

Environment and Sustainability Committee

E&S(4)-21-12 paper 1

Inquiry into coastal protection – Evidence from the Minister for Environment & Sustainable Development

The purpose of this paper is to provide information on Welsh Government's approach to coastal management and, in particular, in regard to coastal erosion and tidal flood risk. The foundation of this approach is found in the National Strategy for Flood and Coastal Erosion Risk Management in Wales, published November 2011.

The Welsh Coastline

1. The Welsh coast currently has in the region of 415km of constructed coastal defence structures that protect over £8 billion of assets from coastal erosion and tidal flooding¹. This includes residential and business properties, road and rail, energy, water and sewerage infrastructure and a range of other nationally and locally significant assets. In addition to economic and human infrastructure, 75% of the Welsh coast is designated for its environmental importance.
2. Historically, coastal erosion has been low in Wales and it has been estimated that 1.4 km² of land and three properties have been lost to coastal erosion over the last 100 years². However, climate change projections suggest that rate of loss could increase in the future and it is estimated that erosion is occurring along 346km (23%) of the Welsh coast³.
3. The key findings⁴ for Wales from the UK Climate Projections 2009 suggest that by 2050 sea levels around Wales are predicted to rise by approximately 20cm and storm intensity in summer and winter will increase, leading to more severe storms and larger waves attacking our shores.

National Strategy for Flood and Coastal Erosion Risk Management

4. In November 2011 the Welsh Government published the first National Strategy for Flood and Coastal Erosion Risk Management in Wales. The National Strategy sets out the following four overarching objectives for managing flood and coastal erosion risk:

1 The total length of Welsh coastline is approximately 2740km including Anglesey and Holyhead; British Cartographic Society.

2 Taken from Environment Agency report 'Historical Losses to Coastal Erosion – Wales Region' commissioned for the National Coastal Erosion Risk Mapping project

3 Marine Climate Change Impacts Partnership, Plymouth University, 2008.

<http://www.mccip.org.uk/annual-report-card/2007-2008/marine-environment/coastal-erosion.aspx>

4 Key findings from medium emission scenario, using central estimate of probability.

- reducing the consequences for individuals, communities, businesses and the environment from flooding and coastal erosion;
- raising awareness of and engaging people on flood and coastal erosion risk;
- providing an effective and sustained response to flood and coastal erosion events; and
- prioritising investment in the most at risk communities

Reducing the Consequences

5. It is not possible to stop or prevent all flooding or coastal erosion. Building more and higher defences is not a sustainable option in the longer term, and even where we can build appropriate defences there will always be a residual risk. We can however take steps to reduce the consequences and create more resilient communities.
6. A risk management approach encompasses measures to help communities as well as the wider environment. Some measures incorporate natural processes to provide a more flexible and long-term solutions, such as returning an area to natural tidal flood plain, whilst others concentrate on increasing our understanding so that communities can respond or prepare in advance of flood events or make longer term plans to minimise material or personal loss to coastal erosion.

Improving our understanding

7. A fundamental element to limiting the consequence of events is improving our understanding of risk. Integral to this is the work of the Welsh Government funded Wales Coastal Monitoring Centre, which will publish standards on coastal monitoring later this year, and continued improvements in the technology that underpins our modelling and mapping facilities.
8. The Environment Agency has recently completed National Coastal Erosion Risk Maps, which provide a series of interactive public maps, available online, and a wealth of data for use by stakeholders. The maps take account of the climate change projections and are based on the 50% probability of the erosion predictions occurring. They provide a starting point for discussions with communities and business on the long term sustainability of Welsh coastal locations, and the choices we and they face for the future. Some of this work has already been started through the development of our Shoreline Management Plans, which have been subject to extensive consultation.
9. The coastal erosion risk maps complement the flood risk maps also hosted on the Environment Agency website. These maps provide an indication of

the areas of Welsh coastline that are at tidal flood risk and the likely extent of flooding from rivers (based upon a 1 percent (1 in 100) chance of happening in any year), the sea (based upon a 0.5 percent (1 in 200) chance of happening in any year) and from extreme flood events from the rivers and the sea (based upon a 0.1 percent (1 in 1000) chance of happening in any year).

10. The maps represent a significant advancement in the understanding of coastal erosion risk but the predictions are very dependent on the rate of sea level rise and climate change impacts so continued monitoring and review will be necessary.

