



**REVIEW OF LOCAL AUTHORITY SKILLS AND
CAPACITY FOR COASTAL RISK MANAGEMENT
FUNCTIONS**

A 3-YEAR REVIEW

FINAL REPORT

September 2009

CCPL
Coast and Country
Projects Limited

The Old Gallery, Westbury, Sherborne, Dorset, DT9 3EJ

Tel: 01935 812255 Mobile: 07951 882489

E-mail: ccpl.southwest@btinternet.com

Executive Summary

A review of local authority skills and capacity to undertake coastal risk management functions was carried out using the data obtained from a sample of 34 local authorities, representing 38% of the 90 maritime councils in England. The review covered a total number of 228 staff working on coastal risk management in those authorities, of which 133 (58%) were within engineering disciplines, and represents an update of a similar survey carried out for Defra in late 2005.

For coastal authorities nationwide, it is estimated that coastal risk management staffing in terms of full time equivalents has reduced by around a third since 2005. Only two thirds of authorities taking part in the review considered that they had adequate staff resources at present, and less than a third of authorities had a high level of confidence that they would be able to secure and develop adequate staff over the next 10 years. Hence there is a risk that councils may not be able to meet their coastal risk management functions in the future.

However, there remains within local authorities an enormous and valuable body of local knowledge and experience, which through appropriate strategies could potentially be maintained and enhanced to provide coastal risk management skills to meet future challenges. Councils have also indicated a high degree of willingness to collaborate with other councils on coastal management issues.

There was a distinctly negative opinion from local authorities on the impacts of a possible reduced role in authorities' coastal risk management responsibility.

However, transfer of strategic overview of coastal risk management to the Environment Agency (EA) was viewed positively overall, and a good level of engagement was reported between the EA and local authorities.

There are nine recommendations for the EA to consider in the context of this skills and capacity review, relating to further initiatives that could be carried out to assist in defining the EA future strategy for local authority coastal risk management. These centre upon:

- 1) maintaining and developing current skills and capacity through local collaboration between authorities, and through development and training;
- 2) estimating future coastal workload and demands for coastal risk management skills, and considering options for how these may be met;
- 3) improving the evidence base on which strategic decisions will be made, including the further collection of data and making comparisons with related studies such as the EA's recent internal skills and capacity review, and that completed by Defra and the LGA in 2008.

REVIEW OF LOCAL AUTHORITY SKILLS AND CAPACITY FOR COASTAL RISK MANAGEMENT FUNCTIONS

A 3-YEAR REVIEW

CONTENTS

Executive summary

- 1.0 Background and scope
 - 2.0 General methodology
 - 3.0 Rationale behind the review questions
 - 4.0 Results and analysis
 - 5.0 Discussion
 - 6.0 Summary of key findings
 - 7.0 Recommendations
-
- Appendix 1 Standard E-mail to Interviewees
 - Appendix 2 Blank Questionnaire
 - Appendix 3 Master Analysis of all 34 Interviewed Authorities (electronic version only)

Report prepared by:-

- Keith Cole - Director
- Geoff Davis - Associate

1.0 Background and scope

1.1 The Government's response to Defra's Making Space for Water consultation exercise, carried out in 2004, committed the Government to reviewing the prevailing legislative and institutional arrangements for all forms of flooding and coastal erosion risk, with the intention that the Environment Agency (EA) would take a strategic overview role for their management in England. The principal objective was stated as follows:

“So as to facilitate a 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.”

1.2 This triggered a range of concerns over alterations to those arrangements, the perceived skill shortages within councils, and the growing pressure from within local authorities (LAs) to re-prioritise resources in order to deliver other statutory responsibilities and Government targets. Re-prioritisation also has a potential knock-on effect on recruiting and developing new engineers, and securing the skills needed as a nation to, for example, adapt to the anticipated effects of climate change.

1.3 In order to address these concerns, and to ensure that Defra understood the impact of the possible approaches so that they could take informed decisions, a review of LA skills and capacity was commissioned in late 2005. The final report was published in March 2006 and is available on Defra's website at :

<http://www.defra.gov.uk/environment/flooding/documents/policy/strategy/coastpascreview.pdf>

- 1.4 The EA has subsequently taken on the strategic overview of the coast in England. This was announced in June 2007 and became effective from 01 April 2008.
- 1.5 In addition, Defra recommended in early 2008 that the existing LA Coastal Groups should become more strategic and play a stronger role in the future planning of flood and coastal erosion risk management. The previous fourteen Coastal Groups in England have now been reduced to seven.
- 1.6 Given the significance of the changes that are taking place in the coastal management arena, and the possible movement or loss of resources from LAs which might result, it was important that a review of the current position (early 2009) and an assessment of possible outcomes were undertaken.
- 1.7 The main objective of this study is therefore, by way of a 3-year review, to update the earlier assessment of skills and capacity in local authorities for administering and undertaking management of the coastline, and to provide information on the potential impacts of decisions which might be taken by the EA.
- 1.8 This report explains the methodology used in undertaking the review, presents the numerical results of the study (both graphically and in text), makes postulations and estimates, discusses the implications of the findings and makes recommendations for further work. It is a review, taken at a moment in time (March 2009), to give an indication of skills and capacities, and should be taken as such.
- 1.9 The report is given in a similar format to the original survey carried out in late 2005, and draws comparisons with the findings of that survey.

1.10 Terms used in this document:

Capital works – coastal engineering works involving a one-off expenditure of funds

Coast protection - a term used until recently to refer to coastal erosion risk management involving physical protection, and used in graphics from the previous review report. Coastal erosion risk management is now the preferred expression to refer to management which may not necessarily involve physical protection of the coast. For practical purposes in the present review, the terms coast protection and coastal erosion risk management are considered to be directly comparable.

Coastal defence - a term used until recently to refer to coastal risk management involving physical defences and used in the graphics from the previous review report. Coastal risk management is now the preferred expression to refer to management which may not necessarily involve physical protection of the coast. For practical purposes in the present review, the terms coastal defence and coastal risk management are considered to be directly comparable.

Coastal erosion risk management – activity to identify and manage the risks and consequences of coastal erosion and encroachment from the sea.

Coastal risk management – a generic term to describe the carrying out of either or both of sea defence (flood) risk management or coastal erosion risk management. Where, in the report, it has been particularly necessary to distinguish between the two activities, they have been stated individually.

Council staff – any employees (including heads of service, project managers, engineers and their technical staff, other professionals, administrators, direct labour and other categories of council staff) who work for an authority on coastal risk management.

Engineering staff – project managers, engineers and their technical staff (excluding heads of service, other professionals, administration, direct labour and other categories of council staff) who work for an authority on coastal risk management.

Full time equivalent (FTE) – the relative proportion of time in person days spent by staff on coastal risk management. For example an engineering team of 3 which spent half of their time on coastal risk management and half on other duties would be recorded as 1.5 FTE.

Sea defence (flood) risk management – activity to identify and manage the risks and consequences of flooding from the sea.

- 1.11 With regard to coastal risk management in England, many coastal operating authorities only carry out coastal erosion risk management activities but, as can be seen from the returns in this review, a number of authorities (with low lying coastal strips) also consider that they play their part in carrying out sea defence risk management activities.

2.0 General methodology

- 2.1 Information for the review was obtained by conducting telephone interviews with a senior manager (or senior engineer) from each one of a representative sample (38%) of operating authorities responsible for coastal risk management activities in England.
- 2.2 Interviews were based upon a standard interview form/questionnaire (see **Appendix 2**) which was designed in consultation with the EA project team. This was in a similar format to the questionnaire used in the 2005 survey, but with several additional sections which are indicated in the Appendix.
- 2.3 The forms were sent out to the participating authorities, together with a standard explanatory e-mail (see **Appendix 1**) a few days before each interview was carried out, in order that the interviewee could take time to prepare and gather the required information.
- 2.4 The questions on the interview form were designed to require either numerical answers or multiple choice answers, in order that the information could be analysed effectively and quantitatively. Questions inviting free comment were kept to a minimum, in order to avoid the potential difficulties in interpretation often associated with that type of answer. If however, the interviewee had strong points to make, then these were recorded (and, where appropriate, information used for discussion, see Section 5), but not incorporated into the mathematical analysis. The time required to conduct each interview varied typically in the range 20 to 30 minutes.
- 2.5 Telephone contact was preferred over purely postal or e-mail based questionnaires for the following reasons:

- To ensure a high degree of participation from the operating authorities.
- To acquire the data rapidly, in order to meet the EA's programme for conducting and reporting on the review.
- To ensure that the interviewees understood the aims of the review and the nature of the individual questions.
- To help ensure that the answers provided were reasonably objective and not unduly skewed by any assumptions or strong opinions held by the interviewee.

After the initial contact, a number of local authority representatives preferred to complete the forms electronically and then returned them by e-mail, which then served as the basis for the telephone discussion.

- 2.6 The coastal operating authorities invited to take part in the review were chosen in collaboration with the EA project team. Most of those invited for interview agreed readily to take part, but it was noticeable that a significant proportion of LAs, in contrast to the 2005 review, did not respond to the initial contact and considerable effort was needed in some cases to obtain an interview. The reasons for this may vary from internal resource issues to actually identifying the correct person to take part in the interview.
- 2.7 A short list of 36 LAs was selected from the total number of 90 coastal operating authorities in England, giving a representative sample size of 40% to be interviewed.
- 2.8 This representative coverage was achieved on the basis of having at least five operating authorities from the following geographical regions North West; North East; Anglia; South East; and South West.

- 2.9 Out of the intended total of 36 authorities, only two declined to take part, resulting in 34 interviews (94% of the intended total and 38% of the operating authorities responsible for coastal risk management activities in England). The locations of the authorities interviewed are shown on Figure 1.
- 2.10 Consideration was also given to the degree of activity of the LA in coastal risk management, in order to achieve a representative spread across LAs of different activity. However, the activity of an operating authority may not be straightforward to define. In the original survey of local authority skills and capacity carried out in 2005, the judgement of Defra Regional Engineers on the degree of activity of particular authorities was found, in some cases, not to agree with the judgement of the operating authority themselves, who often considered themselves to have a higher level of activity. It was considered that the Defra opinion was likely to be skewed in favour of those councils which were active in carrying out capital works and against those which had high activity in operations and maintenance, but which were not submitting grant aid applications for schemes. Conversely, there may be a tendency for the local authority interviewees to place a greater degree of emphasis on the coastal management activity of their organisation compared with the perspective of those outside the organisation.
- 2.11 For the purposes of the current review, the activity of an operating authority was based upon the opinions of the authority itself. As one of the questions in the review, interviewees were asked to estimate the level of activity of their organisation in coastal schemes, operations and studies (such as SMPs) over the last 10 years as either “high”, “moderate” or “low”. Their response was then scored in accordance with the matrix below.

	High level of activity	Moderate level of activity	Low level of activity
Schemes	3	2	1
Operations, maintenance and response	3	2	1
Studies	3	2	1

The total scores were then used to assign levels of overall activity as follows:

Overall score	Overall activity level
3 or 4	Low
5, 6 or 7	Moderate
8 or 9	High

On this basis, the following spread of overall activity was obtained:

Overall activity level	Percentage of operating authorities taking part in review
Low	12
Moderate	35
High	53

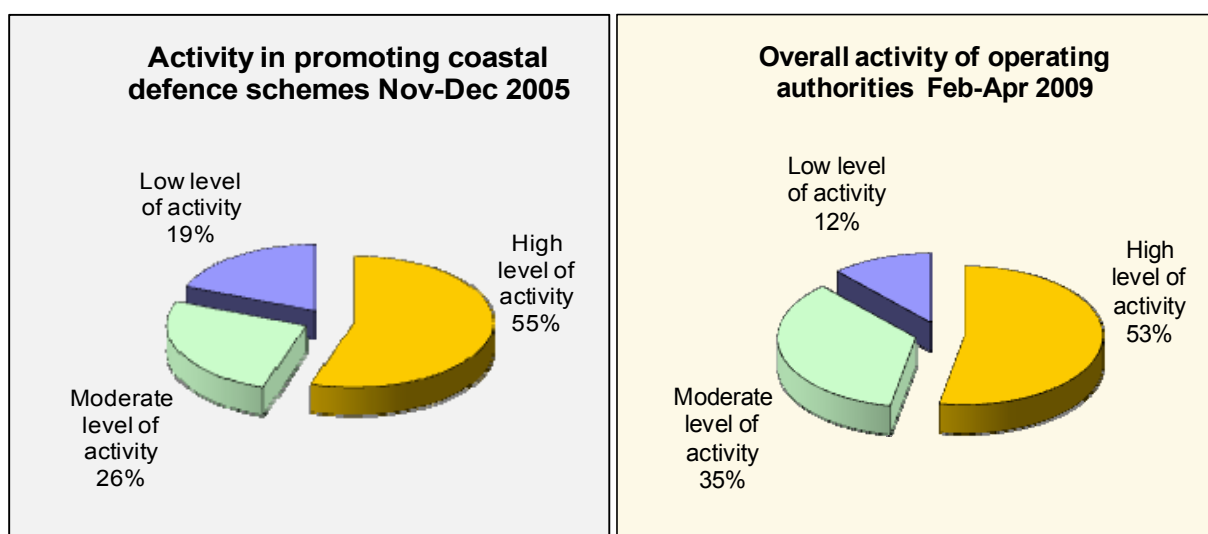
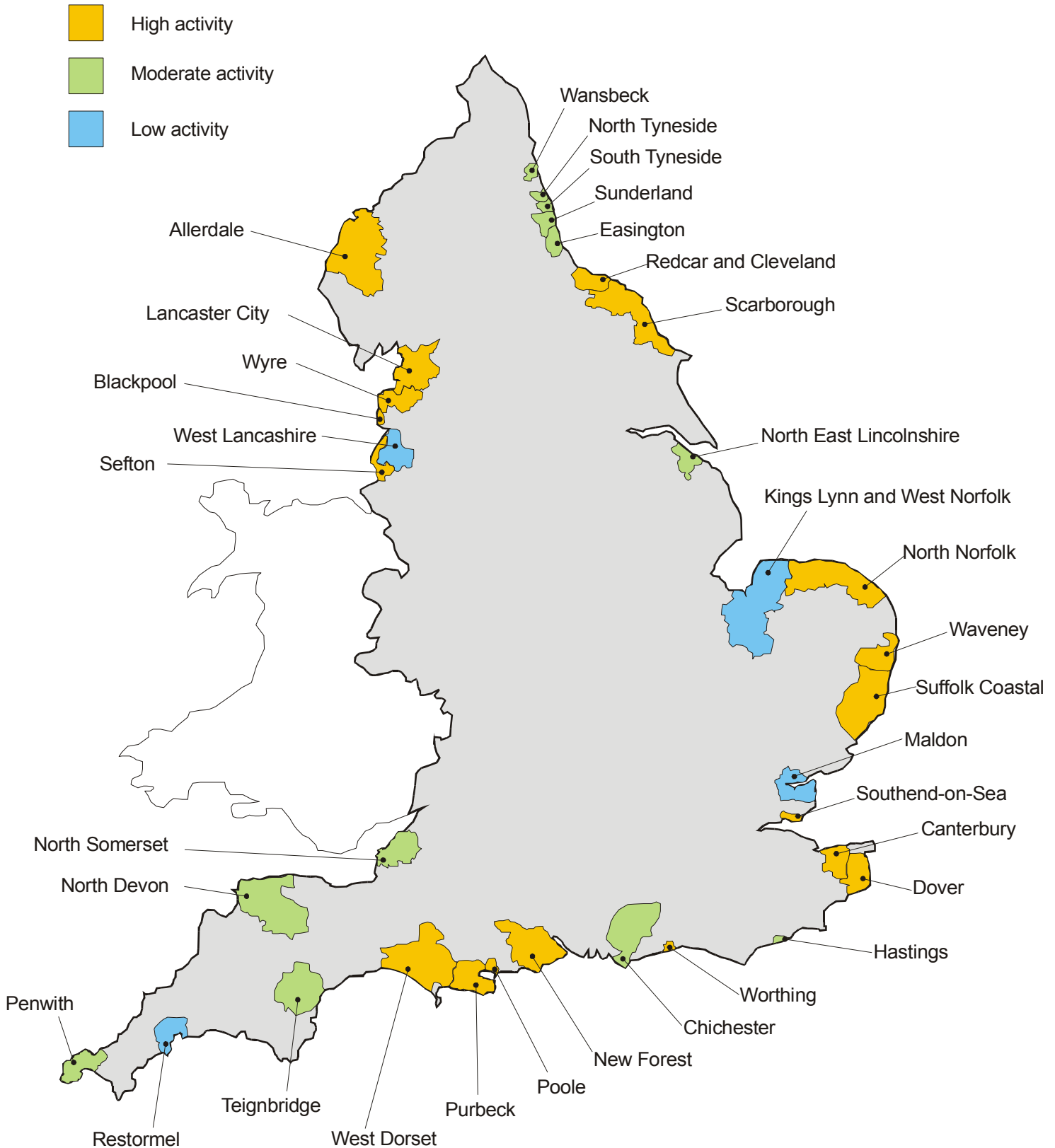


Figure 1

Plan showing location of local authorities taking part in the review



2.12 The full list of participating authorities, with the level of activity and interview date for each, is given below. Restormel BC and Penwith DC became part of the newly-formed Cornwall unitary authority shortly after their interviews on 1st April 2009. Similarly, Wansbeck DC became part of the new Northumberland unitary authority, also on 1st April 2009.

