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WORKING TOGETHER FOR THE COAST

Catchment, Shoreline and Estuary Management Plans



ENVIRONMENT
AGENCY



Dr I Paterson, March 1996



ENGLISH
NATURE

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Environment Agency
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Foreword

This paper was produced during a six month secondment of Dr I Paterson from English Nature, Grantham to CRN section NRA Anglian Region in 1995, which sought to use the expertise available in EN to help develop partnership approaches between the two organisations in areas of common interest.

Early discussions with P Barham (CRN Manager Anglian Region) identified a need for guidance for those involved in producing Shoreline and Catchment Plans especially where Estuary Management Plans were planned or in production for the same coastal area.

The advice contained in this document reflects the state of the planning process in 1995. There have been several changes since the document was written. Most notably the NRA became a part of the Environment Agency. The Agency is now developing Local Environment Agency Planning which builds on the momentum established through catchment planning but which will embrace the wider responsibilities and duties of the new organisation. Coastal zone management is also a dynamic and evolving field with new guidance being developed.

Nevertheless the principles and concepts described in this paper are an important contribution to the evolution of these plans and facilitating a more integrated and efficient approach to their production.

ACKNOWLEDGEMENTS

This paper has benefitted from the comments of a wide variety of staff from within English Nature and the Environment Agency, but particularly Peter Barham, Craig Woolhouse, Richard Nunn (the Agency), Richard Leafe and Angela Moffat (EN) and John Ash (MAFF). The author would also especially like to thank Peter Barham for his advice during the secondment and all the staff of CRN section for their hospitality and assistance during his stay with them.

Summary

Estuary, Shoreline and Estuary Management Plans are three initiatives which have developed independently to meet different roles, and each can be produced for the same stretch of coast. This could lead to duplication of work, potential conflict between plans, confusion between plan consultees and those involved managing the coast. Guidance from government indicates that these plans should be prepared with the aim of an integrated approach to coastal management. Guidance on the preparation of each of these Plans is available elsewhere, but no specific guidance is available on how they may be integrated.

This paper seeks to summarise and clarify the roles of each Plan, identifies areas of overlap between the Plans and mechanisms for producing a more integrated approach which could produce complementary Plans.

Analysis of each Plan has identified particular products which each Plan can produce eg strategic objectives or actions which can be adopted or used subsequently by other Plans. Integration can be further assisted by utilising common environmental data for each Plan, involving those who have prepared one of the other Plans, and in the consultation procedures.

Individual Plans should clearly identify their roles and responsibilities with respect to other Plans. If an objective or issue identified in the preparation of a Plan falls outside its remit or is best addressed through one of the other plans, then it should delegate the responsibility and identify an action for the other Plan accordingly.

Taken together these steps should produce complimentary Plans which produce an integrated approach to managing the coast.

Recommendations

1. The production of these Plans should be seen as part of an integrated process of coastal zone management through complimentary Plans.
2. Recognise and where necessary agree the role and responsibilities of each Plan.
3. When preparing one of these Plans, screen any pre-existing Plans for environmental data, objectives or actions which the proposed Plan should adopt or address.
4. When producing one of these Plans, consult and as far as possible involve those who have been involved in producing other Plans to avoid duplication of content, effort and consultation as far as possible and to ensure a complimentary approach and content between Plans.
5. When an issue or objective is identified in the preparation of a Plan which falls outside its remit but is relevant or best addressed by another Plan, then this together with the appropriate action should be clearly identified eg recreational conflicts identified in an SMP may indicate the need for an Estuary Management Plan.
6. Plans should avoid highly prescriptive objectives or actions which are within the remit of other Plans.
7. Plans should clearly identify those particular products eg strategic objectives which are required by other Plans and should be incorporated during their initial production or review. More detailed guidance is available in Appendix 1

1.1 Introduction

One of the first national initiatives to promote an integrated approach to coastal zone management was produced by English Nature which launched a 'Campaign for a Living Coastline' in 1992, to encourage the preparation of Estuary Management Plans (EMPs). EMPs are now regarded as a means of delivering the Government's commitment to sustainable development made at the Biodiversity Conference in Rio and are a target in the Biodiversity Action Plan'. Initially 12 major estuaries were targeted for EMPs in 1992 and by 1995 33 estuaries had Plans in production.

The coastal zone can now be covered by a variety of overlapping non-statutory initiatives seeking to manage the coast in an integrated manner. The NRA can be involved in producing three different types of plans for the coastal zone:

- Shoreline Management Plans;
- Catchment Management Plans;
- Estuary Management Plans;

which can overlap both in their scope contents and procedures. The general relationship between the three types of plans is indicated in Figure one. General guidance from MAFF indicates that each of these Plans should take account of the other Plans in their preparation to facilitate relevant information exchange and avoid duplication between Plans.

This note seeks to develop more detailed guidance by:

- describing briefly the plans;
- indicating the interrelationships;
- and identifying generic principles and actions;

so that in preparing Plans the environmental and other relevant objectives can be identified and Plans integrated in their approaches to those issues affecting their common coast.

The scope and processes of production of the three Plans are similar, containing several areas of overlap and some of the participants may also be the same. Given this overlap there are benefits to participants in all Plans in attempting to ensure a coordination between plans, which would :

- avoid or minimise duplication of effort and conflict between Plans;
- increase the efficiency of the processes for all plans;
- minimise costs;
- minimise potential confusion for consultees;
- and a coordinated approach to deliver effective, integrated plans for the coastal zone.

Other benefits include:

- improved relationships between statutory bodies or authorities by working in partnerships;
- a shared vision for the coast.

