth of information on concepts and practices of management to support sustainable use and conservation of biodiversity.

Scialabba, Nadia (Ed.), Integrated Coastal Area Management and Agriculture, Forestry and Fisheries. FAO Guidelines. FAO, Rome 1998. 256 pp. ISBN 92-5-104132-6.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
FAO (1998)	*	0	A+	0	0	B	A	B	B	0	A	B	B	0	0	A+	B	B	0	B	*

Introduction

The main purpose of this document is to provide guidance on the integration of the agricultural, forestry and fisheries sectors into Integrated Coastal Area Management (ICAM).

Annotations

I. In line with the remark on objectives above, the need for biodiversity conservation is not explicitly recognised, but implicitly it is used and elaborated in many implicit points.
I.2. Establishment of protected areas is briefly discussed. (p. 33, 76).
II. Although not explicitly mentioned as an objective (cf. General and I. above), sustainable use of the components of biodiversity is a major subject of these guidelines.
II.1. Although much attention is devoted to monitoring and information gathering in a general sense, components of biological diversity, other than directly used resources, receive remarkably little attention.
II.2. For the treated subjects - agriculture, forestry and fisheries - this is the main subject of this publication.
II.3. These guidelines focus on such integration.
IV. Very little attention is paid to education and raising awareness (*e.g.* for fisheries) (p.184).
VI. The precautionary approach is supported and explained at several points; specific attention is paid in relation to fisheries management. (p.1.6.3., 25, 31, 103, 167)
VII. While the ecosystem approach is not explicitly mentioned, many of its elements are taken into account. However, a clear focus on the protection and conservation of biological diversity lacks. Indigenous and local knowledge and practices are also hardly treated.

Conclusion

Its emphasis is mostly on management, planning and process aspects rather than on explicit attention for objectives. Sustainable use of resources is the main topic. The chapter on agriculture is very limited, which leads to a rather unbalanced document. The agricultural chapter also hardly devotes any attention to biodiversity related issues. The limited index as well as text boxes which are not referred to in the main text make it difficult to access the document's information.

IADB (1998): Strategy for Coastal Marine Resources Management in Latin America and the Caribbean. Bank Strategy Paper. Washington D.C.

Lemay, M.H. (1998): Coastal Marine Resources Management in Latin America and the Caribbean. Inter American Development Bank, Technical Study No. ENV-129, Washington D.C.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
IADB (1998)	A	0	0	0	0	A	A-	0	0	0	0	0	A-	0	0	0	0	A	0	A-	0

Introduction

These two documents are taken together as the show a large overlap, the IADB Strategy Paper being based on the Technical Study. They present guiding principles for IMCAM as well as objectives and actions for the Bank's involvement in IMCAM. Main focus of these is on (the process of) good governance. However very little attention is paid to protection of biodiversity.

Annotations

VI. Only mentioned in the context of fisheries management.

Conclusion

The documents give support to important principles for biodiversity related IMCAM *e.g.* "maintaining the biological diversity", protection of ecosystems, participatory governance, integrated and precautionary approaches. It identifies actions and mechanisms through which the IADB wants to implement these. Because of this nature of the document, it offers little guidance for setting up and implementing IMCAM.

Commission of the European Communities (CEC) (1999): Lessons from the European Commission's Demonstration Programme on Integrated Coastal Zone Management (ICZM), CEC, Luxembourg.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
CEC (1999)	0	0	0	0	0	A	0	0	A-	0	0	A	0	0	0	0	0	0	0	A	0

Introduction

During 1997 – 1999 the European Commission executed an extensive "Demonstration Programme" on Integrated Coastal Zone Management. One of its results was this "reflection paper", describing general principles and policy options for ICZM. It gives a description of ICZM and identifies 7 general principles for "good management of Europe's coastal zones". The emphasis is on "sustainable management of coastal zones". The principles are of a very general nature regarding the management of natural resources and contain no explicit support for protection of biodiversity. "Ensure that decisions taken today do not foreclose options for the future" is one such general principle.

