

Question	Response
<p>The Dynamic Coast site shows least worst predictions - is there a way to find out something about possible ranges of predictions for coastal change?</p>	<p>Your right that future projections are based on recent rates, which are higher than historic rates. With future sea level (amongst other drivers) increasing the actual risks are likely to be larger than those presented. Given the doubling of erosion rates between historic to recent period, you could use the '2100 future coast' which could be used to visualise a further doubling of rates by 2050. The 2100 future coast is available for GIS download and is visible on the webmaps.</p> <p>The Dynamic Coast project team are investigating the likely impacts of climate change on future erosion rates and extents within the current phase of research. They will update the maps accordingly in 2020.</p> <p>(More information about the various predicted rates of climate change can be found via the Met Office's UK climate projections webpage https://www.metoffice.gov.uk/research/collaboration/ukcp.)</p>
<p>What does dynamic coast offer that is not covered by SMPs where they exist</p>	<p>The Dynamic Coast offers a more interactive and understandable interface than most SMPs, though they both share the same evidence, namely where was the coast and what's at risk in the future. SMPs go on to explore management options and define clear policy approaches to maintain defences or change approach. Dynamic Coast mapping will also continue to be updated nationally over time using a consistent methodology.</p>
<p>Dynamic Coast is currently available in Scotland only are there any plans to roll this out across GB?</p>	<p>Planning is a devolved matter, so Dynamic Coast has been created to serve Scotland. We are not aware of any plans to extend it across the rest of the UK. (Shoreline Management Plans exist in England and Wales, though the interface and approach is different.)</p>
<p>Where it is not possible to protect from flooding and erosion is relocation supported by current government policy and planning?</p>	<p>Although not explicitly mentioning relocation, the National Planning Framework identifies the land use change and adaptation is going to be required in coastal locations and that it will need to be "wide-ranging" to ensure the resilience of coastal communities (eg paragraphs 4.16, 4.25, 4.31), while Scottish Planning Policy identifies that "managed realignment" may be required (paragraph 88).</p> <p>Some situations are extremely challenging and in these situations in the future it may be more sustainable to relocate the assets (and communities). These are tough choices and are starting to be made by communities around the world. Whilst examples of relocation of individual properties have been funded as part of Flood Risk Management schemes in Scotland, there have not been applications for coastal settings to date.</p>
<p>Will the dynamic coast website be updated on a regular basis?</p>	<p>Yes - we are about to do a major refresh of the website, and will continue to reflect ongoing research outputs over time. We have some very exciting results and will want to share them with the public. More to come!</p>
<p>Is there a requirement to consider sediment supply to areas at risk? eg impacts remote from the development site.</p>	<p>When considering the environmental effects of development, planners are expected to consider potential influences on and from a development. Effects may be local or far field. This is why consideration is given to changes within coastal cells, which are coastal management units. Within coastal cells, actions can have influence on adjacent areas, but separate cells are isolated from one another.</p>
<p>How do we go about identifying natural defences? Where are the data sources? Thanks.</p>	<p>GIS mapping of saltmarshes and sand dunes can be found via Scotland's Environment website ('SE web') https://www.environment.gov.scot/maps/scotlands-environment-map/ and loading the "HabMoS collection of layers" in the map data tab.</p> <p>The dataset is also available to download and use in GIS systems via</p>

