



# Annual report for Southern Coastal Group and SCOPAC 2012/13



Report prepared by Andrew Bradbury – Chairman of Southern Coastal Group

Photos courtesy: A Bradbury, David Bowie, Havant BC, Dave Harlow, Channel Coastal Observatory

# **Annual report for Standing Conference on Problems Associated with the Coastline and Southern Coastal Group 2012/13**

Andrew Bradbury - Chairman of Southern Coastal Group

## **Political representation**

- The Coastal Group has continued to be instrumental in raising the profile of the difficulties associated with scheme funding, both through the Environment Agency and through other fora. Political representation has been made by members and officers of the coastal group to local members of parliament.
- The Coastal Group's representation on the Southern and Wessex Regional Flood and Coastal Committees (RFCC) has continued to highlight challenges facing coastal communities, particularly with respect to coastal erosion issues. As reported last year, the focus of the committees has been very much on inland flooding issues, and has continued to move further away from coast protection issues. The work of the recently formed Lead Local Flood Authorities (LLFAs) now forms a prominent aspect of the reporting process. The Environment Agency has recognised this challenge, which has been highlighted by the Coastal Group Chairmen, and is attempting to raise the profile of coastal matters by planning a coastal focussed meeting at the July 2013 Southern RFCC. Concerns persist with the lack of Coast protection authority elected member representation within the new RFCC structure.
- Planned capital expenditure on Coastal Protection matters shows a clear decline over the next five years, in the medium term programme; this has been highlighted in papers published at the last three RFCC meetings. This is considered to be a particular problem by the Coastal Group, and has acted as the catalyst to commence a small investigation by the Southern Coastal Group to establish the reasons for this decline. This will be undertaken during the coming year, with reporting of the outcomes to relevant politicians.
- There is a further challenge in engaging the LLFAs in coastal matters and in most instances the coast does not appear to figure in their planning. It is particularly disappointing that several (but not all) of the LLFAs within the coastal group region are not coastal group members, particularly when they have a responsibility to liaise with the membership of these organisations.
- Associations with other bodies in our region and nationally with the other Regional Coastal Groups and other National Stakeholder Groups have continued. A recent presentation to the DEFRA coastal forum by the Southern Coastal Group Chairmen has highlighted the excellent work undertaken by the regional coastal groups in delivery of the National Network of Coastal monitoring programmes and this has been recognised by the Chairman of the LGA Coastal special interest group.

## **Leadership**

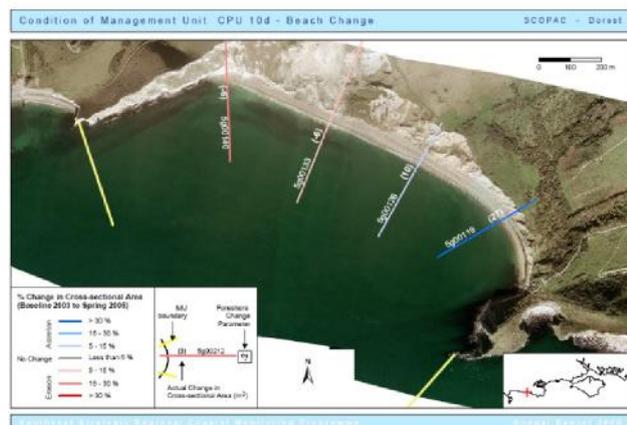
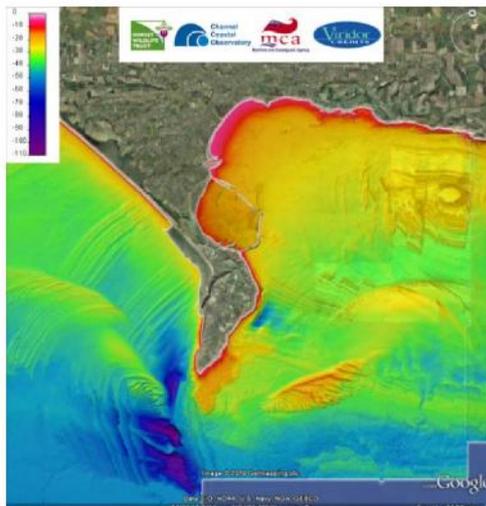
- Councillor Roger Elkins has concluded his term as Chairman of SCOPAC, following a lengthy period as chairman as a representative of Arun District Council prior to that. Members of both SCOPAC and the Southern Coastal Groups are grateful for Cllr Elkins support over this period. Cllr Mary Penfold of West Dorset District Council has recently taken over the role as Chairman of SCOPAC and the role of Vice Chairman has been taken by Cllr Hugh Mason of Portsmouth CC. The Southern Coastal Group maintains a sound relationship with its partner, SCOPAC and this is crucial to the delivery of many of the Southern Coastal Group Activities.
- Continuity of leadership has been maintained within the Southern Coastal Group. Andrew Bradbury (New Forest DC) has been reappointed for a further term as chairman, with valuable support from deputy Chairmen, Lyall Cairns (Havant BC) and Neil Watson (Environment Agency). Samantha Cope has continued to act as research subgroup chair.