2.1 Catchment Management Plans

Integrated Catchment Management Plans are "at the heart" of NRA's work (NRA Corporate Plan 1993). The first Consultation reports were published in 1989 and since then there have been changes in the content and presentation of the Plans. CMPS act as a vehicle for setting priorities, allocating resources in consultation with others. CMPS also need to be set in the context of statutory plans eg Local Authority development plans, and non-statutory plans or policies of NRA and other consultees eg English Nature.

Internal Guidance on CMPS has been issued by NRA, and advice on integrating conservation input to CMPS produced internally. EN have also published "*Conservation in Catchment Management Planning - a Handbook*" in consultation with NRA, which aims to help EN and other conservation bodies contribute to the CMPS process. The handbook describes the scope and purpose of CMPS, steps in its preparation, liaison between NRA and EN, and a checklist of topics which should be considered. The following sections describing CMPS are based on this advice. However this advice concentrates on the freshwater aspect of river catchments.

Figure 1 Management Plans which affect the Coast (from Shoreline Management Plans A guide for Coastal Authorities).

	Shoreline Management Plan	Coastal Zone Management Plan	Catchment Management Plan
Primary Purpose	Strategic planning for coastal defence	Framework to help resolve competing pressures in the coastal zone	Strategic planning of Environment Agency functions
Main Issues Covered	Coastal defence	Coastal defence Agriculture Fisheries Development Recreation Landscape Environment Navigation	Flood Defence Water resources Navigation Conservation Fisheries Pollution
Extent and Boundaries	Sediment cell/sub-cell areas such as estuaries or longer stretches of open coast	Varies: may focus on specific	Main river catchments
Lead Authority	Maritime District Council or Environment Agency (in collaboration with other members of the relevant coastal group)	District or County Council, Borough Council or other interested organisation	Environment Agency

note Estuary Management Plans are one type of Coastal Zone Plan

In December 1994 the NRA reached agreement with EN that as far as possible the CMP should seek to integrate its work with that being conducted by EMPS.

2.2 Preparation of Catchment Plans

The preparation of a CMP should involve NRA and others with an interest in the water environment in:

- Identifying and recording physical attributes, catchment uses and resources;
- setting environmental targets for catchment uses;
- comparing targets with current status of the water environment;
- identifying issues and developing options for addressing them;
- undertaking consultation on the uses, targets, issues and options;
- preparing action plans to address issues;
- implementing action plans;
- Identifying a methodology for monitoring and reviewing the CMP.

The Plan is typically prepared over a fifteen month period in two stages:

- Consultation Report (see 2.3);
- Action Plan (see 2.4).

Annual reviews are then prepared to review progress.

2.3 Consultation Report contents

The first stage consultation report should contain the following:

- introduction to the NRA and CMP process;
- overview of the catchment;
- NRA's vision for the catchment;
- description of the catchment uses, activities and resources;
- objectives and current status of the catchment;
- issues and problems within the catchment;
- proposed actions or options to solve issues/problems, and meet objectives.

The Report is given a public consultation generally over a three month period.

2.4 Action Plan contents

Following the public consultation the plan is revised, its contents to include:

- catchment vision;
- introduction to the process;
- review of the consultation;
- overview of the catchment;
- activity plans;
- future review and monitoring.

This Plan will be considerable shorter than the original Consultation report.

2.5 Role

The CMP Action Plan should:

- seek to achieve strategic objectives within a multi-functional approach;
- concentrate on those issues and problems confirmed through the consultation,
- agree actions for tackling them, including environmental concerns;
- indicate costs and timescales;
- and identify responsibilities whether internal, external or collaborative for the actions.

3.1 Shoreline Management Plans

Shoreline Management Plans (SMP) are prepared by the NRA and or Coastal Authority to follow guidance produced by MAFF (Shoreline Management Plans A guide for coastal defence authorities). SMPs aim to provide a strategic basis for sustainable coastal defence policies within a sediment cell and set objectives for the future management of the shoreline.

3.2 Main objectives

The main objectives of an SMP are to:

- assess a range of strategic coastal defence options and agree a preferred approach;
- outline future requirements for monitoring, data management and research;
- inform the statutory planning process and related coastal zone planning;
- identify opportunities for maintaining and enhancing the natural environment;
- set out arrangements for consultation with interested parties.

The four generic strategic options for shoreline management are:

- do nothing;
- hold the existing defence line by maintaining or changing the standard of protection;
- advance the existing defence line;
- retreat the existing defence line.

Each option should be considered in relation to its likely effect upon adjacent management units and the sediment cell as a whole.

3.3 Key issues for SMP

The guidance from MAFF outlines the following four key areas to be addressed in the SMP:

- coastal processes
- coastal defence
- land use, human and built environment
- the natural environment

3.4 Preparation of SMP

The Plan is prepared in two phases:

Phase 1 collation and analysis of the issues in the four key areas and setting of objectives;

Phase 2 appraisal of strategic coastal defence options and identifying management units and the preferred management option.

Public consultation is involved after each stage in the plan preparation. The plans should also contain details for monitoring and reviewing the plan.

3.5 Role

The SMP should:

- produce a strategic assessment of flood defence and coastal protection options in relation to associated issues and needs of the natural, land use and human and built environment;
- define management units;
- appraise the strategic coastal defence options and describe the preferred option;
- identify needs for future research and monitoring and review of the SMP.

4.1 Estuary Management Plans

Estuary Management Plans aim to provide an integrated plan for the sustainable use of an estuary, which is prepared, implemented and supported by all estuary users and regulatory authorities. The EMP may be led or supported by one or more Local Authorities other Statutory Authority or partnership of organisations.

Estuary Management Plans have been developing over a number of years and as a cooperative process have evolved a variety of structures to support their development. A more detailed generic description of EMP processes and structures is given in Appendix 2.

4.2 Objectives

- identify all the issues affecting the sustainable use of the estuary;
- provide strategic objectives and actions to address the issues in an integrated manner;
- promote cooperation and involvement between Local Authorities, regulatory bodies, local communities and users;
- provide processes and structures for the continued involvement and support of all parties and the continued development of the EMP;
- co-ordinate, support and inform existing planning structures or Plans.

