



An analysis & evaluation of Flood & Coastal Erosion Risk Management and Well-being in Wales

Summary of Research Findings

Context

An estimated 245,000 properties are currently at risk of fluvial, coastal and surface water flooding in Wales, with coastal erosion affecting a further 400 properties along the Welsh coastline. These risks will be exacerbated in the future by climate change and sea level rise. This presents both challenges and opportunities for delivering the aspirations of the *Well-being of Future Generations (Wales) Act 2015* and the national well-being goals.

Research methods

Examining the relationship between Flood & Coastal Erosion Risk Management (FCERM) and well-being, this research highlights the strengths and weaknesses in current FCERM governance, while identifying the synergies and conflicts between FCERM and the national well-being goals. The research draws from in-depth policy and legal analysis of approximately 200 documents, as well as 47 interviews with policymakers and practitioners operating at national and local scales. The findings were further validated through a stakeholder workshop in July 2019.

Key strengths (+) and Weaknesses (-) in FCERM governance



Strategic direction

+ Holistic, diversified risk-based approach is reinforced in national policy and is key for societal resilience;

- + Discursive strength and growing expectations towards multi-beneficial initiatives;
- Adaptation is not specified as a strategic objective in the revised National FCERM Strategy;
- National FCERM strategy lacks ambition;
- Absence of explicit well-being objectives and limited perspective on well-being goals in the National FCERM Strategy.



Ecosystem resilience

+ *Environment (Wales) Act 2016* mandates Sustainable Management of Natural Resources (SMNR), with strong compatibility with FCERM objectives;

- + Area statements could facilitate SMNR and collaborative working;
- + Natural Flood Management (NFM) must be short-listed for FCERM schemes;
- + National Habitat Creation Programme (NHCP) provides compensatory habitats for FCERM schemes;
- Slow delivery of NHCP due to challenges including multiple land/asset owners, misaligned planning cycles and legal duties (related to care and Public Rights of Way);
- Expensive to realign and decommission existing assets for compensatory habitats.



Coastal adaptation

+ Long-term planning policies outlined through Shoreline Management Plans (SMP2) and new requirement on Coastal Groups to report on action plan progress;

- + Newly established Wales Coastal Monitoring Centre (funded until 2022) to support evidence-based decisions;
- + Examples of frameworks for navigating adaptation processes (e.g. Fairbourne and Newgale), which actively involve communities and adopt long planning horizons;
- Lack of governance mechanisms/policy instruments to enable adaptation, with calls for strategic support from Government;
- "Adaptation gap" in FCERM funding and budget silos;
- Non-statutory status of SMP2 conflicts with Highways legislation and duties to maintain Public Rights of Way;
- 'Difficult conversations' demand proactive, *sustained* and *meaningful* engagement (not consultation), that places communities at the heart of decision-making.



Funding

+ Medium-term capital commitments in FCERM programme and CRMP to support longer-term planning and efficiency savings;

- Funding is primarily allocated to protect people and property which is ill-suited to adaptation schemes, leaving an 'adaptation gap';
- Wider benefits and well-being contributions receive lowest weighting in scoring criteria for funding;
- Shortfall in revenue funding to support wide range of FCERM activities.



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Key strengths (+) and Weaknesses (-) in FCERM governance



Spatial planning

- + Guidance on *Development and Flood Risk* (TAN 15), which adopts a precautionary approach, according to flood zone and vulnerability of development;
- + Flood Consequence Assessments (FCA) required for Flood Zone C, alongside Justification and Acceptability tests;
- + Numerous weaknesses are addressed by *revised* TAN15 (*under consultation*), including merger with TAN14 ('*Coastal Planning*') and stronger emphasis on use of Strategic FCA;
- Local Planning Authorities not formerly required to adhere to NRW advice (although call-in powers in place);
- Significant limitations of *current* approach e.g. detachment from TAN 14 and criticisms of Development Advice Maps (e.g. different flood zones and thresholds to NRW's Flood Map) (although many of these are addressed in revised TAN15).