## Coastal monitoring

- The Southern Coastal Group has led on the coordination and development of the highly successful southeast regional coastal monitoring programme, which has been running since 2002. The second five year phase was successfully completed in April 2012 and the first year of the National Network of Regional Coastal Monitoring Programmes concluded in April 2013. Continued management and technical support for this programme has been provided by New Forest District Council
- A successful annual review event was supported in December by the Southern and South East Coastal Groups and attended by 80 officers.
- The policy of making data freely available and free to all has previously been effective in generating interest and contributions to the programme from other bodies, in particular the Maritime and Coastguard Agency. Interest from other organisations has continued to grow and more formal links are now being established with the British Geological Survey. This association is likely to provide an increased range of available data to the programme at no additional cost, including geological mapping and also coastal geohazard assessments; this latter aspect is likely to be of particular interest to those authorities with soft cliffs that are subject to landsliding.
- Recent government cabinet office initiatives have resulted in other organisations following the lead of the southeast regional monitoring programme by making their data freely available to comply with national best practice e.g. Natural England. The bulk of the programme data is now made freely available with the Open Government Licence, which permits free use by anyone. Internal regulations within the Environment Agency relating to data commissioned by the EA currently restrict the availability of data that has been delivered to the programme by the EA, to programme partners only; this data is not freely available and free to all, contrary to the original signed agreements.
- Many of the initiatives originally developed for the southeast regional coastal monitoring programme now form keystones of the National Network of Regional Coastal Monitoring Programmes; this has now been running for one year but has been one of many victims of funding cuts. Regrettably, the major financial cuts that have been made to this programme (>30%) have impacted on programme delivery and fewer staff now service the regional programme as a result. Efforts are being made to deliver the target programme within the revised budget, but this is proving not to be possible, particularly in those programme areas that are serviced by external contracts, where costs have continued to rise.
- The Southern Coastal group has continued to lead on development and technical coordination of this programme. A national framework of contractors has been established, led by members of the southern coastal group, enabling efficient and coordinated procurement of surveys across the country.

. The ongoing monitoring programme will continue until 2017 and planning for the next phase is already underway. Southern Coastal Group members have agreed to continue in a coordination role with preparation of the application for this programme, on behalf of all coastal groups. The project has included collaboration of all of the other coastal groups nationally. The project provides an exemplar balance of national economies of scale, coordinated procurement and technical collaboration, whilst maintaining local skills and local delivery in line with the government's localism agenda.

### Outputs from the regional monitoring programme



[www.channelcoast.org](http://www.channelcoast.org)

## Events

- The annual programme of field trips was continued with a very successful visit to Hurst Castle and the Keyhaven River in June 2012.
- The focus was on measures undertaken to prevent flooding of a low lying area, protection of an ancient monument and extensive erosion of internationally important habitats. The event was attended by 40 elected members and officers. Local support was provided by New Forest District Council and the Environment Agency. Attendees were treated to presentations relating to a range of local issues including: flood defences, coastal planning, coastal heritage and nature conservation.
- The site was chosen as it encompasses a wide variety of coastal management topics such as the 1996 replenishment scheme, designated inter-tidal and vegetated shingle habitats, the offshore Shingles Bank and North Point used for sediment recycling. In addition, the site has an interesting history and is surrounded by artefacts of archaeological significance.
- Approximately 40 delegates attended the event which commenced with a ferry trip from Keyhaven to Hurst Castle.
- Councillor Roger Elkins (Chairman of SCOPAC) introduced the event followed by Professor Andy Bradbury (Chairman of the Southern Coastal Group) who provided the context of the day.
- Delegates visited the west wing of the castle where Professor Andy Bradbury gave a talk on engineering of Hurst Spit, followed by Peter Ferguson's talk (New Forest District Council) on maintenance of the spit to reduce the likelihood of overwashing and breaching events.
- At the east wing of the castle Andrew Colenutt (New Forest District Council) gave a talk on saltmarsh evolution in context with coastal management, followed by Dr Uwe Dornbusch's talk (Environment Agency) on the South-east Regional Habitat Creation Programme, which aims to strategically offset any losses to European designated habitat resulting from coastal management across south-east England.
- There was also a tour of the castle's history led by Sean Crane (Hurst Castle manager) and a talk by James Brown (New Forest National Park) on the archaeological importance of artefacts surrounding the castle.



