



# Funding for Building with Nature and Natural Flood Management

A catchment oriented Policy Brief from the Interreg North Sea Region Building with Nature project, by the Eddleston Water Project Team, Scotland

## Key messages

- Tackling the increasing threats from flooding, including climate change, requires adoption of an integrated approach that addresses these challenges spatially and temporally across a whole catchment and utilises the full range of hard (structural) and soft Natural Flood Management (NFM) techniques to reduce flood risk to communities and wildlife
- The 'Building with Nature' (BwN) approach focuses attention on the potential role of these 'soft' techniques to alter catchment land (and water) management, so as to reduce flood risk and deliver other benefits
- The provision of sustainable financing for the delivery and maintenance of NFM measures is a major challenge; the answer to which requires robust scientific evidence of their effectiveness and a new approach to governance and partnership working
- This will need the integration of what are currently separate budgets supporting different policy sectors (flooding, water quality, nature conservation, etc.), such that costs and benefits of such NFM schemes can be assessed not solely on their capacity to reduce flood risk, but also for the other multiple benefits they provide, including climate resilience, biodiversity, carbon management and water quality improvements.

## Building with Nature project

- Partners from Scotland, The Netherlands, Belgium, Germany, Denmark, Sweden and Norway work together.
- The project demonstrates BwN solutions at 6 catchment scale and 7 coastal sites.
- The project is part of the Interreg VB North Sea Region programme.
- Project period: 2015 – 2020.



## Introduction

The potential use of the 'natural characteristics' of a catchment to help reduce flood risk to downstream communities is an integral part of the Scottish approach to Sustainable Flood Risk Management. Assessing the role of Natural Flood Management (NFM) measures in protecting communities and land is a key part of the Flood Risk Management (Scotland) Act 2009, and embraces the concept of Building with Nature

A number of potential areas for policy development were identified, with one priority being to examine funding for NFM delivery in Scotland. This was also a common theme identified by Catchment partners in BwN Work Package 4. Specific challenges associated with funding BwN measures include not just the acquisition of funds themselves but also the appraisal mechanisms used to assess their viability against cost-benefit criteria associated with more traditional means of flood defence.

The Scottish BwN Catchment Laboratory is the Eddleston Water on the Tweed. This is a long-term research study on the effectiveness of NFM measures for flood risk reduction and habitat improvement. The policy brief builds on experiences in this study and from other work commissioned by Scottish Government on sustainable flood risk reduction, as well as incorporating learning from studies undertaken by the Scottish partners and others elsewhere.



## Scope of Problem:

Funding for the development of BwN measures is a challenge. This includes identification of funding sources, total amounts available and long-term financing for active maintenance of measures.

- The legal basis for imposing BwN measures on individual landowners at the locations desired is unclear, with compulsory options generally not seen as a favoured approach within Scotland.
- Attention has focused on incentives to achieve results, so knowing what incentives are attractive and under what circumstances is key to getting land managers involved
- Providing the science evidence base for the effectiveness of BwN to reduce flood risk is a major challenge, with NFM measures being as yet 'unproven' in the eyes of some stakeholders
- Currently, there is no accepted single methodology for assessing costs and benefits that includes ecosystem services and non-market benefits delivered through BwN.
- Benefits of BwN are often long-term, and not immediate (compared to 'traditional' means). Expecting short-term monitoring to provide 'proof' of effectiveness is unrealistic
- Benefits from NFM may be more immediately apparent in non-flood terms (e.g. carbon sequestration or water quality improvements) than as direct avoidance of flood damages
- Aligning funds for flood risk reduction with the benefits derived from NFM measures is a challenge. Funding and delivery targets are sectorally separated in different policy areas, such that novel forms of partnership working across disciplines, policy and implementation are essential.