Annotations

II.3. Not specific for biodiversity.
II.6. Not specific for biodiversity.

Conclusion

It is surprising how little support this outcome of the EU Demonstration Programme offers to biodiversity related aspects of IMCAM. Statements of the document are formulated in very general wordings.

Kelleher, G. (Ed.) (1999): Guidelines for Marine Protected Areas. IUCN, Gland, Switzerland and Cambridge, UK. xxiv + 107 pp. ISBN 2-8317-0505-3.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.	VIII
Document:																						
IUCN – Kelleher (1999)	B	B	B	B	A	B	B	B	A	A	B	B	B	0	0	A	A	0	0	0	A+	0

Introduction

The aim of these guidelines is to help countries establish systems of marine protected areas, as a key component of integrated management of their coastal and marine areas and as part of their sustainable development. These guidelines set out various actions needed to make an effective MPA, from the early planning stages to implementation. It recognises that IMCAM is the broader context within which MPA should be managed, but does not provide guidance on IMCAM. Unfortunately the document hardly refers to other documents and lacks an index.

Annotations

I. Recognises that MPAs are essential for marine conservation and emphasises that conservation should be the primary objective of MPAs (p. 14).

I.1, I.2, I.3. Are dealt with in detail. Provides criteria for selection of sites and for MPA , guidance on establishment, and management of MPA and recognises the importance of ensuring sustainable development in adjacent areas ex. Regulating aquaculture, mining and other land based activities (3.1, 3.4, 3.6, 3.8).

II. Although it calls for more emphasis on conservation, the document acknowledges that it is not feasible to divorce the questions of resources use and conservation (p. xiii) and provides guidance on making ongoing uses sustainable through detailed guidelines on management plans, zoning plans (6, annexes 2 & 3).

II.1, II.2. Provides guidance on what the research/monitoring questions should be, design of research/monitoring programmes, how to implement the programme including involving local people, and how to use the results for review (9).

II.3. The need and importance of integrating the establishment of MPAs with other policies for use of land and sea is recognised and the adoption of the ecosystem approach is promoted (1.2) but offers no details.
II.5, II.6. Guidance on these aspects is rather well elaborated. Section 4 provides guidance on making partnerships with communities and other stakeholders and Annex 1 provides in details the steps towards creating a co-management partnership. Involvement of the private sector in ensuring financial sustainability is also addressed (8.4)
II.7. Concept of financial sustainability, incentives and perverse incentives, are described. Some options for financial sustainability is provided and some examples of MPA adopting some of these innovative approaches for financial sustainability are identified.
III.1. § 4.2 deals with relations with local communities and stakeholders.

Conclusion

This document provides valuable guidance on conservation of coastal and marine biodiversity within MPA. It is not exclusively to the mangers of MPA but is also for policy makers and planners. Hence the guidance in some areas are rather broad but also includes very specific guidance ex on the design of management plans and zoning plans. This complements well with Salm & Clark (2000) which is directed more to application at field sites.

UNEP/MAP/PAP (1999): Conceptual Framework and Planning Guidelines for Integrated Coastal Area and River Basin Management. Split. 78 pp. ISBN 953-6429-27-6.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
UNEP-MAP (1999)	0	B	A	A	0	A	B	A	B	0	0	A	B	0	0	A	B	A	A	A	A

Introduction

Integrated Coastal Area and River Basin Management (ICARM) is a new approach. The priority issues in this approach are: capacity building, coastal land-use planning, river basin development, and resource management, enforcement, coastal and riverbanks protection and conservation. The preparation of a set of guidelines was the first step in the development of ICARM as a tool for policy-makers. The guidelines are meant to serve as a concrete basis for further action. The first part presents a conceptual framework; the second part presents practical procedures.