Delegates at Hurst Castle



Overwashing Hurst Spit 1989

## Training

- The series of back to basics training events has continued, following the success of the previous three years. The focus has been on local succession planning and transfer of skills. The successful “A problem shared” workshop series has continued. Experienced coastal engineers and contractors have shared their in-depth knowledge and understanding with those new to the industry.
- The aim of the workshop series is to share best practice and to assist operating authorities with basic skills development.
- A Beach Recharge Workshop was held at the National Oceanography Centre on 1<sup>st</sup> February 2013. The workshop focused on practical aspects of beach recharge: the need for, frequency and timing of renourishment events, sourcing material, sediment grading (fine and coarse), quantities of material, practicalities of shipping material, EIA, consents, costs, monitoring, timing of future works and health and safety. Approximately 60 officers - coastal engineers and scientists - attended the workshop, which commenced with Professor Andrew Bradbury providing background information on the basic principles of beach recharge. Presentations were made about aggregate sources (Andrew Bellamy of Taramac); Construction Phase ( by Will Shields Boskalis); Bournemouth, sand recharge case study by Dave Robson (Borough of Poole) and Dave Harlow (Bournemouth Borough Council); Eastoke, shingle case study by Caroline Timlett,, the Eastern Solent Partnership (Havant, Portsmouth, Gosport and Fareham Councils)and Hurst Spit, shingle case study by Andy Bradbury (New Forest District Council)
- The event was opened to other coastal group members and consultants for the first time. A small charge was made for attendance of these external organisation and this has proven to be an excellent method of self financing of these events.
- These events continue the series planned to further local professional development at very low cost, and truly within the spirit of the cooperation of the coastal group. With efforts to achieve succession planning within local authorities and the Environment Agency, this approach is becoming an important element of the training programme for future coastal engineers.
- All presentations for the training events, which contain largely previously unpublished material, have been made available on the coastal group web site. These documents provide valuable insights to practical aspects of beach and structure management

## Communications

- Minor modifications have been made to style and layout of both the Southern Coastal Group and the SCOPAC websites and these provide an easily accessible summary of coastal group activities and issues. The sites have been regularly updated to provide up-to-date summaries of recent and planned activities as well as administrative papers and summaries of research programmes. Presentations made to coastal group events are now made available via the website where possible.

The image displays two screenshots of websites related to coastal management. The left screenshot is the SCOPAC website, featuring a header with the SCOPAC logo and navigation links. The main content includes a 'Welcome to SCOPAC' section with a map of the SCOPAC area of interest, a 'What's New' section listing recent events and publications, and a 'Quick links to popular documents and research' section. The right screenshot is the Southern Coastal Group website, featuring a header with the Southern Coastal Group logo and navigation links. The main content includes a 'Welcome' section, a map of the SCG area of operation, and a 'What's New' section listing recent events and publications.

- Outputs from the SCOPAC research programme are finding their way onto national agendas and several projects have provided major technical breakthroughs with wide applicability. In particular the investigations into regional wave climate are leading to development of ground breaking new design and assessment methods.