## Specific Scottish challenges include:

- how can agri -environment schemes be made to work better for delivery of NFM, including ensuring flood measures are seen as a priority in land management options
- how to ensure contracts with landowners for NFM measures can be sustained over long time periods – such as easements attached to land ownership title
- how to create a 'critical mass' of NFM interventions to have an effect at a catchment scale
- how to allocate funding for NFM as a component of Local Authorities' overall flooding budgets



## Learning from BwN Partners' Governance study:

- There is a **major challenge in justifying and funding land purchase for creation of NFM measures** (or otherwise legally constrain its use). Bespoke funds for NFM measures are rare and often NFM is delivered through means designed not solely for flood risk reduction, but to improve the physical condition of water bodies, or respond to losses of biodiversity
- Whilst these and similar EU agri-environment support schemes provide an opportunity to incorporate NFM measures, **priorities for such funding may not always align with those of flood risk management**, and thus do not permit targeted delivery of NFM
- On the practical side, partners identified the **lack of a common methodology for including NFM measures within project appraisal** was a barrier; including the uncertainties associated with bringing other benefits that NFM options deliver into 'traditional' flood assessment methodologies and funding rules
- Concurrent **improvements that NFM can deliver need to be documented and accounted for**, with targeting of NFM measures at a catchment scale improved to deliver maximum benefits for both flood risk reduction and other ecosystem services, such as water quality, biodiversity, carbon retention, climate adaptation
- **The governance challenge** that arises with NFM cost-benefits needing to be assessed on a whole catchment basis conflicting with the administrative scales of decision-making.



## Potential Policy Alternatives:

Policy alternatives arise at different levels and in different arenas, reflecting the transition from strategy to delivery, and from policy to practice.

### At a strategic level:

- BwN seen as part of a holistic approach to Integrated Water Resource Management – the ultimate aim being integration across functions, topics, finances, stakeholders, space and time
- BwN as part of Sustainable Flood Risk Management – identifying how NFM should fit into the range of options from 'traditional' structural engineering to 'soft' land management measures
- BwN as an additional element to Flood Risk Management - for example to account for uncertainties and longer-term increases in flood risk from Climate change

### Implementation:

- Compulsory purchase – of targeted locations to implement NFM measures, supported by Building with Nature 'Easements'
- Voluntary encouragement – incentives to make NFM measures attractive to land managers at the desired locations. These require details of how much, where, for how long, how joined up, and how any such payments can be assessed and made

### Assessment of costs and benefits:

- Science evidence base for effectiveness of BwN measures – the success and value of NFM needs to be demonstrated, results standardised and outcomes accepted by key stakeholders
- Costs and Benefits - need to be integrated into EIA and project appraisal, including non-market benefits alongside financial values and return on investment

### Governance:

- Need for new forms of private and public partnership - with the role of the 'Trusted intermediary' seen as an important element of facilitation and persuasion for land managers to engage in NFM measures
- Realising benefits in areas different to that of spend – the need to recognise that BwN spend will potentially bring benefits spatially, temporally and functionally separate from a simple silo approach to immediate allocation and return on investment of 'flood budgets' alone.



## Policy recommendations

By not restricting policy assessment solely to flood risk, but bringing in environmental, socio-economic and cultural aspects, the potential exists to encourage the uptake of BwN measures within both EIA and Project Appraisal frameworks. This would contribute to better integration at the policy level through joint implementation of, for example the EU Floods and Water Framework Directives, promoting Green Infrastructure measures in both Flood Risk and River Basin Management Plans.

At a practical level, recommendations address how to work with land managers to achieve long-term gains. Experience with the Scottish Land Use Strategy pilot undertaken on the Tweed shows the importance of producing 'opportunity maps' which identify potential locations for NFM measures at a catchment scale.



### Key recommendations include:

1. The adoption of a clearly articulated holistic vision with BwN, including NFM, as part of Integrated Water Resource Management at the Catchment scale.
2. The development and use of Environmental Impact Assessment and project appraisals to include costs, values and multiple benefits of NFM as part of routine assessment not only for Flood Risk Reduction schemes, but other catchment-based water-related developments
3. The need for natural capital accounting to inform decisions on targeting and selection of NFM measures
4. The development of mechanisms to enable and promote cross-sectoral spend within Local Authority budgets so as to deliver flood risk reduction through NFM alongside the other benefits that are enjoyed as a consequence in other sectors
5. The development of a standardised set of methodologies for assessing NFM options alongside structural options as part of a joint approach (not an alternative approach)
6. Introducing clarity as to how local Authorities should assess and fund NFM options within overall Flood Schemes
7. Working with National Farmers' Union (Scotland) and other relevant stakeholders to develop the accepted best practice approach to land management compensation for NFM delivery
8. Ensuring support for the role of a 'trusted intermediary' working on the ground with local stakeholders to assist with facilitating uptake of NFM measures and attracting a mix of private and public funding.