

Designing coastlines fit for the future

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English Nature Research Reports

Number 702

Designing coastlines fit for the future

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ISSN 0967-876X
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Cover note

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The views in this report are those of the author(s) and do not necessarily represent those of English Nature

This report should be cited as:

MILLIGAN, J., O’RIORDAN, T. & WATKINSON, A. 2006. Designing coastlines fit for the future. *English Nature Research Reports*, No 702

Acknowledgements

The authors thank the participants of the Winterton Liaison Group, North Norfolk District Council, Suffolk Coasts and Heaths AONB, and the Slapton Line Partnership for their important contributions to this report. They also express their gratitude to English Nature staff members: Peter Lambley, Gareth Dalglish, Simon Dunsford, Sue Rees and Helen Rae for their enthusiasm and knowledge. Sue Rees edited the final draft in an exemplary fashion. Much appreciation also goes to other Tyndall staff: Simon Jude and Andy Jones.

Natural England

Following the publication of the draft Natural Environment and Rural Communities Bill in February 2006, English Nature, the Rural Development Service and the Countryside Agency's Landscape, Access and Recreation division are working towards integration as a single body from October 2006. This new body, Natural England, will work for people, places and nature with responsibility for enhancing biodiversity, landscapes and wildlife in rural, urban, coastal and marine areas; promoting access, recreation and public well-being and contributing to the way in which natural resources are managed-so they can be enjoyed now and for future generations.

This report, whilst produced in partnership with English Nature, will have relevance to the work of Natural England in the case study and other areas. It is presented by the authors with a view to the continuation of work by Natural England staff with these local communities and others. It will be particularly relevant to the achievement of more sustainable use and management of the natural environment and the increased ability of the natural environment to adapt to climate change.

Summary

This research project between the Tyndall Centre for Climate Change Research and English Nature builds on the findings of a previous project (Milligan and others, 2006). That study examined the ecological, social and political issues connected with locating new wildlife opportunities on a changing coastline faced with sea level rise, shifts in coastal defence economics, and new land management incentive schemes. That project also sought to assess how far wildlife and conservation gains could be derived from a changing coastline, and obtain and gauge the reactions of and support by local residents and coastal interest groups.

This new project is based on three case studies, all involving coastal sites of national or international conservation significance, namely Winterton coast and dunes National Nature Reserve in Norfolk, the Suffolk coast around the Alde and the Ore, and the Slapton shingle bar in Devon. These examples highlight many of the issues which Natural England will need to address regarding dynamic and ecologically changing coastlines, and improve ways of working with land-owners, residents and other coastal users.

The research involved a comprehensive overview of current and evolving coastal policy, such as Defra's 'Making space for water' strategy for flood and coastal erosion risk management, and the subsequent 'Adaptation Toolkit'. The study explored the Shoreline Management Plan process for North Norfolk (SMP 3b) as well as the changes in the planning process such as the local development framework and the up-dating of PPS 25 (Policy Planning Statement on Flood Risk and Development), among other coastal strategies and plans.

The case studies illustrated the necessity of clearly understanding the local economies and politics of the areas and of involving interested parties in independently facilitated discussion forums to attempt to find long term, sustainable, solutions. The Winterton visioning exercise, in particular, showed that it is difficult for local stakeholders to contemplate coastal futures for their area over 50 years' time. The main reasons for this are the huge uncertainties for any meaningful scientific prognosis for the appropriate mix of managed and natural coastlines, and the political uncertainty over policies such as planning restrictions and compensation for lost property or property blight, and for stimulating economies in relocated settlements. The creation of the Winterton Liaison Group as a stakeholder-led discussion forum facilitated a novel opportunity for sharing knowledge, values, ideas and aspirations in a constructive manner and improved the relationships between different stakeholders (some of which in the past have been confrontational).

The research in both Suffolk and Slapton is not as far advanced as that in Winterton, but both of these case studies display the willingness and enthusiasm of stakeholders to work together to formulate creative and sustainable solutions for coastal management. This suggests that one obvious role for Natural England is to maintain close coordination with other statutory and voluntary bodies over coastal management policies and mechanisms for adjustment. Another role is clear communication throughout with all local interests. A third role lies in the creative relationship between seizing opportunities for coastal economic advantage over any future conservation gains of a changing coast, and responding creatively to local opinion that people and wildlife can best prosper from a well designed changing coast. All of these conclusions suggest that there is a continuing need to train English Nature/Natural England staff in techniques to facilitate effective dialogue, in a policy setting that gives confidence so that effective adaptation can be worked out.

Contents

Acknowledgements

Summary

1	Introduction.....	9
2	Project aims	10
3	Stakeholder participation	11
	3.1 Winterton dunes and heaths	13
	3.2 Suffolk coasts and heaths	14
	3.3 Slapton line	14
4	Current coastal policy setting.....	14
	4.1 Making space for water.....	14
	4.2 Planning	16
	4.2.1 PPS 25.....	16
	4.2.2 Local development frameworks.....	17
	4.3 Shoreline management plans (SMPs)	17
5	Issues to address.....	20
	5.1 Integrated coastal zone management (ICZM).....	20
	5.2 Funding/ institutional arrangements	21
	5.3 Planning issues	21
	5.4 Public perceptions/expectations	21
6	Finding solutions.....	22
	6.1 Coastal change – technical issues	22
	6.1.1 Maritime and coastal strategies.....	23
	6.1.2 English Nature’s Maritime Strategy	23
	6.1.3 Environment Agency Marine Strategy	24
	6.1.4 National Trust	24
	6.2 Coastal change: flooding and erosion risk	25
7	Case studies- background.....	26
	7.1 Winterton, Norfolk.....	26
	7.2 Suffolk.....	27
	7.3 Slapton, Devon.....	28
8	Participation techniques	29
	8.1 Visioning exercise.....	29
9	Case studies update and future actions	32
	9.1 Winterton, Norfolk.....	32
	9.2 Suffolk.....	34
	9.3 Slapton, Devon.....	37
10	A ‘Toolkit’ for working with local communities.....	38
11	Observations	39
12	References	40

Research Information Note

1 Introduction

The Tyndall Centre for Climate Change Research worked with English Nature to develop further the research findings explored during a previous collaborative Tyndall research project 'Living with a changing coastline' (Milligan and others 2006). This first phase of research involved a Steering Group of representatives from English Nature, the Environment Agency, the Department for the Environment, Food and Rural Affairs (Defra) and North Norfolk District Council. It identified issues surrounding the relatively recent shift in coastal policy, the evolving principles underpinning medium to long term coastal change practices, and the community dialogue that took place over the Shoreline Management Plan 3b on the North Norfolk coast between Kelling and Lowestoft in 2005/06. This last phase of the research concentrated on the Cley-Kelling stretch, the Happisburgh cliff and the Winterton beach and dunes. The context of the research was set in the emerging policy framework of *Making space for water* (Defra, 2005a, b), and through English Nature's Maritime Strategy (English Nature, 2005).

The specific context for this research report is the relationship between English Nature and coastal communities and concerns over the outcomes of coastal change for wildlife, habitat and local livelihoods. Despite strenuous attempts to keep local interests informed, it is generally the case that English Nature is portrayed in the media as placing an emphasis on the advantages of wildlife and habitat improvement arising from managed realignment of coastal defences, while inadvertently giving the impression that the consequences for local property values and livelihoods appear to be of less direct relevance. No matter how much this impression is misleading and, in many cases, unfair to the staff involved, the outcome of this creates a lack of trust on the part of the public. English Nature tends to be seen as placing a bias on wildlife and habitat, without taking account of the interests of local communities and economies. Hence, the need for more careful and timely intervention with local people to enable these to be considered more closely together provides a critical backdrop to this report.

This second phase of research focuses on three case studies: Winterton in North Norfolk, the Suffolk coast, and the Slapton shingle barrier beach in Devon. All of these cases include designated sites including Sites of Special Scientific Interest (SSSI). This work explored the relationships between the many different coastal stakeholders and identified the benefits and issues related to effective public participation and coastal change. The outcomes of this work are aimed at English Nature staff and other interested parties dealing with maritime issues and coastal change, including the various informal coastal partnerships, and how the theme of uncertain coastal futures is communicated to others and the general public.

The Tyndall team worked closely with English Nature at the national and local levels to ensure comprehensive co-operation. The research programme also involved working with local people, and the various official and informal agencies and partnerships on these coastlines. The study conducted extensive and detailed surveying of local opinion at strategic points on the coastline. The work was a continuation of the existing approaches on the north and east Norfolk coastline, and extended this approach to specific issues in Suffolk and Devon. It was independently facilitated, inclusive of all interests, and reported openly and sensitively to all opinion.

The methodology used in this project involved a series of working meetings with a variety of coastal action groups, local politicians, agency officers, local government officers, and academics from many disciplines. Some of these workshops were informative and consultative, others were facilitated to search for agreed perspectives and to initiate coordinated courses of action. All were progressive, and all followed on policy initiatives and creative ideas advanced by interested parties. This sequential, positive and embracing approach was welcomed by all involved.

This study also explored the relationships between the following policy arenas within the rapidly changing coastal policy framework:

- *Making Space for Water* in the form of the March 2005 First Government Response to the 2004 consultation. (Defra, 2005a).
- Implementation of English Nature's Maritime Strategy (English Nature, 2005).
- The development of a national strategy for Integrated Coastal Zone Management (ICZM), following from the ICZM stocktake (Defra, 2006a).
- The development of a Marine Bill, and the potential revision of elements of the Coast Protection Act 1949 (Defra, 2006b).
- The Environment Agency's *State of the Environment 2005* document, which highlights the need to "prepare now for the unavoidable impacts of climate change by planning for its effects, including effective flood risk management". (Environment Agency, 2005).

A parallel research project commissioned by North Norfolk District Council aimed at exploring the Shoreline Management Plan (SMP) public consultation process for SMP3b (Kelling to Lowestoft) also took place at the same time as this study. It investigated new opportunities for inclusionary and participatory involvement in future coastal design and looked at the scope for using the forthcoming Local Development Framework of the NNDC as a tool for delivering a phased, integrated and publicly acceptable basis for devising a future Shoreline Management Plan.

2 Project aims

This research project continued with the collaborative research approach which was established in the project 'Living with a changing coastline' and endeavoured to develop this approach with some further specific outcomes.