	North East Authorities	Activity	Interview date
1.	Wansbeck DC ^o	Moderate	20 th March 2009
2.	North Tyneside Council ⁺	Moderate	19 th March 2009
3.	South Tyneside Council ⁺	Moderate	17 th March 2009
4.	Sunderland CC ⁺	Moderate	13 th March 2009
5.	Easington DC	Moderate	11 th March 2009
6.	Redcar & Cleveland BC*	High	17 th March 2009
7.	Scarborough BC	High	11 th March 2009

	Anglia	Activity	Interview date
1.	NE Lincolnshire Council*	Moderate	19 th March 2009
2.	Kings Lynn & West Norfolk BC	Low	13 th March 2009
3.	North Norfolk DC	High	26 th February 2009
4.	Waveney DC	High	3 rd April 2009
5.	Suffolk Coastal DC	High	29 th March 2009
6.	Maldon DC	Low	23 rd March 2009
7.	Southend-on-Sea BC*	High	27 th February 2009

	South East Authorities	Activity	Interview date
1.	Canterbury CC	High	11 th March 2009
2.	Dover DC	High	25 th March 2009
3.	Hastings BC	Moderate	2 nd April 2009
4.	Worthing BC	High	13 th March 2009
5.	Chichester DC	Moderate	4 th March 2009

	South West Authorities	Activity	Interview date
1.	New Forest DC	High	25 th March 2009
2.	Poole BC*	High	2 nd March 2009
3.	Purbeck DC	High	11 th March 2009
4.	West Dorset DC	High	2 nd March 2009
5.	Teignbridge DC	Moderate	16 th March 2009
6.	Restormel BC [§]	Low	25 th February 2009
7.	Penwith DC [§]	Moderate	17 th March 2009
8.	North Somerset Council*	Moderate	17 th March 2009
9.	North Devon DC	Moderate	3 rd March 2009

	North West Authorities	Activity	Interview date
1.	Sefton MBC ⁺	High	4 th March 2009
2.	West Lancashire DC	Low	5 th March 2009
3.	Blackpool BC*	High	25 th March 2009
4.	Wyre BC	High	19 th March 2009
5.	Lancaster City Council	High	16 th March 2009
6.	Allerdale BC	High	4 th March 2009

* Unitary Authority

+ Metropolitan Borough

§ Cornwall unitary authority from 1st April 2009

o Northumberland unitary authority from 1st April 2009

3.0 Rationale behind the interview questions

3.1 The interview questions were designed in order to provide information on a number of key issues. These included:

- What is the ability / capacity of maritime councils to deliver their coastal risk management activities/responsibilities at present?
- What is the age profile of local authority engineering staff – are many engineers likely to retire in the next 5-10 years?
- Will the current arrangements be sustainable in a 10-year time frame?
- How successful have local authorities been in securing and developing new engineering staff resource?
- How much engineering services resource is currently used on coastal risk management and how much on other council functions (such as highway maintenance etc)?
- How would these functions be affected if coastal risk management responsibilities moved away from the authority?
- What would the impact be on an authority's wider objectives (such as tourism and economic regeneration) if coastal risk management responsibilities were moved away from councils?
- Would the authority intend using the resources of another authority on coastal risk management if these were available.

- What has been the impact of the transfer to the EA of the strategic overview role in coastal risk management and what level of engagement is there with the EA?
- What could be the impact of emerging issues such as climate change and the Government response to the Pitt Review?

3.2 The rationale behind each of the individual questions on the interview form is given in the following sections, for which reference should be made to the blank interview form in **Appendix 2**. Sections 1 to 3 gives mostly factual information on staff numbers, roles, ages etc., whereas Sections 4 through to Section 14 involve a degree of opinion from the interviewee.

3.3 The table in **Section 1** records the numbers and roles of staff within the operating authority who are engaged in coastal risk management work, together with the percentage of staff time spent on the different engineering services functions of the authority in addition to coastal erosion risk and sea defence risk. The boxes for year of appointment, and age range of each staff member, have been included to allow the calculation of demographic information.

3.4 **Section 2** records the number of engineering services staff not engaged in coastal erosion or sea defence risk, so that the percentage of staff working on coastal risk management in terms of total engineering services personnel may be determined.

3.5 **Section 3** records the number of engineering services staff, in terms of full time equivalent posts, that carry out work for other authorities or clients on a consultancy basis (for example, as a water company sewerage agency or as a highway agency) and the proportion of coastal risk management work which is outsourced. This section also records the intention to establish a “Centre of Excellence” for coastal risk

management work which other authorities could use, and the intention to use the resources of another authority if these were available.

- 3.6 **Section 4** gathers information from the local authority contact (“the interviewee”) on their view of the overall impact on the operating authority of responsibility for strategic overview of coastal risk management transferring from Defra to the Environment Agency.
- 3.7 **Section 5** gives the interviewee’s estimate of the number of staff that would transfer under Transfer of Undertakings Protection of Employment (TUPE) in the event that the responsibility for delivery of coastal risk management work passed to another authority or body.
- 3.8 **Section 6** invites the interviewee to consider how successful their authority has been in securing and developing engineering staff, *in the past*, that is over the last 10 years.
- 3.9 **Section 7** asks the interviewee for an opinion about the adequacy of the authority’s *current* staff resources engaged in coastal risk management.
- 3.10 **Section 8** records the interviewee’s degree of confidence about securing and developing engineering staff *in the future*.
- 3.11 **Section 9** gives the interviewee’s estimates of the *impact on the authority's wider responsibilities* if it were to lose the ability to undertake centrally funded coastal defence measures, including:
- Other engineering objectives (for example land drainage measures).
 - A variety of non-engineering responsibilities.

- Overall ability to deliver objectives other than coastal risk management.

3.12 **Section 10** considers the interviewee's opinion of the *impact on coastal risk management* of a reduced role in the authority's delivery responsibility, over a range of indicators.

3.13 **Section 11** records the interviewee's opinion of the level of activity (High, Moderate or Low) of the authority in terms of new schemes, operations and maintenance and studies. This is to confirm that the interviews have been conducted over a representative range of council activity levels.

3.14 **Section 12** gives information on the level of engagement that the interviewee considers coastal risk management staff have with planners in the same authority, in terms of implementing new schemes and shoreline management plans. For example, in taking account of the recommendations of a shoreline management plan in planning policy.

3.15 **Section 13** gives a measure of the level of engagement that the interviewee considers coastal risk management staff have with the Environment Agency, particularly in terms of the recent transfer of responsibility for strategic overview of coastal risk management.

3.16 **Section 14** considers the interviewee's opinion of the impact on coastal risk management of a number of emerging and topical issues.

4.0 Results and analysis

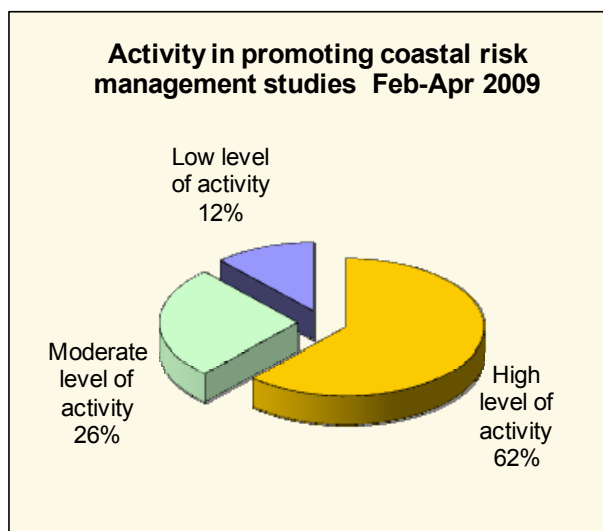
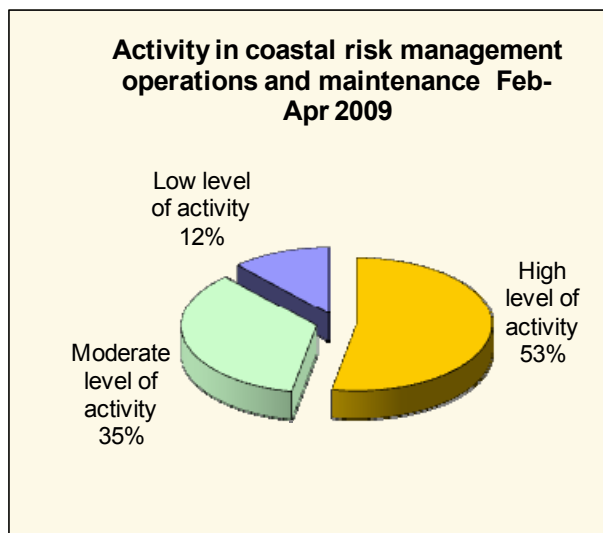
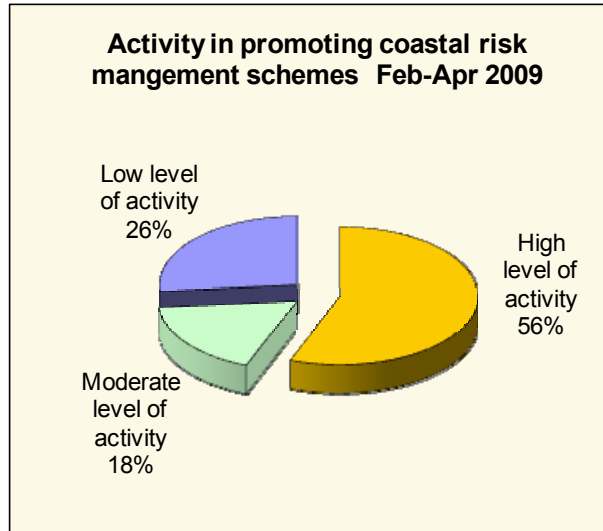
4.1 The results of all the interviews are summarised in the analysis spreadsheet in **Appendix 3**.

4.2 The following paragraphs give a summary of the main findings of the review, with brief comments on the data. Commentary on the significance of the findings is given in Section 5, Discussion.

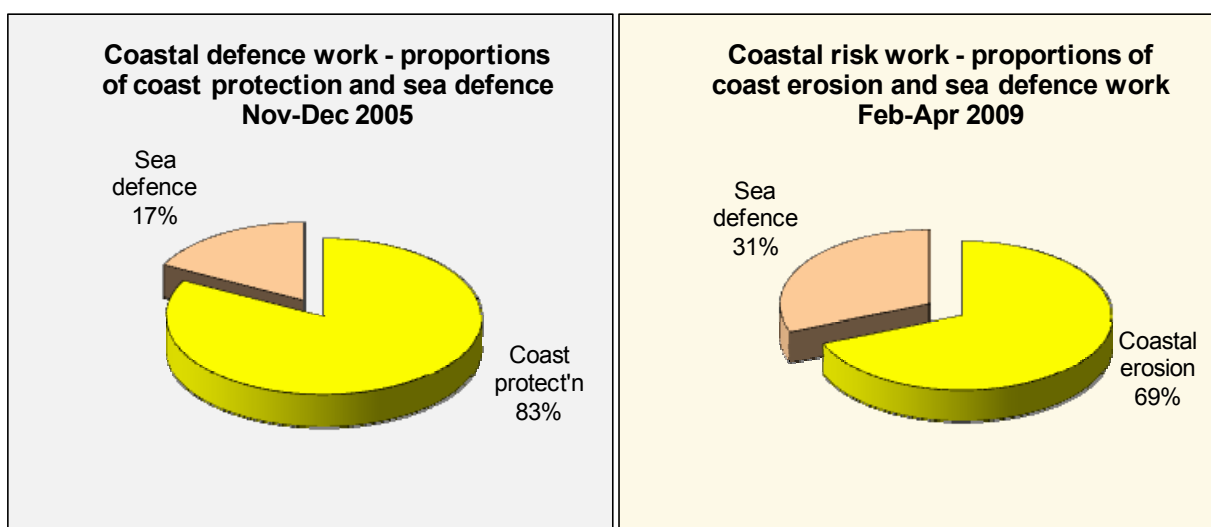
4.3 *Review statistics*

4.3.1 A total number of 34 local councils were interviewed representing 38% of the 90 operating authorities in England. The review covered a total number of 228 staff working on coastal risk management in those authorities, of which 133 (58%) were within engineering disciplines.

4.3.2 The relative activity of the operating authorities in terms of coastal risk management are given in the charts below. These are based on the views of those local authority representatives interviewed and, as such, indicate that the review covered a reasonable spread of councils in terms of activity.

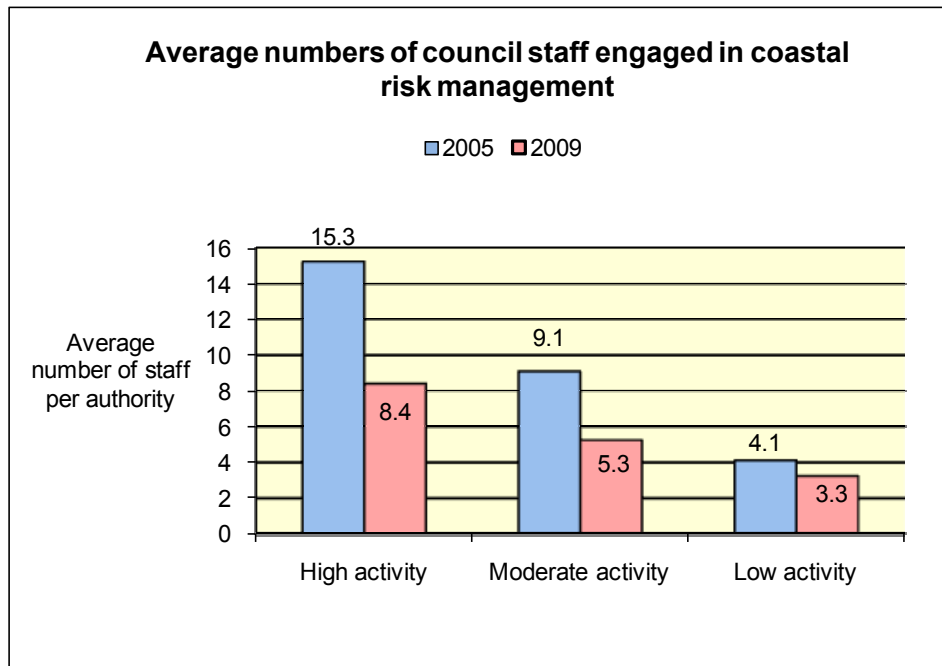


4.3.3 Overall, a relatively small proportion of the coastal risk management workload was taken up by sea defence activities. However, the proportion of sea defence work from the last review in 2005 was significantly less, as shown in the charts below. This is considered to reflect a reduction in coastal erosion risk work, rather than an increase in sea defence work, as indicated by the statistics in Section 4.4.

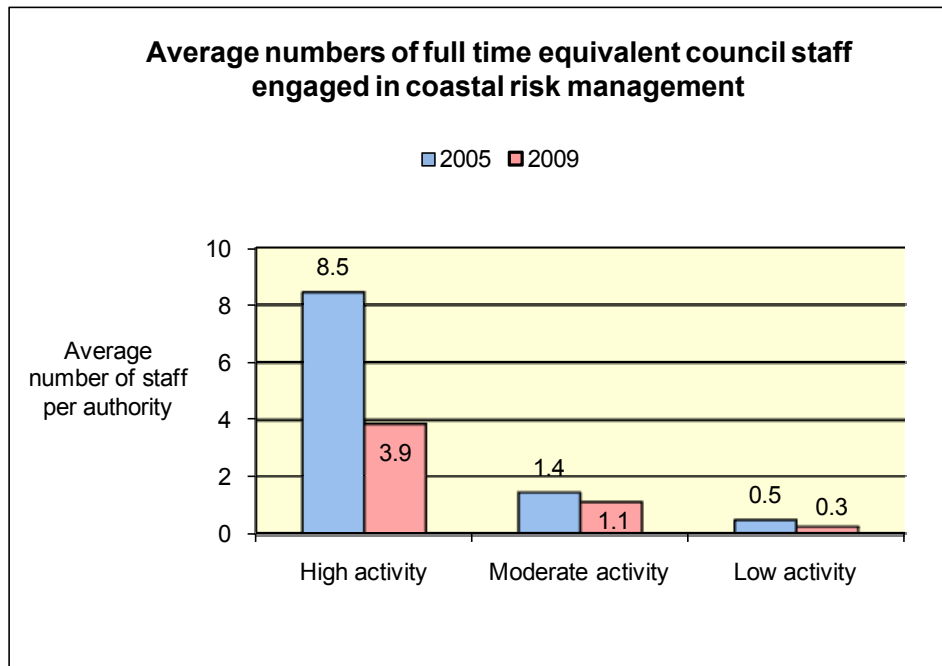


4.4 ***Local authority staff engaged in coastal risk management***

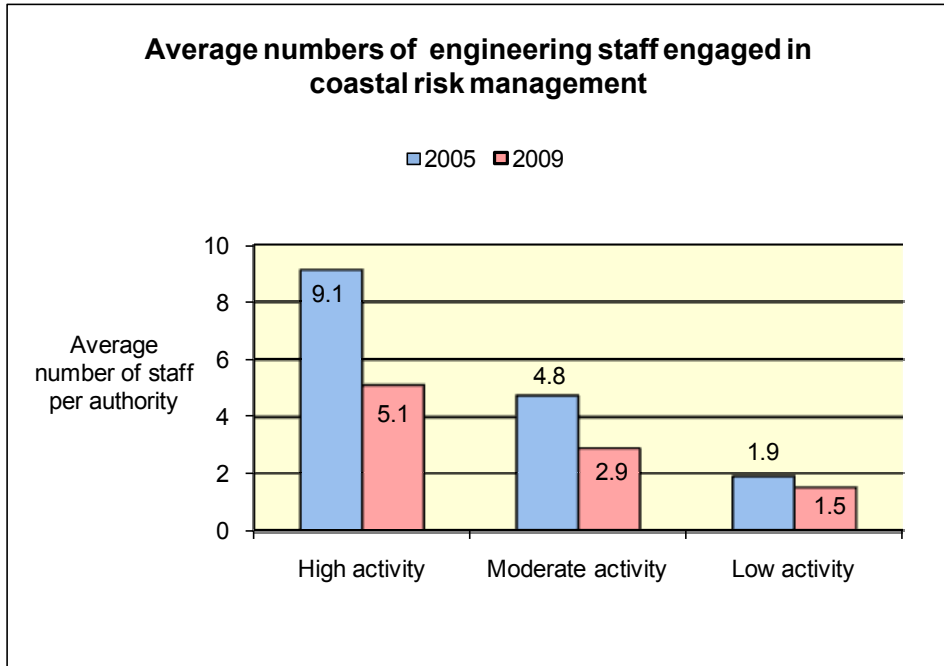
4.4.1 The average number of council staff engaged in coastal risk management work in each local authority was 6.7. As might be expected, there was a contrast in staffing levels between councils of high, moderate and low activity. There is a striking contrast between the numbers of staff currently engaged in coastal risk management with those in 2005, with numbers nearly halved for councils of moderate and high activity.