4.3 Preparation

These Plans prepared in two phases:

- data collation to identify issues;
- setting objectives, actions to address issues and mechanisms to implement the plan.

Public consultation is an important part of both stages and may include the establishment of public fora and working groups to discuss and resolve issues. The EMP is based upon working through consensus and as such may take longer than two year to produce.

EMPs should be monitored, reviewed and revised as part of an evolving approach to managing the estuary.

4.4 Role

The EMP should seek to:

- promote the integrated management of an estuary in a non-statutory plan, whilst incorporating the duties or roles of statutory authorities involved in the EMP;
- promote information exchange and improved working relationships between those parties to the plan;
- complement, rather than conflict with or supplant the functions of statutory authorities operating in the area;
- set strategic goals and objectives for the sustainable use of the estuary which are agreed by all parties to the plan.

5.1 Co-ordinating and Integrating Catchment, Shoreline and Estuary Management Plans

All three Plans share common approaches and elements in:

- Identifying and recording physical and environmental attributes; resources and uses;
- developing environmental objectives;
- Identifying issues and options for addressing them;
- preparing action plans to address issues;
- undertaking consultation;
- measures to implement, monitor and review the Plan.

so there is considerable scope for integrating the Plans. However, in practice one or more of these plans may be in preparation for the same coast at any time, with the potential for duplication overlap or conflict with other plans. Whichever Plan is later into the process should seek to integrate with and compliment the other Plan(s).

The following section describe principles, products from each plan and actions which can be taken by those preparing plans to ensure an integrated approach.

5.2 Generic Principles for Co-ordinating and Integrating Plans

The following generic principles which can be used in preparing a Plan where there is a preexisting Plan or if a Plan is envisaged or in preparation:

- exchange of information and objectives common to plans;
- ensure minimal duplication of effort and content by utilising existing processes;
- seek good communications between plans by involving common participating parties to each plan in its preparation.

In practice this means that integration can be based on:

- clear understanding of the roles, scope and relationship between Plans;
- common baseline environmental data;
- a common public consultation procedure;
- use of preexisting structures;
- involvement of staff who prepared, or will prepare other Plans;
- specific products from each Plan.

To assist the integration of Plans each should as a minimum produce particular products which can then be used in the production of the other Plans. These outputs are specified below, and the linkage of products between plans is illustrated in Figure 2..

5.3 Recommended Actions for Integrating Plans

5.3.1 CATCHMENT PLANS

When preparing a CMPS, with a preexisting SMP or EMP,

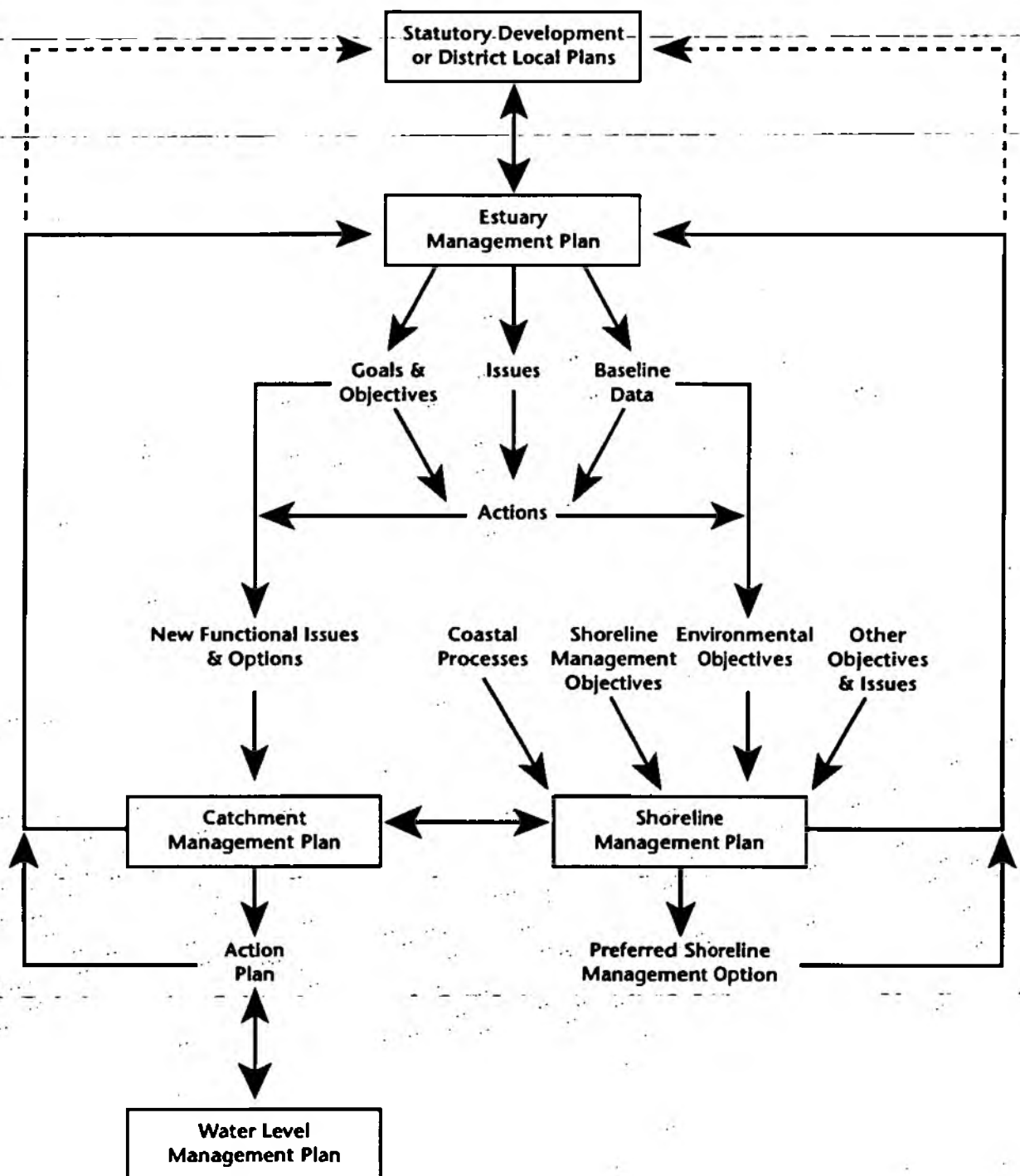
i - the CMP should screen these plans and:

- adopt descriptions of environmental assets;
- adopt environmental objectives;
- identify and adopt relevant issues, objectives or actions;

relevant to the CMP area and NRA functions which can be addressed through the CMPS.

The environmental objectives and issues or approaches will be derived from extensive consultation with

Figure 2 Linkages of inputs and output between Coastal Plans

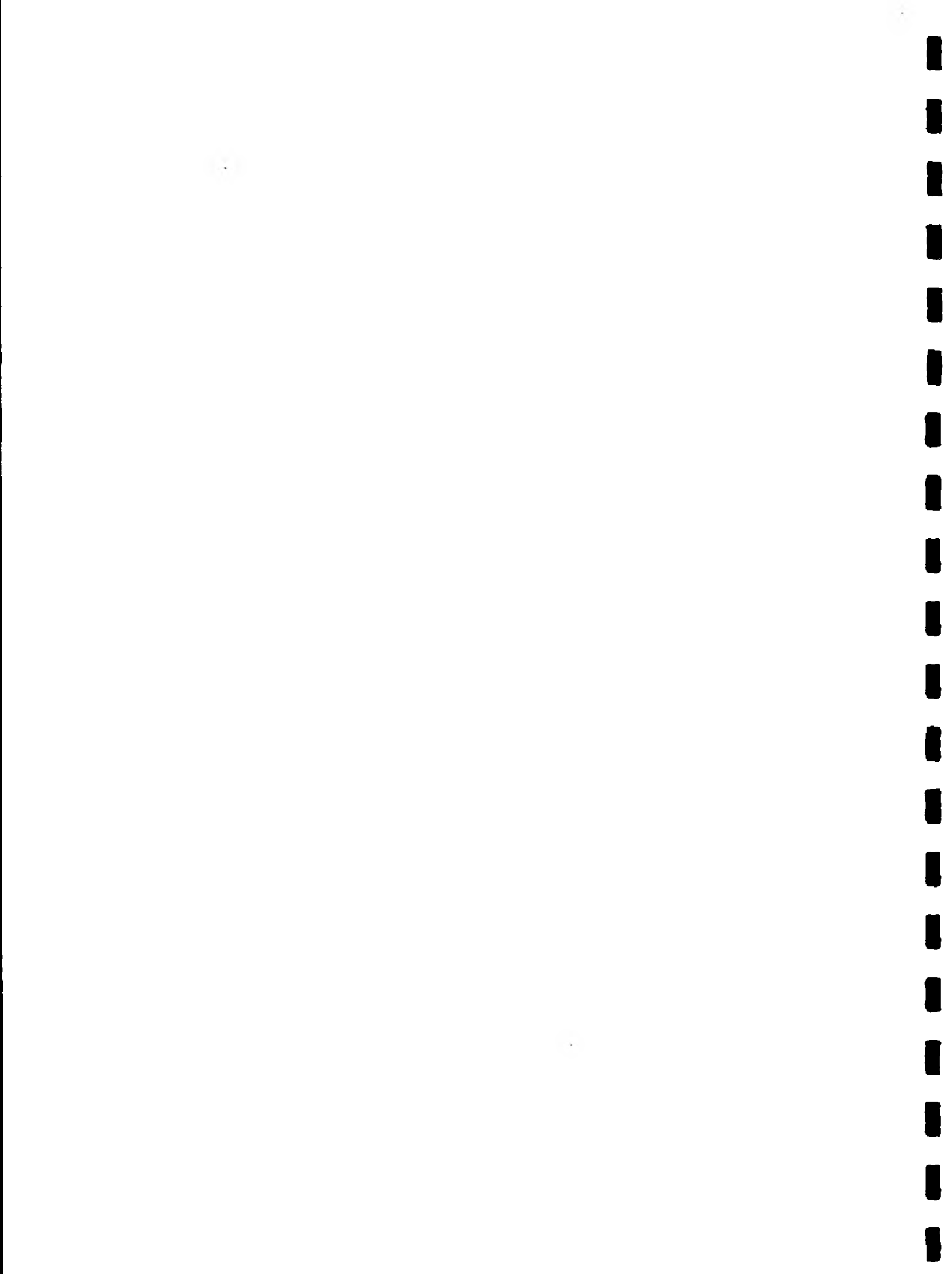


other statutory bodies and the public before being incorporated into the other plans. Adoption by the CMPS assists in an integrated approach towards managing the coast by the NRA as a statutory authority with responsibility in this area. This should also reduce the potential for conflict between the plans.

ii - Those preparing the CMP should consult staff who have been involved in the preparing the SMP, or the Estuary Project Officer for the EMP, to ensure the CMP's approach integrates with the SMP or EMP respectively. This could include inviting them to attend and advise the project group meetings.

iii - utilise the structures eg fora and consultation procedures, of the EMP.

EMPs have structures and often publicity vehicles eg newsletters which can be used to identify issues, key players, consultees and ensure the widest possible audience for the CMP.