The project aimed to:

- continue the existing work on the North Norfolk and Winterton coastlines to ascertain how English Nature's objectives to achieve resilient ecosystems and how changing coastlines can be understood, adjusted and accepted by local and national interests;
- build on and develop similar work on the Suffolk coast;
- extend the work to the Slapton shingle barrier beach in Devon, working with the local community and land owners on planning for long-term coastal change for this SSSI;

- develop effective participatory procedures for enabling local residents and visitors to appreciate the nature conservation advantages and the benefits to the local economy for long term, progressive coastal change;
- create effective and adaptive partnerships between the local authorities, statutory agencies and landowners, tourism, wildlife, and residential interests to ensure that all appropriate options for designing sustainable dynamic coasts are understood and appreciated.

3 Stakeholder participation

Coastal habitats are a crucial part of biodiversity and support unique ecosystems. Coastal features range from the granite coastline of Cornwall, the unique geology of the East Devon and Dorset World Heritage Site, the world famous wetlands, salt marshes and seabird communities of Norfolk, to the beautiful sand dunes of the Northumbrian coast (Covey and Laffoley, 2002).. There is an interesting and important mixture of maritime and coastal species and habitats, and much of England’s coastline is designated as Sites of Special Scientific Interest for its geology or wildlife interest. However, there are also many other land uses on the coast and this can lead to conflict between users for a limited and highly valued space. Choices that require multiple stakeholders to balance conflicting objectives are among today’s most controversial decisions (Gregory and Keeney, 1994).

This is especially the case where:

- the future management of the coastline is dependent on funding that is subject to formal guidelines over the cost-benefit analysis of proposed schemes, and government views on adaptation and the potential relocation of residents, businesses, coastal land use activities and recreation;
- coasts are in the front line of climate change, affected by sea level rise, increased storminess and the impacts of global warming and climate change.

These are two sources of uncertainty over which local people have limited political or economic influence. The future of any given stretch of coast is only a ‘story’, or a ‘scenario’: the outcome of various assumptions or predictions. Hence, working with coastal communities means leading them through pathways of uncertainty. It is no wonder that trust in the process and in the agencies involved is required, plus some reasonable assurance that the adjustments needed to cope with a changing coast are understood, accepted, and deemed to be fair.

These circumstances occur on many coastlines. Controversy is inevitable due to the diversity of stakeholders involved and the massive implications of such choices for people’s homes, properties and livelihoods, as well as the style, effectiveness and credibility of participatory programmes. Decision-making will neither be easy nor predictable in such circumstances. Coastal decision-making could become a coherent mechanism for shaping future communities, or it may suffer through a process “which proceeds via a series of stages or phases as part of a problem-solving exercise” (Adger and others, 2003).

Studd (2002) highlighted the benefits of a deliberative and inclusionary process for decision-making. Two levels at which benefits can be seen as a result of participatory processes were identified. These are:

- **Programme outcomes** – changes in local conditions as a result of the decision/output.
- **Process outcomes** – changes as a result of the process used to reach the decision.

In terms of programme outcomes the three levels of knowledge are all valid: cognitive (information based on technical expertise and facts), experiential (common sense, knowledge gained through experience), and value-based (moral, normative values based on an individual's perception of society). Indeed, they are essential to take on board to ensure better outcomes.

A participatory process can have value in its own right (Petts, 2001). These benefits can take several forms such as personal benefits (with individuals feeling that their view points are valued); gains from understanding how others are affected, and subsequently react; and an opportunity to get key points across in an arena where continuous analysis gets an airing, even when untried and very radical.

Participation should not be a substitute for structured scientific examination of potential coastal futures. It should extend this science by supplementing or augmenting it (Glicken, 2000). This is an important point for any science geared to sustainable development. Scientific underpinning of any social discussion is vital, but not in itself sufficient. Local opinion, knowledge of processes which reflect experience and careful observation, as well as the all important values of social judgement all must contribute to a “full scientific enquiry” in the modern era (Royal Commission on Environmental Pollution, 2000, Chapter 7).

It has been observed that when stakeholders or those affected by a particular decision take part in the decision-making process then they are more likely to support the implementation of that decision (Stojanovic and others, 2004). Similarly, there are several arguments for making public participation part of environmental decision-making: integrating local knowledge, working with democratic ideals and legitimacy and fairness. There are a multitude of other potential benefits to be gained by involving the community in decision-making and the policy process (Dovers, 2000). These include:

- to allow communicative debate about social values;
- to formulate and assess policy or policy principles;
- to draw on particular expertise;
- to implement policy and to evaluate the implications;
- to better deliver more focused funding opportunities for project developments;
- to engage in management of on the ground works;
- to ensure transparency and accountability;
- to monitor environmental or social trends and conditions; and
- to monitor and evaluate various alternative approaches to devising policy and implementing management.

A participatory process can be useful in itself because, even if the users are not entirely happy with the outcome, they may at least be satisfied that the decision-making process in which

they took part allowed them to express their thoughts, and opinions, explain their concerns and argue for their views (Buanes and others, 2004). Regardless of the outcome this process in itself is an important component in a fundamental democratic sense (Chess and Purcell, 1999).

However, there are a number of pitfalls for participation, including the practical challenge of involving multiple viewpoints (polyvocality) without focussing too much on individual and personal biases (Treby and Clark, 2004). There also needs to be consideration of the potential costs involved- such as the time the participatory process may take to function effectively and the costs of allocating staff to the process.

These can create formidable obstacles. Participation that is partially inclusive or participation that begins a process of unravelling existing public policy may exclude others from the process, set up a challenge that representative democracy is being undermined, and lengthen proceedings beyond the time scale of funding and needed implementation. Participation cannot be assumed to be a “good thing”. Like all tools of this kind, it requires much in the form of careful preparation and thoughtful evaluation.

Nonetheless, community involvement and better communication, as advocated in English Nature’s Maritime Strategy, can help achieve the vision of coasts and seas where there is space for people, industry and wildlife (English Nature, 2005) while working with local communities to create a greater sense of local involvement and trust.

This report looks at three case studies. Each of these is an example of interaction between English Nature and stakeholders in order to find solutions to potentially controversial issues at coastal sites. All have used different aspects of a participatory approach to decision-making. All of these three case study areas contain important natural assets, all are affected by likely coastal change, and all are locations where English Nature needs to work with the public about communication over the future viability for the existing and future coastlines. All these areas support one or more SSSIs which are covered by the Government's Public Service Agreement (PSA) target for England to have 95% of the SSSI area in favourable or recovering condition by 2010. English Nature has a key role in the monitoring of SSSIs and advising on management to achieve favourable condition.

The three case studies are as follows:

3.1 Winterton dunes and heaths

The Winterton Dunes are a key coastal NNR, an important gateway to the internationally recognised wetlands of the Norfolk Broads. The dunes provide some protection from flooding, and they are partly reinforced by a concrete sea wall along all but 400m of their length. The future decisions about management of the dunes and the sea wall will affect the way that the land is managed, which could include opportunities to develop new wetlands. Information about the site and flood risk management issues can be found on http://www.english-nature.org.uk/about/teams/team_photo/Wintertondunes.pdf and at <http://www.english-nature.org.uk/livingwiththesea/champs/pilots.asp>

3.2 Suffolk coasts and heaths

The Suffolk coasts and heaths are also home to important nature conservation sites, most notably at Minsmere (RSPB reserve), Dunwich (National Trust) and the Alde and Ore estuaries (National Trust). Background to the area can be found in the Natural Area report (http://www.english-nature.org.uk/science/natural/NA_Details.asp?N=&R=8&NA_Id=49).

A large part of the coast and the estuaries were covered by the Suffolk Coast and Estuaries CHaMP, which addresses the long-term flood risk management issues for the Natura 2000 sites on this stretch of coast.

(<http://www.english-nature.org.uk/livingwiththesea/champs/pdf/CHaMPs/Suffolk%20Final%20CHaMP%20rev1.pdf>).

3.3 Slapton line

The Slapton “line”, in Devon, is term used to describe the area that includes the shingle barrier beach that encloses the Slapton Ley Nature Reserve, the Slapton Ley Special Site of Scientific Interest (SSSI) and the river valleys draining into the Ley. The barrier beach has a road along its length, the A379 linking the communities of Torcross and Strete. The road is susceptible to erosion and intermittent severance, as the shingle bar is mobile and transgressive.

4 Current coastal policy setting

This is a time of great change in coastal policy in England. Over the last few years a multitude of strategies, consultations and planning documents have been produced which impact on management of coasts, and the land and sea around them. Not only are the policies changing but the roles of the organisations are altering too. For example, the First Government Response to the ‘Making space for water’ consultation (Defra, 2005a) highlights the following in order to develop a more strategic and integrated approach to flood and erosion risk management, *“so as to facilitate an holistic approach that is risk-driven, the Government will work towards giving the Environment Agency an overarching strategic overview across all flooding and coastal erosion risks”*.

The progressive transformation of policy is proving controversial due to the degree of expectation amongst many people that a ‘hold the line’ policy will be maintained. For many years, despite the fact that reducing risk of flooding and coastal erosion is a discretionary responsibility for operating authorities, public expectations consider that “hold the line” is a feasible, affordable and preferred policy option. These expectations can partly be attributed to a limited understanding of the mechanisms that provide coastal erosion and flood risk management, and a poor explanation of the roles, responsibilities and funding for coastal management. In addition, engineered structures do not remove the risk, they only reduce the risk, but this interpretation requires effective communication.

4.1 Making space for water

The Defra consultation on the new approach to managing the risks of flooding and coastal erosion in England entitled ‘Making space for water’ was published in July 2004; the First Government Response to the points made by interested stakeholders was published in March

2005. This document charts the way forward for flood and erosion risk management and promotes a more integrated approach. In Chapter 8, entitled 'Living with the changing coast' the approach the government wishes to take to achieve sustainable coastal management is set out. This highlights that there is much work to be done and information gathered on the various complicated issues entrenched in managing a changing coastline.

The Government response aims to embed the five principles of the UK Sustainable Development Strategy *Securing the Future* (HM Government, 2005), into the management of flood and erosion risk. It also highlights the need to link more closely with the land-use planning system (which also mirrors the sustainable development strategy) as introduced in the Planning and Compensation Act of 2005. This sets up a new process of planning policy statements (PPSs), of which PPS 25 will deal with development and flood risk. A consultation on this ended in February 2006. The intention is that PPS 25, together with an accompanying Practice Guide, should replace *Planning Policy Guidance Note 25 (PPG 25): Development and Flood Risk* published in July 2001.

In August 2005 Defra's Flood Management Strategy Unit published a Cross-Government Delivery Plan setting out the tasks for delivery partners in order to take forward managing the coast (Defra, 2005b). This Delivery Plan includes a vision and identifies the ways of implementing the proposals set out in the First Government Response to *Making space for water*.