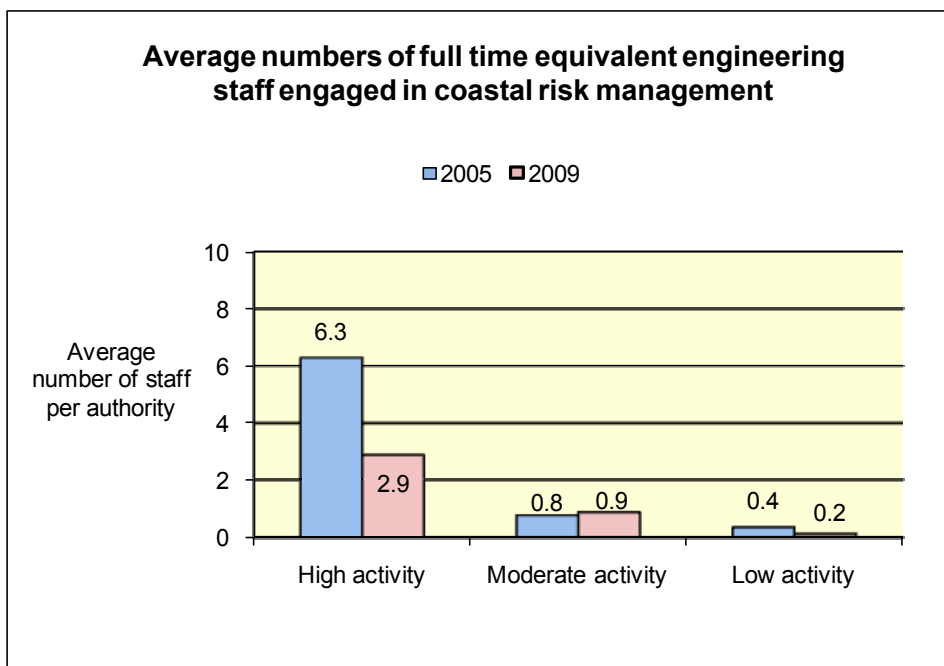
4.4.2 The numbers of full time equivalent council staff engaged in coastal risk management work were very much lower than the total numbers of staff, particularly for authorities of moderate and low activity. This indicates that many staff (e.g. legal officers) only spend a small fraction of their time on coastal risk management matters. The overall average number of full time equivalent staff engaged in coastal risk was 2.5. For councils of high activity, the numbers of full time equivalent staff are markedly lower than results returned in 2005.



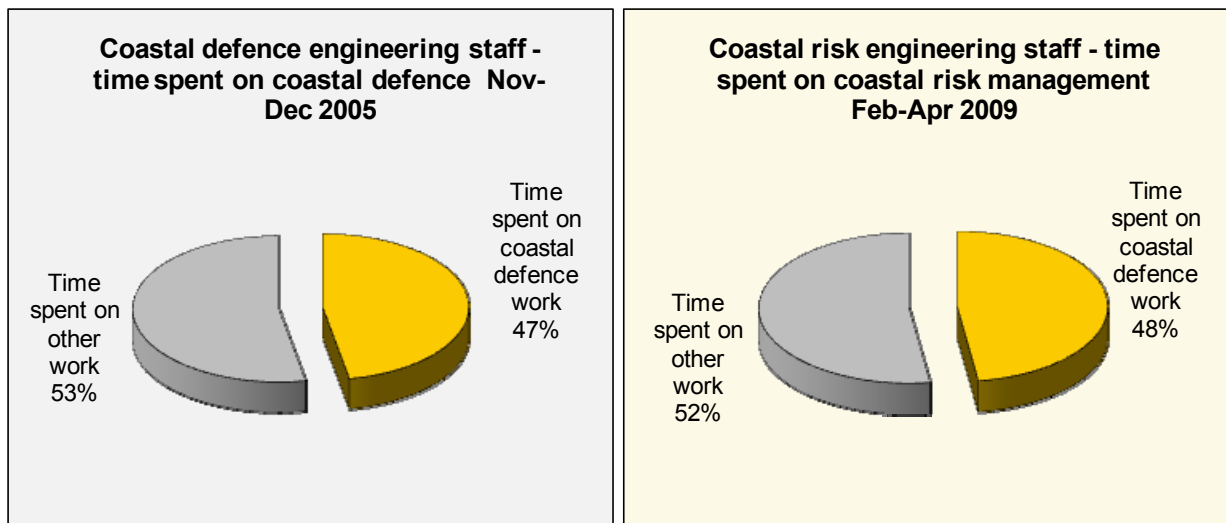
4.4.3 As explained in the Introduction, for the purposes of the analysis, “engineering staff” were taken to comprise the project managers, engineers, and other technical staff and excluded the heads of service, admin and other categories. The average number of engineering staff engaged in coastal risk work was 3.9 per authority. A decrease in the number of engineering staff since 2005 is also evident.



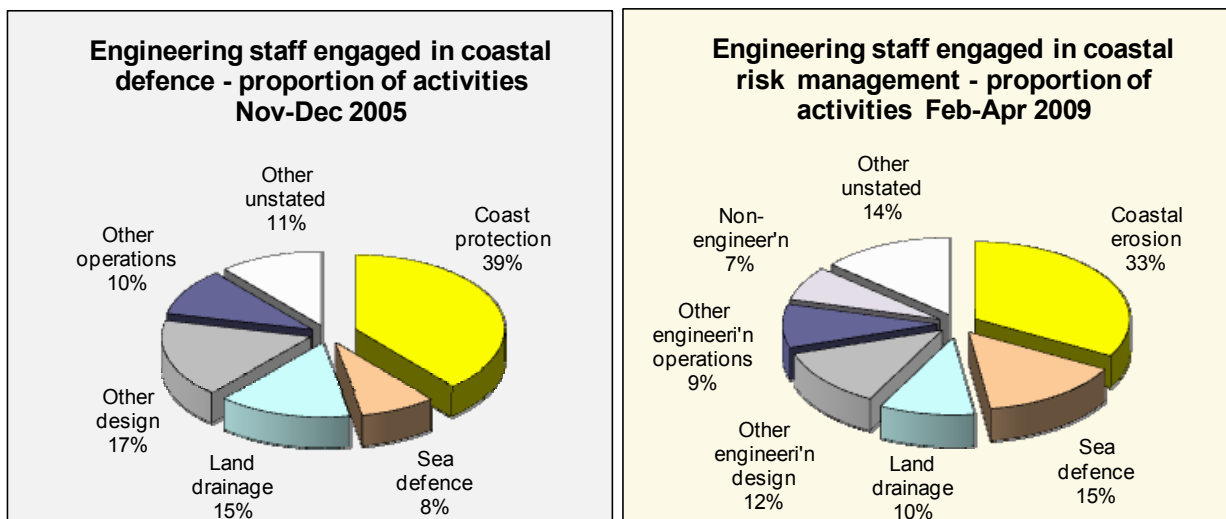
4.4.4 Again, the full time equivalent numbers are very much less than the totals, particularly for councils of moderate and low activity. The overall average full time equivalent number of engineering staff engaged in coastal risk management is 1.9 per authority.



4.4.5 Essentially, many of the engineering staff are employed on other duties in addition to coastal risk management work, which means that the number of full time equivalent posts working on coastal risk management is only 48% of the total number of engineering staff working on coastal risk management. This compares with a similar percentage of 47% obtained in 2005.



4.4.6 A more detailed breakdown of the proportion of full time equivalent engineering staff engaged in coastal erosion, sea defence and other responsibilities is given below. A similar spread of activities was evident in 2005.



4.4.7 Coastal risk management activity may also be subdivided on the basis of capital works, as opposed to maintenance operations or studies. To make an estimate of the number of full time equivalent engineering posts engaged in capital works throughout England, it was postulated that those councils in the sample that had a “high” or “moderate” level of coastal risk management activity were engaged on capital schemes, and that those with “low” activity were not. The review has determined (from its spread of councils) that the average number of full time equivalent engineering staff from the high activity councils was 2.9, from the moderate activity councils was 0.9 and that from the low activity councils was 0.2 (Section 4.4.4).

4.4.8 The review statistics show that there is, generally, a close correspondence within each high activity council between level of activity on schemes and level of activity on operations/maintenance. It may, therefore, be assumed that half of the engineering staff time in those councils would be engaged on schemes (capital) and half on operations/maintenance (revenue). It has been postulated that for moderate activity councils a smaller correspondence for capital/revenue (25/75) is probably realistic and, as stated above, for low activity councils the capital element is likely to be nil (0/100). The total number of full time equivalent engineering posts engaged on coastal defence capital and revenue in the 90 coastal authorities in England (see **Table 1**) may then be postulated as shown in **Table 2**.

4.4.9 The calculation gives an estimated full time equivalent engineering staff engaged on capital works of 41 and an estimated full time equivalent engineering staff engaged on revenue of 60. These are one-third lower than the equivalent values of 62 and 89 for capital and revenue respectively estimated from the 2005 dataset.

TABLE 1

***POSTULATED ACTIVITY LEVELS OF COAST PROTECTION AUTHORITIES IN ENGLAND**

[Running clockwise around the English coastline, starting from NE (Berwick-upon-Tweed), via Straits of Dover, to NW (Carlisle)]

COAST PROTECTION AUTHORITY	ACTIVITY	COASTAL GROUP AREA	COAST PROTECTION AUTHORITY	ACTIVITY	COASTAL GROUP AREA	
<i>From Scottish Border</i>			<i>Through The Solent</i>			
Berwick-upon-Tweed	M	North East	Isle of Wight	H	Southern	
Alnwick	L		New Forest	H		
Castle Morpeth	L		Christchurch	M		
Wansbeck	M		Bournemouth	H		
Blyth Valley	L		Poole	H		
North Tyneside	M		Purbeck	H		
South Tyneside	M		Weymouth and Portland	M		
Sunderland	M		<i>Round Portland Bill</i>			
Easington	M		West Dorset	H		South West
Hartlepool	M		East Devon	M		
Redcar and Cleveland	H	Teignbridge	M			
Scarborough	H	Torbay	M			
East Riding of Yorkshire	H	South Hams	L			
Kingston-upon-Hull	L	Plymouth	L			
NE Lincolnshire	M	Caradon	M			
East Lindsey	L	Restormel	L			
# Boston	L	Carrick	L			
# South Holland	L	Isles of Scilly	M			
<i>Across The Wash</i>			Kerrier	M	Bristol Channel	
Kings Lynn & W Norfolk	L	Penwith	L			
North Norfolk	H	North Cornwall	L			
Great Yarmouth	L	Torridge	L			
Waveney	H	North Devon	M			
Suffolk Coastal	H	West Somerset	L			
Tendring	H	Sedgemoor	L			
Colchester	L	North Somerset	M			
Maldon	L	Bristol City Council	L			
Rochford	L	Forest of Dean	L			
Southend-on-Sea	H	South Gloucestershire	L			
<i>Across Thames Estuary</i>			<i>From Severn Estuary to Liverpool Bay, omitting Wales</i>			
Medway Towns	L	South East	Wirral	H	North West	
Swale	L		Sefton	H		
Canterbury	H		West Lancashire	L		
Thanet	L		Fylde	L		
Dover	H		Blackpool	H		
<i>Through Straits of Dover</i>			Wyre	H		
Shepway	H		Lancaster	H		
Rother	L		South Lakeland	L		
Hastings	M		Barrow	M		
Eastbourne	L		Copeland	L		
Wealden	L	Allerdale	H			
Lewes	L	Carlisle	L			
Brighton & Hove	H	<i>End at Scottish Border</i>				
Adur	L	*H = High Activity 25 No = 28%				
Worthing	H	*M = Mod Activity 24 No = 27%				
Arun	M	*L = Low or Nil Activity ° 41 No = 45%				
Chichester	M	TOTAL English CPAs = 90 No				
Havant	M	* Postulated from information provided by Defra and CPAs.				
Portsmouth	M	° It is probable that L (Low) activity councils actually have Nil activity on capital works.				
Gosport	L	# May only be sea defence activity, but included as a CPA for continuity of coastal run.				
Fareham	L					
Eastleigh	L					
Southampton	L					
Bold font denotes those authorities which took part in the 2009 review						

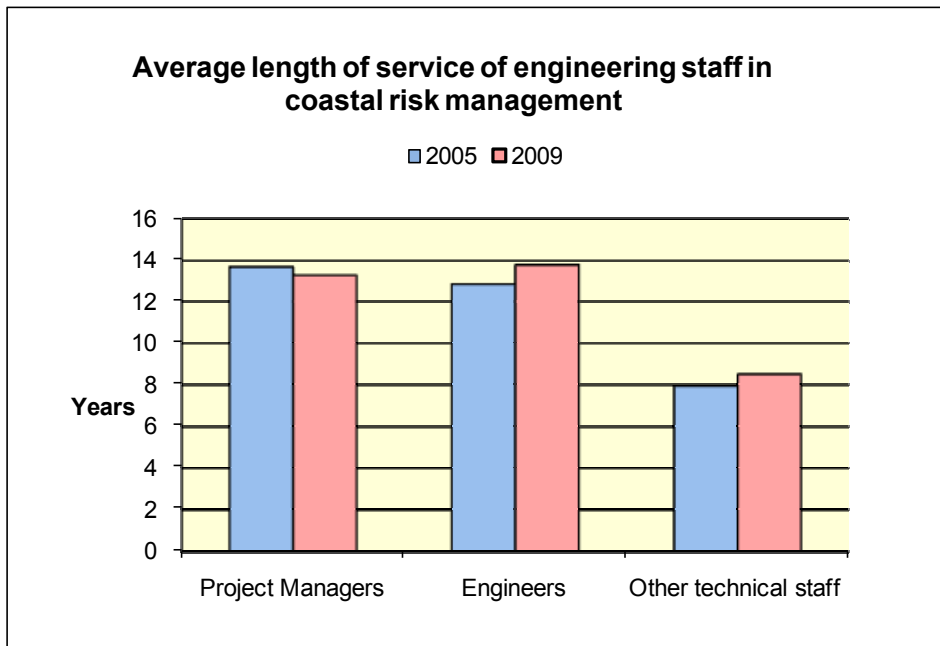
TABLE 2
ESTIMATES OF NATIONAL FTE ENGINEERING STAFF ENGAGED IN COASTAL
RISK MANAGEMENT IN ENGLAND

	Average full time equivalent (FTE) engineering staff (section 4.4.4)	Number of councils nationally (Table 2)	Assumed proportion of time (%) engaged on capital/ Revenue	Estimated full time equivalent engineering staff engaged on capital	Estimated full time equivalent engineering staff engaged on revenue
High Activity Council	2.9	25	50/50	36	36
Mod Activity Council	0.9	24	25/75	5	16
Low Activity Council	0.2	41	0/100	0	8
TOTALS		90	-	41	60

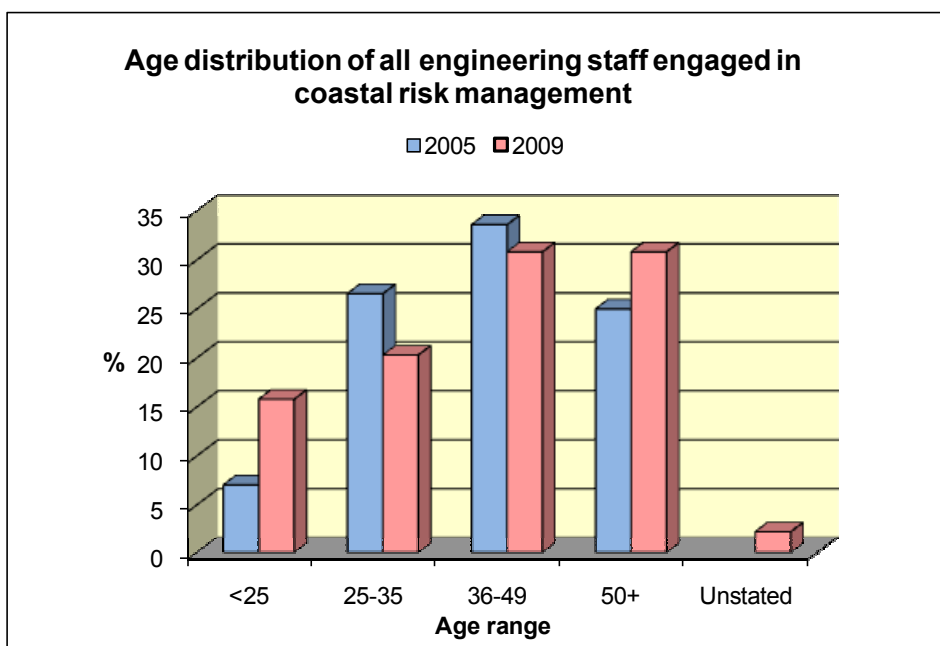
4.4.10 There was a contrast between the District Councils, which tended to have relatively small engineering departments, and the Unitary, Borough and Metropolitan Councils, which had a much larger engineering staff engaged on other engineering duties and, hence, a smaller proportion of their whole working on coastal risk management. However, for the District Councils, the overall percentage of engineering staff working in coastal risk management was relatively high.

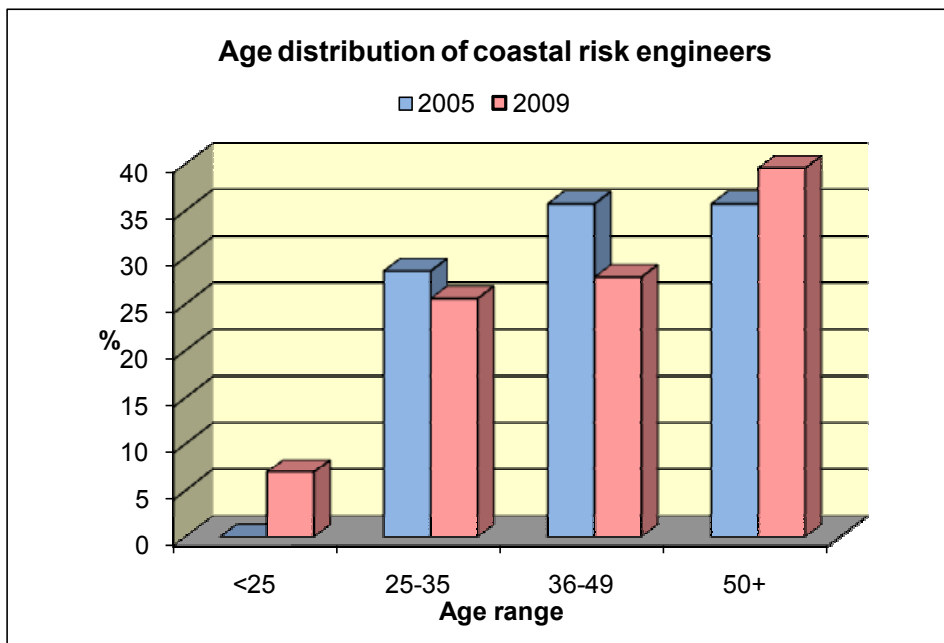
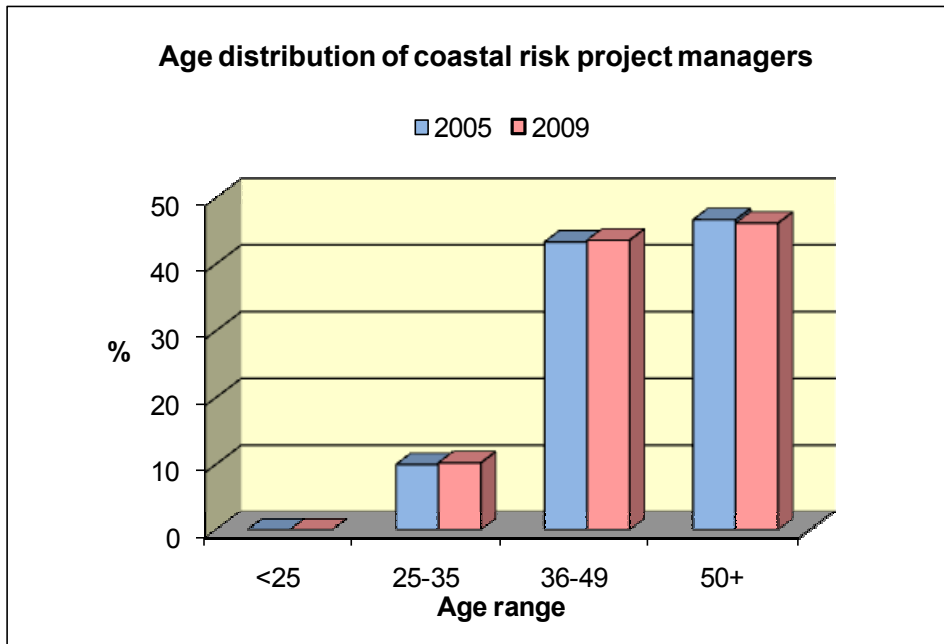
4.4.11 The overall proportion of engineering staff working in coastal risk management in the review authorities, as opposed to other engineering activities, was 27%.