## Strategic coastal management

- The Southern Coastal Group and SCOPAC have continued to make major contributions to the national and regional agenda of flood and coastal erosion risk management. In particular the role of the SCOPAC membership on the delivery of the National Network of Regional Coastal Monitoring programmes has been important to the development of this project.
- An important role for both the Southern Coastal Group and SCOPAC has been to support the delivery of the second round of shoreline management plans. A coordinated approach to monitoring the delivery of SMP action plans has been conducted by the coastal group and this demonstrates good progress against the original aspirations of the SMPS. Applications for coordinated regional scale studies and investigations have been prepared for submission, to enable cost effective regional delivery.
- The Coastal Groups have a responsibility to report on the progress and development of SMP action plans and regular updates are made of progress of the plans. An update of the SMP action plan progressed was produced in March 2013. These reviews feed into national reporting, coordinated by the Environment Agency, known as Section 18 reports.



## Funding

- The Medium Term Programme forms a standing agenda item now and significant improvements to delivery of the capital programme have been made within the Southern Coastal Group. Expenditure has been much more closely aligned with start of year expectations. Strong support has been provided by EA officers from Southern and Wessex regions. Aspects of monitoring and coordination of the programme remain tricky, with the separation of the EA / LA programmes and lack of availability of the EA components within the routinely published documentation.

## **Research**

- The Southern Coastal Group has provided technical support for SCOPAC including the delivery of SCOPAC's approved research programme. The research programme continues to provide valuable information for its constituent members with the aim of undertaking cutting-edge research that will be of direct benefit to those involved in coastal risk management, both by contributing funding towards national projects that can be tested along the south coast of England, as well as by supporting sub-regional research projects and providing guidance information. A particular benefit is the use of the in-house skills from within the partner organisations to conduct some of the research, which enables focused research to be conducted with the benefits of excellent local knowledge, and in support of the government's localism agenda.

## **Research Funding**

- One of the key objectives of the SCOPAC funded research programme is to optimise expenditure and to focus on projects which might potentially lead to much larger scale investments at a national scale, and which may also provide significant regional benefits. Whilst national funding for regional projects has not previously been achieved through the DEFRA / EA FDGIA process, two recent applications to attract funding through this route have been successful.
- The successful scheme applications have been highlighted as regional requirements through the Shoreline Management Plan action plans and these have featured as targets in several action plans on a region-wide basis. Applications, which must be made by coastal operating authorities, have been made by New Forest District Council on behalf of the whole of the regional community. Both projects are linked directly with previous small scale SCOPAC funded projects.
- The two projects which had previously been approved within the medium term plan (MTP), for commencement in 2012, have now been further developed and full applications have been made for the projects. Dr Sam Cope and Prof Andrew Bradbury presented successful applications to the southeast Environment Agency project appraisal board in September 2012.
- The first project is for an update of the sediment transport study, which is widely used within the region. The original SCOPAC study was carried out a number of years ago and is probably the most extensively used of all the SCOPAC research projects. This study will be funded over a three year period and its outputs are expected to aid the development of future strategic coastal plans. Funding of £150,000 has been secured for this study.
- The findings of a SCOPAC funded preliminary study on extreme wave conditions within the English Channel has highlighted serious risks of

flooding which are not generally taken into account in the design process. This study will be supported by a new project entitled “Reducing regional flood and erosion risk from wave action on the Channel Coast”. This study will take place over period of two years at an estimated cost of £230,000

### **Reducing regional flood and erosion risk from wave action on the Channel Coast**

.It is anticipated that this project will comprise assessments of field data, and will be supported by physical model testing. A number of key sites, which have previously been subject to problems, will be examined on a site specific basis; these include Chesil Beach, Hayling Island and Hurst Spit. The intention is that a new method for definition of design conditions for wave overtopping and breaching will be produced. A series of design conditions will be produced, which will enable the standards of service at many sites to be reassessed. It is anticipated that defences will subsequently require some improvements at a number of locations, in order to maintain the required standard of service. . It is likely that opportunities will arise for members and officers to visit the model testing facility to view progress of the project.



**Unanticipated wave run-up and flooding at Hayling Island**

## Non-standard Rock Groynes

- Poole, Bournemouth, Christchurch and New Forest Councils have all built rock groynes which predate and do not conform to the Rock Manual Guidelines. A review has been undertaken of the performance of these structures. Local conditions preclude conventional construction of some structures. Anecdotal evidence suggests that all of these non-standard groynes are performing satisfactorily.
- The study conducted by Dr Dave Harlow at Bournemouth Borough Council, has assessed the existing groyne systems to examine whether settlement or stability is a problem. The review suggests that this pragmatic approach is appropriate for future rock groyne construction. This topic is especially relevant to Bournemouth where the Timber Groyne Renewal Programme will require the removal of 51 life expired timber groynes between 2013 and 2029, and it is anticipated that the new structures will be rock groynes.