Community preparedness & emergency management

- + Strengths of Flood Awareness Wales;
- + Increased coverage of warnings and automated services;
- + Community flood planning strongly advocated & supported;
- + Effective arrangements for activating and scaling-up emergency response according to subsidiarity principle, with further clarity provided by the *Wales Flood Response Framework*;
- Criticism that community engagement focuses too heavily on outputs (i.e. community flood plans), rather than the *process* of effective engagement;
- Engaging and empowering communities on matters of coastal adaptation requires alternative ways of working and resourcing;
- Scope for increasing involvement of the voluntary sector.



Flood insurance

- + Flood Re ensures access to affordable insurance;
- + Post-2009 properties exempt from Flood Re (i.e. discouraging inappropriate development);
- Hard incentives within Flood Re are unlikely to drive significant change in householders' behaviours;
- Risk that Flood Re is seen as the panacea, or may undermine urgency required to ready communities for risk-reflexive pricing.



Surface water

- + Clearer distribution of responsibilities since the *Flood and Water Management Act 2010*;
- + Implementation of SuDS Approval Bodies (SABs) in Jan 2019, requiring sustainable urban drainage for new developments;
- + Regulatory incentives to encourage consideration of SMNR and long-term planning in Welsh water companies;
- Too early to establish effectiveness of SABs in practice;
- Potential difficulties establishing an institutional cultural shift in the water industry and embedding long-term planning within 5-yearly Asset Management Periods.



Land use management

- + Proposed *Sustainable Farming Scheme* to reward environmental outcomes, including flood mitigation benefits;
- + Conditional payments better incentivise a wider range of activities than universal income currently provided through CAP;
- Mixed success of agri-environment schemes in the past (e.g. Glastir Advance);
- Loss of CAP and stable income for farmers is a concern amid significant 'Brexit' uncertainty.



Marine management

- + Welsh National Marine Plan includes policies related to coastal adaptation, including reference to SMP2s;
- + Marine Planning Decision Makers Group supports integration across policy areas;
- + Marine licensing for coastal defences takes into account SMP2 policies;
- Lack of engagement between terrestrial and marine planners;
- Resource constraints limit opportunity and capacity for collaboration & integration between FCERM and Marine management.



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Delivering the National Well-Being Goals *Well-being of Future Generations (Wales) Act 2015*

Prosperity

- Aligning FCERM with economic growth and regeneration agendas has unlocked opportunities for funding and enabled the delivery of multi-beneficial schemes;
- Continued diversification of funding needed to support FCERM activities, including private sector input;
- Need to sustain and enhance education with children and young adults to increase risk awareness.

Resilience

- Strong 'fit' with FCERM objectives, supported by policy cohesiveness with Natural Resources Policy and key governance mechanisms (e.g. S6 duty of *Environment (Wales) Act 2016*, Area Statements and National Habitat Creation Programme (NHCP));
- Implementation barriers to Natural Flood Management, Managed Realignment and NHCP remain, creating a gap between policy and delivery.

Health

- Mechanisms to address health impacts of flooding within immediate aftermath, but greater awareness needed in health and social care services about potentially long-lasting effects;
- Need to support communities living with risk and uncertain futures in their personal resilience and emotional well-being. Honest and compassionate communication is key.
- Opportunities to support preventative health care through creation of green-blue spaces.

Equality

- Risk-based funding seen as offering a fair approach, but focus on protection of people and property disadvantages adaptation-based schemes;
- Acknowledging potential and perceived inequalities resulting from shoreline management policies should be a key step within community engagement;
- Principles of justice need to be embedded within adaptation discourse in FCERM to facilitate 'just transitions' where Managed Realignment is specified.

Cohesive communities

- Sustainable FCERM means difficult decisions need to be made about the long-term viability of certain coastal communities. Working directly and proactively with communities is essential to manage impacts, forge community cohesion and sense of shared ownership;
- Stronger engagement with coastal adaptation required from Network Rail to strategically manage the Wales Route for the future and engage with PSBs.