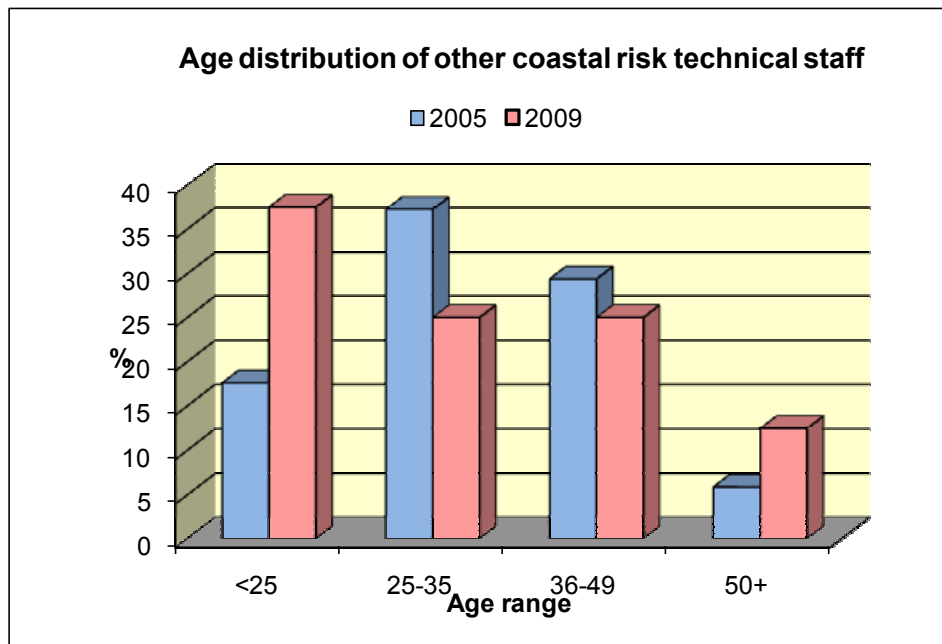
4.4.12 It was notable, as it was in 2005, that many of the coastal engineering staff had long service records, with the average length of service for project managers and engineers being 13 and 14 years respectively.



4.4.13 Overall, the age distributions of engineering staff were top heavy, with many of the staff being in the 50+ category. This trend was more pronounced than it was in 2005. As might be expected, ages in the more senior “project manager” category were skewed towards the older age ranges. It was notable that there was a greater proportion of young people in the <25 age range for technical staff than the case in 2005, indicating an influx of young blood to local authority coastal engineering.







4.4.14 Forty-one percent of the operating authorities had engineering staff which carried out work for other authorities on a consultancy basis. Overall, however, only 16% of engineering staff resource at those operating authorities interviewed was engaged in work for other authorities.

4.4.15 About a third of coastal risk management work was indicated as being outsourced to consultants or contractors, demonstrating that most of the work is still carried out by councils in house.

4.4.16 Thirty-five percent of authorities indicated the intention to establish a Centre of Excellence in coastal engineering which could offer services to other authorities.

4.4.17 A large proportion of councils, 76%, indicated that they would use the resources of another authority if these were available, demonstrating a willingness for a high degree of collaboration with other councils.

4.4.18 A significant proportion of authorities, 18%, indicated the intention both to establish a Centre of Excellence and to use the resources of another authority, presumably for different skill sets.

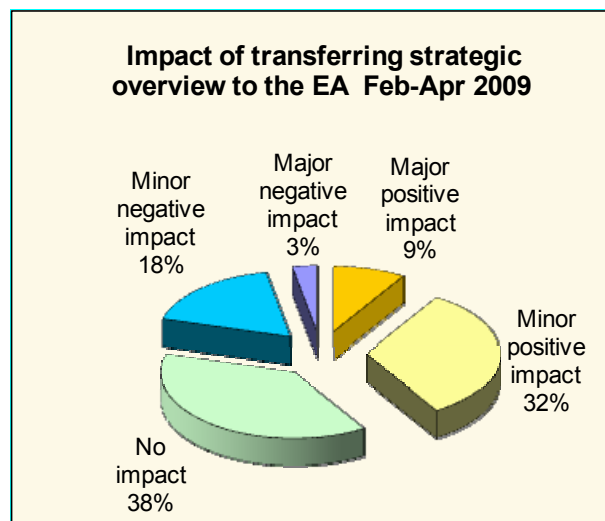
4.4.19 Administrative staff and staff of other disciplines, such as legal services and finance, generally made up a very small proportion of the total number of full time equivalent posts working in coastal risk management. However, it is clear that a large number of staff from these disciplines are necessarily engaged, as and when required, on coastal risk management work.

4.4.20 Similarly, the overall proportion of their time spent by heads of service on coastal risk management was only 6%, but in terms of executive supervision and overview it appears to be a necessary and important input for most organisations, and compares with a 2% figure returned from the 2005 review.

4.4.21 Four local authorities indicated that they employed in-house environmental specialists on coastal risk management.

4.5 ***Impact of transferring strategic overview for coastal risk management to the Environment Agency.***

4.5.1 The transfer of strategic overview to the EA gave a spread of opinion over the positive and negative effects, but with the balance being positive.



4.5.2 Surprisingly perhaps, 32% of authorities said that their council members had not yet been briefed on the new role of the EA.

4.5.3 Interviewees were invited to give comment on the impact of transferring strategic overview to the EA, and a sample of the responses is given in Table 3.

TABLE 3
INTERVIEWEES COMMENTS ON THE IMPACT OF TRANSFERRING
STRATEGIC OVERVIEW TO THE EA

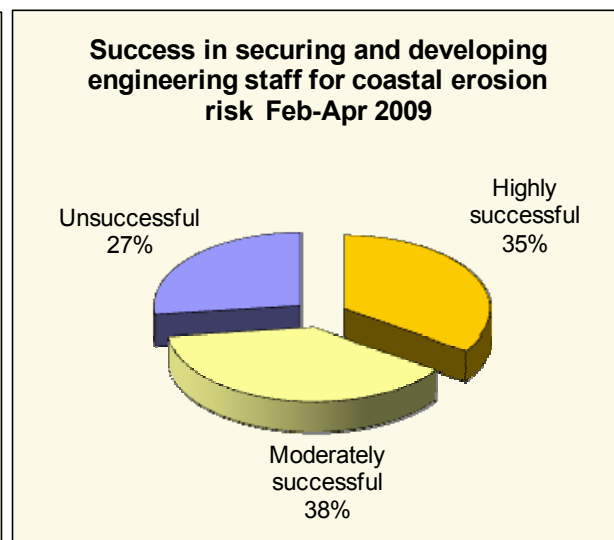
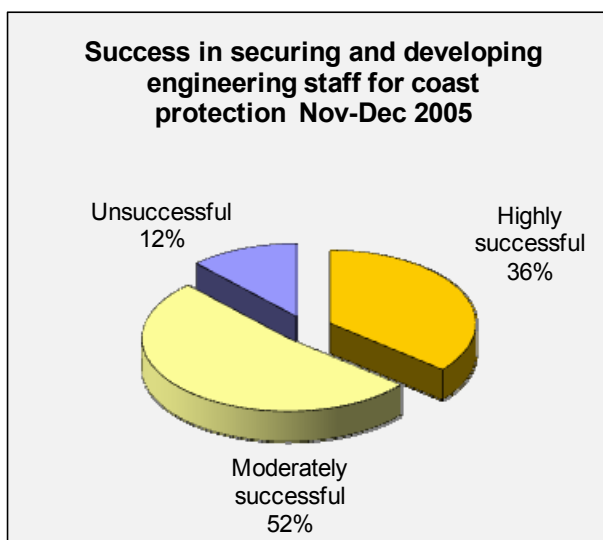
Positive	<ul style="list-style-type: none"> • Direct contact with EA local staff has enabled us to promote and carry out capital projects that would have been more difficult to achieve with direct Defra contact. • Greater understanding and order is likely to be the outcome • There is currently a good working relationship with the EA Area Flood Risk Manager. • We have good rapport with EA reps. • We welcome the appointment of new EA coastal engineers. • We have always had an excellent relationship with the EA. • The ability of the EA to bring greater resource to this area is seen as a benefit. • The EA plan to introduce Engineer and Advisor support resource which is welcomed. • We envisage a lot of opportunities in sharing expertise and potentially working in partnership with the EA to assist lower resourced local authorities.
Neutral	<ul style="list-style-type: none"> • We need to maintain a close liaison with EA staff. • As yet there has been little change from Defra, but the transfer has only just occurred last year. • Too early to comment at present.
Negative	<ul style="list-style-type: none"> • The EA do not yet have procedures in place to support this new role • Much more cumbersome process with significantly increased costs both to achieve grant approval and in the study costs. • We have reservations about EA's ability to have any positive impact as they struggle locally to achieve their own schemes • There is additional workload associated with increased complexity of gaining scheme approval.

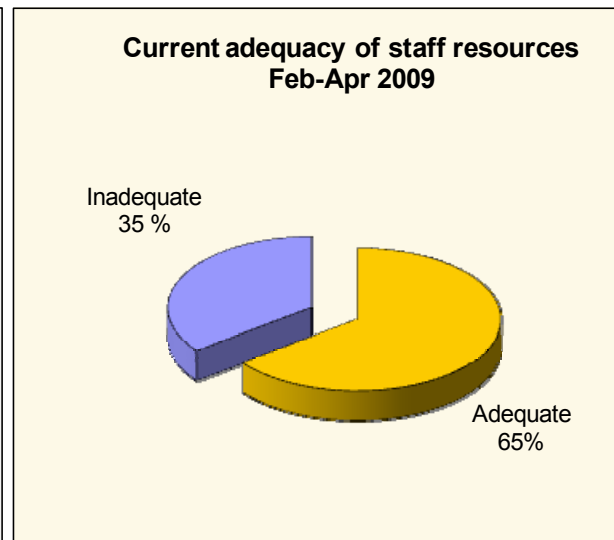
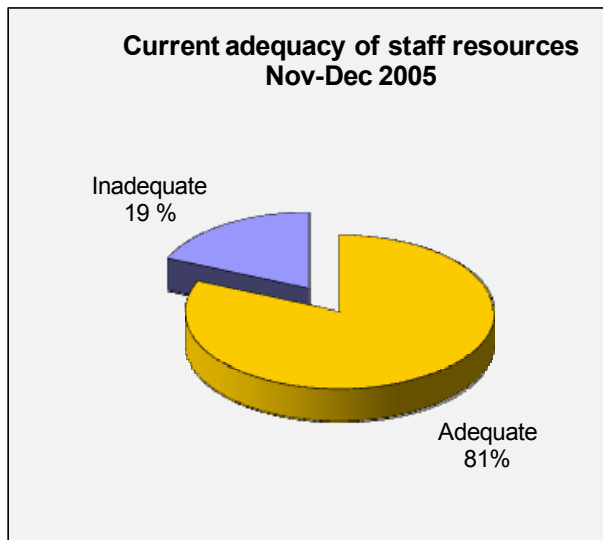
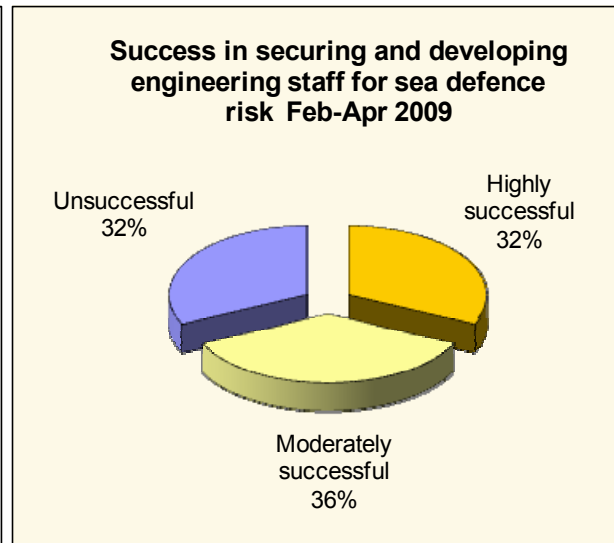
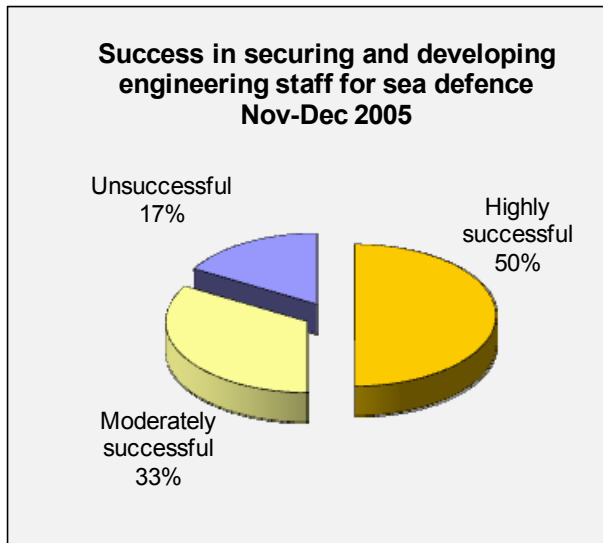
4.6 Estimated number of staff that would transfer under TUPE if responsibility for delivery of coastal defence work passed to another authority.

4.6.1 The interviewees estimated that the number of council staff that would transfer under TUPE (assumes these staff spend over 50% of their time on coastal risk management), was 56 across the participating authorities, an average of 1.6 staff per authority. This represents 84% of the full time equivalent council staff engaged in coastal risk management at those representative authorities.

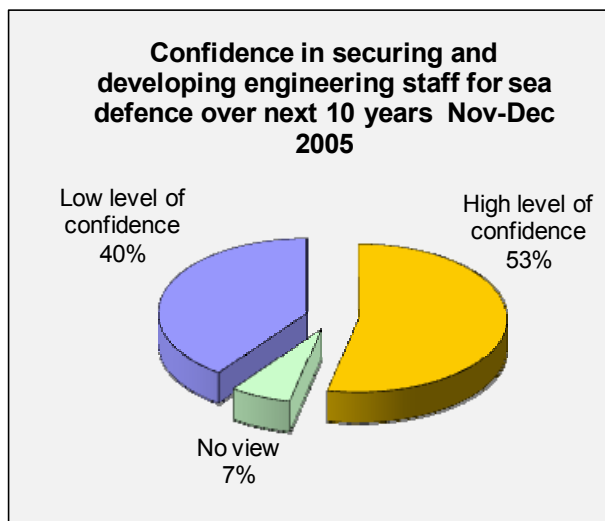
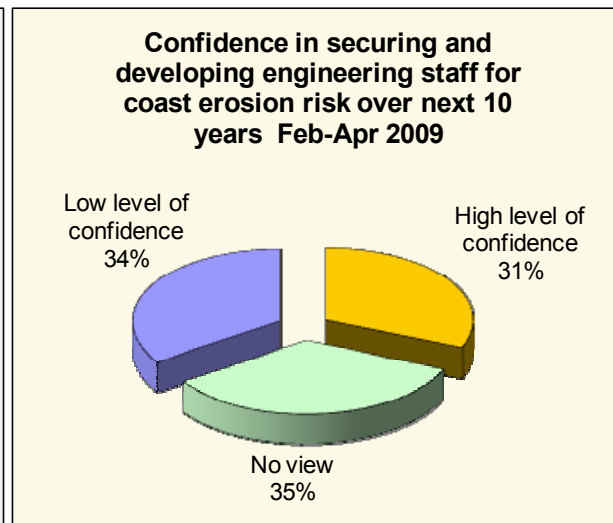
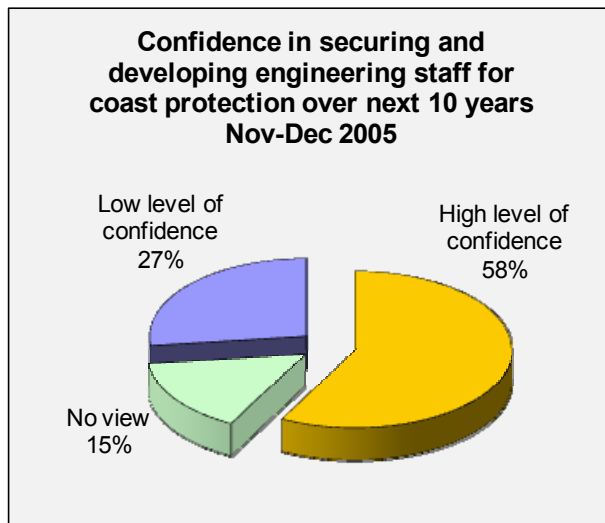
4.7 Adequacy of engineering staff in the past, present and future.

4.7.1 There had been noticeably less success in securing and developing engineering staff compared to the last review. Only 65% of authorities considered that they had adequate staff resources at present, compared with the equivalent figure of 81% three years ago.