Annotations

I. Biodiversity as such is not mentioned, more about coastal degradation and socio-economic functions.
I.1. Survey of basic characteristics of structure and dynamics of natural and human ecosystems (p.43). Identify types of ecosystems (p.45). See also app. 2 on coastal classification (p.71).
I.2. Delineation of management zones (p.47, 60). Coastal environment can be divided into: critical zone, dynamic zone and wider zone of influence (p.48).
I.3. Sustainable development in the framework of environmental conservation (no particular mention of bufferzones), (p.viii). Bufferzones are specific areas for specific functions (p.61).
II.1. Monitoring of natural forces and processes though a number of variables (p.53).
II.2. Interaction between natural and human ecosystems, plus analysis of critical factors and processes in order to define management objectives (p.43).
II.3. Ensure multi-sectoral and multi-level integration in decision-making, linking broad scale management to local level intervention (p.viii). ICARM requires a high level of integration within and between institutional structures

(p.viii). ICARM must function at national sub-national and local level (p.viii). Definition of sectoral and corss-sectoral objectives (p.49) (+ p.50).
II.4. Customary use not mentioned and it not part of the predefined assessment categories.
II.5. There is no particular support of local populations, they are included in the process.
II.6. ICARM requires multi-sectoral approach (p.vii). Multiple use of resources (p.viii). Public participation is essential, as well as that of the 'corporate' stakeholders (p.48) (+ p.50).
II.7. Economic measures and instruments (p.55, 62). Interesting tool is a environment-development scenario (p.59).
IV. Identification of the key factors (triggers) for ICARM which may contribute significantly to the awareness of the public (p.45). Public awareness, capacity building and education (p.62) is important to gain public support.
V. Monitoring and evaluation (p.44, 54). Document suggests both Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA), (p.63).
V.1. Allow for participation of all actors in the planning process (p.viii, 51, 52).
V.2. In order to mitigate or prevent possible negative effects [...] risk management techniques should be part of ICARM (p.64). Vulnerability analysis offers supplementary information (p.64).
VI. It is necessary to adopt a pro-active approach (p.viii, 43, 49).
VII. The ecosystem approach is implicit in the sense that river basin and watershed are linked to coastal zone. The two areas are linked through a number of natural and socio-economic processes (p. vii).

Conclusion

The analysis of this document mainly focused on the guidelines (part II of the document). The process phases are described (p.43). Document mentions time and scale as important in the planning phase (p.45).
The document provides a good overview of instruments deployable in ICARM aside from economic instruments (p.55). Other instruments important in ICARM are: information management (p.56); regulation and control (p.60); economic evaluation of costs and benefits (p.64), and conflict resolution mechanisms (p.65). A number of tools can be employed in ICARM such as data-bases, GIS, SEA, EIA, DSS, CCA and economic valuation of costs and benefits, suggesting an innovative approach (p. viii).
Interesting is a suggestion for systems analogy for the human system (p.73). However, a weak point is that the human system is analysed through their social, demographic, and administrative structure (p.19). Cultural aspects and customary resource management are not mentioned. The approach is rather technical with a strong emphasis on

variables and factors that can be measured, not on the process or cultural context (including customary resource use). Equity is not an issue in the approach.

Document is rather elaborate with much text and repetition. It is very much predefined, with not much liberty to include other factors and variables.

Commission of the European Communities (CEC) (2000): Communication from the Commission to the Council and the European Parliament on Integrated Coastal Zone Management: A Strategy for Europe. COM(2000)547. Brussels.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
CEC (2000)	0	0	0	0	0	A-	0	A-	A-	A	0	A	A-	0	0	0	0	0	0	A	*

Introduction

Rather than aiming to provide guidance on IMCAM in a general sense, this document presents the EU strategy for IMCAM. However, it lacks the identification of clear objectives, but "consists of a series of concrete actions". In the Annex to the Strategy, the European Commission presents 8 principles of Integrated Coastal Zone Management. These relate mainly to different aspects of the management process and are formulated in very general terms. The document contains no explicit objectives in terms of protection or conservation of biodiversity.

Annotations

None.

Conclusion

This document neither offers much guidance on IMCAM in relation to biodiversity aims nor explicitly supports such aims in formulated objectives or principles.