Culture & language

- Culture and Welsh language do not appear to be given the same consideration within FCERM as other well-being goals;
- Need to think creatively about how FCERM activities might support and enhance Welsh language skills (e.g. through education pathways), and link to other local community initiatives;
- Need to align and better articulate relationship between FCERM and the historic environment.

Global responsibility

- Natural Flood Management and Sustainable Urban Drainage measures are actively supported through FCERM and can help with climate mitigation & decarbonisation, and mitigate declining biodiversity;
- Successful delivery of these is constrained by several factors (e.g. non-statutory status of SMP2 and conflicts with statutory duties; difficulties negotiating across multiple land/asset owners, aligning planning cycles; knowledge gaps in quantifying wider benefits etc.).



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Recommendations



Strategic matters

1. There is a need for urgent action in the current climate emergency - Welsh Government should strengthen its strategic policy around coastal adaptation and display a greater sense of urgency when developing and implementing adaptation planning. Longer-term adaptation should be better embedded within the risk-based paradigm of FCERM, forming an explicit objective within the revised National Strategy for FCERM in Wales, alongside specific adaptation-based measures to provide greater clarity to all stakeholders (including the public) about the future. Longer-term ambitions should be clearly stated.
2. Reframing problems and solutions – FCERM should be understood as a key component of climate change adaptation and as part of a wider social, economic and environmental challenge that demands a diversified approach, in addition to protective measures. Climate change adaptation should be given the same level of priority within Welsh Government as climate change mitigation and decarbonisation goals.
3. There is a current lack of clarity in how Welsh Government understands and expresses the contribution of FCERM to the well-being goals. Stronger leadership from Welsh Government is essential if it is to maximise its strategic steering capacity. Welsh Government should specify well-being objectives within the National FCERM Strategy and consider specific measures for monitoring progress against these.



Funding

4. Diversifying funding sources and establishing 'funding partnerships' will be essential for maintaining and enhancing FCERM and wider well-being benefits in the face of future threats. Further research is required to better understand how this might be implemented, barriers addressed and action incentivised.
5. A boost and long-term commitment to revenue funding is required to keep pace with the rising demands facing FCERM associated with climate change.
6. Prioritisation of FCERM capital funding should reconsider the weighting assigned to multiple benefits in order to better incentivise delivery of wider well-being goals. This could vary depending on different categories of FCERM schemes.
7. There is no clear funding stream to support adaptation schemes requiring managed realignment, decommissioning of assets, or relocation of people and property. To address the current 'adaptation gap' in funding, there is a need to re-think how funding is prioritised within the CRMP/FCERM programme, which currently favour traditional defence-based approaches and disadvantage adaptive-based schemes. This creates inequalities in the accessibility of FCERM funding that must be addressed. Efforts must be made to bridge current departmental silos and unlock opportunities for cross-department/cross-sectoral funding.
8. Further research is required to address remaining evidence gaps in quantifying the benefits of catchment/area-based approaches, Natural Flood Management and hybrid approaches, as well as the wider well-being benefits associated with FCERM schemes.