5.3.2 CMP AS PART OF AN EMP

The NRA are usually directly involved in preparing EMPS, and when an action for the NRA to prepare a CMPS results from such an EMP then the CMPS should:

adopt the strategic goals and objectives of the EMP

in addition to those issues and actions relevant to the CMPS. This should ensure that the CMP is prepared within the overall strategic framework of the EMP.

In some cases the CMP could be produced as an integral part of the EMP rather than as a separate plan. In such cases this could be done by working in a CMP topic group of the EMP. This group could contain NRA function representatives, plus the EPO and representatives of key consultees or interests in both plans. Further information concerning EMP processes and functions are given in Appendix 2.

5.3.3 INTEGRATING CMPS WITHIN AN EMP

An estuary may have several rivers flowing into it, each of which have their own CMPS. In such cases it is important that the issues, objectives and actions in each CMPS, are considered for their effects in the wider estuary as a whole and that estuarine issues are addressed through CMPS. This can be addressed by producing an *Integrated Action Plan* for the estuary which:

- Reviews individual CMP's to identify issues and actions which might affect the wider estuary;
- Reviews the EMP to identify wider issues requiring co-ordinated action in CMPS;
- Addresses those issues identified through the review and summarises those actions required in each catchment and the wider estuary.

5.3.4. PRODUCTS FROM THE ACTION PLAN

The CMP Action Plan should:

- summarise the issues in the Plan;
- agreed actions for addressing them;
- indicate responsibilities for actions whether internal, external or collaborative;
- indicate costs and timescales.

In indicating responsibilities the CMP should clearly identify:

- environmental or other objectives;
- actions ;
- responsibilities;

which can be best achieved through the mechanisms or actions of an EMP or SMP, or the production of such plans where they do not currently exist. Where no other plans exist the CMP should generate strategic objectives as in the SMP or EMP process.

More detailed guidance for preparing a CMP is given in *Appendix 1*.

5.4.1 SHORELINE MANAGEMENT PLANS

The preparation of an SMP to integrate with preexisting CMPS or EMP is essentially as outlined for CMPS in 5.3 above, regarding screening of the other plans and consulting those involved in their preparation. However the SMP must produce objectives as part of its first stage production which can act as products for other Plans.

5.4.2 PRODUCTS FROM THE SMP

The first stage SMP should produce 3 classes of objectives:

- shoreline management objectives;
- environmental objectives;
- objectives for other coastal issues.

These objectives may be contradictory, or only indirectly related to shoreline management issues, but are helpful in assessing the preferred strategic shoreline management options (MAFF 1995). Although issues identified through consultation and the objectives derived from them may not directly relevant to the final preferred SMP options, these are potentially very useful products for subsequent EMPS or CMPS.

Environmental objectives, and especially issues eg recreational conflict, may be relevant to or best addressed through Estuary Plans. In such cases the SMP should also clearly highlight those issues identified during consultation which fall outside its scope but which should be addressed by an Estuary Management Plan.

The final SMP should identify any actions which are relevant for subsequent CMPS or EMPS.

5.5 Estuary Management Plans

5.5.1 ACTIONS FOR INTEGRATING EMPS WITH OTHER PLANS

If an estuary has a preexisting CMPS or is covered by an SMP then the actions are essentially the same as described for preparing a CMPS in 5.3. However the EMP may precede the production of other Plans and detailed information on the preparation of EMPS is available in Appendix 2. In preparing an EMP for integration with the other Plans it is important that the NRA lead its development in areas of its statutory responsibility, and that the EMP does not conflict with these.

5.5.2 PRODUCTS FROM THE EMP

To ensure that other Plans can integrate with the EMP it should identify:

- strategic goals and approaches for future management;
- environmental assets and objectives;
- objectives and issues relating to other estuary interests;
- those actions needed to achieve the objectives and identify who should do them;

which may be relevant, or specific to the SMP or CMP and NRA functions within it, particularly when the CMP is being produced to implement NRA commitment to an EMP.

Appendix 1 A Checklist for preparing Integrated Plans

1.1 Catchment Management Plans

To ensure that a CMP is prepared within the strategic framework of a pre-existing EMP or SMP and particularly when CMP production is an identified action for the NRA in an EMP prepared jointly with the NRA, then the following is recommended:

- review the EMP or SMP to identify those issues, objectives, actions and environmental assets relevant to each function addressed in the CMP eg, Flood Defence-Coast Protection, Water Quality and Resources, etc;
- adopt the natural, human and built environment and land use descriptions in the EMP or SMP;
- adopt and address those EMP or SMP issues, objectives and actions relevant to the CMP;
- examine how other issues and actions in the CMP may affect the estuarine environment and EMP or SMP objectives;
- utilise the structures (eg, committees, fora) and newsletters of the EMP to identify relevant consultees for the CMP, minimise and coordinate consultation procedures when consulting on options, and inform the public of progress;
- consult with the Estuary Project Officer (EPO) and NRA representative to the EMP to ensure the CMP is consistent with the EMP;
- consult staff involved in producing the SMP to ensure the CMP is consistent.

1.2 When several CMPs fall within the EMP area

To ensure an integrated and consistent approach to estuary management and issues, produce an *Integrated Action Plan* for the estuary which:

- reviews the EMP to identify environmental assets relevant to the CMPs area and adopt them;
- reviews the EMP to identify issues and objectives requiring co-ordinated action in CMPs;
- reviews individual CMPs to identify issues and actions which might affect the wider estuary;
- addresses those issues identified through the review;
- identifies and summarises those actions required in each catchment and the wider estuary;
- involves the NRA representative to the EMP is consulted during the initial stages of production of the plans, in addition to regular consultation with the EPO.

On producing the *Integrated Action Plan*:

- amend individual CMPs to include actions from the Integrated Action Plan.