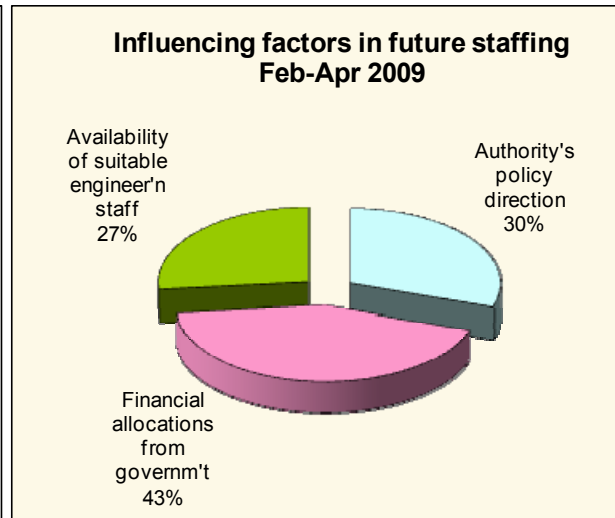
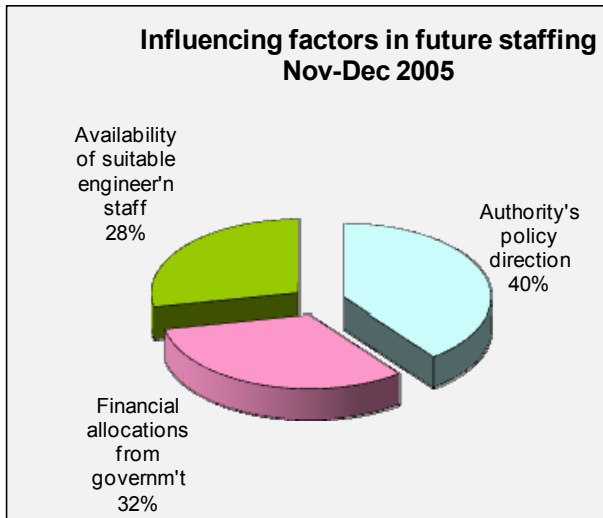




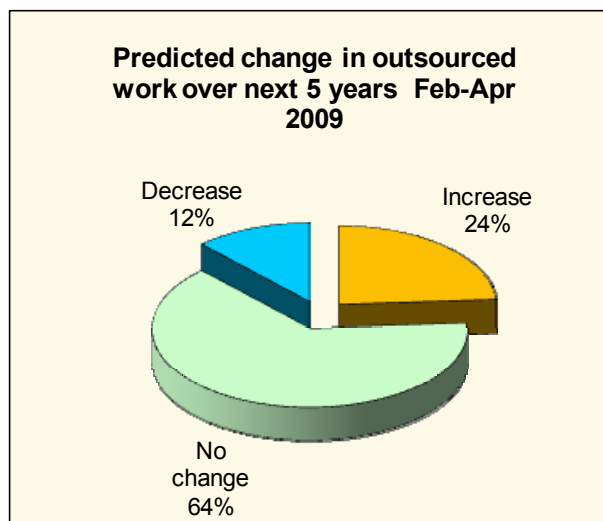
4.7.2 There was even less confidence in the future, with less than a third of authorities having a high level of confidence that they would be able to secure and develop adequate staff over the next 10 years.



4.7.3 There was a good spread of opinion on the relative importance of influencing factors (availability of suitable staff, local authorities' policy direction, financial allocation from government) with regard to future staffing, but with increasing concern about financial allocation from government



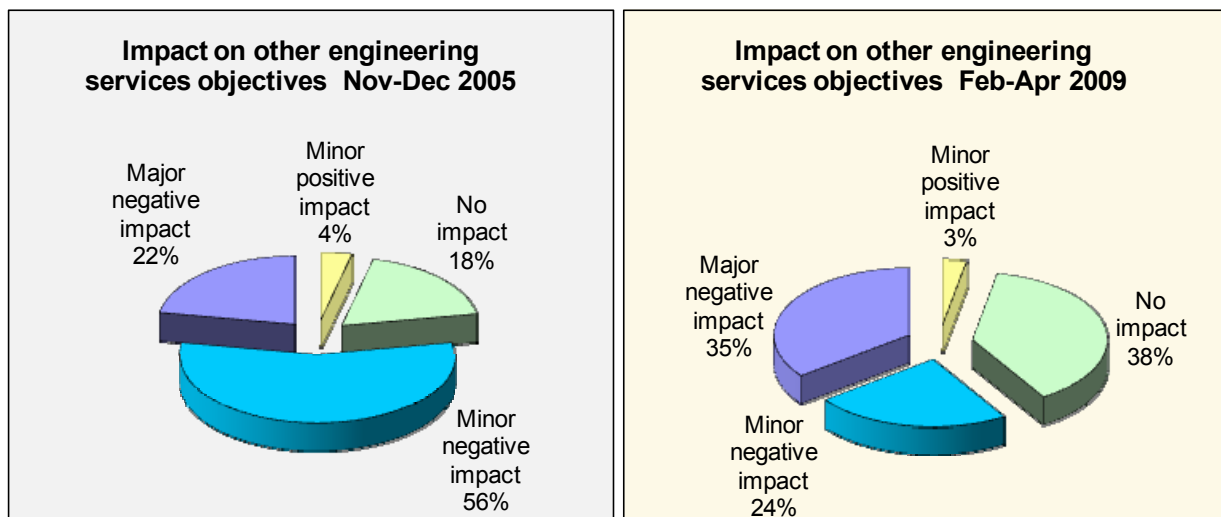
4.7.4 There was a fairly neutral picture of predicted change in the amount of work which would be outsourced over the next 5 years.



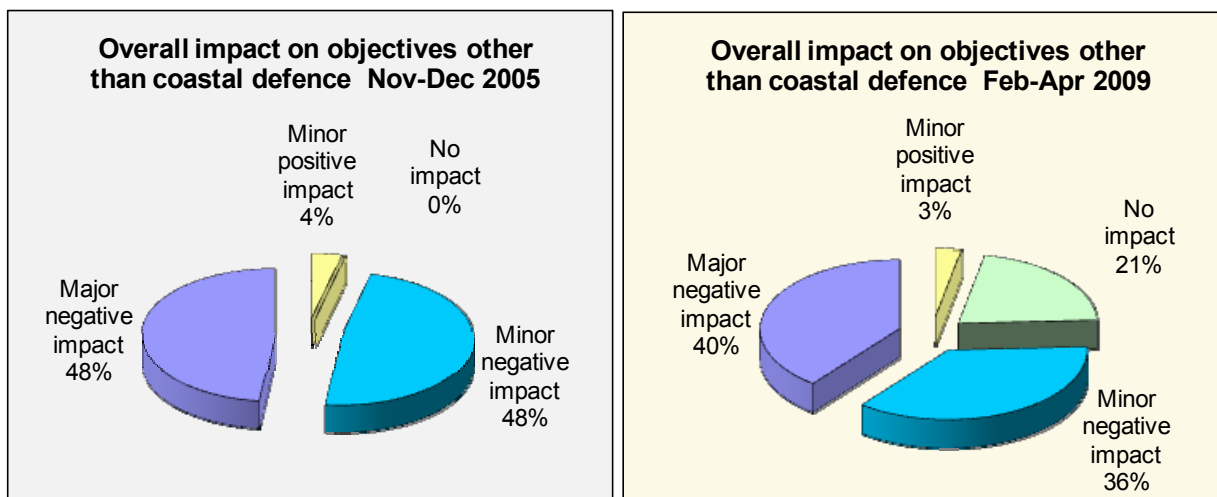
4.8 ***Impact on authorities' wider responsibilities if they were to lose the ability to promote centrally funded coastal defence measures.***

4.8.1 Interviewees were asked for their opinion on what impact losing the ability to promote centrally funded coastal defence measures would have on a range of their authority's wider responsibilities.

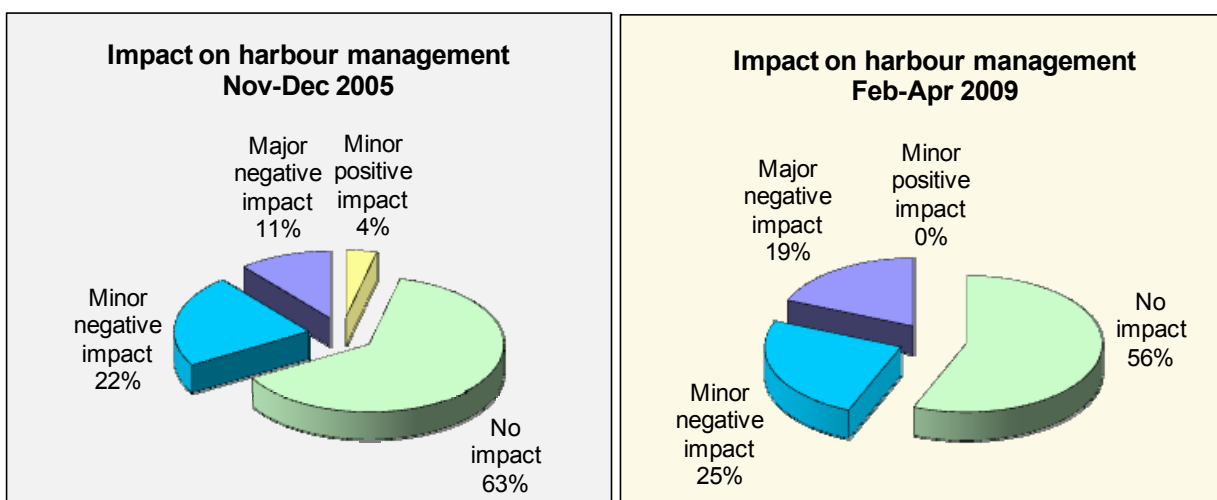
4.8.2 In terms of the authorities' *engineering services* activities other than coastal defence, 59% of participants considered that there would be a negative impact, and 38% no impact. Only one authority, representing 3% of the sample, thought that there would be a positive impact. The response was somewhat different to that obtained in 2005, when 78% of participants considered that there would be a negative impact and 18% no impact. As might be expected, the high and moderate activity councils tended to have a more negative opinion of the possible impact on other engineering services objectives than the low activity councils.

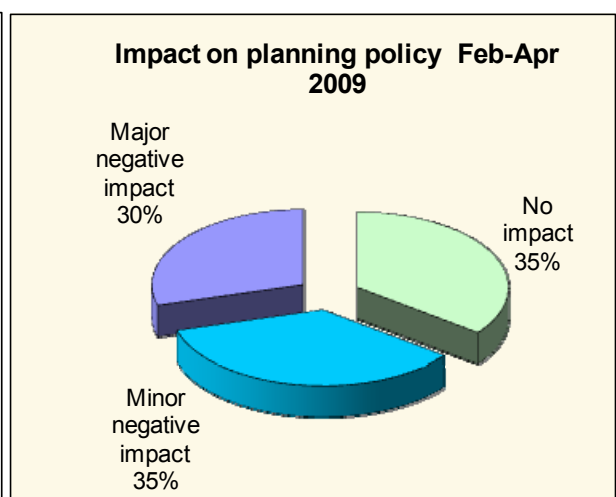
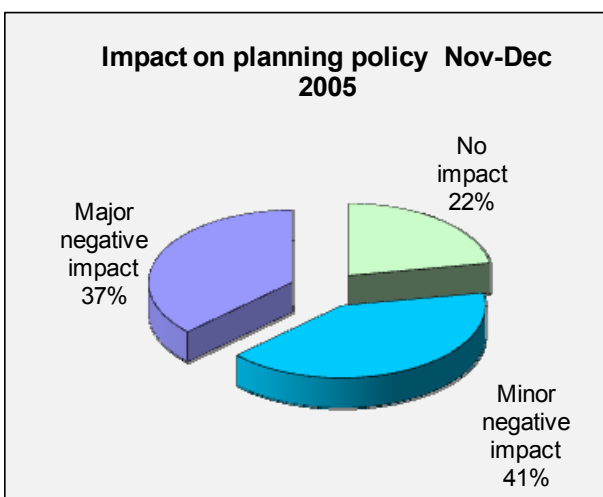
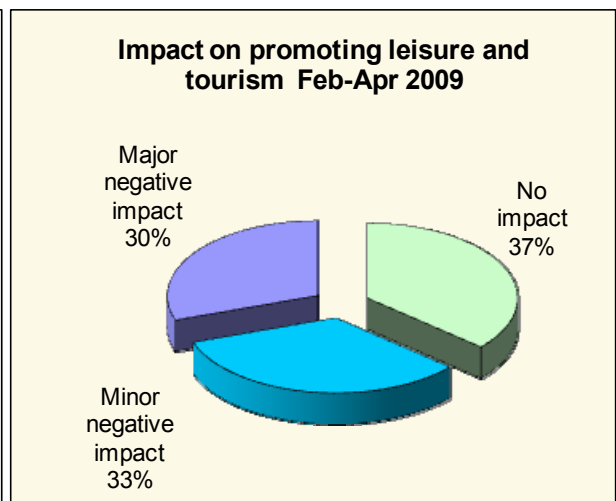
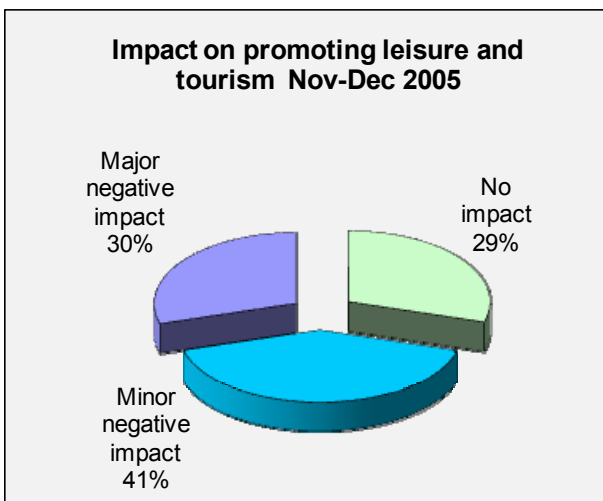
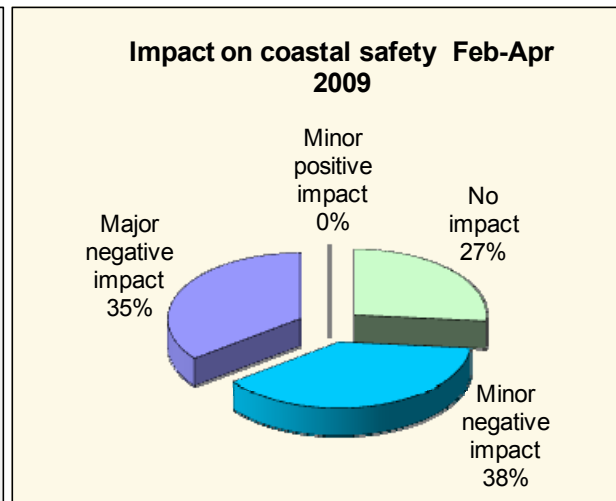
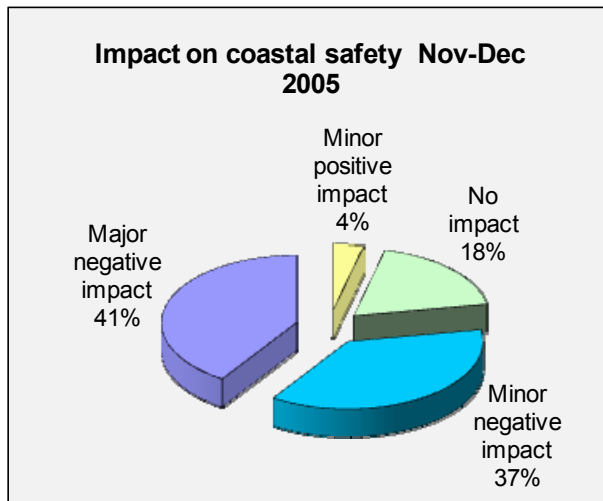


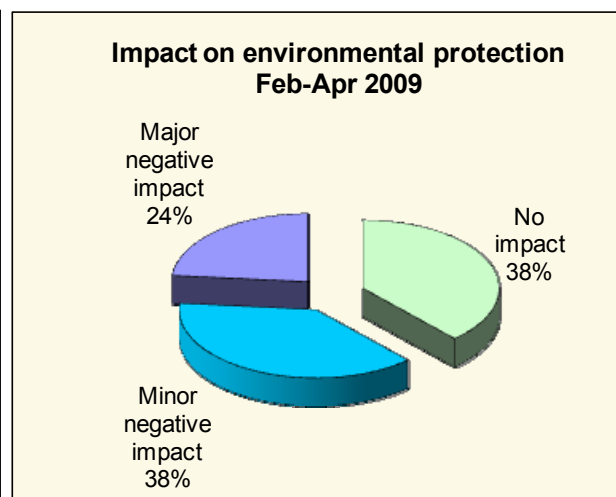
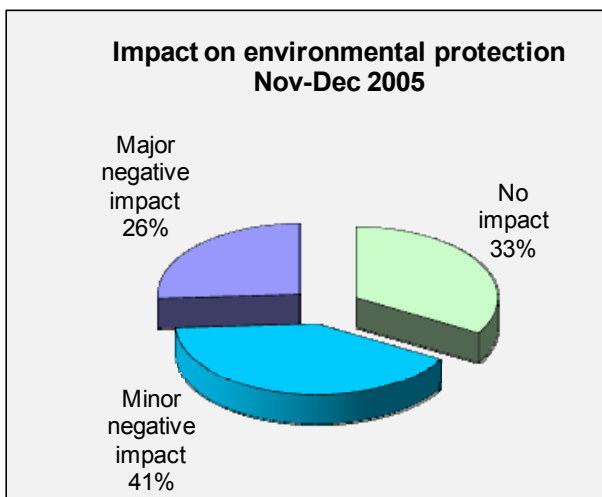
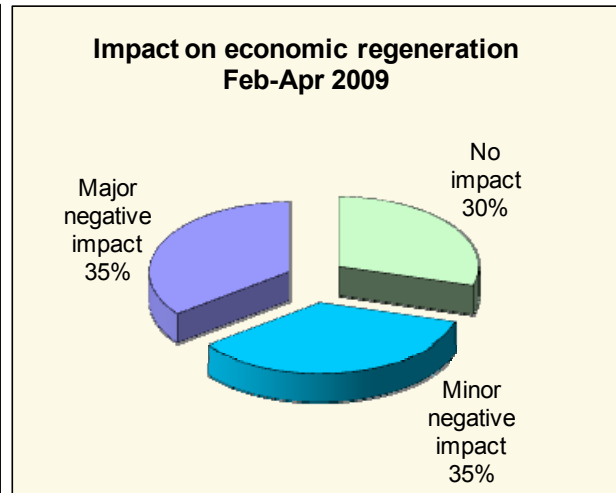
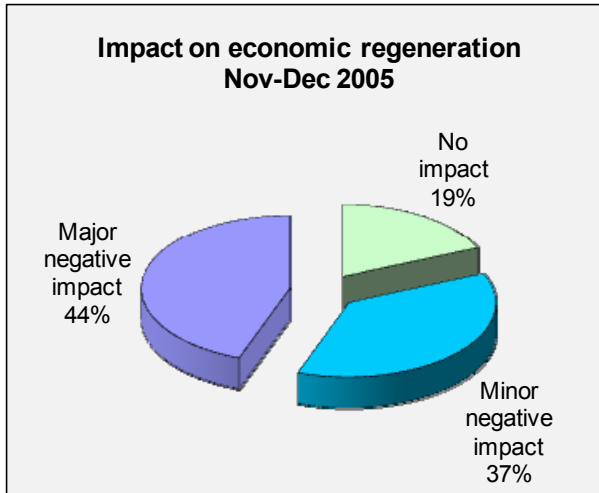
4.8.3 The overall view of the general impact of the possible change to reduce the wider coastal risk management responsibilities was largely negative, with 36% of authorities considering that there would be a minor negative impact and 40% a major negative impact. Again, only one authority felt that there would be a positive impact. The response, however, was more positive than that returned in 2005.