	<p>Natural Spaces on the SNH website https://gateway.snh.gov.uk/natural-spaces/index.jsp by selecting the “Habitats and Species” category and then “Habitat Map of Scotland”.</p> <p>The second phase of Dynamic Coast project research is exploring techniques which could be used to update these data and inform mobility of the natural defences. More information will be available via the Dynamic Coast website in the future.</p>
<p>How may insurance companies start using this? Is there a caveat on the NCCA data for this?</p>	<p>Our understanding is that insurers do not usually insure against coastal erosion. Use of Dynamic Coast mapping is also subject to several caveats including “The NCCA map should not be used to assess coastal erosion risk to individual properties. The NCCA is based on currently available national datasets. Given the inherent uncertainty in these datasets, methods and the strategic scope of the assessment, further detailed studies may still be required to accurately assess erosion risk for a particular local area.” and “Data may be used for your own use provided that the use is not for or related to any commercial, business, professional or other income generating activity and provided that usage is not detrimental to the Scottish Government, its activities or the environment. For more detail on what we regard as commercial use please contact us.”. If insurance companies wish to start using the Dynamic Coast data, they should contact the Dynamic Coast team via the Dynamic Coast team via ncca@nature.scot</p>
<p>Can you give any details on approach you are exploring for shoreline recession rates for gravel/sand/cliff shorelines using projected climate change scenarios?</p>	<p>This is quite complex to answer here - full details of the methodology used by the Dynamic Coast project are available via the Dynamic Coast website on the outputs page http://www.dynamiccoast.com/outputs.html</p>
<p>What confidence is there in the datasets informing future erosion rates to inform confidence planning decisions?</p>	<p>The methodology used is inherently conservative, in that it only projects erosion landward on areas where the change is known to be real (ie beyond mapping errors). Using the recent rate, is the safest or least speculative approach, thus the maps are described here as the ‘least worst case scenario’. There are areas where change is occurring, but is within the mapping errors, however these have not been projected landwards in the published maps. Similarly future sea level (amongst other factors) is likely to be more rapid than recent sea level rise, thus future rates of erosion are likely to be higher. So these map show the areas that are anticipated to experience continuing erosion, but erosion is likely to happen elsewhere too.</p> <p>The published maps provide a national baseline of best available evidence. Our planning policies clearly state, where there is uncertainty, the precautionary principle should be applied. The implications of future climate change are being explored in the second phase of research, which will be reflected across the Dynamic Coast website and maps.</p>
<p>Do we have a database of natural and manmade defences incl. crest height etc.?</p>	<p>There is not a database at present, however GIS mapping of natural defences (ie saltmarshes and sand dunes) can be found via Scotland’s Environment website (‘SE web’) https://www.environment.gov.scot/maps/scotlands-environment-map/ and loading the “HabMoS collection of layers” in the map data tab.</p> <p>The dataset is also available to download and use in GIS systems via Natural Spaces on the SNH website https://gateway.snh.gov.uk/natural-spaces/index.jsp by selecting the “Habitats and Species” category and then “Habitat Map of Scotland”.</p>

	<p>In Scotland, local authorities are the coast protection authorities and have discretionary powers under the Coast Protection Act 1949 to carry out any coast protection work as may be necessary or expedient for the protection of any land against erosion and encroachment by the sea. They may therefore have information on man-made defences in their area, however there may also be defences installed prior to 1949 that are either unmapped or others that are unknown about.</p> <p>The second phase of research is investigating this area currently, and will support SEPA's role in assimilating these mapped data.</p> <p>Scottish Government are working with SEPA to deliver section 19 of the Flood Risk Management (Scotland) Act 2009. This will map natural and man-made coastal features that may cause significant flooding if removed.</p>
<p>Is the data provided by Dynamic Coast used by SEPA when modelling coastal flooding for the National Flood Risk Assessment?</p>	<p>SEPA are on the Dynamic Coast steering committee and incorporating the data into the ongoing National Flood Risk Assessment process.</p>
<p>Will SNH be providing advice to planning authorities etc on planning applications regarding these issues?</p>	<p>Responsibility for taking account of coastal change lies with the planning authority, who have a duty under SPP and the Climate Change Act to deliver the Scottish Climate Change Adaptation Programme, which addresses the risks set out in the Climate Change Risk Assessment (Scotland) including erosion and flooding risks to the natural environment, infrastructure, people, built environment and business. Planning authorities should therefore make use of the recently published <i>Looking Ahead: Planning for Coastal Change guidance</i> to inform development planning and development management decisions (available via https://www.nature.scot/professional-advice/planning-and-development/natural-heritage-advice-planners-and-developers/planning-and-development-coastal-change).</p> <p>SNH will provide advice on planning applications in line with our Service Statement, available via https://www.nature.scot/professional-advice/planning-and-development/consulting-snh-planning-and-development.</p>