Of particular interest are the five milestones in the Delivery Plan:

- Consultation on PPS 25 launched in November 2005.
- Revised draft PPS 25 published in summer 2006
- Options paper on adaptation toolkit presented to ministers in summer 2006.
- Adaptation toolkit published summer 2007.
- Coastal erosion risk maps launched spring 2008.

The Government First Response aims to provide a strategic plan for flood and coastal erosion risk management over the next 20 years and beyond. However, there are some policy areas which will need further work or piloting before any decisions are made. These are stated as:

- **Environment Agency strategic overview of flooding and coastal erosion** While it is proposed to give the Environment Agency the strategic overview function, the precise nature of this role has not been decided. This proposal has elicited some concerns from local government representatives, who would like to see the retention of direct accountability over coastal protection.
- **Adaptation toolkit.** During the *Making space for water* consultation, it was identified that the successful implementation of adaptation policies on the coast would need to achieve more sustainable solutions, and that this would be facilitated by some form of help to those affected. The adaptation toolkit work will look at these areas including incentives but with the understanding that there is no commitment to introduce new financing arrangements
- **Pilot projects** to look at integrated urban drainage and resilience of water courses for periodic excessive flooding

The Government response acknowledges that until there is a better evidence base, it will not be possible to look at future changes in policy or the development of new mechanisms to enable effective adaptation. This is inevitably leading to feelings of frustration amongst local residents and coastal groups for example in North Norfolk and Suffolk. These locally based groups will continue applying pressure. The Defra 'Adaptation toolkit' is still in a very early phase of development. Defra have also commissioned a number of consultations which will take time to produce and digest. This is a valuable time for English Nature to take stock and work through the changing practical and political circumstances.

4.2 Planning

4.2.1 PPS 25

It appears that there are difficulties with the planning system with regard to the current Planning Policy Guidance 25 on development and flood risk, with a number of developments going ahead despite the Environment Agency advice about possible flood risk. The consultation on the revised PPS 25 closed in February 2006. At present PPG 25 does not provide any specific advice over the characteristics of the currently determined long term flood risk, nor does the proposed PPS 25, address future coastal erosion. At present PPG 14 deals with 'Development on unstable land' and there are proposals to develop coastal erosion risk maps as part of Defra's *Making space for water* Strategy.

Local planning authorities may refuse consent for development in flood or coastal erosion risk areas. Such decisions, however, can be overturned on appeal by Planning inspectors, wholly independent, but reporting to the Department of Communities and Local Government (DCLG). The current planning guidance offers no scope for inspectors to consider long term flood or erosion hazard, ranging beyond the design life of the development itself. There is reference to current shoreline management plans, but no indication of the timescale for these. Therefore, it is legally correct to offer planning permission for sites where a flooding hazard may occur in say 50 years time as a result of a change in the SMP policy. At present, even the Environment Agency cannot stop such permissions being granted, even on appeal.

Hence, at present there seems to be a need for greater join-up between and within the local planning authorities making decisions on the coast, and acting as operating authorities over the current (but in policy terms, outdated) Shoreline Management Plans, the Environment Agency giving advice, the DCLG and its appeals process, and the call-in power of the relevant ministers. These processes appear to be working largely independently of each other and the linkages are presently unclear.

Yet there is recent evidence, based on our enquiries in North Norfolk, that the planning authorities, the Environment Agency, and the DCLG inspectorate are taking long term flood and erosion risk into consideration. While there is genuine disjunction between present guidance and the previous shoreline management plans, new guidance published in 2006 (Defra 2006), provides the opportunity to demonstrate how SMPs can support the planning system. This relationship is still being explored.

4.2.2 Local development frameworks

The emergence of a new local development framework for planning – Planning Policy Statement 12 (ODPM 2004) means that local authorities have a statutory responsibility to bring in Area Action Plans for the coastline. These are tied to the government’s official sustainable development principles as laid out in its Sustainable Development Strategy published in March 2005 (HM Government, 2005). An important test for coastal governance is how far the emerging area action plans may be made to fit within the new generation of SMPs. The sustainable development approach explicitly introduces notions of well-being and fairness, as well as designing land use within the tolerance of natural functions, so there may be additional adaptation strategies to incorporate in future coastal design.

There is an opportunity for introducing schemes of community redesign, for local food production, for green tourism and for a variety of schemes to enable natural processes to proceed by giving greater support for moving assets at risk. By doing this, the local development frameworks and their coastal action plans could provide a better approach to community well-being. There is a need to achieve fairness of treatment for local residents who, until recently, have not been made fully aware of the consequences for their properties of the changes that are occurring at the coast. Some properties are now at greater risk, and this level of danger may increase as climate change brings more storms, bigger waves, and changes in sediment movement leading to more extreme and unpredictable events.

Local development frameworks are still at a relatively early stage of development. They lie within regional spatial strategies as promoted by regional assemblies and debated through a formal examination in public. They consist of a bundle of activities involving:

- conceptual and visionary statements;
- appraisal tools based on sustainable development principles as outlined by the government in its sustainable development strategy (HM Government, 2005, p16);
- statements of community involvement (SCIs);
- precise schemes as laid down in area action plans (AAPs).

As such, current planning practices permit such plans to incorporate local strategic partnerships (LSPs- collectives of coordinated public delivery organisations and funding) and local area action plans (AAPs- schemes for putting LSPs into effect at an agreed local scale). It is here where more comprehensive sustainable development orientations could be placed into a changing coast. This set of connections is still in analysis by the relevant local authorities. But it does offer consideration scope for the implementation of English Nature’s Maritime Strategy in future.

4.3 Shoreline management plans (SMPs)

Shoreline Management Plans (SMPs) provide large-scale assessments of the risks associated with coastal processes and present a long term policy framework to reduce these risks to people and the developed, historic and natural environment in a sustainable manner. In doing so, they are high –level documents that form an important part of the Defra strategy for flood and coastal erosion risk management (Defra, 2001, 2006).

In the 1990s, 'First generation' SMPs were produced around the coast of England and Wales, with 39 completed by 1999, based on the guidance published by MAFF in 1995. Following a review of these SMPs, further guidance for coastal authorities was published in 2001 to assist them with revision of SMPs. This has now been produced as more detailed and updated guidance (Defra 2006). The first generation SMPs are undergoing a review, and must include adequate public involvement and also take account of technical coastal process information subsequently collected or changing circumstances. North Norfolk was one of three pilot 'second generation' SMPs which went out to public consultation in 2004/2005. The other pilot SMPs were in Kent and Sussex.

There are a number of advantages of shoreline management plans:

- they are strategic documents that look at long-term planning and whole coastlines;
- they must have a technically sound basis, have good technical support and use the best science available;
- preparation must involve public participation through different stakeholder engagement models;
- they involve partnerships with different local bodies (which provide an important gathering of interests) and put the emphasis on maintaining partnerships-these mechanisms will differ for different SMPs, and in some cases may bring additional work for operating authorities.

However, there are also weaknesses of shoreline management plans that still need to be addressed:

- they represent a plan primarily for the physical evolution of the coast, and hence do not represent a fully integrated plan for the socio-economic development of an evolving physical coastline;
- they are not statutory documents and need to be more integrated with development planning (development control) and strategic planning (LDFs);
- they are not linked to other shoreline strategies in a fundamental way so that statutory bodies are not all connected, with respect to their own coastal strategies and schemes;
- they can be ambiguous in their leadership and follow through;
- they set out policies that are dependent on Defra funding and points scoring for implementation, even when these guidelines are constantly under review;
- they can become influenced politically, resulting in confused messages to local residents; after all, they are an action of local authorities, and may indeed be led by them.

For example, North Norfolk District Council and the local civic forums in Norfolk are refusing to adopt the new second generation SMP 3b without the issues of social justice and fairness of treatment being treated upfront. In addition, the realities of coastal erosion are not fully understood, leading to a genuine uncertainty as to how erosion or flood lines may evolve. On the technical side, some coastal action groups (eg MARINET, <http://www.marinet.org.uk/>) are targeting off-shore aggregate dredging as a potential contributory cause of the loss of beach protection, and hence the cause of heightened coastal erosion risk.

The outlook for SMPs is that they may have to be linked to Local Development Frameworks (LDFs) as well as the Sustainable Development Strategy framework and Environment Agency risk maps, with creative new approaches to public participation. This could be done through the Marine Bill provisions relating to the future for ICZM.

In March 2006, the Environment Agency announced that it was delaying the current round of public consultation on the Suffolk and Essex estuarine management plans. The reasons given were “financial considerations”. Essentially, the consultation exercise was generating a public response in favour of ‘holding the line’. This is not financially acceptable to Defra as the expectations arising from the consultation exercise could not be met by current cost benefit analysis rules or financing guidelines.

Regarding the North Norfolk Cell 3b, the draft Shoreline Management Plan has been challenged by North Norfolk District Council (NNDC), a key partner in the Shoreline Management Plan process. Their grounds for refusing to accept SMP 3b are that:

- Although they accept the basic integrity of the technical analysis of the coastal processes within the prescribed parameters set by Defra, with the exception of the huge uncertainty of the impact of offshore dredging, they cannot accept the application of the technical analysis to the proposed SMP (ie the principle of managed realignment in the absence of consideration of the human, social and economic consequences for the coastal zone and inland communities).
- Furthermore, they cannot accept the total lack of social justice caused by a fundamental change of policy from ‘hold the line’.
- To address the current shortcomings, they believe the following actions need to be undertaken:
 - a. a detailed analysis of the impact of large-scale and long-term offshore dredging as currently practised;
 - b. a full and professional cost analysis of what is at risk if the plan were to be implemented, specially to include infrastructure, assets and economic activity;
 - c. a comparison of b with the cost of appropriate defences strategies – ie soft and hard solutions;
 - d. the development of a compensation scheme to remove the potential for blight by ensuring social justice and maintaining confidence in our coastal communities and in the local economy.
- To allow (a. - d.) to be undertaken, they believe it is essential that:
 - i. the further application of the draft SMP is suspended pending the outcome of various studies;
 - ii. suitable measures must be taken to address those locations at immediate risk of erosion

This is a significant issue for the new generation of SMPs. In effect, NNDC will not approve its own SMP until there are creative responses to the points listed above. In all likelihood, Suffolk local authorities may follow suit, and Great Yarmouth Borough Council is also minded to pursue this position. This is why the whole future for the ‘adaptation tool kit’ and

the public acceptance of the provisions of that toolkit will be vital for the continuation of the second generation SMPs. English Nature now has an opportunity to help shape the character of this adaptation toolkit and how it could apply to sustainable development on a changing coastline.