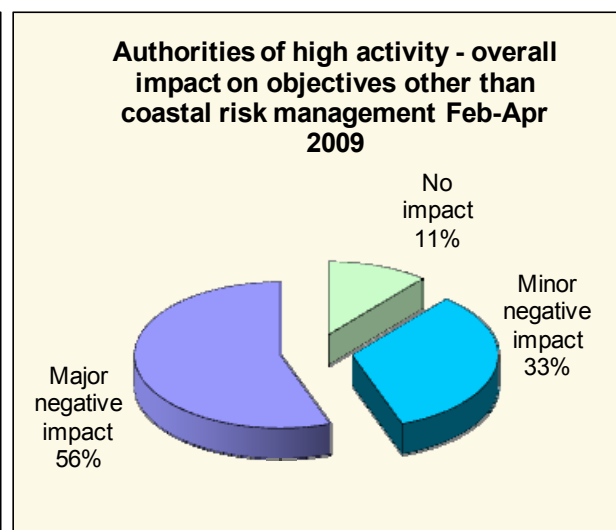
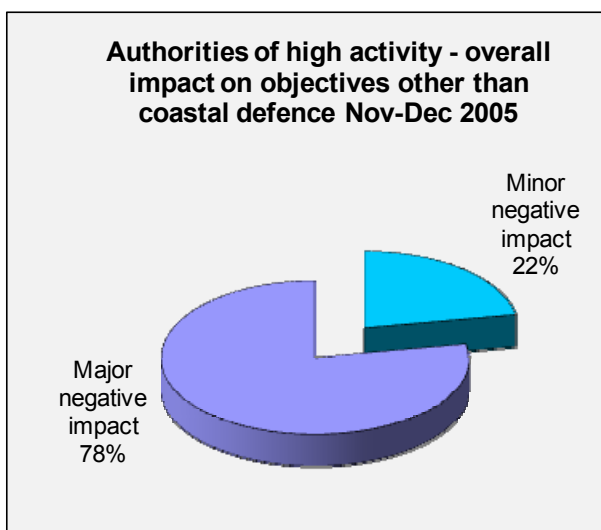
4.8.4 The overall opinion on a range of objectives other than coastal risk management, together with their 2005 comparisons, is given in the charts below. The trends in 2009 were broadly similar to those from 2005, but slightly less negative.

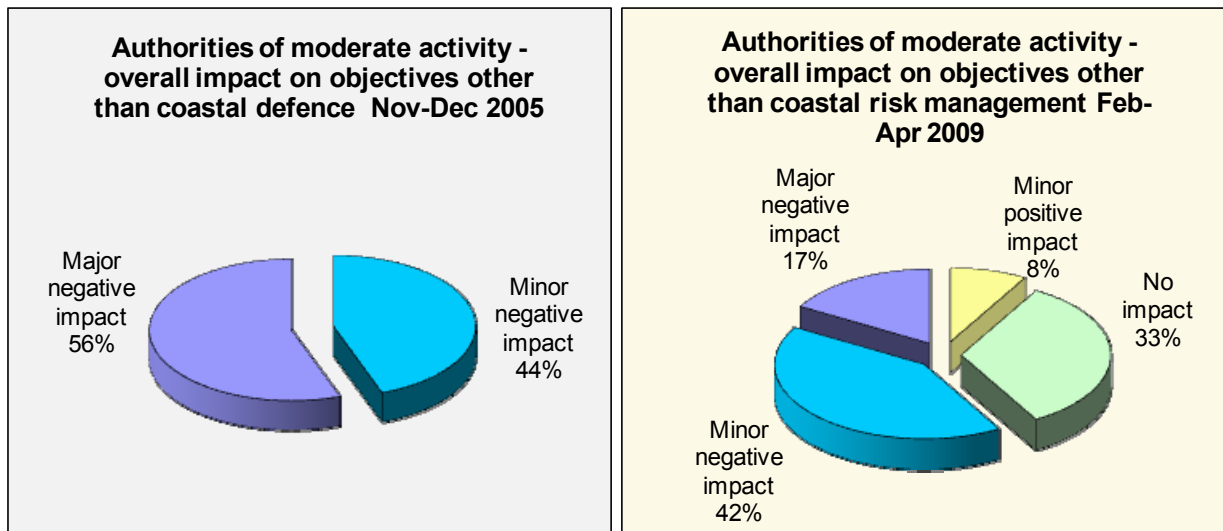






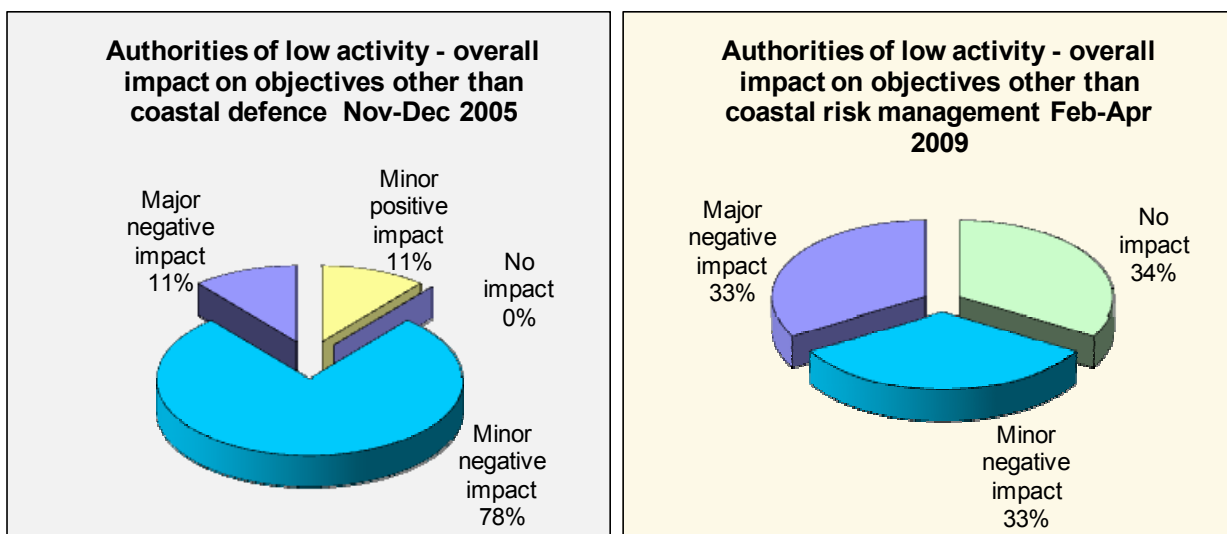
4.8.5 The breakdown of opinion according to activity is given in the charts below:

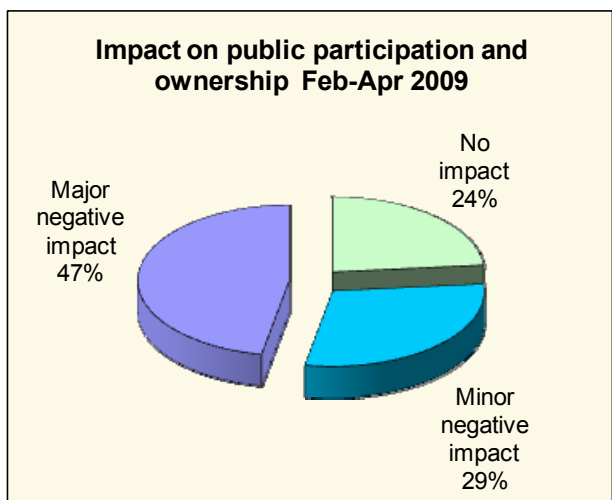
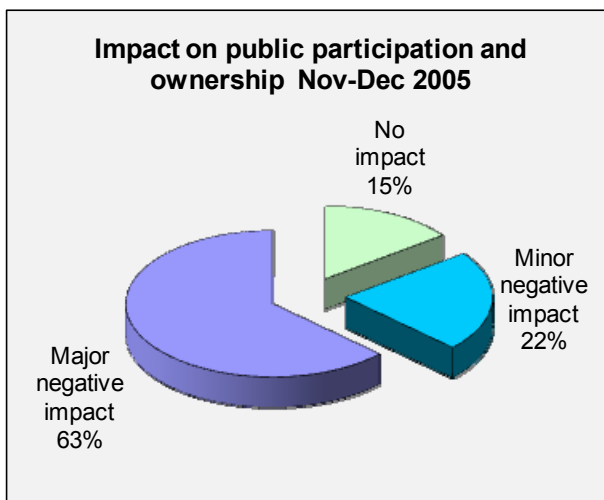
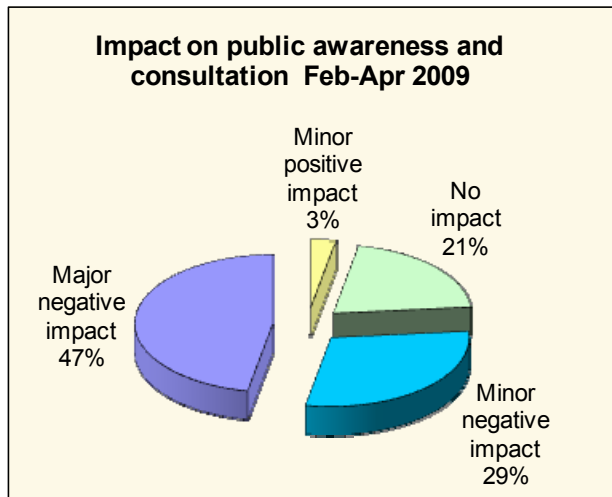
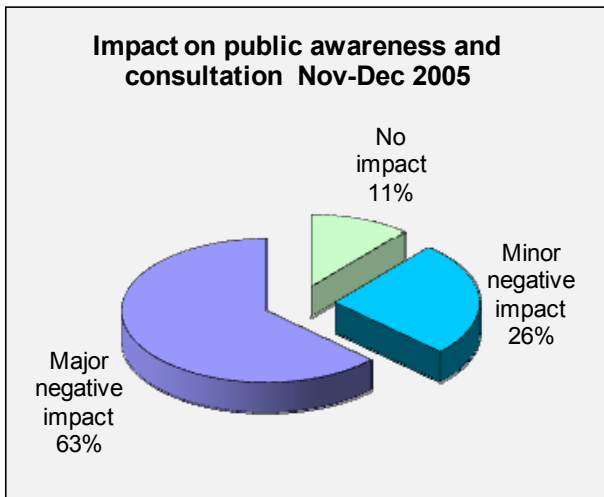
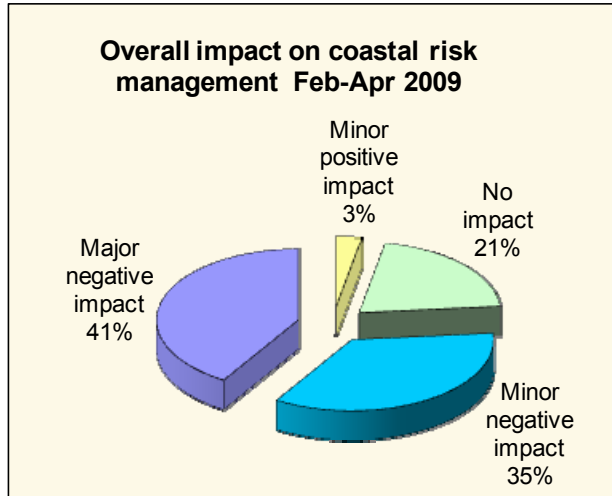
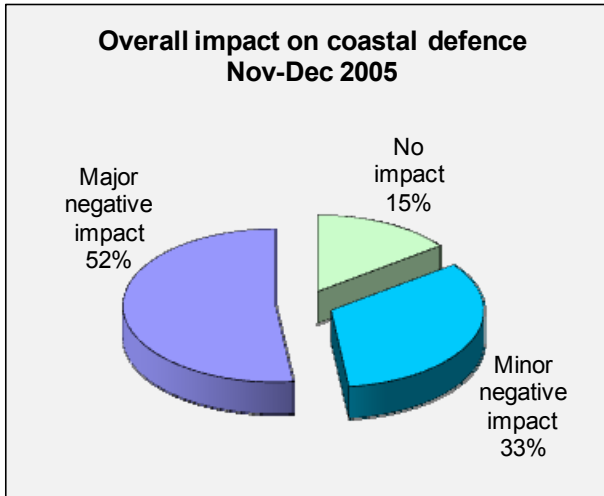


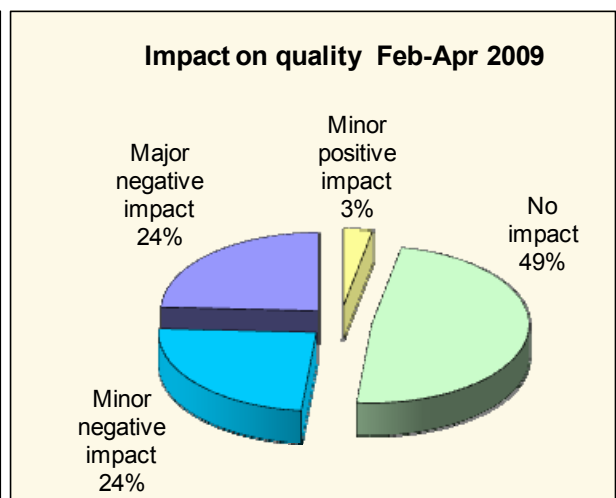
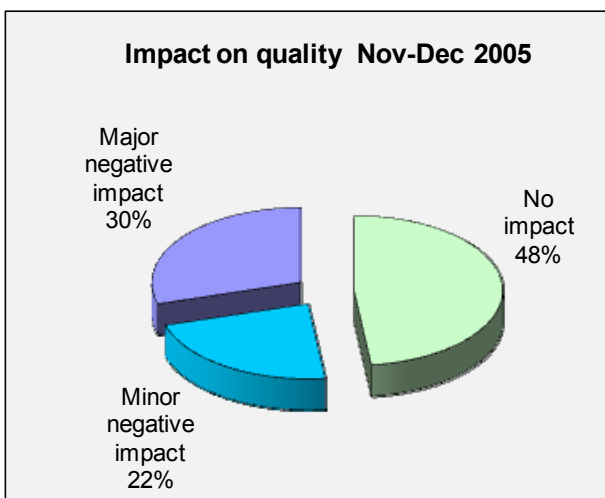
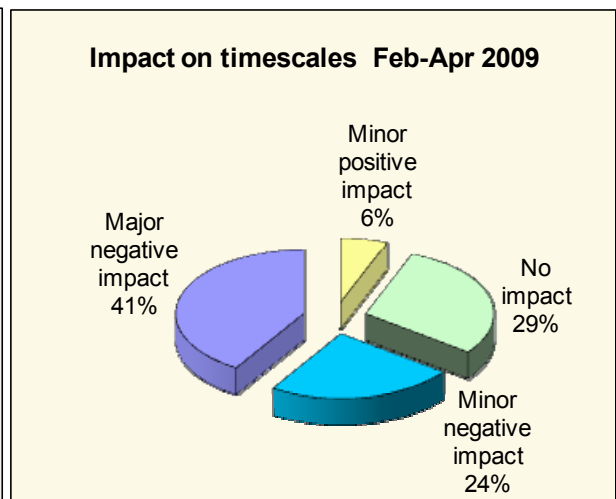
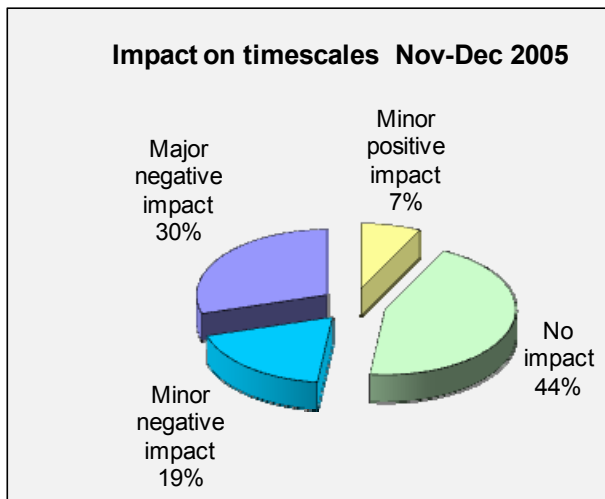
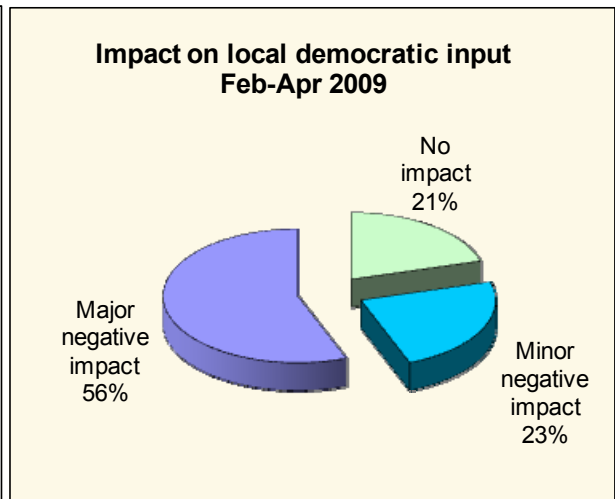
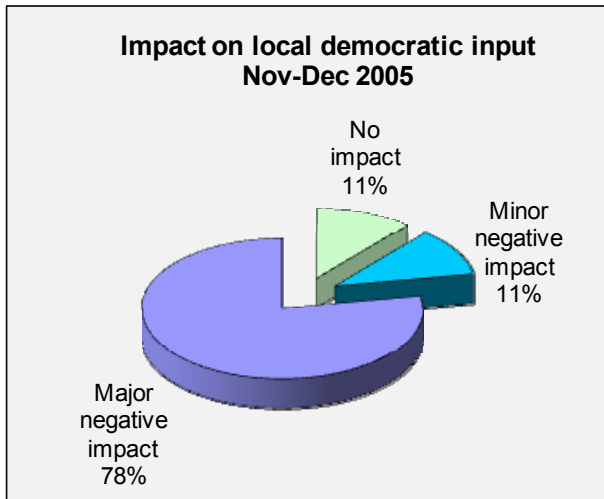


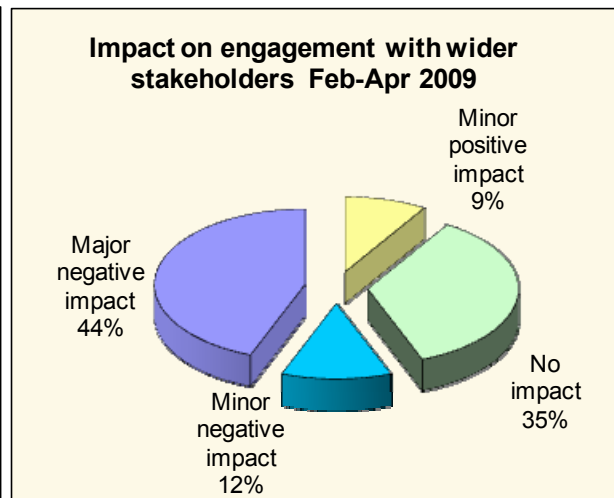
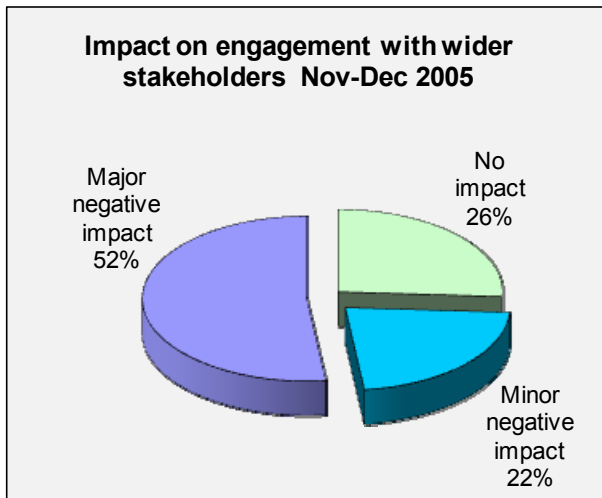
4.9 Impact on coast protection and sea defence of a reduced role in authorities' delivery responsibility.