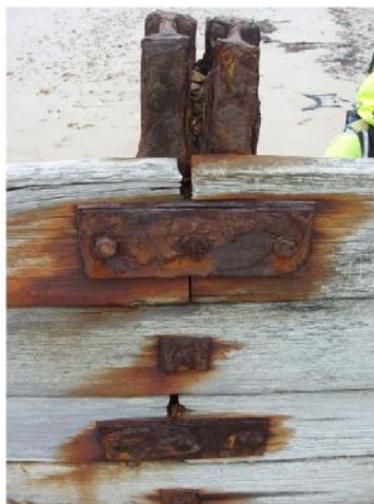


(Photo by David Harlow)

## Non Standard rock groyne in Poole Bay

## Maintenance of Coastal Structures - Phase 1: Timber Groynes

- A SCOPAC research project entitled Maintenance of Coastal Structures: Phase 1 - Timber Groynes is under development and a preliminary start was made with this workshop held in March 2010 at the National Oceanography Centre, Southampton.
- The focus of the project, which is scheduled to conclude next year, is to provide guidance on practical methods of improving the efficiency of groyne maintenance. Investigations have drawn on approaches adopted throughout the SCOPAC region and have identified a range of techniques used to prolong the life of groynes. A practical manual is under preparation which includes advice on pile protection systems, replacement techniques and timber fixing techniques



## Bibliographic database

- The Channel Coastal Observatory have managed a project to update the SCOPAC bibliographic database. The update includes technical reports and academic publications. Technical input has also been provided by Dr Dave Carter and Dr Malcolm Bray. Overall, an additional 700 references were added to the database for the period between 2002 and 2012.
- The revised database will be uploaded onto the SCOPAC website and will underpin the literature review section of the Regional Sediment Transport Study update.

## Sediment Tracer Studies, East Solent

- The East Solent Partnership have developed a new shingle tracer study technique using Radio-Frequency Identification (RFID) technology to track pebbles moving around the East Solent coastline. Investigations are contributing to the River Hamble to Porchester Strategy. Radio Frequency Identification (RFID) tags have been used successfully over a 21 month period to monitor the transport pathways of beach material at key locations in the East Solent. This has helped confirm the presence of two drift divides, and disprove the presence of a third. Transport across a potential barrier to littoral drift at Fort Cumberland, Eastney, has also been documented. The project includes several deployments.

**Sediment tagging and detection for Solent Breezes to establish location of drift divide (1000 tracers)**

The studies currently being undertaken will help confirm the presence of a drift divide at Solent Breezes and help quantify the volume of eroded cliff material flowing south towards the littoral sink at Portsmouth's tidal delta.

**Sediment tagging and detection at Lee-on-the-Solent to track beach nourishment material (500 tracers)**

500 tracers will be deployed at the nourished beach at Lee-on-the-Solent to monitor the direction and rate of sediment transport along the coast. The particle size distribution has been analysed and appropriately sized tracers will be deployed and tracked along the frontage over a 6 month period.

- **Sediment tagging and detection at Stokes Bay to establish the contemporary sediment pathways (500 tracers)**

500 tracers will be deployed at Stokes Bay and monitored over a 6 month period to establish how beach material is currently moving in relation to changes in the morphology. The particle size distribution of the beach has been analysed to ensure the tracer pebbles replicate this.

More specifically, the SCOPAC contribution will fund the following elements of the tracer studies:

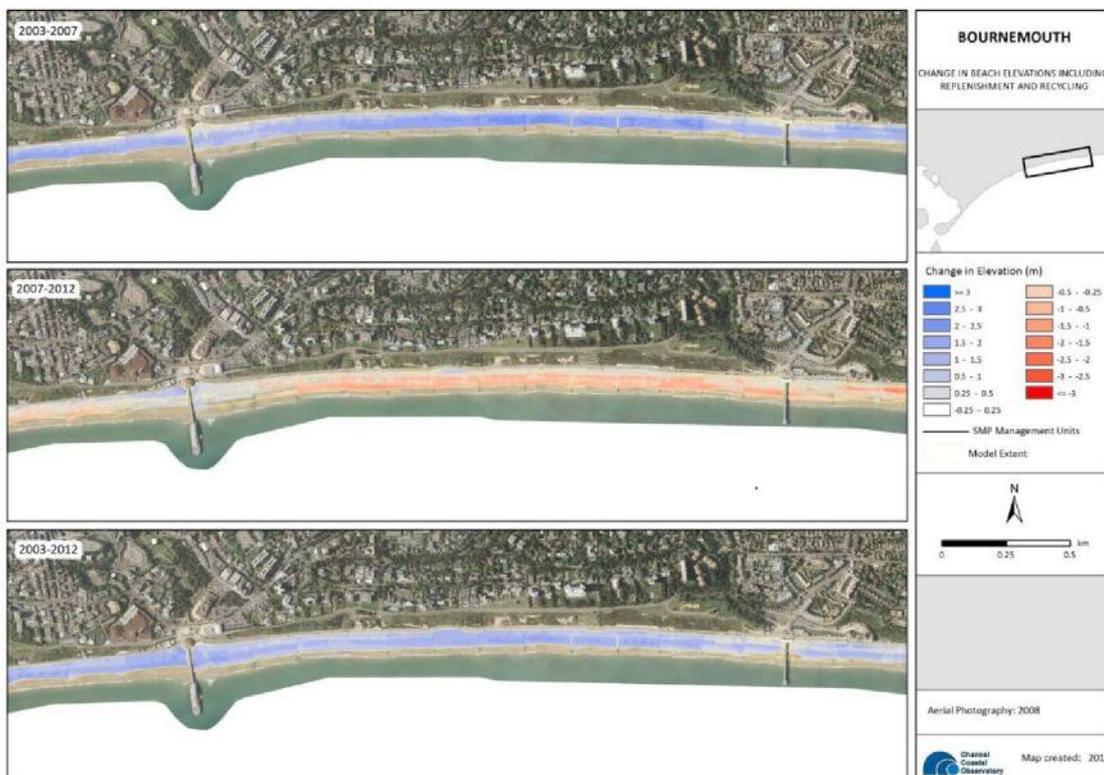
- 500 of the 2000 pebbles to be tagged and 10 survey days to detect the tracers.
- Establish tracer burial depth detection range and orientation issues.



Transport across a barrier at Fort Cumberland

## Evolution of coastal sediment sinks

- The primary aim of the project is to identify sediment sinks and stores across the SCOPAC region, to provide potential sites for future recycling operations; these often present opportunities for large management cost savings as locally sourced material for beach replenishment schemes. The project, which is being undertaken by the Channel Coastal Observatory, has utilised Regional Monitoring data ([www.channelcoast.org](http://www.channelcoast.org)) to focus on active sediment stores and sinks, particularly those areas undergoing large changes in volume (i.e. Pagham Harbour spit, Hengistbury Head, North Point).
- The project has defined sediment sinks, stores, throughputs (drawing on the SCOPAC Sediment Transport Study), and mapped the location of sediment sinks and stores. Estimates of historical and existing volumes of sinks and stores have been calculated, Particular emphasis has been placed on assessment of engineering activities on natural evolution .The following activities have been undertaken.
  - Define sediment sinks, stores, throughputs (drawing on the SCOPAC Sediment Transport Study).
  - Scope available information (literature review)
  - Map location of sediment sinks and stores
  - Map historical evolution (area change)
  - Estimate historical and existing volumes/areas
  - Document any known sediment extractions
  - Summarise environmental protection laws (MMO, Crown Estates etc.)