1.3 Producing a CMP without a preceding EMP or SMP

When preparing a CMP for a catchment with an estuary component which has no current EMP or SMP, in addition to following NRA and EN published guidance available elsewhere:

- ensure that the estuarine component is included in the catchment vision;
- describe the physical processes operating in the estuary;
- describe environmental assets in the estuary, through consultation with English Nature identify Critical Natural Capital and Constant Natural Assets and adopt appropriate environmental objectives for them;
- identify uses, issues, objectives, targets and actions for the estuary section of the catchment which can be addressed by the CMP and those which should be addressed by an EMP or SMP.

2.1 Shoreline Management Plans

A Shoreline Management Plan may include a coastal area with one or more EMPs or CMPs. The following recommendations seek to reduce duplication and conflict in EMPs and SMPs.

the SMP should as far as possible :

- adopt descriptions in the EMP of natural, human, built environment and land use;
- adopt the issues for coastal defence identified in the EMP;
- adopt environmental objectives from the EMP which are relevant to the SMP;
- utilise the structures (eg, committees, fora) of the EMP to minimise consultation procedures and identify relevant consultees for the SMP;
- consult with the Estuary Project Officer (EPO) and NRA representative to the EMP to ensure the SMP is consistent with the EMP;
- consult staff involved in producing the CMP to ensure the SMP is consistent;
- identify the implications for CMPs of the preferred options for coastal defence.

In rare cases where the SMP may be produced as an integral part of the EMP document, then the task of overseeing its production should be delegated to a topic group led by the NRA or Coastal Authority to ensure it follows MAFF guidance on SMPs.

2.2 Producing a SMP for estuaries without EMPs

When the SMP is produced first the SMP should, in addition to following MAFF guidance:

- identify Critical Natural Capital and Constant Natural Assets and adopt appropriate environmental objectives for them through consultation (see Appendix 1);
- identify issues and objectives outside the scope of the SMP, which should be addressed by a subsequent EMP or other coastal plans.

3 Estuary Management Plans

the EMP should:

- describe the estuary and its uses and identify Critical Natural Capital and Constant Natural Assets (see Appendix 3);
- identify flood defence, coastal protection and water quality issues through consultation;
- produce topic papers describing the coastal processes in the area through the Coastal Authority, and water quality of the estuary through NRA;
- identify issues affecting coastal defence;
- set environmental objectives for shoreline management;
- avoid preempting the SMP by producing detailed or unrealistic prescriptions for flood defence and coastal protection which could conflict with the SMP by deferring this to the SMP where possible;
- avoid preempting the CMP by producing prescriptions which would conflict with the statutory duties of the NRA by delegating this to the CMP where possible, and supporting the CMP process;
- appoint to the Executive Committee for the EMP from a member of the NRA to advise on NRA functions, duties, and the CMP process;
- clearly identify those objectives and actions in the EMP which need to be developed through a CMP or SMP.

3.1 Preparing an EMP with pre-existing SMPs or CMPs

- review the SMP to identify coastal processes operating in the area, objectives and issues identified in the SMP relevant to the EMP, and seek incorporation into EMP.
- review any CMPs to identify objectives, issues and actions identified in the CMPs relevant to the EMP, and seek incorporation into EMP.
- ensure that a member of the SMP or CMP project board is able to provide advice and input from the SMP and CMP process in an appropriate way, either by appointment to the EMP Executive Committee or leading the appropriate topic group.

Appendix 2 A Brief Introduction to Estuary Management Plans

2.1 Introduction

Estuary Management Plans (EMPs) are integrated plans for the sustainable management of individual estuaries produced through the involvement of local users and communities working together with statutory bodies and Local Planning Authorities (LPAs). EMP's are non-statutory.

The preparation of EMPs were promoted by English Nature's 'Estuaries Initiative' which was launched in 1992 with DoE funding. EMPs are now regarded as a means of delivering the Government's commitment to sustainable development made at the Biodiversity Conference in Rio and are a target in the U.K. 'Biodiversity Action Plan'. Initially 12 major estuaries were targeted for EMPs in 1992 and in 1995 33 estuaries have Plans in production.

The EMP seeks to promote the integrated management of an estuary in a non-statutory plan, incorporating the duties or objectives of statutory authorities involved in the EMP. It should seek to complement, rather than conflict with or supplant the functions of statutory authorities operating in the area. The preparation of the EMP is a process which encourages communication, understanding and consensus between the diverse range of estuary users and managers.

Each Estuary Plan is produced in an individual way depending on local circumstances, which can produce very different management structures making it difficult to produce generalised descriptions. The following description of EMP production is based on the general model described in '*Estuary Management Plans - a coordinators guide*', which was produced by English Nature as guidance on best practice for those embarking on EMPs. The following sections give a brief description of some generic procedures and structures involved in producing EMPs.

2.2 Structures

The EMP production may be led by one or more LPA, Port or Harbour Authority and produced by a number of organisations seeking to work in partnership, through a number of structures summarised in Figure 3.

The production of the Plan is overseen by an Executive or Management Committee which may consist solely of Officers from LPAs, (usually from the Planning departments), and statutory authorities eg, NRA, EN, Countryside Commission, Port or Harbour Authority, Fisheries Committee, Internal Drainage Boards or contain a wider representation of interests and users (eg RSPB, Sports Council, British Association for Shooting and Conservation). This group can also to help promote goodwill and cooperation in working relationships between the partners. The executive group of the EMP must be as small as possible to allow efficient working whilst ensuring representation of relevant bodies. Multi-functional agencies should try to ensure they are represented by one officer.

A Secretariat or Steering Group may service the Executive Group by drafting minutes or editing papers for the group and look after the day-to-day running and coordination of the Plan. The Secretariat may consist of an Estuary Project Officer (EPO) working with a LPA Officer. The EPO is responsible for ensuring the production of the Plan, acting as a contact point and broker between interest groups if required. The EPO may be based with the LPA, EN or other body eg Harbour Authority and may be responsible for all secretariat functions.