Council of Europe (2000): European Code of Conduct for Coastal Zones. In: Model law on sustainable management of coastal zones and European code of conduct for coastal zones. Nature and Environment Series No. 101. Strassbourg, France. ISBN 92-871-4153-3.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
Council of Europe (2000)	B-	A	A	0	A	*	A	*	B	0	0	A	B	0	B-	B-	B	B-	A-	A	*

Introduction

The European Code of Conduct for Coastal Zones has been published by the Council of Europe, to provide "practical guidelines for the conservation of nature and biodiversity in coastal areas". The document is however mainly sectoral in nature: after a chapter on strategic principles follow 12 sectoral chapters and subsequently a chapter "Integrated Coastal Zone Management" at the end. Obviously, an integrated approach is not the main feature of this document. Also, the sectoral approaches are not embedded within a broader framework. The sectoral guidelines mainly identify opportunities for to shift towards more sustainable practices. Although the official year of the publication is 2000, the Code was already adopted in 1997 and prepared in the years before that.

Annotations

I. Limited: p.17.
II. Not explicitly addressed, but extensively elaborated for different sectors.
II.2. Not explicitly addressed, but elaborated to some extent for different sectors.
VII. Not explicitly addressed; some elements covered, e.g. Principles 3 (p.17), 4, 6.

Conclusion

The main observation on this document is that it follows primarily a sectoral approach, not well embedded in a broader framework. To IMCAM only small section is devoted. The sections on strategic principles and on integrated management are well in line with the objectives of the CBD, but offer little elaboration.

Salm, R.V. and Clark, J. (2000): Marine and Coastal Protected Areas. A Guide for Planners and Managers. IUCN, Gland. 371 pp. ISBN 2-8317-0540-1.

	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
IUCN - Salm & Clark (2000)	B	B	B	B	A+	B	A	A	A	A	B	A	B	A+	A-	B	A	0	*	0	A

Introduction

This document is intended to guide those persons in tropical countries with a mandate to plan individual or national systems of protected areas. It describes the basic principles and approaches to establish MPA. It is meant to complement modern texts covering policy aspects of MPA selection and design by providing approaches and tools for everyday application at field sites. A major premise is the recognition that of the intrinsic linkages between marine, coastal and terrestrial realms, which preclude the effective management of the marine area independent of the adjacent land habitats. The book lacks an index.

Annotations

I.1, I.2. Conservation of biodiversity within MPA is elaborately addressed. A detailed section on site selection (4) provides guidance on identifying important components of biodiversity and provides principle, a process and practical lists of criteria (ecological, social, economic regional and pragmatic) are provided.
I.2. As this is the main objective of the book it has elaborate guidance on this aspect.
I.3. Control of uses in the adjacent zones of influence through CZM programmes is recommended; zoning and dealing with external influences are treated.
I.4. The role of MPAs in replenishing depleted stocks (especially of fish species) is discussed with examples (p.29). There is some information on ecosystem restoration (5.6).
II. Sustainable use of biodiversity within MPAs is addressed throughout as the book acknowledges that sustainable use should be permitted within MPAs (according to the MPA objectives).This is also reflected in the guidance on

management plans and zoning plans (p. 42-45). The issue of determining the carrying capacity is discussed (p.53) offers no guidance.
II.1, II.2. These aspects are discussed but not any great detail. Use of GIS and remote sensing are promoted as monitoring techniques, but guidance for a monitoring programme is not provided.
II.3. The need to embedded MPAs within national programmes is suggested (6.1 & 6.5).
II.5. Community engagement through planning and management of MPAs is elaborated upon with guidance on types of participatory approaches, creating and fostering partnerships.(section 3). Participatory approach used by an MPAs in Africa is discussed in detail.
II.6. No specific attention given but private sector participation is included in the some of the case studies given for economic innovations.
II.7. Identifies some innovations that have come into place over the last decade in the application of economic tools and measures to marine management problems. These tools and incentives (e.g. valuation techniques) can be used to justify the existence of MPAs, to prevent degradation and loss and to raise the funds necessary to conserve the marine environment. Case studies on the application of economic tools and incentives are also provided
III. Activities leading to decreases in genetic diversity, importance of preserving genetic diversity, are discussed. MPA are one of three ways to preserve marine genetic diversity (p.20-22).
III.1. Mentioned under general guidelines (§ 6.8) .
IV. Education and outreach (§ 5.4) is has a major role in the success of MPA and can also be used to obtain 'feedback' on programme performance. Some techniques are discussed but detailed guidance is not included.
V.2. Protection from Natural Hazards is discussed in § 1.10.