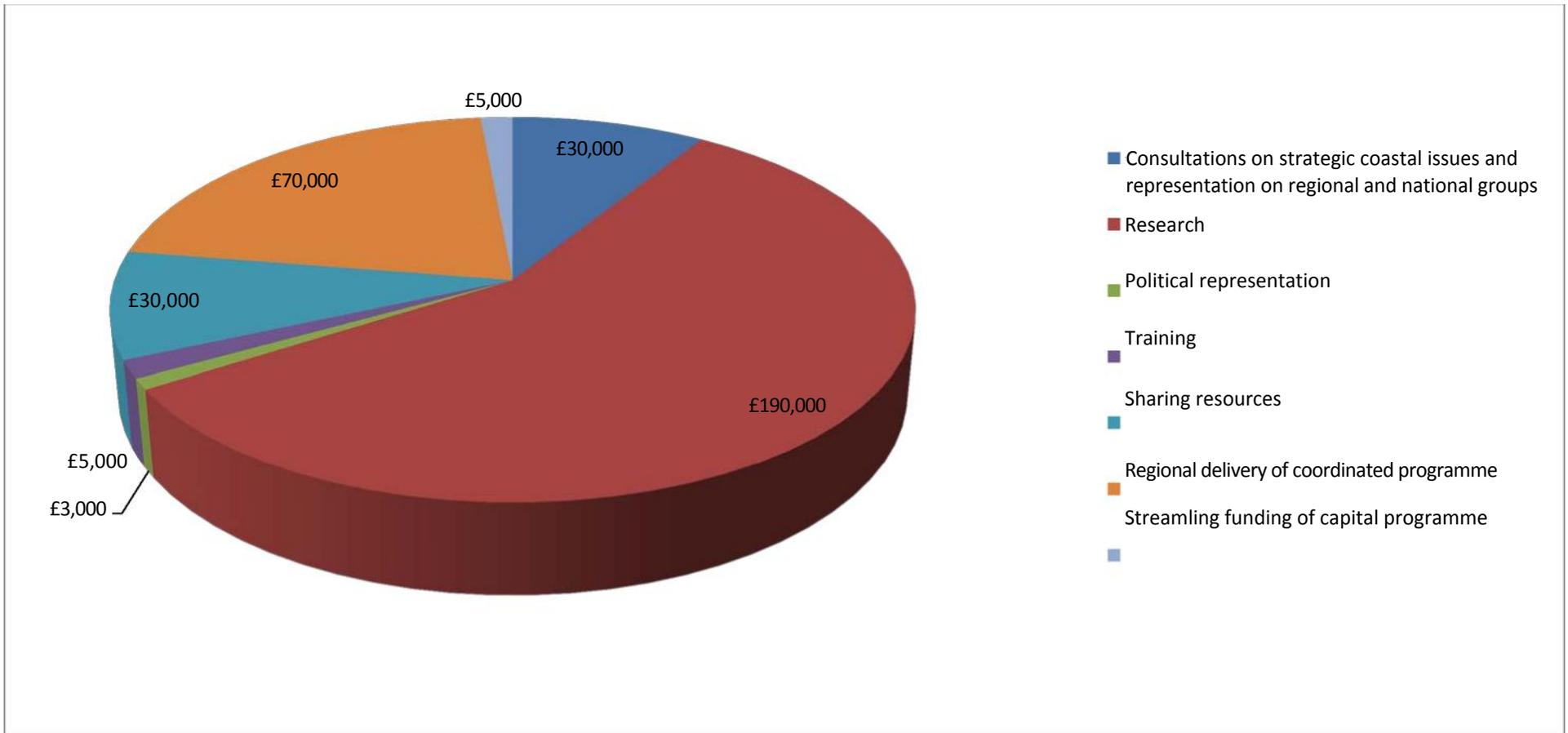
## Beach changes and impacts of engineering activities at Bournemouth

## **Coastal group performance**

A clear demonstration of the value for money to coastal group members is evident by reference to the deliverables achieved from both the action plan and from the SCOPAC research programme. The savings made to the partner organisations through the coordination of investment to optimise delivery is clearly evident (Graph 1 summarises Table 1).

### **Deliverables achieved from Action Plan**

1. Publish an annual forward programme of meeting dates for SCOPAC
2. Maintain an up to date database of SCOPAC Contact details.
3. Continue to develop and improve the Southern Coastal Group and SCOPAC websites.
4. Prepare an annual report and business plan.
5. Arrange early meetings with the RFCC Chairman and Environment Agency officers to discuss coast protection input to Regional Flood Defence Committees.
6. Maintain firm links with the Solent and Dorset Coastal Fora and the LGA Coastal Special Interests Group.
7. Continue to support technical field meetings and conferences where appropriate.
8. Support the successful completion/implementation of SMP2s, Strategy Studies and Medium Term Plans.
9. Oversee the successful completion of the SCOPAC research programme.
10. Deliver the research programme for SCOPAC through the Southern Coastal Group.
11. Support the extension of the Strategic Monitoring Programme.
12. Examine and support opportunities for joint-working, collaboration and joint-procurement between Group members
13. Support workshops and training activities within the Group and/or with adjacent Groups on key topics and new scientific advances
14. Encourage attendance by Group members at key coastal-related national/international conferences
15. Liaison with EA over funding issues relating to Group's new role and delivery of Strategic Overview
16. Facilitate improved links between coastal engineers, development control and planning policy officers through their involvement in meetings and events
17. Exchange good practice on coastal risk management with Officers of the Environment Agency
18. Assist EA officers with preparation of Medium and Long Term Plans
19. Review research programme against timescales and targets
20. Monitor progress on individual research projects
21. Approve minor projects for funding within agreed 'De-minimus' limits