5 Issues to address

This research has identified four areas in coastal management where there are gaps and where more detailed work still needs to be done.

5.1 Integrated coastal zone management (ICZM)

In 2004 Atkins were commissioned by Defra to produce a Stocktake Report on the current situation of institutional arrangements for integrated coastal zone management (ICZM) in the UK. The stocktake highlighted the widespread occurrence of participation at all levels of decision making. However, it is often uncoordinated and initiatives can be constrained, or made less effective, by lack of long-term resources and commitment from stakeholders. One area of concern was the lack of long-term planning for future coastal management. Defra's Marine and Waterways division is currently preparing a draft strategy on ICZM for England. The strategy will lay out objectives for achieving a more consistent approach to ICZM around the coast.

A number of uncertainties exist regarding the forthcoming ICZM strategy, including:

- it is unclear as to exactly how ICZM will fit with Shoreline Management Plans;
- the ICZM relationship to Local Development Frameworks;
- how it will be implemented and which body will lead the ICZM implementation process;
- whether there will be a national overview;
- the role of any marine management organisation;
- how ICZM will link marine and terrestrial planning, especially in the light of the possible provision in Marine Bill.

The Environment Agency sees that, for ICZM to be effective, the strategy must demonstrate effective conflict resolution, purposeful influence over associated land use plans, and reduce the consultation burden. As yet it is unclear whether ICZM should be a statutory or a permissive element in the widening of the planning system (Worrall, 2005).

The ICZM process is still at a very embryonic stage, just in a period when planning procedures and strategic coastal management plans are undergoing much revision. This offers another opportunity for English Nature to cooperate so as to shape these emerging strategies, for example through exploring the envisioning toolkit. The Defra consultation document on the ICZM Strategy can be found at <http://www.defra.gov.uk/corporate/consult/iczm-strategy/index.htm> and the closing date for responses is the 8th September 2006.

5.2 Funding/ institutional arrangements

The vision for new strategic direction for flood and coastal erosion risk management in England in the *Making space for water* First Government Response states that, “*There will be increased use of co-funding with other bodies and other schemes so as to secure sustainable and cost-effective management of flood and coastal erosion while at the same time securing a greater overall contribution to sustainable development than would have been possible without co-operation*” (Defra, 2005a, p15). The document also states that ministers will further consult on a proposal to offer the Environment Agency a holistic and strategic role in relation to all coastal flood and erosion risk management issues in England. Therefore there are still opportunities and uncertainties about organisational roles for the future of coastal management in England and Wales.

5.3 Planning issues

With regard to the Local Development Framework, one area of particular interest is Area Action Plans (AAPs) for key areas of change or conservation. Key features of the AAPs are that they should;

- deliver planned growth areas;
- stimulate regeneration;
- protect areas particularly sensitive to change;
- resolve conflicting objectives in areas subject to development pressures; or
- focus the delivery of area based regeneration initiatives.

Hence, they can provide more detailed assessment of areas of change and might cover an assessment of needs and opportunities for developing sustainable communities, and their physical and social infrastructure requirements. There is scope for the coastal strip to be highlighted as an area action plan because it is an area particularly sensitive to change that in many cases cannot be prevented. The development of proposals for the Defra ‘adaptation toolkit’ will require full and interactive input from stakeholders to make it effective. The need to ‘think ahead: be adaptable’ is essential. There is a need for the planning system to take this approach as well. The methods of effectively seeking residents (and others’) views, without raising expectations that the status quo can be maintained, whilst building understanding of the issues and workable solutions need to be developed and used.

Here is another opportunity for English Nature to explore the scope for linking local strategic partnerships to area action plans via local area agreement procedures. There is much to play for as these schemes are still at a ‘drawing board’ stage. Given the scope for implementing the Defra ‘adaptation toolkit’ over the coming months, this is an ideal time for English Nature to be proactive.

5.4 Public perceptions/expectations

The views of the public with regard to coastal change, and how these are understood and communicated by operating authorities are an important consideration. The progressive transformation of coastal policy is challenging due to the degree of expectation amongst

many stakeholders' that a 'hold the line' policy at the coast will be maintained. As set out in Section 2, the key issues where better communication is required are:

- reducing the risk of flooding and coastal erosion is a discretionary responsibility for operating authorities,
- managing expectations amongst coastal communities that 'hold the line' is a feasible, affordable and preferred policy option;
- improving public understanding of the mechanisms which provide coastal erosion and flood risk management;
- explanation of the roles, responsibilities and funding for coastal management;
- the concept of flood and coastal erosion risk management.

English Nature needs to understand how to address these expectations in taking forward the Maritime Strategy objectives. It is going to be difficult to demonstrate that coastal adaptation could be 'better' for wildlife and habitat enhancement without taking into account adaptation options for property and economy, as these latter issues generally lie beyond the English Nature remit. However, by working with all stakeholders, including local communities, in designing at the beginning both visions and coordinated policies for sustainable coastal futures, there is potential for finding successful outcomes. The case studies which follow offer some hope that this can be achieved, although there is a need for a long-term commitment to this work.

6 Finding solutions

This research project explored what requirements are involved in designing a 'Coastline fit for the future' ie one that is sustainably managed and ecologically resilient to climate change. Three areas have been identified as potentially leading the way to finding sustainable solutions, and are relevant background to the case studies. These requirements are:

- Coastal Change – technical issues.
- Maritime and coastal strategies-development and implementation.
- Coastal change and flooding and erosion risk

6.1 Coastal change – technical issues

The Foresight Future Flooding project was one of the first of its kind to approach the future of coastal flooding risk with the aim of a long-term perspective. By using four future scenarios it explored a range of potential climate and socio-economic scenarios and the implications that they have for coastal flooding (Evans and others, 2004a and b). It advocates a long-term strategic approach to dealing with a changing coastline and sets out the key messages that:

- continuing with existing policies is not an option – in all the scenarios considered, flooding risks grow to unacceptable levels;
- flooding risks need to be addressed now in order to leave room for the creation of new coastal patterns over the coming three generations and beyond.

Sediment movement can have much value in coastal management. There is a need to create robust models of future sediment motion relating both to existing and proposed patterns of flood defence (ie maintenance, strengthening or progressive removal) and possible benefits and consequences for coastal protection elsewhere. Where individual landowners take matters into their own hands, models show that neighbouring interest are adversely affected by such practices, therefore there is a case for controlling this practice where there are negative consequential impacts on coastal change

Researchers at the Tyndall Centre for Climate Change Research have also been working on projects looking at both erosion and flood modelling. The Tyndall Regional Coastal Simulator describes coastal behaviours in East Anglia and deals with spatial areas and time periods that are unusually large in (quantified) geomorphic modelling terms (Walkden, 2005).

6.1.1 Maritime and coastal strategies

A number of coastal/maritime strategies have been published in the last few years. Many of these ideas and suggestions are incorporated into the proposals for the three case studies outlined in Section 5. They provide further background, but as yet, do not offer fresh solutions.

6.1.2 English Nature's Maritime Strategy

The Maritime Strategy of English Nature is set out in the document, *Our coasts and seas-making space for people, industry and wildlife* (English Nature, 2005). This strategy highlights the need for action across many issues, ranging from the loss of coastal habitats due to coastal squeeze, to the need to recover the quality of the marine ecosystem and improve the sustainability of economic activities in the sea and at the coast. It illustrates the need to adapt to change, and advocates the establishment of a marine spatial planning system along with a coherent network of Marine Protected Areas. Both of these would require new legislation. The strategy also highlights the need for action across a range of issues from the loss of coastal habitats due to coastal squeeze to the damage to marine ecosystem caused by over-exploitation of fisheries.

Issues that need to be addressed include:

- close working relationships between English Nature and other partners with relevant strategies to implement all the necessary actions;
- closer working with planning and local authorities;
- improved public participation;
- an effective transition of coastal management work from English Nature to Natural England;
- strengthening the compatibility between English Nature/Natural England and the Environment Agency;
- meeting the aspirations of the strapline 'Our coasts and seas-making space for people, industry **and** wildlife' to ensure that sustainability is at the heart of decision-making by all organisations.

6.1.3 Environment Agency Marine Strategy

The Environment Agency published their Marine Strategy in November 2005. This summarises their priorities for the future and how they will help assist the Government's aims for the marine environment (Environment Agency, 2005).

The four priorities of the Marine Strategy to create cleaner coasts and healthier seas are:

- promoting sustainable development – to get results for people, businesses and wildlife;
- integrating management between the land and sea;
- efficiently regulating our coasts and seas;
- making sure that we all value our coastal and marine environment.

There is also a clear link with the development of the Marine Bill and the implementation of the English Nature Maritime Strategy.

6.1.4 National Trust

The aim of the National Trust is to conserve and promote the natural and cultural heritage. It has 1130 kilometres of coastline in its care, making it a significant landowner of some of the most striking coastlines of England, Wales and Northern Ireland.

Tony Burton, Director of Policy and Strategy at the National Trust, has commented that

"Over the next few decades, extensive coastal change – especially flooding and erosion caused by sea level rise and more frequent storms – appears inevitable. The UK cannot ignore the issue, and all sectors must plan how to adapt to a future of advancing seas".

To help plan for the future the Trust commissioned research to assess how the coastline is likely to change over the next 100 years. The results suggest that many of the Trust's important sites are at risk from coastal erosion and flooding. The outcomes of this research are summarised in the document 'Shifting shores' (National Trust, 2005). The five key lessons about managing changing coastlines are:

- long-term planning is essential;
- think and act in a wider context;
- work with nature not against it;
- solutions need partnership
- involving the public is critical

It has been stated that that the National Trust policy is, "...to work with, enable and free-up natural coastal processes", and that they will, "only intervene to prevent coastal change at specific places where there is a clear need to 'buy some time' through limited and 'soft' intervention. This can allow (us) to negotiate the longer term position with specific interest

groups and/or agencies. In these relatively few instances (we) may only expect to ‘hold a line’ for a few decades” (Jarman, 2006).

Currently, the Trust is developing its policy towards managed realignments on its own properties. It is experiencing a degree of antagonism amongst some local interests, notably those with maritime land uses (sailing, nature conservation) and property owners, who are not yet ready to accept coastal realignment at the rate at which it is being promoted.

All of these strategies and associated consultations add up to a serious level of attention to future coastal management. But they do not constitute a coherent whole. Despite the cross-referencing in the studies, the impression is gained of agencies still looking for a comprehensive solution to sustainable coastal management beyond their current funding limitations and statutory responsibilities.