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Coastal adaptation

9. Long-term funding for the Wales Coastal Monitoring Centre should be secured beyond 2022 to maintain a strategic approach to coastal monitoring, essential for supporting evidence-based decision-making.
10. There is a need to raise the profile of SMP2s amongst a broader remit of stakeholders operating at national to local scales, in order to better embed shoreline management in strategic planning at the land-sea interface. This could be supported by efforts to diversify and motivate wider participation within Coastal Groups (e.g. Network Rail, National Trust and other relevant Local Authority departments). The Wales Coastal Group Forum is well-placed to develop a communication strategy to support this endeavour.
11. To sustain the valuable role played by Coastal Groups, and ensure regular attendance from local authority members, there is a need to investigate options for overcoming resource constraints and opportunities for pooling resources.
12. Coastal adaptation is seriously constrained by the absence of governance mechanisms and policy instruments, and lack of strategic leadership from Welsh Government to address this. Further research is required into innovative governance mechanisms for enabling adaptation (e.g. looking across FCERM, spatial planning, building regulations and insurance sectors), alongside critical questions about who should pay.
13. Adaptation is a *process* – effective frameworks (not projects per se) are essential for providing a route-map for locally-driven decision-making. However, a national *strategic* framework through which to deliver adaptation on the ground is essential. Stronger leadership and support from Welsh Government is required in this regard. While the proposed coastal adaptation toolkit/guidance may be useful, this needs to be coproduced between Welsh Government, Coastal Groups and the Wales Coastal Groups Forum to ensure it matches the needs of those implementing adaptation at the local scale.
14. Legislative rigidity in the form of Public Rights of Way is a key barrier to implementing coastal adaptation. Aligning Public Rights of Way / Highways legislation with coastal adaptation requirements is essential. The Wales Coastal Groups Forum should directly engage the National Access Forum and proposed independent Access Reform Group, to discuss how access reforms may better support and enable coastal adaptation.
15. ‘Difficult conversations’ need to be taking place today. There is a moral responsibility to actively engage communities and other stakeholders now about the future of their coastline. Community engagement requires sustained dialogue, supported by sufficient resources and training of staff on the ground. All RMAs and Coastal Erosion Risk Management Authorities should actively engage local communities in a consistent, honest and transparent way, while recognising the need for sensitive and compassionate language.
16. Communities should be placed at the heart of adaptation planning and play a key role in determining their future. Empowering local communities to become actively involved in FCERM and adaptation planning will require *meaningful* engagement (not consultation) in order to establish a shared understanding of local risks and adaptation needs, while creating space for different options for the future (i.e. adaptation pathways) to be discussed. Further research is needed to explore alternative, creative approaches to diversify the engagement ‘toolkit’, and explore how these may be appropriately tailored to suit different place needs, as well as reflecting the vibrancy of Welsh culture and the Welsh language.



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Recommendations



Coastal adaptation cont.

17. “Just transitions” are vital - there is a need to better embed the principles of justice within adaptation discourse in FCERM. It is recommended that the Flood and Coastal Erosion Committee consider this alongside potential pathways through which scrutiny might be provided, such as the creation of a *Flood Just* group, or opportunities to collaborate with the proposed Climate Just advisory group.
18. The long-term adjustment and potential relocation of critical infrastructure will have significant impacts for maintaining well-connected communities. Network Rail should conduct a strategic assessment of the Wales Route to identify vulnerable infrastructure and should be actively involved in Coastal Groups and Public Service Boards to ensure the well-being implications, and impact to other services, are understood. At the UK scale, there is a need for a high-level debate about the remit of Network Rail funding and its strategic consideration of climate change adaptation.



Ecosystem resilience

19. Area Statements have the potential to increase opportunities for co-delivering FCERM projects and delivering schemes with flood-related benefits through alternative funding sources. However, it will be important to monitor and evaluate the extent to which Area Statements, once adopted, perform as intended.
20. Resources to support periodic monitoring of area-based approaches will be essential to establish evidence and confidence in new approaches. However, the lack of evidence should not be a barrier to trialling experimental approaches – opportunities to experiment, innovate and learn are essential for enhancing capacities to adapt to future change.
21. Coastal squeeze presents a significant threat to intertidal habitats and the integrity of the Natura Network; however, the delivery of compensatory habitat through the National Habitat Creation Programme (NHCP) is notoriously complex and faces numerous barriers related to working with multiple landowners (with different priorities, planning horizons and remits of responsibility); navigating legal duties to maintain public rights of way and duties of care; reputational risks; and lack of awareness of the implications of SMP2 amongst land/asset owners. In order to keep pace with sea level rise, these barriers will need to be overcome by – a) continued proactive engagement with landowners and service providers to identify potential sites for compensatory habitat early on; b) continuing to promote exception clauses for inviting non-Risk Management Authorities to participate in the NHCP; and c) addressing Recommendations 10, 12, 14 & 18.