**Annual value of coastal group activities to partner organisations**

| Activity   | Method of saving and technical benefits  | Specific examples   | Typical annual value of coastal group contribution to each partner organisation i.e. cost of doing work in isolation |
|--|--|---|--|
| Consultations on strategic coastal issues and representation on regional and national groups | <ul style="list-style-type: none"> <li>· Avoidance of individual organisation effort</li> <li>· Coordinated regional approach</li> </ul>   | <ul style="list-style-type: none"> <li>· Floods and waters act</li> <li>· CLG revenue funding</li> <li>· DEFRA funding review</li> <li>· National coastal chairs</li> <li>· National coastal forum</li> <li>· Representation on RFCC</li> </ul> | <b>£30,000</b>   |
| Research   | <ul style="list-style-type: none"> <li>· Focused regional programme</li> <li>· Improved design and risk assessment</li> <li>· Improved maintenance techniques</li> <li>· Raising political profile of regional issues</li> </ul> | <ul style="list-style-type: none"> <li>· Sediment stores and sinks</li> <li>· Sediment transport study</li> <li>· Extreme wave climate</li> <li>· Timber maintenance</li> <li>· Sediment tracer studies</li> <li>· Rock groyne</li> </ul>       | <b>£190,000</b>  |
| Political representation   | <ul style="list-style-type: none"> <li>· Coordinated approach to political consultations with central government</li> <li>· Raising political profile of regional issues with Westminster politicians</li> </ul>                 | <ul style="list-style-type: none"> <li>· Grant aid funding</li> </ul>   | <b>£3,000</b>  |

| <b>Activity</b>                                    | <b>Method of saving and technical benefits</b>  | <b>Specific examples</b>   | <b>Typical annual value of coastal group contribution to each partner organisation i.e. cost of doing work in isolation</b> |
|--|---|--|---|
| <b>Training</b>                                    | <ul style="list-style-type: none"> <li>· Provision of expert advice</li> <li>· Courses and conferences</li> <li>· Sharing experiences</li> <li>· Sharing skills</li> <li>· Succession planning</li> </ul> | <ul style="list-style-type: none"> <li>· Beach recharge workshop</li> <li>· Field visit</li> <li>· Regional Monitoring</li> <li>· Annual review</li> <li>· MTP workshop</li> </ul> | <b>£2,000-5000</b><br><br>(depends on number of officers/members)   |
| <b>Sharing resources</b>                           | <ul style="list-style-type: none"> <li>· Development of procurement frameworks</li> <li>· Collaborative working</li> </ul>  | <ul style="list-style-type: none"> <li>· Portsmouth/Havant led consultant framework</li> <li>· NFDC led regional monitoring framework</li> <li>· Regional monitoring</li> </ul>    | <b>£30,000</b>  |
| <b>Regional delivery of Coordinated programmes</b> | <ul style="list-style-type: none"> <li>· Regional coastal monitoring programme</li> <li>· SMP delivery of plans</li> <li>· SMP coordination of action plans</li> </ul>                                    | <ul style="list-style-type: none"> <li>· Staff time running regional programmes</li> </ul>   | <b>£70,000</b>  |
| <b>Streamlining funding of capital programme</b>   | <ul style="list-style-type: none"> <li>· Coordination of admin procedures</li> </ul>  | <ul style="list-style-type: none"> <li>· Medium term plan</li> </ul>   | <b>£5,000</b>   |
| <b>Estimated total</b>                             |   |  | <b>£333,000</b>   |

Estimates are based upon actual timesheet records, staff time costs and contracted activities for delivery of each activity conducted by officers on behalf of the coastal