6.2 Coastal change: flooding and erosion risk

The mobile nature of soft coasts means that coastal communities face huge uncertainty in their property values and peace of mind when the shoreline management policy is changed. The position of Government is that public funding of flood risk management schemes have to be affordable, ie the cost of the works need to be balanced against the cost of the assets being protected. As a consequence, areas of low population density or low-value agricultural land may not meet the economic criteria, meaning that in the long-term flooding or erosion is unavoidable. Coastal residents in such areas have broadly come to assume that they will get defences if they make enough fuss, but this cannot continue. The government is currently investigating the evidence base in this area, but is not currently prepared to pay compensation for lost property value. This is in turn creating a claim for loss of fairness of treatment. This dispute throws up important questions of what are the appropriate mechanisms for effective governance for coastal change and subsequent adaptation.

It is important to highlight that the impacts of erosion and flooding can be very different. Often the two are talked about in the same breath but not clearly separated. Erosion loses land and any property situated on that land. In addition, coastal erosion is the birthplace of all coastal sediment mobilisation and movement. So erosion is not only a natural process, in many cases it is also one where coastal protection and coastal natural habitat are nurtured and replenished. From a nature conservation perspective, therefore, coastal erosion is beneficial for geomorphology, habitats and species, where even the erosion of cliff-top habitats provides a colonisation source for the cliff slope.

From a policy perspective, the threat of coastal erosion is the more feared by property owners, though sea flooding can be fearsome, and, where land is below sea level, extremely damaging. Coastal flooding offers scope for natural coastline defence to be promoted, with a variety of nature conservation advantages.

An important consideration is the issue of uncertainty – either in terms of the science of climate change or other areas of physical change or in the arena of politics. Uncertainty is endemic in coastal futures. This is because the science and politics, along with climate change and greenhouse gas mitigation throw up many different interpretations of how coasts may change. In addition, the direction of government policy is still evolving, especially regarding adaptation strategies and the scope for further enhancing nature conservation

interests. Both offer huge scope for English Nature to link creative consultation with socio-economic gains.

At issue here is a change in perspective. A future coast, suitably designed and shared in its formation by local interests, could well become a tourist asset, a new wildlife and interpretation site, and scope for revitalising the local economy, notably for extended recreation and local sourcing of food and other materials for sustainable communities. Here is where English Nature (and Natural England in future) may look for an expanded role.

The case studies which follow seek to explore the scope for implementing the opportunities which lie ahead. English Nature is a player in an evolving drama. It can influence events if it knows when to be most effective. The case studies suggest this is possible:

- in doing and promoting visioning exercises for local communities and key officials and voluntary bodies for designing future coasts;
- in assisting in the shape and character of the adaptation funding and procedural guidance;
- in working with planning authorities in guiding PPS 25, and the new planning machinery;
- in creating new conservation opportunities that make the coast more resilient to sea level rise and coastal change more generally, and which genuinely enhance local economic and social activity.

7 Case studies- background

This section outlines the proposed work packages for the three case studies:

- Winterton, Norfolk
- Suffolk
- Slapton, Devon

A more detailed analysis of the Winterton case study and the Winterton Liaison Group process is discussed in Section 6. An up-date of each of these case studies is then given in Section 7. However, it should be noted that they are not all at the same stage of progress.

7.1 Winterton, Norfolk

Winterton in North Norfolk and the adjacent area of coast is of national and international importance for its dune system (including its geomorphological interest) and associated wildlife. In addition, the dune frontage to the north protects the upper Thurne with its internationally important freshwater interests. This is recognised in a series of nature conservation and landscape designations.

The recent Winterton Dunes Coastal Habitat Management Plan (English Nature, 2003)) and the current draft Shoreline Management Plan have raised issues about the long term sustainability of protecting this frontage especially in the north. Additionally, erosion along the frontage from the car park at Winterton village southwards has raised serious concerns

with many local residents and land owners. Other issues may include visitor pressure on the coast, for example, impacts on grey seals with pups and breeding little terns. There are also perceived problems in relation to recreational activities such as dog walking, horse riding and off-road vehicles. The issue of dumping of garden refuse on the SSSI has also been raised by English Nature staff and local residents.

In early 2005 a group was initiated to provide a forum to communicate over the variety of issues and interests that relate to Winterton Dunes National Nature Reserve and more generally the frontage from the southern end of Winterton-Horsey Dunes SSSI (just north of Hemsby) to Waxham (subject to agreement by the group). This group was the Winterton Liaison Group and it aspired to facilitate constructive engagement between various interests. The aim of the group was to reach consensus on these issues described above and to communicate agreed actions to the relevant bodies. The group consisted of representatives of landowning interests, representatives of statutory and non-statutory bodies and representatives of the local community. A series of four meetings/workshops were held. The first of these focused on issues relating to the Winterton area and set the scene for discussions. The four main themes for the group to cover were:

- coastal defence and sustainability;
- recreation and public amenity issues
- recreation and wildlife issues
- tourism and cultural heritage.

The second meeting consisted of a series of presentations and then a group discussion. The presentations were given by representatives of the University of East Anglia (on the topic of processes affecting the supply of sand to the Winterton Area), the Environment Agency (on the role of the Environment Agency and the Shoreline Management Plan process) and English Nature (on dynamic coasts and Coastal Habitat Management Plans).

The third meeting of the Winterton Liaison Group was a workshop that involved a visioning exercise and explored what the group thought the future for the Winterton area should be. This visioning exercise is described in section 6 on participation techniques.

7.2 Suffolk

The Suffolk coast consists of a series of coastal nature reserves and designated sites linked by estuaries (Blyth, Deben, and Alde and Ore) and receding cliffs (notably Easton Bavents and Dunwich). One particular issue is the debate currently evolving over the action by a local resident in Easton Bavents to use spoil material to prevent recession of a cliff line which, in December 2005, was put into the revised "Pakefield to Easton Bavents SSSI". This sea defence has not been authorised through the planning legislation. One possibility is to use this case as a basis for an extended workshop but as the review of the SSSI was subject to a separate public consultation process ongoing until June 2006, the workshop has not been taken forward.

This issue of private defences is being supported by the 'Suffolk Committee Against Retreat' (SCAR). In the light of the recent decision by the Environment Agency to postpone further public consultation on all estuary strategies, it is possible that a workshop around the future

of the Alde and Ore will be held as an independent analysis to chart a way forward for this strategically important section of the East Anglian coast.

For more details about the current proposal for more study in this area please go to Section 9.2.

7.3 Slapton, Devon

Slapton Ley National Nature Reserve (NNR) is the largest natural freshwater lake in south-west England. It is separated from the sea by a shingle ridge which supports a minor A road on top of it for a distance of 3.5 km – the Slapton Line. The Slapton Line is an instance of a coastal system that is experiencing dynamic change. Independent consultants have established that it is possible to retain the road on the shingle bar for a number of years, possibly as many as 50. In the interim the road is likely to suffer short periods when it is severed from time to time, as coastal change progressively weaken the shingle bar. At some point the cost of re-establishing or maintaining the road link will outweigh the benefits and the future of the road will become unsustainable.

This research involves working with the English Nature Officer in Devon and the Slapton Line Partnership. It proposes a study to create a set of images of how the coastline of the Slapton Line could look if the bar were progressively severed. It would also examine the scope for making the area an alternative tourism and sustainable lifestyle venue for future generations. There is much scope for converting Torcross into a viable economy based on local enterprise, involving food, medicinal plants, health care and therapy, and self-build, carbon neutral housing and community facilities. In short, Torcross, and other local villages, could become progressively more sustainable.

This study could therefore link this improved management of the bar to the Ley, aiming at comprehensive catchment management for the whole region. This would enable a more saline but relatively unpolluted Ley, and newly designed wetlands in the catchments to the shore side of the Ley. The improvement of the area for environmental quality would be part of the renaissance for the whole area.

There is, as yet, no clear proposal for the enhancement of nature conservation in all of this. Options include extending the gravel spit for coastal habitat improvement, and creating freshwater wetlands in the valleys draining the surrounding catchments into the Ley.

The study would work with villagers, business interests, and tourists to help make such a vision well in advance of the final closing of the road link. The whole purpose of this work is to create a possible future that has time and resources on its side before it begins to emerge. This research is not designed to shortcut any legitimate decisions regarding the Slapton Line in the foreseeable future.

As a result of a workshop held by the Slapton Line Partnership, followed by a high level discussion run by the research team, the Partnership has agreed to apply for the Defra Flood and Coastal Management Innovation Fund for a comprehensive survey of sustainable coastal options for the coastal area.

8 Participation techniques

8.1 Visioning exercise

During the Winterton Liaison Group work it became clear that it would be interesting and useful to have the group participate in a 'Visioning exercise' to explore the future for this stretch of coastline. Visioning exercises are used to define and therefore help achieve a desirable future. This technique has a number of benefits:

- when integration between issues is required;
- when a wide variety of ideas should be heard;
- when a range of potential solutions is needed;
- when participation for developing a long-range plan should be encouraged;
- as an integrated approach to policy-making;
- as a basis for a democratically-derived consensus.

However, there can be weaknesses such as:

- organisation of the visioning exercise can be costly and lengthy;
- visions can be difficult to transfer into strategy and policy as they are scenarios, not forecasts;
- there must be some sort of credible adaptation strategy with reliable funding.

More details on visioning exercises can be found on the Australian Coastal Cooperative Research Centre (CRC) website on techniques in their 'Citizen Science Toolbox' - <http://www.coastal.crc.org.au/toolbox/alpha-list.asp>. An example of a visioning exercise conducted by the Coastal CRC is given in Box 1.

The Winterton Liaison Group undertook a Visioning Exercise in July 2005. The event aimed to explore what future visions the group had for the Winterton area. There were 28 individuals involved in the visioning exercise (including several Tyndall Centre researchers). The agenda for the meeting/workshop is given in Box 2. The participants were split into four groups of seven. The groups were assigned before the meeting and ensured that each group had a mix of different viewpoints and expertise ranging from local action groups to governmental bodies. The meeting started with a short introduction from the chairman who asked that people speak from their experiences and not just negotiate for their organisations as well as looking far into the distance and opening up new ideas. A short presentation was then given by English Nature regarding the history of the site and background information. The presentation highlighted the following issues for the Winterton area:

- The Broads and potential saline intrusion over a long distance inland.
- Winterton Dunes as a dynamic, mobile system.
- The sea wall acting to protect the Broads also impinges on the geomorphology of the dunes (ie the dunes cannot roll back as sea level rises).