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FCERM, land-use management and land-sea integration

22. The significant weaknesses in Technical Advice Note 15 (*Development and Flood Risk*) are largely addressed through the proposed changes outlined in the current consultation of TAN 15 (*Development, flooding and coastal erosion*); subject to acceptance, these changes will offer better-integration across terrestrial and coastal systems. Some potential gaps exist in relation to the development of Strategic Flood Risk Assessments – engagement with Coastal Groups should be explicitly encouraged in order to better bridge coastal management and spatial planning, and strengthen the role of spatial planning in adaptation efforts. Moreover, the Welsh National Marine Plan should be cited and referred to as a source of evidence to further support joined-up thinking at the land-sea interface.
23. Periodic monitoring of the newly-implemented SuDS Approval Bodies (SABs) is essential to ensure their effectiveness is optimised.
24. Further research is required into appropriate mechanisms for promoting behavioural change and the uptake of property-level resistance and resilience measures, looking across potential mechanisms within FCERM, spatial planning, building regulations and insurance sectors, for example.
25. Opportunities for collaborative working, both within/between RMAs and other stakeholder groups, should be sought where possible to promote integrated approaches to water management at the catchment/area scale through which multiple benefits can be delivered.
26. It is vital that efforts to join-up thinking across the land-sea interface continue – The review process and the Marine Planning Decision Makers Group should be used to support this and address common challenges through whole system thinking. There is a need to address resource and funding gaps in order to support coordination across marine and terrestrial planning.



Aligning FCERM and Well-being

27. Push and pull messaging - There is a need for the FCERM community and National FCERM Strategy to better articulate the wider well-being benefits of their activities to attract engagement from others.
28. Public Service Boards have the potential to play an important part in FCERM governance and facilitate joined-up working. However, the extent to which flooding (and climate change adaptation more widely) has been embraced by PSBs is ad hoc. More effort is required to raise the profile of FCERM within PSBs and local well-being plans. NRW as a statutory member of PSBs could facilitate this. At the national scale, climate change adaptation should be included as a strategic priority within the Future Generations Commissioner's priority areas to better promote its inclusion in well-being planning at the local scale.
29. Efforts should be sustained (and promoted further) within the FCERM community to support the education of children and young adults about flood and coastal erosion risks and climate change, and also cultivate a sense of global responsibility.



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Aligning FCERM and Well-being cont.

30. To support healthy communities, there is a need to raise awareness of the lasting health effects of flooding. However, beyond 'treating' the impact of floods, there is a need to proactively support communities living with risk and uncertain futures in their personal resilience and emotional well-being. The communication of SMP policy changes should be sensitive to this and RMAs should identify where health and social care services, or voluntary groups, might assist the communication process and provide additional support. Moreover, FCERM should consider where certain NFM approaches have the potential to offer mental and physical health benefits associated with blue-green spaces and, in turn, support preventative health care initiatives.
31. The national well-being indicators give a limited picture of fluvial and coastal flood risk, only, focused on numbers at risk. Consideration should be given as to whether there is a need to expand this to include other sources of flood risk, as well as information on the scale of coastal change highlighted by SMP2 policies, given that coastal change presents a significant threat (and potential opportunity) for national well-being.
32. There is a need to think creatively about how FCERM activities might help support and enhance Welsh language skills (e.g. through education pathways), and link to local community initiatives which may simultaneously help to foster social capital and support community resilience to flooding.
33. In order to ensure the sustainable management and preservation of cultural heritage in the face of coastal change, there is a need to strengthen alignment between the historic environment and FCERM communities. In the first instance, the relationship between the two should be more strongly articulated within the National Strategy for FCERM to provide a strategic steer for action on the ground.
34. It is essential that well-being policy and associated governance mechanisms are given time to mature, through learning-by-doing.

Project details

This research was performed within the CoastWEB project- Valuing the contribution which coastal habitats make to human health and wellbeing, with a focus on the alleviation of natural hazards. This was funded through the Valuing Nature Programme.

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