A LPA Members Forum may be established to provide a direct means of involving elected members of each LPA and communicating with the relevant committees in each LPA.

Topic groups are issue or activity related, providing information for the Plan production, identifying and resolving conflicts by producing topic papers, Plan policies and assisting with the public consultation exercises. Topic groups can be led by a member of the executive group where the topic falls under their area of responsibility, or by the EPO.

An Estuary Forum provides a means for communication between the Executive and Topic groups and should also involve all interested parties eg land owners for general information exchange, identifying issues, discussion and problem solving. The Forum may include pre-existing estuary fora or groups.

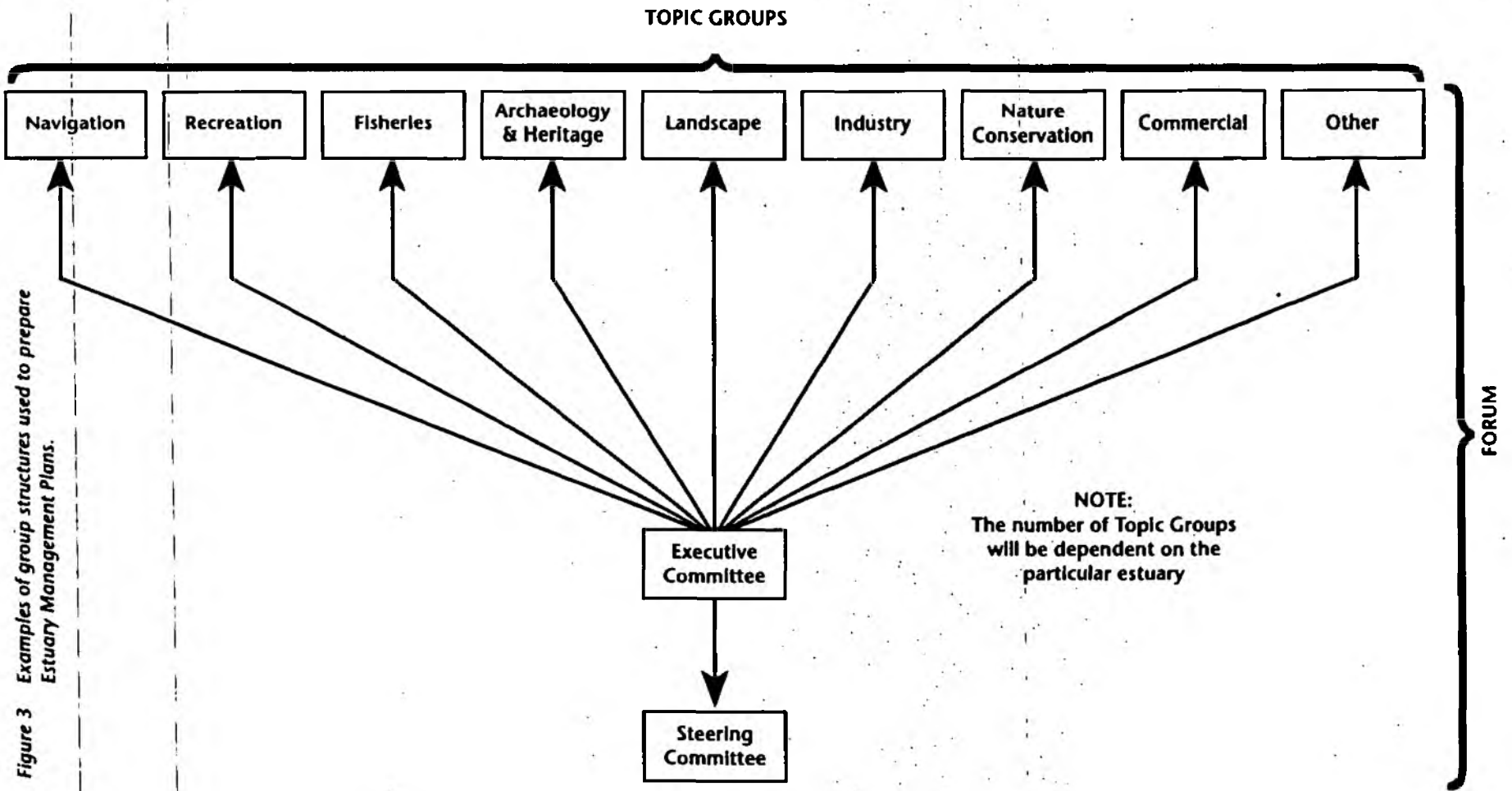


Figure 3 Examples of group structures used to prepare Estuary Management Plans.

2.3 Plan production

Stages in production are summarised in Figure 4. An initial period of data collection, collation and public consultation is often used to produce a report summarising the natural and physical environment, uses, and issues. The Plan may be produced by the Estuary project Officer, or consultants, based upon information supplied by participating bodies and during the initial consultation phase, or by separate topic papers being drafted by those partners on the Management Committee or topic groups responsible for each issue, eg the recreation topic group drafting the recreation paper and NRA drafting the paper on water quality.

The initial report and topic papers may be developed into the Plan, which also receives a public consultation before modification and adoption by all parties.