4.9.1 The overall opinion from the participating authorities was that a reduced role in the authority's delivery responsibility would have a negative effect, but the response was less negative than the very strong responses obtained in 2005. The only indicator to go against this trend was impact on timescales.

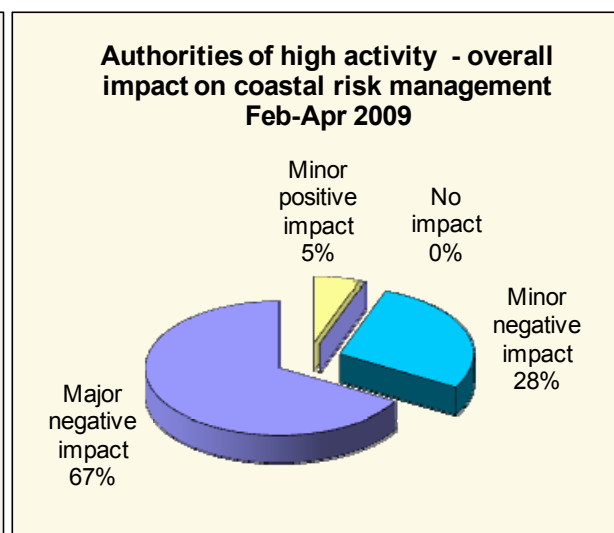
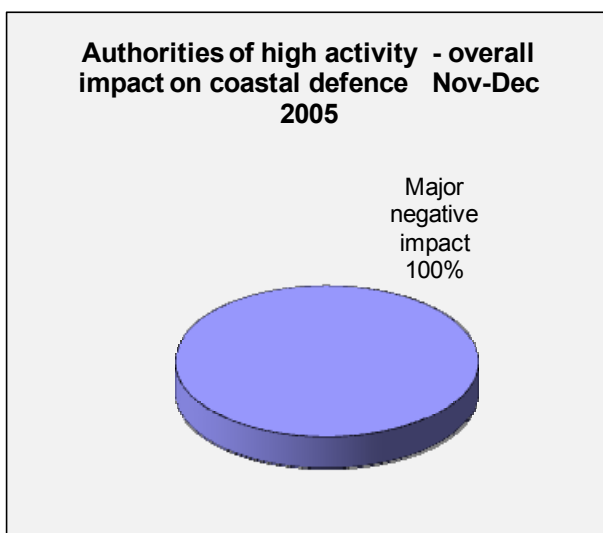


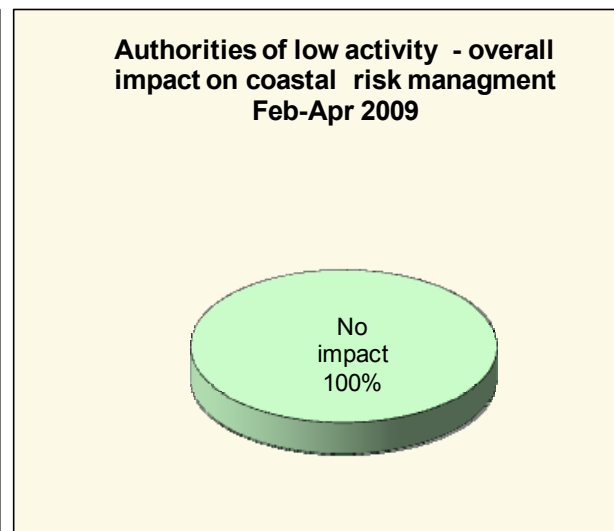
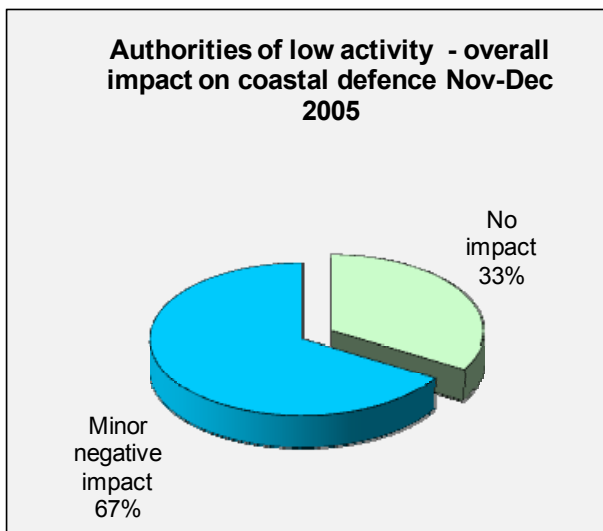
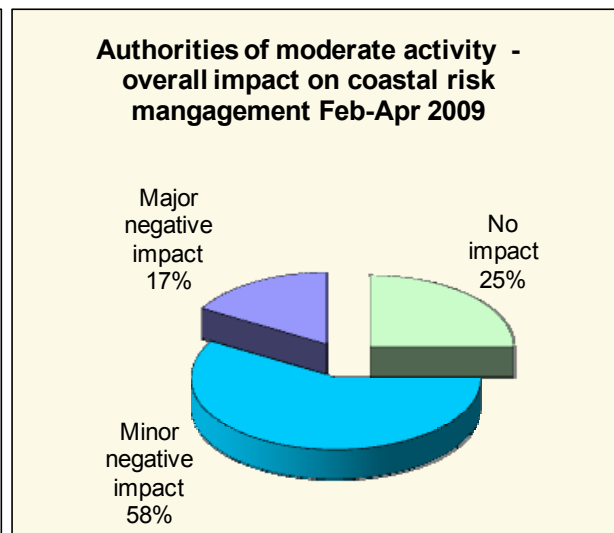
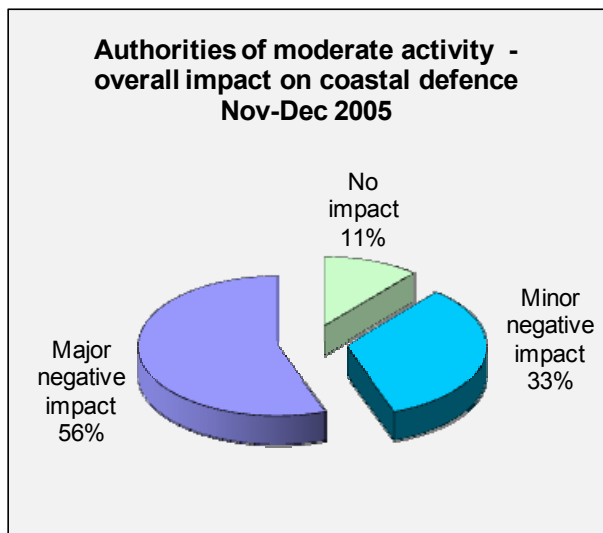






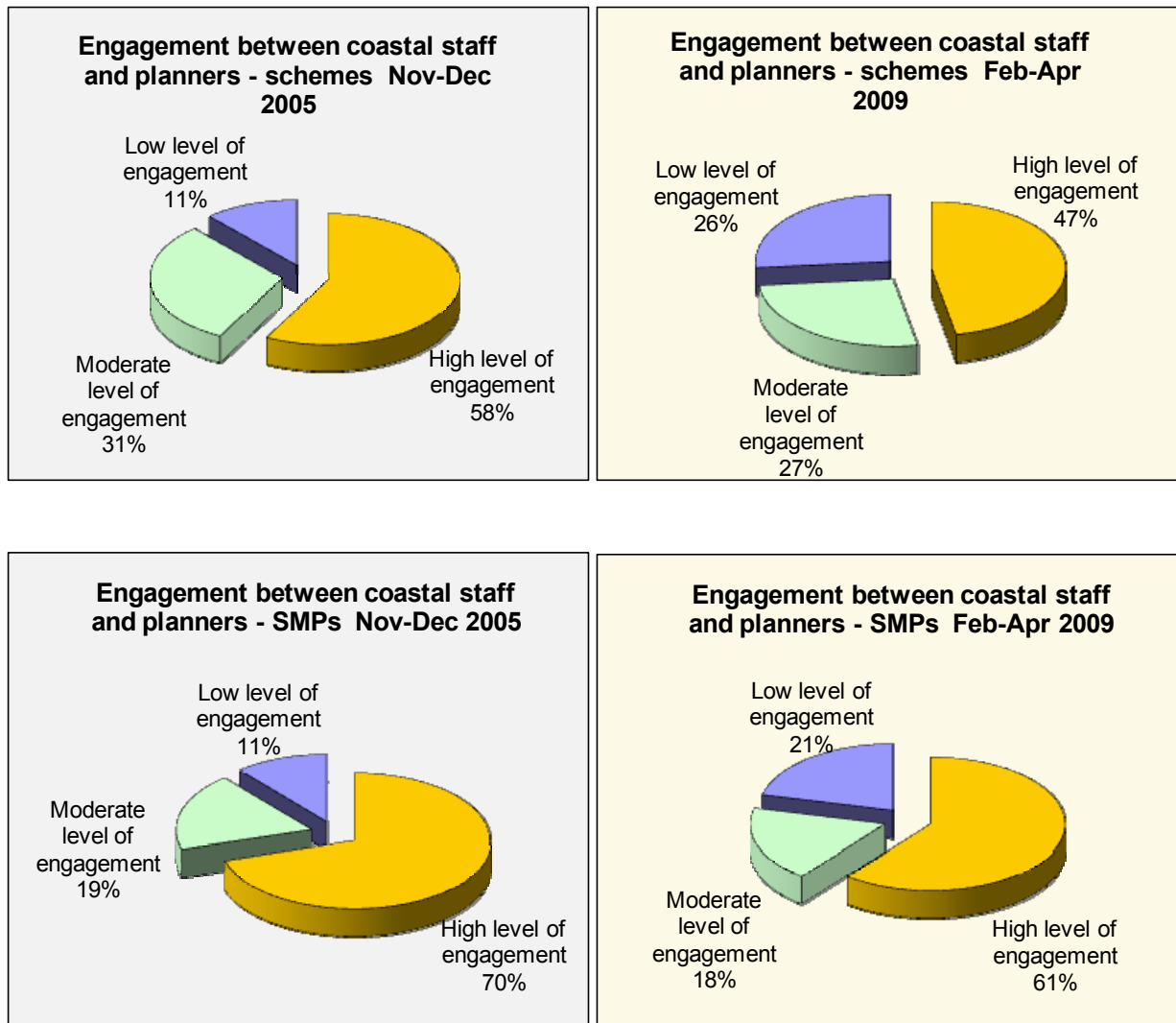
4.9.2 In giving their view on the possible impact on coastal risk management of a reduced role in authorities' delivery responsibility, there were distinct differences in the opinions of the interviewees depending upon the degree of activity of their authority, with the general pattern being the higher the activity, the higher the degree of negativity. The reduced level of negative responses since 2005 can also be seen in the graphs.





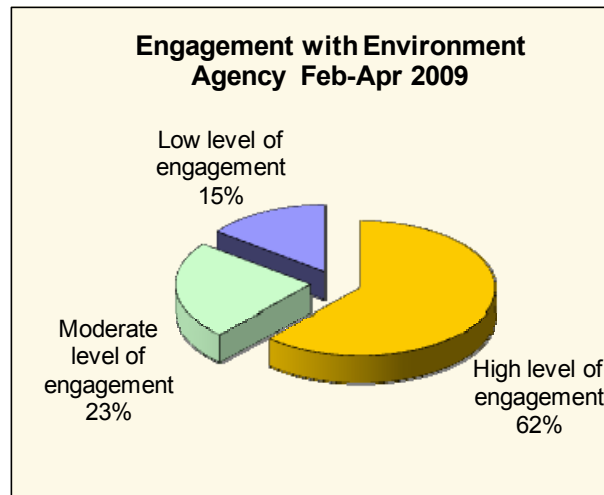
4.10 *Engagement with planners*

4.10.1 There was a fairly high level of engagement between coastal risk management staff and planners in the same authority, but less than that indicated in 2005.



4.11 *Engagement between coastal risk management staff and the Environment Agency*

4.11.1 The response to the question of level of engagement between coastal risk management staff and the Environment Agency was positive overall, with 85% reporting either a high or moderate level of engagement.

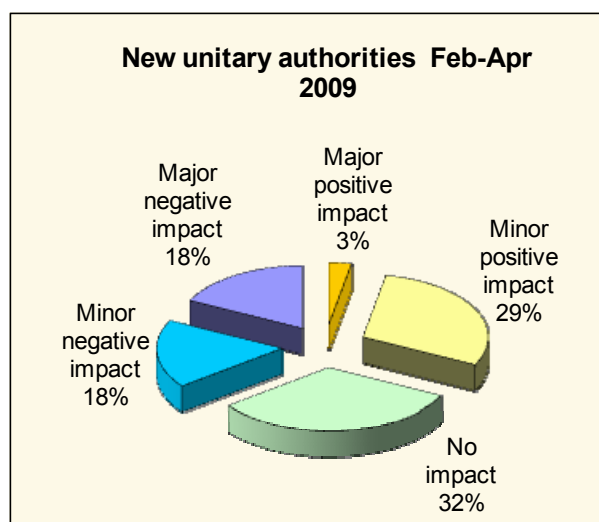


4.11.2 Some comments made by the interviewees relating to their engagement with the EA are given in Section 4.5.

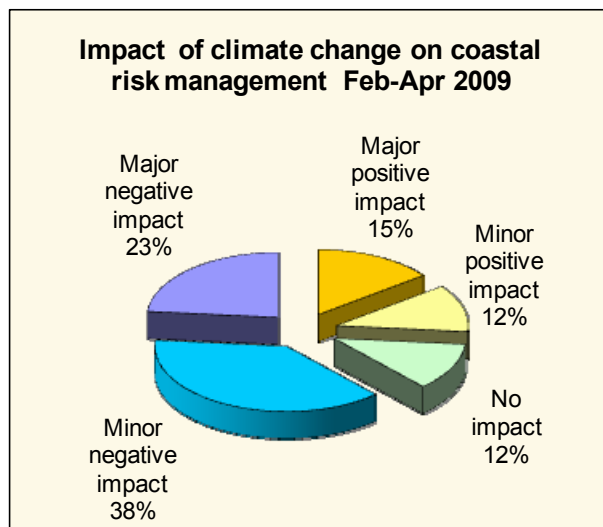
4.12 *Impact on coastal risk management of emerging issues.*

4.12.1 Interviewees were invited to consider the impact on coastal risk management in their area of a number of new and emerging issues for councils.

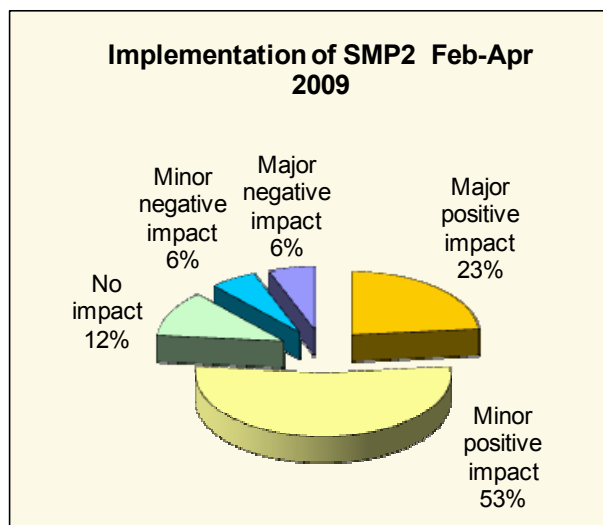
4.12.2 Opinion on the impact of new unitary authorities was fairly evenly balanced. Many authorities would not be directly affected.