Box 1: Wheel of Fortune Visioning Exercise, Bribie Island, Queensland

In this case study a Wheel of Coastal Fortune© game was used as an innovative tool for helping coastal communities to envision the future of their area. The Game was run as an exercise for representatives of government and non-government environmental organisations whose principle focus is on coastal planning and management. Having observed the game and taken part, the 30 government and volunteer participants at the Bribie Island workshop could then go back to their organisations across South-East Queensland and explain the advantages of trying more innovative engagement techniques.

This technique was chosen for inclusion as a case study in the Toolbox because it describes an innovative tool that can be adapted for a variety of situations to suit the user, to achieve a variety of goals and to work with a broad range of stakeholders. In this particular case, the training process required a time commitment of around half a day. The game helped introduce participants to a new way of thinking. The game also introduced an element of fun that allowed people to be more creative in their suggestions and more spontaneous with their comments. The game broke up the formal meeting structure of people passively seated around the table and allowed people to move and extend their understanding of the planning process for coastal and catchment management.

As the principal goal of the meeting was a focus on how to achieve integration amongst groups, the use of this tool was seen as appropriate to promote strategic discussion amongst managers, industry and environmental groups and to prompt discussion on a vision of how they see the land with possible functions for that land, and then to set priorities as a regional community.

The Wheel of Coastal Fortune© offered the group the following opportunities:

- a method of visioning possible futures for the coastal/catchment areas in south-east Queensland Wheel of Coastal Fortune Game, in Jervis Bay, NSW;
- a tool that could be used in their local areas for visioning and educational exercises;
- a chance to stand up, move around, and interact with other participants that elicited an enthusiastic response while being focused on a common goal; and
- a representation of the complex coastal catchment system in an abstract form.

Simulation games provide an innovative and imaginative technique to encourage individuals to address wider issues of relationships between people and their environment. Games allow children and people who may not speak up otherwise to have their views included.

Source: http://www.coastal.crc.org.au/toolbox/casestudies/cs_visioning.pdf

Box 2: Agenda for the Winterton Visioning Exercise

17.30 ***Buffet***

18.00 ***Briefing***

Changes in the future and buying time
What landscape and how do we get there?

18.15 ***State of play***

Presentations on:

How changed in the past?
Critical areas
Nature conservation considerations

18.40 ***Group work***

Visioning exercise with maps to discuss vision for the future of Winterton area (4 groups)

20.00 ***Plenary session***

Discussion of Group Work

20.45 ***Workshop end***

The following challenges were also identified:

- future generations (and their heavy responsibility);
- have to achieve consensus ;
- sustainable outcomes (one that will last and be of benefit to people, property and environment). So that future generations don't think that we have got it so badly wrong;
- legislation (interpretation and application);
- change is inevitable (better managed than ignored or fought – uncertainty about the rate of change).

A short presentation by the University of East Anglia researchers on visualisation work was then given regarding how this technique can be used as a coastal management tool to explore options for the future.

The groups then worked through the visioning exercise. Each of the four groups were given an Activity Sheet (see Box 3 below for details), a large laminated map of the area, paper to write on and markers to draw on the laminated map with.

The groups were given 1 hour and 20 minutes to work through the activity sheet. The groups then came back together for a plenary session to discuss the issues raised by each group. For details of the Visioning Exercise results go to Section 7.1

Box 3: Activity sheet for Winterton visioning exercise

1. Vision statement

Within your group put together a statement or selection of words to describe your vision for Winterton in 50 + years time. Note that this should be a group consensus, not a collection of individual pleas!

Think about the following questions:

- What is your vision for the area?
- What are the guiding principles behind your vision?
- How would you like to work with other partners to obtain such a vision?
- What do you see as the main obstacles to obtaining your vision?

2. Vision map

Using the large, laminated A1 map of the Winterton area (1938 flood shown on it) work together as a group to draw out what you think Winterton and the surrounding areas should look like in 50 + years time. You should seek to base this on your vision principles.

3. Diagram of working relationships

On the sheets of paper provided sketch out a diagram of how your group sees the various organisations and individuals working together to achieve this vision. These would be alliances to look for to build the vision. You do not have to stick to the present or proposed configuration of agencies and governmental bodies. But you should be prepared to justify any changes...What we are all looking for are practical outcomes.

9 Case studies update and future actions

9.1 Winterton, Norfolk

The Winterton Liaison Group can be seen as a valuable exercise in the process of facilitated constructive discussions. These discussions have been able to improve relationship between stakeholders through allowing time and space for the sharing of ideas and knowledge, while at the same time, providing a neutral forum for discussion. In addition, the group meeting enabled English Nature representatives to gain a better understanding of how the issues of

coastal change were seen locally, providing useful opportunities to identify ways of improving communication to meet local residents' needs.

Four meetings have taken place for the Winterton Liaison Group. The third involved the Visioning Exercise described in Section 6. It was discovered through this Winterton Liaison Group meeting that the visualisation exercise itself proved very difficult for the participants. It became clear that the ability of people to imagine future coastal landscapes was varied and some may be strongly constrained by their attachment to or personal involvement with current landscapes. There were a number of reasons for the difficulty in visioning:

- participants felt that they did not have enough information about the science involved to forecast what the coast should/would look like;
- the fact that policy is in flux (eg Defra and points scoring) made it difficult to look ahead – uncertainty of politics;
- without information on how socio-economic issues are going to be addressed, participants can understandably be reluctant to move from their public stances.

A number of areas of uncertainty were also identified:

- data lacking for effects of offshore dredging;
- storm surge information – what would happen to the dunes? Need to model better and visualise the outcome of a significant surge;
- little was known about economic opportunities and losses of salt water intrusion eg changing/adapting homes (consequences of persistent flooded areas needs to be recorded). There is no detailed audit of people's property, and livelihoods when affected by flooding;
- lack of analysis of flood risk in relation to planning (development);
- cultural landscape and why the area important to people – need to have a land-owner by land-owner discussion;
- relating to changes over the 50-year timescales envisaged is difficult for many people and organisations.

Similarly, several key issues were apparent from the discussions:

- people cannot visualise when there is little information to go on (considered very important but they feel that they cannot identify);
- social justice/equity/fairness are critical considerations;
- flood hazard planning is both vital and hugely uncertain;
- critical information about massive flooding and sea level rise should be sensitively mapped;
- livelihood survey needed (costs and benefits including the loss of infrastructure – major cost).

A fourth follow-up meeting of the Winterton Liaison Group was held in January 2006. This had a positive response from participants mixed with 'healthy scepticism' about Defra's

ability to do long-term planning and mis-match in timescales between local development frameworks (20 years) and shoreline management plans (100 years). There was a willingness from the Winterton Liaison Group to support a pilot project- 'Natural history, natural futures' but this would need to be scoped. It was noted that there were differences in the way that larger landowners and village residents react to coastal change, and this difference may need different approaches. It was also apparent from the discussion that planning is becoming a key factor in addressing coastal management issues. Hence, English Nature/ Natural England staff will need to extend their existing levels of planning experience/expertise.

A lesson learned from the Winterton Visioning Exercise was that experts in different fields may be needed to put together supporting information/examples of likely future landscape scenarios if this type of tool can be effective. However, if this were to be the case, it would be extremely important to present these 'expert' scenarios in such a way that the participants feel that they are not being imposed upon them. The scenarios should be presented as a few possible ways forward but that can be altered and adapted as the participants see fit.

The following comments were made by participants of the visioning exercise:

"it was a different and interesting approach taken during this meeting. It achieved something in that it is bringing it all together. However, we do not want it to continue to be a "talking shop", but it could be very useful."

"Any form of meeting is useful. 18 months ago I would not have thought I would be sitting in a room with this group of people. It has a very useful purpose. What was said in one group was also said in the others and they are reflecting the same issues. All the people in the room know the issues, but they don't know that in Whitehall."

9.2 Suffolk

The process of stakeholder engagement in Suffolk is not as far developed as is the case in Winterton. However, a number of meetings have taken place between the Tyndall research team and other interested individuals and groups including, SCAR, the Alde and Ore Partnership, the Aldeburgh Society, the Suffolk English Nature team and the Suffolk Coasts and Heaths AONB Unit.

A recent activity has been the production of a collaborative proposal, led by the Suffolk Coast and Heaths AONB Unit, entitled 'Coast Life to address the issues of coastal change in Suffolk. This was initiated by a meeting of the research team with the Alde and Ore Partnership. The result of this creative discussion was a proposal which is detailed below. It is important to cover this in full as it was the first example of a co-operative proposal between English Nature and a coastal partnership that reflected emergence of the use of the tool kit.

Coastal Life – a new way to deal with the future of tidal areas

The coast of Suffolk – open coast and estuarine – is changing at an increasing rate. The coast has been eroding for centuries and this is likely to increase as climate change exacerbates the rise in sea levels and creates stormier conditions and higher freshwater flows in the winter. Flood defences which were designed for a less stressed environment in past centuries are past their design life and are preventing flood plains from taking flood waters. This is having a significant effect on both the landscape and the communities in low-lying coastal areas and adjacent to eroding cliffs. It is therefore vital that a wide range of interested parties contribute to the discussion and the determination of the approach to these changes to ensure the special qualities of the coast – including its landscape, biodiversity, heritage, recreational and commercial attributes – are conserved, and that communities adapt in an appropriate way.

The responses to the traditional consultation programmes of the estuary flood risk strategies in Suffolk have shown that there is little agreement about the scale of changes, their implications and the priorities for public money.

Rather than spend energy in trying to re-work the current situation, there is a need to foster a change of attitude- to make a step change in approach. This requires working with all manner of community interests in a new way, improving understanding, harnessing fresh resources, embracing sustainability and moving from a muddle to progress.

We need to shift from seeing changes to the coast as a worrying threat to seeing them as an challenging opportunity; from wasting money on projects that are not working or have a limited lifespan to investing in more creative ways of solving problems; from seeing public involvement as a source of confrontation and negativity to being a source of innovation and energy. With effective stakeholder involvement will come deeper commitment to tackle problems and make real progress.

This proposal is based on discussions between the Tyndall Centre for Climate Change and the Suffolk Coast and Heaths AONB Unit utilising experience from coastal adaptation strategies being developed in Suffolk and Norfolk. For it to work it is critical to have support from the political and voluntary establishment, the public sector coastal management agencies, and relevant local authorities and at the community level. It is a framework for people to debate and modify until they are comfortable to put their weight behind it and pilot a new approach.