Conclusion

In view of its purpose, the document deals exhaustively with establishment and management of MPAs. However, it concurs with most of the CBD objectives and hence the criteria selected. It pays no significant attention to criteria V.1, and VI.
Rather well elaborated guidance is found in relation to criteria I, I.1, I.2, II.5 and II.7.
This is a practical guide for MPA practitioners. Several case studies are used to illustrate topics by 'real world' examples. This version gives more emphasis on community participation, an approach that became popular since the earlier edition. It is less focussed on coral reefs than most of the MPA documents and provides guidance on protected

areas for coral reefs, lagoons and estuaries, small islands and for beaches. It also includes 25 case studies form the tropics. The book is a good complement to the guidelines for MPA by Kelleher (2000).

Shine, C. and C. Lefebvre (2000): Coastal Conservation: Policy and Legal Tools. Paper prepared for the World Conservation Congress 4-11 October, 2000, Amman. IUCN. 108 pp.

	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
Shine & Lefebvre (2000)	A	0	A	0	0	A	A	A	A	A	B	A	B	0	0	A	0	0	0	0	0

Introduction

This document has been prepared in terms of IUCN's mandate to support the Ramsar Convention with regard to conservation of coastal wetlands, the Convention on Biological Diversity's marine and coastal ecosystems thematic programme and the biodiversity related protocols of the several regional seas conventions. The specific purpose of the document is not clear. However, based on this document, a recommendation on Land –use policies and legal tools for Coastal Conservation was submitted to the World conservation Congress held in Amman In October, 2000 and approved by consensus.

Annotations

I.2 The creation of MPA networks at the regional and national level, is promoted as a means of securing more effective protection of habitats and species with a range that straddle national boundaries (p.27).

II. Sustainable use is implied recommended policy but is not addressed explicitly.

II.1. Monitoring natural habitats and their biological diversity is briefly dealt with (section 1.3).

II.2. Describes a range of processes and activities that need to be taken into account and emphasises on some of the more important and related policy issues. Also discusses several planning and land use regulations for managing activities that cause significant threats.

II.3. Need for policy integration is discussed briefly in section 4.5 under mechanisms for coordination

II.4. Identifies the need to incorporate protection of customary and user rights of local communities, whose methods of land use contribute to conservation objectives, within land ownership management measures (P 21). This is also included in the discussion on community based management of coastal land (p.83).

II.5. & II.6. Consulting coastal stakeholders to build awareness about the environmental problems is considered essential for implementing conservation policies (p.32) and highlights the importance of stakeholder participation and their commitment for conservation decision making and sustainable policy (p.33). Addresses how this can be achieved through various mechanisms and describes experiences from a few countries. This is also included in the discussion on community based management of coastal land (p.83) .

II.7. Describes rather elaborately how tax systems, public or private funding, indirect incentives and voluntary approaches can provide economic incentives for coastal conservation. Examples of application of the incentives in different countries are included.

Conclusion

This document describes certain policy issues and goals for conservation within integrated coastal area management and supportive legal and institutional frameworks that are necessary to implement this policy in a consistent, rational and cost effective manner at national and local levels. A positive aspect of this document is that it provides examples of how specific policies, measures and mechanisms are applied in a variety of countries. This provides very useful reference to obtain further guidance.

Van der Heijden, P., and C. van Zwol (2000): Marine Biodioversity. Policy and Best Practices Document 5. Ministry of Foreign Affairs, The Hague, The Netherlands.