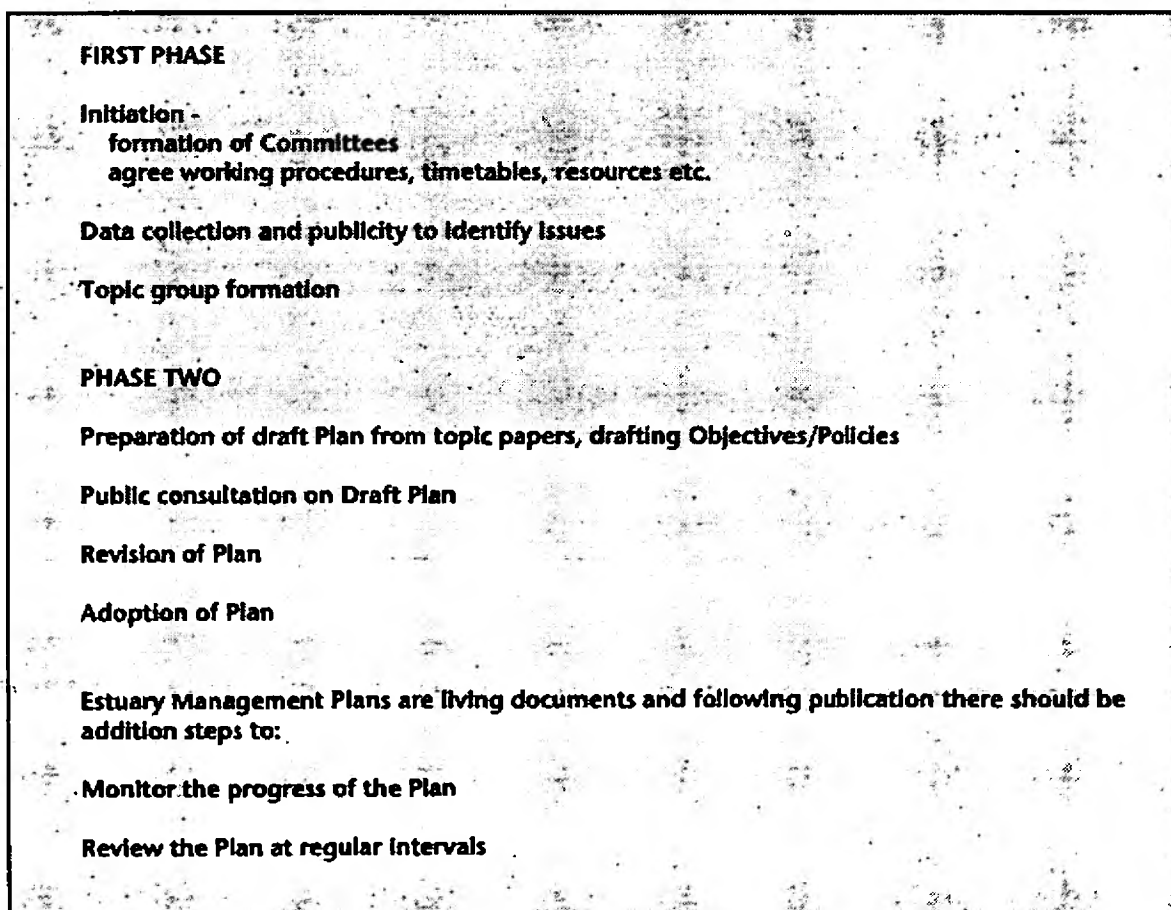
The timescale for producing the final Plan should be about two years but may vary depending on the complexity of the issues in the estuary, and number of LPA committee cycles needed to authorise various stages of the EMP.

2.4 The Estuary Management Plan content

Generally EMPs should provide a Strategic overview of the estuary and issues affecting it but some EMPs may be issues led. The EMP should provide a summary of the natural and physical environment of the estuary, summarise each use or issue identified for the estuary, strategic objectives for each issue and proposals for its future management based on the objectives. The proposals may be either detailed management prescriptions or less prescriptive on large complex estuaries. There should also be a description of how the plan will be implemented, monitored and reviewed.

The description of the estuary should identify designated sites, species and may define Critical Natural Capital and Constant Natural Assets.

Figure 4 Typical stages in the production of an Estuary Management Plan



Appendix 3 Defining Critical Natural Capital and Constant Natural Assets

Work recently undertaken for English Nature has identified the concept of "Critical Natural Capital" (CNC) in relation to shoreline management planning. CNC may also be referred to as Critical Environmental Capital or other similar terms but share the same definition. The preservation of CNC is essential to achieve environmental sustainability and is therefore a central objective for SMPs. This concept is still under development and as such consultations with English Nature are recommended to identify such sites in SMPs.

For practical purposes, within SMPs Critical Natural Capital and Constant Natural Assets can be defined as follows:-

Critical Natural Capital (CNC) is those elements of the natural environment whose loss would be serious, or which would be irreplaceable, or which would be too difficult or expensive to replace in human timescales. CNC should be preserved.

Basic criteria are:

- the site or population of species is of national or international importance;
- the site or population of species is essentially irreplaceable within the lifespan of the SMP (25-50 years) through economic or technical considerations, or both.

In practice the identification of CNC is generally on the basis of existing or proposed designations but there may be CNC which falls outside the statutory designation system and should not be ignored. Examples of CNC for habitats and species might be internationally important for geological conservation, or habitats supporting nationally rare or endangered species.

Constant Natural Assets (CNA) are those elements which are not irreplaceable but whose loss should be fully and directly compensated for eg. by habitat recreation.

CNA should be conserved to maintain their stock or extent overall, preferably within the coastal sub-unit but not necessarily in their current locations. An example of a CNA may be the intertidal sand or mudflats which supports internationally important waterfowl populations or nationally important freshwater wetland in the coastal zone.

CNC and CNA can be identified for habitats, species and earth science sites. The identification of CNC and CNA should be used in setting the strategic objectives in the EMP.

A proper understanding of the coastal processes of the estuary is seen as important not only for addressing issues of Flood Defence and Coastal Protection in the EMP but also when identifying CNC / CNA and setting environmental objectives for the SMP.

Nature conservation objectives should be set at three levels:

- the preservation of CNC;
- the conservation of CNA;
- modification of coastal defence objectives to conserve CNC.