Timing

At present there is no clear way forward on the Suffolk Coast. The Environment Agency has announced that further public consultation on the estuarine management plans are to be delayed due to financial considerations. In essence, it is unlikely that enough Defra funds will be levered in by the current proposals which are, in any case, opposed by many locally. The Government is actively looking for adaptation strategies that may help to provide a basis for communities to adjust to a changing coastline. The new planning guidelines outline ways in which future proposed development on the coast may be restricted in the face of an increasing coastal threat.

Consequently the timing is ideal for a new initiative, one that is based on exploring creatively just how coastal communities might evolve to promote reliable and sustainable coastal management for viable local livelihoods.

The proposal

The essence of the proposal is to establish a meaningful dialogue between community groups in a pilot area, that

- *is open and transparent and allows people to assimilate different viewpoints;*
- *uses the latest technological aids and involvement techniques;*
- *establishes possible/probable scenarios and suggestions adaptations to deal with the change;*
- *works within realistic but lightly constrained boundaries;*
- *tries to focus future spending on real benefits in the longer term;*
- *treats participants as equal and is led in a neutral way;*
- *embraces the need for sustainable development;*
- *leaves aside current policy and institutional arrangements in the first instance to focus on solutions rather than mechanisms;*
- *utilises the technical learning already gained through previous work*

The main phases of the proposal are:

- *discussion with relevant organisations to get buy-in to trying something new*
- *discussion with the pilot area communities to get a similar buy-in*
- *identification of local feelings about interests and needs*
- *development of best guess scenarios, based on robust science, about how the coast /estuary could evolve with and without intervention*
- *use computer generated visualisations to bring alive the scenarios and to test adaptations, modifications and innovations*
- *facilitated workshops to work towards consensus – on priorities, essentials, modifications, ideas etc.*
- *work with schools and school communities to capture the interests of future generations (particularly using IT as a mechanism)*
- *develop innovative ways to reach sectors of the community yet to be engaged with thinking about the future.*
- *further facilitated work on the mechanisms to move from where we are to where we would like to be*
- *training and support to enable the participants to express the ideas generated to a wider audience – to become effective champions of them*

The phases are not mutually exclusive. The process will need support mechanisms to help people tackle new, complex and perhaps testing thinking. A parallel process would happen to disseminate the progress to, and gather feedback from, a wider set of people on the East Anglian coast so that the pilot learning has the widest implications. (This could also include a national and international aspect depending on the funding support generated.)

The ideal project area is likely to be the area around the Alde & Ore Estuary for the following reasons:

- *it is an area where local interest is already high;*
- *a mechanism exists to allow deep penetration at the community level;*
- *has a range of users/interests active on the water;*
- *is of interest to a wide range of authorities especially the prime flood risk bodies;*
- *has an estuary and open coast;*
- *has a wide range of designation constraints;*
- *is rural and urban – from sparsely populated to a range of villages to the Town of Aldeburgh;*
- *coastal processes are, and will increasingly be, impacting on the area creating inevitable change;*

There are of course risks in taking any new form of approach. Such dialogue processes have to be flexible and there is a risk it can take participants to unexpected areas or new problems and barriers. This has to be weighed against the value of building deep commitment and innovative solutions from tapping new contributions. It does require a belief from all participants about how important it is to keep trying and accept that it may be up to them to change. Just as the predicted changes will only happen over time, so the solutions may also take time to come to fruition. There are no instant answers. However, the current approaches appear to be meeting extensive barriers and it seems sensible to seek alternative routes forward.

If this idea is to be made to work, it will need to be funded. There could be resources within the Defra coastal and flood management machinery for this and the Environment Agency and Natural England may also financially support this. Certain charitable trusts may also be attracted to the project. There is also the possibility of designating this under a Special Countryside Scheme under Section 40 of the 1968 Countryside Act, or its reformulation in the Natural Resources and Rural Communities Act.

Next steps:

This proposal has not yet been taken further. It could lead to the kind of visioning exercise followed in Winterton. This time, however, various strategies for dealing with compensation and relocation options would have to be explicitly considered.

9.3 Slapton, Devon

The Slapton Line Partnership met on 1st February 2006. This meeting agreed to look carefully at the scope for incorporating elements of the Local Development Framework planning process into new visions for a future for the shingle bar with no road connecting the coastal communities of Street and Torcross. The fact that South Hams District Council is prepared to do this is encouraging for the policy of widening the coastal futures management framework into the wider sustainable development and socio-economic well-being of the local development framework process, due to go to public consultation in 2008.

It is too soon to tell how this process will develop in the Slapton area. A facilitated public meeting in January 2006 established an element of common agreement over contingency

planning, the responsibilities of the various official organisations involved, and the scope for involving the local development framework process. The fact that the Slapton Line Partnership is actively pursuing a visioning exercise for the area, and formally pursuing resources for the Defra Flood and Coastal Management Innovation Fund are encouraging signs.

10 A ‘Toolkit’ for working with local communities

In terms of a ‘toolkit’ for working with local communities it is important to recognise that these ‘tools’ include the process itself. It is not just about having a ‘how to’ manual – instead a variety of flexible approaches to suit different circumstances.

Several key principles have been identified for working with local communities to improve participation and effective dialogue. These are:

- i. Stakeholders need a clear adaptation message-what it is, what is done and who does it. This will help reduce uncertainty.
- ii. Understanding stakeholders and the ways they react/behaviour. Being able to recognise types of behaviour/attitudes in individuals and groups eg the outspoken person with a strong viewpoint and not afraid to speak, often very committed to the ‘cause’ and challenges decisions/organisations; those who are deeply concerned but don’t want to/worried about speaking up, ‘ignore it and it’ll go away’; those who want to understand, are rational and can act as local ‘champions’. All are essential to engage with, some take more time than others.
- iii. Different approaches to participation and to helping with the preparation of visions for businesses, householders and larger landowners will be needed. It is important to adapt the toolkit for local expectations and purposes so long as nationally framed guidelines are in place. This would help in ‘Action Research’ with the right training; using anonymous questionnaires designed for that purpose by Tyndall also promotes community networking and involvement. Questionnaires need analysis.
- iv. Visioning future landscapes (see notes on Winterton above) to show how adaptation works and what flexibility the landscape can offer for local economic gain.
- v. Local area agreements based on this mix of ideas under the Planning and Land Compensation Act of 2005, and the Local Government Act of 2000, coupled to various proposals in local integrated public service delivery under the regulations linked to this legislation.
- vi. Training for stakeholder engagement should be part of the career development of English Nature/Natural England staff that have direct responsibility for coastal, river valley and whole landscape planning and management. This training should also involve developing skills in understanding and promoting the active implementation of sustainable development principles.
- vii. Prioritising a “baton change” during the transition to Natural England for staff that are passing out of one area of work and entering another. This transfer may be resisted by funding managers as it involves a period of duplication of staff effort. But from the point of view of local stakeholders it is vital that the end of one coastal officer’s role

does not take place so abruptly that the new officer has no time to understand the political and social dynamic of local communities and how to engage their confidence and trust.

- viii. There is a need to develop the understanding of peoples' internal barriers to change and to move away from reactive situations and move towards proactive engagement as shown by the case studies. The scope for seizing social and economic opportunities out of new coastal alignments and habitats is especially relevant. Promoting advantage for future coastlines should be one of the distinguishing features of the future role of Natural England. The case studies covered here should be pursued with this objective in mind.

11 Observations

This research has found that the current state of affairs is not workable. There is a lack of public confidence in the procedures for developing shoreline management plans (SMPs). This anxiety and anger affects the public interpretation of other coastal strategies, even when these are subject to detailed consultation. There is also considerable scepticism over adequate levels of financing to ensure sustainable coastal futures. In almost all of the contentious sites, where coastal realignment is proposed in the draft SMPs, public opposition has become mobilised mainly by organised and active campaign groups and parish councils. In addition a number of MPs have taken an interest, even to the extent of generating a debate in the House of Commons. At times, both the Environment Agency and English Nature staff have been caught in the middle, often from no direct fault of their own.

Throughout this report the distinction between nationally agreed and communicated guidelines and funding arrangements and locally inclusive and co-operative solutions, suitable for local economies and societies, must be a hallmark of future coastal management along sustainable lines. It is much more likely that both the planning schemes of the new local development framework and the sustainable development principles promoted under the national sustainable development strategy will have to be included. This will require much rethinking of the coastal management procedures, a wider combination of departmental and agency interests, and more effective means of evolving the Defra 'adaptation toolkit'.

It is also evident that English Nature/Natural England staff will require more training in the tool kit of public engagement. This should give more scope for developing agreed strategies that will enable local people to work with SMP partnerships to evolve the best arrangements for these local areas.

At the local level, the Winterton exercise enabled us to take the idea for envisioning coastal futures further than before. Yet still the local people found it difficult to accept that the coast was going to change, irrespective of the wildlife advantages, until the issue of financing coastal adaptation was dealt with. This is why there is limited opportunity for more work in this area until it is possible to deal with the economics and practicalities of adaptation and adjustment operated within the bounds of English Nature's statutory interests, all of which will be taken on by Natural England.

All this suggests that some fresh thinking may be required as Natural England becomes established at regional level in England. Right now, much work still has to be done on why national resources, managed to protect and enhance their ecosystem functions, and creating

meaningful opportunities for communities and their economies to capture a sustainable coastline. This will be an important task for the new organisation with clear purpose to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development.

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Appendix

Presentation given by Jessica Milligan at the English Nature Coastal Action Group meeting at Wareham, Dorset on 30 June, 2006 entitled, *Changing Coastlines: working with stakeholders in Norfolk and Suffolk*.