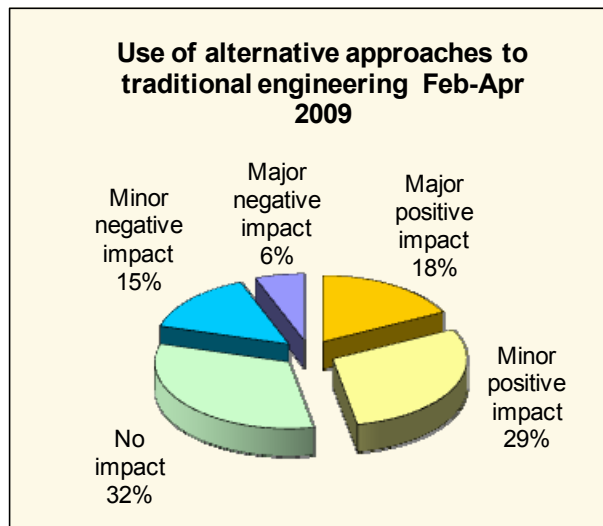
4.12.3 The view on the impact of climate change on coastal risk management was somewhat polarised. 61% of authorities gave a negative response, whilst 27% gave a positive one, with only 12% believing it would have no impact. 41% of authorities considered that climate change would result in the requirement for greater staff resources in house.



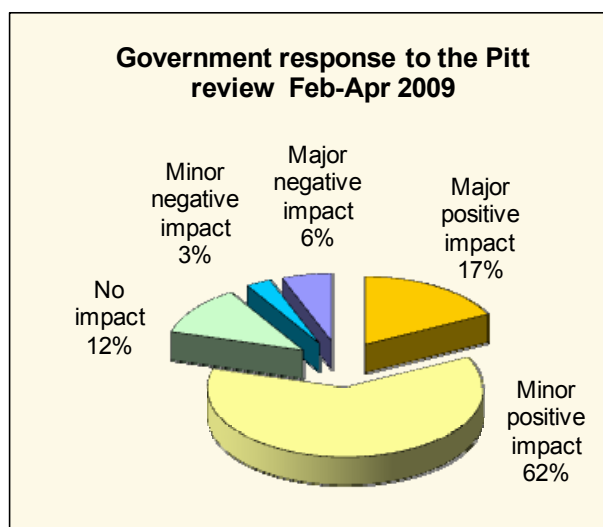
4.12.4 The impact of the implementation of the second round of Shoreline Management Plans was considered to be predominantly positive, with only four councils feeling it would have a negative impact.



4.12.5 Consideration of the use of alternative approaches to managing the coastline, instead of traditional engineering solutions, gave a range of views, but more positive than negative.



4.12.6 Opinion on the Government's response to the Pitt review was predominantly positive, with only three councils considering that this would have a negative impact. 68% of councils indicated that the Government's response would lead to a requirement for greater staff resources in house.



5.0 Discussion

5.1 *Validity of the review data*

5.1.1 The total number of authorities interviewed was 34, which represents 38% of the total number (90) of operating authorities with coastal risk management responsibility. It could be said that had the remaining 62% been interviewed, then they may, in theory, have supplied information very different from the sample obtained and given a different complexion to the findings of the review. However, such is the spread of authorities which took part in the review, in terms of different types of council, geographical location and activity, together with the strong degree of consistency of many of the answers given, that it is reasonable to assume that it is representative of the larger whole.

5.1.2 Most of the elements of the review concerning staffing relate to factual data and are considered to have a high degree of accuracy. Some authorities were not able to provide all of the information requested, but this was a very small proportion of the total body of data.

5.1.3 With regard to the estimates of full time equivalent staff engaged in coastal risk management, as for any focused survey, it may be prudent to consider whether there would have been an inclination for the interviewee to be subject to “focus bias.” This is where there is a tendency to overestimate the amount of staff time spent on the topic of the survey. For example, if the principal theme of the survey had been land drainage, rather than coastal risk management, then different distributions of staff time may have been obtained in the interviews and with a bias towards land drainage. However, even if this has occurred, it is believed that it would have had a relatively small effect and certainly would not invalidate the overall findings of the survey, which gave factual information on total staff numbers.

- 5.1.4 Those questions inviting opinion give, by their very nature, subjective information. For example one senior officer may consider that a particular factor may have a major negative impact on his authority, whereas a colleague in the same authority may consider the same factor to have only a minor negative impact. It is considered, however, that the broad trends indicated by the review should be valid.
- 5.1.5 In critically validating the responses, it could be said that it is human nature to tend to place a high degree of importance on one's own activities and those of the organisation in which one has a senior role - a view which others outside the organisation may not share. It could also be said that, upon being asked, there may be few people who would be humble enough to admit that others could carry out their professional responsibilities better than themselves. This may, for example, have influenced the responses relating to the potential reduced role of the authorities delivery responsibility, giving them a negative slant. Another category of questions which may have been similarly influenced is that relating to the self-assessment of activity of the local authority, as there may be a reluctance to state that the department in which one has a senior role is relatively inactive.
- 5.1.6 Levels of local authority activity presented in the review are based upon the opinion of the local authority officers interviewed. The measures of activity, i.e. "high", "medium" and "low" are a broad, qualitative indication of the level of activity, and are not quantitative measurements. A better comparative measure of the activity would be the annual figures of expenditure on coastal capital schemes (see Section 7.4)
- 5.1.7 Whilst the parts of the review concerning opinion on the impact of possible changes in delivery function should be treated with some caution (as should those in which "focus bias" may play a part), it is considered that the outcomes of this review are likely to represent a good

approximation to the results which may have been obtained should every appropriate local authority have taken part. The overall trends obtained from the answers to these particular types of question are pronounced and are, therefore, considered to have a high degree of validity as to the views of local authorities in England.

5.1.8 Confidence can also be gained by comparing the distribution of responses to questions from the present review with, those obtained in 2005, which in many instances show similar trends.

5.1.9 There can also be some confidence in making valid comparisons with the 2005 results as most of the authorities interviewed in 2005 were also interviewed in the present review.

5.2 ***Significance of the results***

5.2.1 The staffing data indicate that coastal risk management responsibilities form an important part of the engineering workload of many of the maritime local authorities, particularly the smaller ones, where a large proportion of the staff may be engaged in coastal risk management work in addition to their other duties. Many authorities would appear to have insufficient coastal risk workload to justify full time coastal staff (particularly operational), but find a compatible combination with other responsibilities, such as land drainage, which allows the successful operation of small engineering units. This is considered to be one of the principal reasons for the perceived high degree of negative impact that a reduced role in delivery responsibility would have on these councils.

5.2.2 There has been a noticeable change in the age distribution data for the engineering staff since 2005. This is now more “top heavy” with a relatively high proportion of staff lying within the 50+ age range. An implication is that a relatively high proportion of experienced local

authority coastal engineers may be retiring within the next few years, and that there may not be sufficient personnel from the younger age categories with local authority experience to replace them. On the positive side, the youngest age range of less than 25, is notable as being reasonably well represented compared with the findings in 2005, indicating an influx of young engineering staff.

5.2.3 One of the most striking findings of this review is the apparent reduction in staff working for local authorities in coastal risk management. The trend is most pronounced in authorities of high activity. In 2005 the activity of a council was based on Defra Regional Engineers' assessments of the numbers of capital projects being undertaken, whereas in the present review activity has been based on the individual authorities' own assessments. Hence some councils with relatively low staff numbers but which have considered themselves to have high activity, may have been included in the present survey under the high activity category when previously they were not.

5.2.4 Notwithstanding these effects, there is a clear indication of a significant reduction in staff working in local authority coastal risk management, perhaps due to a reduction in the number of capital schemes which are being carried out compared to the situation in 2005. It is also worth noting that the 2005 survey was undertaken between the preparation of SMP1 and SMP2, whereas the present review was carried out during the undertaking of SMP2. SMP preparation can have a tendency to slow down the progress of capital projects, and once the second round of SMPs has been completed there may be an increase in activities as actions lists are implemented.

5.2.5 The reduction in numbers of staff may simply reflect a natural, temporary reduction in coastal risk management activity since 2005, with staff now engaged on other council activities during a downturn and not necessarily being lost from the system. However, there is strong

anecdotal evidence of some councils restructuring and deliberately removing not just employees (early retirements) but the actual coastal risk management posts from their establishments in order to save money. This would have a considerable effect on the capacity of local authorities to carry out coastal risk management functions in the future and should be a serious cause for concern, particularly in view of the challenges in coastal zone management which are likely to lie ahead in terms of climate change, continuing rise in sea level, development pressure, environmental and other issues.

5.2.6 The length of service data indicated that local authorities still command a high degree of loyalty amongst their employees, with staff members typically serving with their council for many years. This must represent an enormous and valuable body of local knowledge and experience, built up over long periods of time.

5.2.7 The opinions of the participating authorities' contacts on the impact of a reduced role in delivery responsibility gave a distinctly negative picture, both in terms of the authorities' wider responsibilities and the impact on coastal risk management. This was particularly so amongst authorities of high and moderate activity (essentially those carrying out capital works and regular operational maintenance work). It may be argued that the negative nature of the responses relating to public consultation and democratic input should not be surprising, as local authorities are by their very nature democratic organisations with stronger links with the local community than the EA. Notwithstanding the caveats described in section 5.1 above, and the fact that the responses were more positive than in 2005, such is the degree of the perceived negative impact of those interviewed, that this should still be a serious concern.

5.2.8 Those authorities who felt that their current staff base was "inadequate" explained that the shortfall in resource was often made up by employing outside consultants. Therefore, although their staffing may be

inadequate, they did not feel the service suffered as a result, as the council officer with local knowledge could still guide the support service consultant.

5.2.9 Over two-thirds of authorities either had low confidence that they would be able to secure and develop adequate coastal engineering staff in the future, or could not give a view. Possible reasons for this include:

- interviewees consider that there will be a civil engineering skills shortage generally,
- there may be difficulty in attracting staff of sufficient calibre to local authority departments,
- there will be insufficient coastal risk management work in the future for councils to justify the employment of coastal engineering staff,
- policy decisions by councils to downsize engineering departments and to make more use of external resources, such as consultants.

5.2.10 Whilst the implementation of the second round of Shoreline Management Plans was considered to be predominantly positive, four councils considered that it would have a negative impact. This may be because:

- the preparation of SMPs diverts engineering resources,
- coastal defence schemes tend to be deferred until the SMP has been completed,
- SMPs may make recommendations contrary to local authority policy.

Hence SMPs may be regarded by a few authorities as something of a distraction from the business of protecting the coast.

5.2.11 The view on the impact of climate change on coastal risk management was polarised. 61% of authorities gave a negative response, whilst 27% gave a positive one, with only 12% believing it would have no impact. It is considered that the negative responses refer to the physical aspects of climate change on the coast. The positive responses were considered to

be due to authorities' view that climate change could be used as a reason to justify increased investment in coastal risk management.

5.2.12 It is clear from the responses and factual returns that a major coastal scheme, particularly when carried out principally in house by a local authority, involves a large commitment of authority staff drawn from many disciplines. The public consultation, exhibition and engagement agenda alone can involve directors, press officers, graphic design teams, printers, committee clerks, legal officers, finance officers, planners, environmentalists, IT technicians and administration staff, as well as the engineers on the project.

5.2.13 A high proportion of LAs indicated that they would use the resources of another authority if these were available, demonstrating a willingness for a high degree of collaboration with other councils. Furthermore, some councils stated the intention to establish Centres of Excellence in coastal engineering which could offer services to other authorities. This would seem to offer a potential solution for possible shortages of experienced coastal engineering staff in the future, and the low level of confidence expressed by some authorities in securing and developing suitable staff.

6.0 Summary of key findings

6.1 Key facts

6.1.1 Numbers of council staff engaged in coastal risk management work are much lower in 2009 than they were in 2005, with numbers nearly halved for councils of high activity.

6.1.2 For coast authorities nationwide, it is estimated that staffing in terms of full time equivalents has reduced by around a third since 2005

6.1.3 Many of the engineering staff are employed on other duties in addition to coastal risk work.

6.1.4 Local authorities command a high degree of loyalty amongst their employees, with staff members typically serving with their council for many years.

6.1.5 The age distributions of engineering staff were top heavy, with many of the staff being in the 50+ category.

6.1.6 Most coastal risk management work is still carried out by councils in house, with about a third being outsourced to consultants or contractors.

6.1.7 Thirty-five percent of authorities indicated the intention to establish a Centre of Excellence in coastal engineering which could offer services to other authorities.

6.1.8 A large proportion of councils, 76%, indicated that they would use the resources of another authority if these were available. This contrasts with the present situation where only 16% of the overall engineering staff resource at those operating authorities interviewed was engaged in work for other authorities.

6.1.9 32% of authorities said that their council members had not yet been briefed on the new role of the EA.

6.2 Key opinions

6.2.1 Only two-thirds of authorities considered that they had adequate staff resources at present.

6.2.2 Less than a third of authorities had a high level of confidence that they would be able to secure and develop adequate staff over the next 10 years.

6.2.3 There was a distinctly negative overall opinion on the possible impacts of a reduced role in authorities' delivery responsibility, but responses were more positive than they were in 2005.

6.2.4 There was a good level of engagement between local authorities and the Environment Agency

6.2.5 There was a generally positive opinion on transfer of strategic overview of coastal risk management to the Environment Agency.

6.3 Key threats

6.3.1 Reduction of staff number in coastal risk management activity may, at least in part, be due to councils' policy decisions to remove employees and risk management posts from their organisation in order to save money, or for other reasons unconnected with workload. This could have a considerable effect on the capacity of local authorities to carry out coastal risk management functions in the future.

6.3.2 A relatively high proportion of experienced local authority coastal engineers may be retiring within the next few years, and there may not be sufficient personnel from the younger age categories with local authority experience to replace them.

6.3.3 There is a distinct lack of confidence amongst many local authorities about their ability to secure and develop adequate coastal risk management staff in the future and it is not certain if there will be adequate resources available to meet upcoming coastal risk management challenges.

6.3.4 The degree of the perceived negative impact of a possible reduced role in the delivery responsibility of local authorities should be a serious concern.

6.4 Key opportunities

6.4.1 There remains within local authorities an enormous and valuable body of local knowledge and experience, built up over long periods of time, which could potentially be maintained and enhanced to provide coastal risk management skills and capacity in the future.

6.4.2 The intention to establish Centres of Excellence in coastal engineering which could offer services to other authorities, together with the high proportion of councils that indicated that they would use the resources of another authority (if these were available), would seem to offer a potential solution for future shortages of experienced coastal engineering staff.

6.4.3 An example of how local authorities may collaborate in coastal management is provided by the Havant & Portsmouth Coastal Team,

where staff from Havant Borough Council and Portsmouth City Council work together under a single Coastal Defence Partnership Manager. It is understood that the arrangement will be extended shortly to include Gosport BC. This model of pooled resources is considered to have multiple benefits, particularly in terms of collaboration between authorities over a section of coast with similar management issues, efficiencies of working and strengthening of staff resources and coastal expertise.

7.0 Recommendations

7.1 Introduction

7.1.1 This section makes recommendations for further work that could be carried out, through the EA, to assist in defining future strategy for local authority coastal risk management in relation to the key issues arising from the review, and particularly with respect to the opportunities and threats that these present.

7.1.2 Three broad areas are addressed:

- consideration of approaches for making best use of current skills and capacity, and for development and training,
- continuing to develop an understanding of future delivery requirements to allow local authorities and the EA to assess future skills and capacity needs,
- improving the existing evidence base.

7.2 Maintaining and developing current skills and capacity

7.2.1 The current body of local authority skills, capacity and experience is clearly a huge asset for the delivery of coastal risk management functions, which should be made best use of through collaboration between authorities and enhanced by pursuing opportunities for development and training.

7.2.2 **Recommendation 1** – continue to develop the systems of coordination and dialogue between the EA coastal teams and local authorities, using

the Coastal Groups as a vehicle. This will ensure it is understood where coastal expertise lies, and will help UK regions to make best use of coastal risk management resources to meet their commitments for the immediate future. **(EA and Coastal Groups)**

7.2.3 Recommendation 2 - engage with Coastal Groups to get a clearer picture on the extent and effectiveness of local authority collaboration, and consult further with Coastal Groups on the establishment of Centres of Excellence. The majority of councils indicated that they would use the resources of another authority if these were available, demonstrating a willingness for a high degree of collaboration with other councils. This would indicate that the greater use of Centres of Excellence may be a way of safeguarding skills and capacity, especially in those regions where local authorities are making policy decisions to downsize their coastal risk management capability. **(EA)**

7.2.4 Recommendation 3 – review the options for developing skills on a collective basis, through joint training and development involving both EA and local authorities. This would include consideration of the extent to which the EA's Foundation Degree in River and Coastal Engineering may meet some of the local authority resource requirements, and how the course may need to be modified to best achieve this objective. **(EA and Coastal Groups)**

7.3 *Understanding future delivery requirements*

7.3.1 A forward plan of workload needs to be established so that future demands for coastal risk management skills and capacity may be estimated. This would take account of, for example, the recommendations emerging from the current round of SMPs, the implications of the EA taking a greater role in sea defence, and how these may influence future demand.

7.3.2 **Recommendation 4** – identify and review available evidence such as the Long Term Investment Strategy (LTIS) information currently being provided to the EA by Coastal Groups, to establish a position on future operating authority workload. **(EA and Coastal Groups)**

7.3.3 **Recommendation 5** – consider options on how the future workload may be met, for example through the local authorities themselves, through Centres of Excellence or through the use of consultants. **(EA and Coastal Groups)**

7.4 *Improving the evidence base*

7.4.1 The present review has involved a significant number of maritime authorities and provides strong evidence based on a large sample size, and is considered to be fit for purpose. It has been, by definition, focused upon the skills and capacity of local authorities to deliver coastal risk management functions. However, many of the issues raised in the review also apply to the wider capacity for the delivery of coastal risk management and related functions, for example by external consulting engineers and by the EA itself, which should be the subject of additional consideration. There is also the opportunity to further improve the evidence base through the collection of more data.

7.4.2 **Recommendation 6** – undertake a formal comparison of the present review with the EA's own recent Skills and Capacity review, to highlight similarities and differences, and to summarise key issues which may inform future strategy. Also consult and compare other recent reviews relating to civil engineering skills and capacity nationally, such as the Defra and LGA Survey 2008, to determine how these reviews link with the broader skills and capacity issues. **(EA)**

- 7.4.3 **Recommendation 7** – upon publication of this report discuss with Coastal Groups whether they wish to extend this survey themselves, perhaps to all coastal authorities. This would ensure that Coastal Groups have a complete picture of LA capabilities and can then maximise opportunities for joint working or setting up centres of excellence where it is indicated that this would be beneficial. **(EA)**
- 7.4.4 **Recommendation 8** – obtain the annual figures of expenditure on capital schemes for the years from 2005, as a measure of local authority activity. This would help to identify any link between capital expenditure and staffing, and if the reduction in staffing is due to decreasing workload or for other reasons. **(EA)**
- 7.4.5 **Recommendation 9** – undertake a further review in 3 years time, possibly linked to inland work and the EA's future reviews, to ensure an ongoing comprehensive picture is obtained. **(EA)**