Criteria	I	I.1.	I.2.	I.3.	I.4.	II.	II.1.	II.2.	II.3.	II.4.	II.5.	II.6.	II.7.	III.	III.1.	IV.	V.	V.1.	V.2.	VI.	VII.
Document:																					
Van der Heijden & van Zwol (2000)	A	A	A+	A+	A+	A	A	A	A+	A	B	0	A+	A	A	A+	B	A	0	0	A

Introduction

The document outlines the importance of marine living resources for humankind and gives guidelines for the sustainable development with regard to marine biodiversity. A number of field experiences are discussed together with the lessons learned. It has been prepared for personnel of the Netherlands' government especially at embassies abroad.

Annotations

I. Biodiversity is defined and explained (p.11).
I.1. Components of marine biodiversity are described (p.11).
I.2. Defined and illustrated with case on page 31 and 48, 49.
I.3. Shrimp farming in combination with mangrove forestry can control conversion of natural areas (p.40). Creation of bufferzones and broader conservation measures (p.48, 49).
I.4. Link between ecosystem components, exploitation and management (p.36,37). Rehabilitation of marine biodiversity is described on page 41, 42, and 56.
II. Bio-prospecting (p.41, 53).
II.1. Research (p.57).
II.2. Marine aquaculture projects […] should follow the guidelines and rules designed to minimise adverse ecological and social impacts (p.10). Regular monitoring and recording activities help to demonstrate the effects of the marine reserve […] to local residents, authorities […] and greatly enhance the value and impact of the project […]. (p.33).

II.3. Management of marine resources by the Netherlands' government is embedded into international conventions and national policy documents (p.24, 45). A legal base is needed for institutions with strong representation of resource users to play a significant role in resource management (p.33). All activities related to use and management of the coastal zone and its living resources should take place with in the framework on an ICZM plan (p.47). National legislation in relation to use and conservation of marine resources (p.58).
II.4. Collapse of traditional common property resource management systems lie at the basis of over-exploitation (p.19).
II.5. Community management and development are important (p.26, 33, 34). Local capacity must be built (p.28). Awareness raising is important, but technical aspects too (p.28). Reduction of excessive fishing pressure on national and lower levels can be countered by improving the capacity and capability to manage fisheries […], 50.
II.6. Not specifically mentioned, but tourism is included in the analysis (p.43).
II.7. The biological diversity of coastal ecosystems offers possibilities for sustainable development of the population (p.20). If continuous benefits flow to the community, they will have a stake in protecting the coastal ecosystems (p.26). Combined projects may be successful for sustainable development e.g. mangrove forestry/shrimp farming (p.29). Also, alternative livelihood is important (p.29). Elaborate on page 34.
III. […] It crucial to make sure that the interests of the coastal resource users are not affected and that a fair part of the benefits goes to the coastal communities (p.10).
III.1. ICZM has to be initiated with understanding for the local socio-political context (p.27).
IV. Increase in knowledge on biodiversity […] in developing countries is seen as a prerequisite for protection of biodiversity (p.25). Community education is important (p.35). Government officials and field staff need to learn about and consider the views of resource users and other stakeholders (p.35). Public awareness raising (p.50). Training, education and public awareness (p.56).
V. The impact of planned activities on marine living resources is considered through Environmental Impact Assessments (p.45, 46).
V.1. Implicit in EIA (p.45,46).
V.2. Emergency responses were not mentioned.
VI. Not mentioned, but implicit.
VII. Implicit.

Conclusion

In this document, the ICZM approach is portrayed as multi-sectoral and integrated. It is a continuous, dynamic and adaptive day-to-day process. Interesting aspects mentioned are that ICZM projects in developing countries often depend heavily on foreign support and have low national government ownership (p.30), and the important role of enforcement and compliance in marine resource management (p.32). Respect for cultural context is important, but traditional management structures out of the scope of the analysis.

A lot of case study material with useful lessons, they are not synthesised at a later stage. A step-by-step approach to come to IMCAM is presented at page 47, but the document lacks a firm direction. (It applies the CBD criteria in the analysis, but does not provide guidelines.)