Raising Awareness

11. The Environment Agency's Flood Awareness Wales campaign has visited 242 geographical communities across Wales and to date over 200 community flood plans have been prepared with over 80 of those having been tested. These plans help prepare those living in flood risk areas and improve their understanding of that risk.
12. In October 2011 the Welsh Government published the first toolkit for raising awareness of flood risk. Developed from the evaluation of awareness raising work underway across Wales, the toolkit is designed to help those working with communities at risk of flooding. It is the intention of the Welsh Government to revisit the toolkit within the life of the National Strategy and incorporate additional advice in relation to the risks of coastal erosion.

Responding to Events

13. It is important to ensure that, as well as acting to raise awareness of and reduce the consequences of the risks we face, we plan to respond when flooding or erosion occurs. In early June parts of Mid and North Wales experienced significant flooding and while the main causes of that flooding were rivers and surface water run-off, the response demonstrated the value of good emergency plans.
14. Wales has experienced severe coastal flooding in the past, the most significant at Towyn in 1990 when thousands of people had to be evacuated from their homes. We have also seen examples of erosion recently, with a cliff fall in Porthkerry in November 2011. Coastal erosion tends to be a slower progressive process compared to a flood event. Although cliff falls and landslides can occur suddenly they are difficult to predict so the response is often less about an emergency response and more about adaptation over time.

Prioritising Investment

15. The Welsh Government is leading a five year programme of flood and coastal erosion risk management works supported by almost £50m from the European Regional Development Fund. With Welsh Government's match funding, our total investment in this programme is over £100 million over the life of this Assembly. This will reduce risk to over 7,000 properties across Wales.
16. The overall core budget for flood and coastal erosion risk management for 2013/14 and 2014/15 is higher than in previous years. We also continue to seek additional capital funds from other areas including the Wales Infrastructure Investment Plan and European Regional Development Fund
17. The National Strategy includes a commitment to develop a national funding policy and prioritisation methodology, also known as the Single Investment Programme. A Single Investment Programme for flood and coastal erosion risk management in Wales will set out a prioritisation methodology that will allow us to rank areas of Wales from the most at risk to the least at risk. This will then enable us to target investment in the most at risk communities, with appropriate intervention methods directed as required.

Development Management

18. Managing the risks of coastal erosion and flooding also includes taking appropriate action in relation to development, as set out in Planning Policy Wales and Technical Advice Notes (TANs) 14 and 15. The overall aim of our planning policies is to ensure new development, in particular highly vulnerable development, is directed away from the floodplain and that inappropriate development is not permitted in unsuitable coastal locations. However, it does acknowledge that some development will be necessary in the floodplain and sets out a number of tests to be applied where development may be justified and any risks can be appropriately managed for the lifetime of the development.
19. Overall, the evidence demonstrates that Planning Policy Wales and the TANs can provide robust policy where planning applications are submitted for development on flood plains.⁵

Implementation, Monitoring and Review

20. Implementing the National Strategy is the responsibility of everyone involved in or affected by flooding or coastal erosion, including: the Welsh Government; the Welsh Risk Management Authorities; and the people of Wales. Policies supporting the National Strategy will also be set out in the Local Flood Risk Management Strategies being prepared by each local authority in Wales and Shoreline Management Plans.

⁵ High Level Target 13 Report 2010/11; Environment Agency Wales

21. Local Flood Risk Management Strategies will set out how local authorities will manage the risks of flooding within their areas. These strategies are intended to balance the needs of communities, the economy and the environment and form the framework within which communities have a greater say in local risk management decisions.
22. All 22 local authorities in Wales are in the process of developing their Local Flood Risk Management Strategies in line with guidance issued by the Welsh Government in November 2011.
23. Shoreline Management Plans are concerned with the risks of flooding from the sea and the wider risks of coastal erosion. They are compiled by Coastal Engineering Groups; joint working groups led by coastal local authorities and with representation from the Environment Agency and the Countryside Council for Wales amongst others.
24. There are four Shoreline Management Plans covering Wales and each one covers a number of coastal communities and a series of sea defences. They detail a proposed shoreline position policy designed to reduce the risks to people, property and land and are scheduled for completion by December 2012.
25. Monitoring and reporting on the National Strategy's implementation is the responsibility of the Environment Agency. Reports on the implementation of the National Strategy will be published every two years, and will form part of a wider assessment of flood and coastal erosion risk in Wales and the management of that risk. Welsh Government will use the reports and assessments to identify good practice, trends and issues to be resolved, then work in partnership to address them where appropriate.
26. The first review of the National Strategy is scheduled to take place in 2016.