Changing Coastlines: Working with stakeholders in Norfolk and Suffolk

Jessica Milligan and Tim O'Riordan

English Nature Coastal Action Group
Wareham, 30th June 2006

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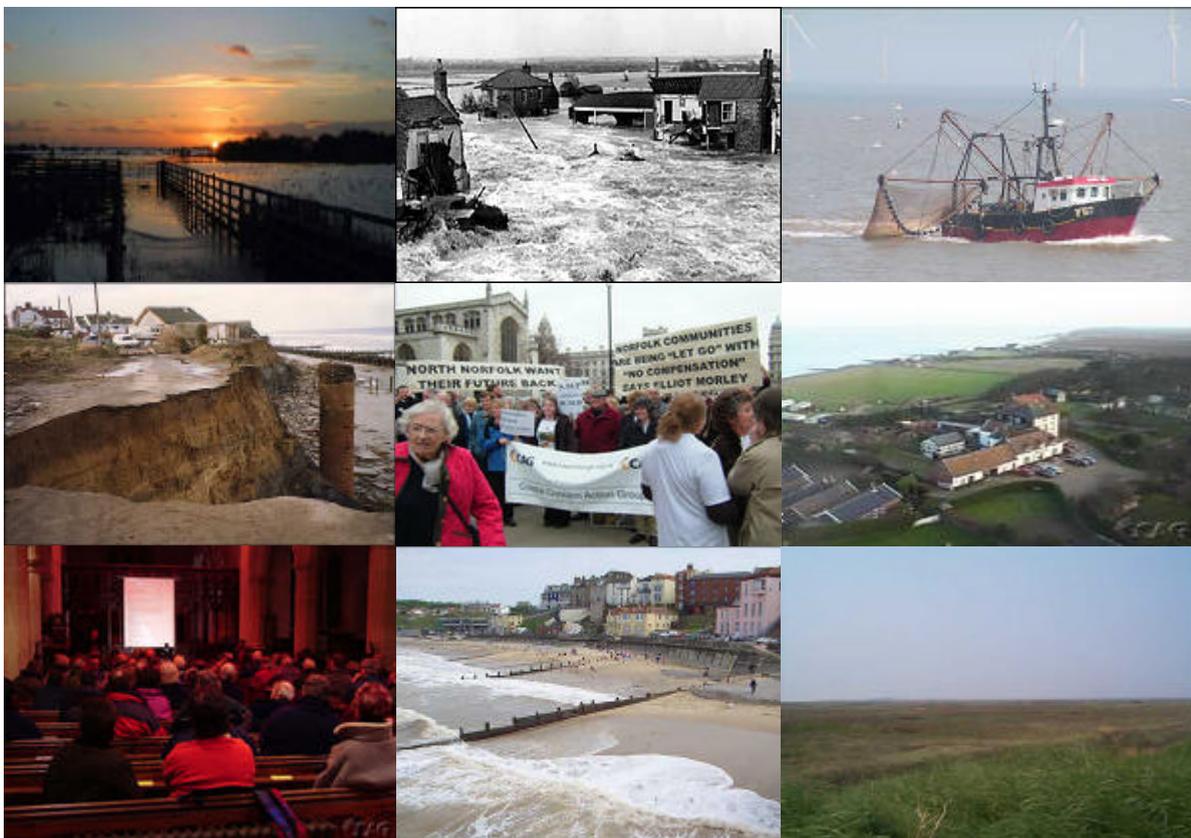
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Tyndall Research

English Nature

- Exploring interaction between EN and stakeholders

Case Studies:

- Winterton NNR - Liaison Group
- Suffolk – Alde and Ore
- Slapton, Devon

NNDC

- Exploration of impacts of Draft SMP 3b on coastal communities well-being, economics and health
- Community meetings and anonymous questionnaires

Action research

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Tyndall/English Nature Project Aims

- continuing existing work on the Winterton coastline to ascertain how English Nature's objectives to achieve resilient ecosystems and how changing coastlines can be understood, adjusted and accepted by local and national interests
- build on and develop similar work on the Suffolk coast
- extend the work to the Slapton shingle spit SSSI in Devon, working with the local community and land owners on planning for long-term coastal change
- develop effective participatory procedures for enabling local residents and visitors to appreciate the nature conservation advantages and the benefits to the local economy for long term, progressive coastal change
- create effective and adaptive partnerships between the local authorities, statutory agencies and landowners, tourism, wildlife, and residential interests to ensure that all appropriate options for designing sustainable dynamic coasts are understood and appreciated

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Winterton Liaison Group

- Group set up in early 2005
- Discussion forum on:
 - coastal defence and sustainability
 - recreation and public amenity issues
 - recreation and wildlife issues
 - tourism and cultural heritage
- Four major meetings
- Visioning exercise



Visioning Exercise

Benefits:

- when integration between issues is required
- when a wide variety of ideas should be heard
- when a range of potential solutions is needed
- when participation for developing a long-range plan should be encouraged
- as an integrated approach to policy-making.
- as a basis for a democratically-derived consensus

Weaknesses:

- organisation of the visioning exercise can be costly and lengthy
- visions can be difficult to transfer into strategy and policy as they are scenarios, not forecasts

Visioning outcomes

Difficult for local stakeholders to contemplate coastal futures for their area over 50 years' time

Reasons:

- huge uncertainties for any meaningful scientific prognosis for the precise line and nature of the coast
- uncertainty over policies such as planning restrictions and compensation for lost property and property blight
- policy flux
- need to take account of social justice/equity

Positive Outcomes:

- stakeholder-led discussion forum facilitated a novel opportunity for sharing knowledge, values, ideas and aspirations in a constructive manner
- improved the relationships between different stakeholders

Comments on Visioning

The following comments were made by participants of the visioning exercise:

"it was a different and interesting approach taken during this meeting. It achieved something in that it is bringing it all together. However, we do not want it to continue to be a "talking shop" but it could be very useful."

"Any form of meeting is useful. 18 months ago I would not have thought I would be sitting in a room with this group of people. It has a very useful purpose. What was said in one group was also said in the others and they are reflecting the same issues. All the people in the room know the issues but they don't know that in Whitehall."

SMP 3b

- Draft SMP - 99.6% objections
- Questionnaires for residents and businesses
- Social Justice
- Lack of trust - communication
- Communities are complex – wide range of influences, views of effect of SMP on property value, and compensation
- Opportunities and a change in perspective
- Flexibility: Local people and local solutions- willingness and enthusiasm of stakeholders to work together to formulate creative and sustainable solutions for coastal management.



Natural England

- Build on experience and strengths
- Sustainable Development Principles
- Expanded remit and change in perspective
- Need for training in communication and facilitation

Possible roles:

1. maintain close coordination with other official and voluntary bodies over coastal management policies and toolkits
2. clear communication throughout with all local interests
3. creative relationship between seizing opportunities for coastal economic advantage over any future conservation gains of a changing coast, and responding creatively to local opinion

“Toolkit”

Key Principles:

1. A clear adaptation message- to help reduce uncertainty.
2. Understanding stakeholders and the ways they react/behave. Engage with all types
3. Different approaches to participation and “bending” the toolkit for local expectations and purposes so long as nationally framed guidelines are in place. Visioning future landscapes
4. Stakeholder engagement training as part of career development of English Nature/Natural England staff
5. Prioritising a “baton change” for all English Nature/Natural England staff that are passing out of one area of work and entering another.

Adaptation



Research Information Note

English Nature Research Reports, No. 702

Designing coastlines fit for the future

Report Authors: Edited by Sue Rees Date: August 2006
Keywords: coastal change, stakeholder participation, coastal policy

Introduction

This research explored the relationship between English Nature and coastal communities in relation to concerns over impacts of coastal change for wildlife, habitat and local livelihoods. The project involved three case studies on coastal sites of national or international conservation significance: Winterton coast and dunes national nature reserve in North Norfolk, the Suffolk coast around the Alde and the Ore, and the Slapton shingle bar and road in Devon. These highlight many of the issues which need to be faced regarding dynamic coastlines and stakeholders' perceptions of the potential opportunities, and how best English Nature can work with land-owners, residents and other coastal users. The case studies illustrated the necessity of clearly understanding the local economies and politics of the areas concerned and involving interested parties in independently-facilitated discussion forums to find long term, sustainable, solutions.

What was done

The work extended the previous work on the north and east Norfolk coastline to specific issues in Suffolk and Devon. The Tyndall Centre research team worked closely with English Nature at national and local levels. It also involved working with local people, and the various official and informal agencies and partnerships on these coastlines. It was independently facilitated, inclusive of all interests, and reported openly and sensitively to all opinion. The methodology involved a series of working meetings with a variety of coastal action groups, local politicians, agency officers, local government officials, and academics from many disciplines. Some workshops were informative and consultative, others were facilitated to search for agreed perspectives that will support coordinated courses of action. All were progressive, and all followed on policy initiatives and creative ideas advanced by interested parties. This sequential, positive and embracing approach was welcomed by all involved.

Continued.....

Results and conclusions

The case studies displayed the willingness and enthusiasm of all interested parties to work together to formulate creative and sustainable solutions for coastal management. Three roles were suggested for English Nature: to maintain close coordination with other statutory and voluntary bodies over coastal management policies and toolkits; clear communication with all local interests; develop creative ways of identifying opportunities for coastal economic advantage with future conservation gains of a changing coast in order to reveal how people and wildlife can prosper from a well designed changing coast.

Several key principles for working with stakeholders were identified:

- i. A clear adaptation message- to help reduce uncertainty and build confidence.
- ii. Understanding stakeholders and the ways they react/ behave. Engage with all interests and groups to be as inclusive as possible.
- iii. Different approaches to participation needed by “bending” the toolkit to fit local expectations and purposes so long as nationally agreed guidelines are in place.
- iv. Stakeholder engagement training needed as part of career development of English Nature/Natural England staff to gain confidence in facilitating effective dialogue.
- v. Prioritising a “baton change” for all English Nature/Natural England staff that are passing out of one area of work and entering another.

English Nature’s viewpoint

This project has not only provided good information that will be used to address how Natural England can best interact with communities in dynamic coastal environment, but has also tested participatory methods such as visioning, in real situations where creative dialogue will need to be continued. The key principles for stakeholder engagement will form a valuable starting point. The need for staff training in these approaches is essential, as well as the need to plan time for this process in development of strategic plans and site- based casework.

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Further information

English Nature Research Reports and their *Research Information Notes* are available to download from our website: www.english-nature.org.uk

For a printed copy of the full report, or for information on other publications on this subject, please contact the Enquiry Service on 01733 455100/101/102 or e-mail enquiries@english-nature.org.uk



English Nature is the Government agency that champions the conservation of wildlife and geology throughout England.

This is one of a range of publications published by:
External Relations Team
English Nature
Northminster House
Peterborough PE1 1UA

www.english-nature.org.uk

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Cover printed on Character Express, post consumer waste paper, ECF.

ISSN 0967-876X

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Top left: Using a home-made moth trap.
Peter Wakely/English Nature 17,396
Middle left: CO₂ experiment at Roudsea Wood and Mosses NNR, Lancashire.
Peter Wakely/English Nature 21,792
Bottom left: Radio tracking a hare on Pawlett Hams, Somerset.
Paul Glendell/English Nature 23,020
Main: Identifying moths caught in a moth trap at Ham Wall NNR, Somerset.
Paul Glendell/English Nature 24,888



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