

# Reducing mental health and wellbeing impacts of flooding in Scotland



## Policy Brief

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## Recommendations

Please see section 4 of the main report for the detailed recommendations.

### 1. Embed Mental Health within Flood Preparedness and Planning

- Integrate mental health and wellbeing messaging and service signposting into SEPA alerts and Local Flood Risk Management Plans.
- Optimise the timing and wording of flood warnings to improve clarity and responsiveness, whilst minimising anticipatory stress. Include mental health and wellbeing indicators within adaptation and planning frameworks.

### 2. Strengthen Trauma-Informed Response Capacity

- Embed Psychological First Aid and trauma-informed practice within civil contingencies planning.
- Develop a national flooding and public mental health communication toolkit for frontline staff and community organisations.

### 3. Invest in Equitable Long-Term Community Resilience

- Offer property-level flood resilience grants in high-risk areas.
- Develop targeted support pathways for vulnerable groups.
- Sustain community resilience programmes beyond emergency phases.
- Ensure timely access to mental health support and services, where required, especially for rural, remote or displaced populations.
- Promote multifunctional green–blue infrastructure that delivers wellbeing co-benefits.

### 4. Reduce Post-Flood Secondary Stressors

- Implement support for displaced households and vulnerable groups (e.g. access to insurance, property-level flood resilience grants, and health & social care).
- Develop coordination best practice between sectors (e.g. housing, insurance advice, and health services during recovery).

### 5. Strengthen Evidence and Monitoring

- Strengthen longitudinal monitoring systems by integrating routine flood, health and social data to facilitate timely short- and long-term monitoring and research of mental health and wellbeing outcomes related to flooding.
- Increase quasi-experimental and natural-experiment evaluations of interventions, addressing critical evidence gaps to support cost-effective, equity-focused investment decisions.

## Summary

Flooding represents one of the most significant climate-related risks to population health in Scotland<sup>1</sup>, with impacts extending beyond physical damage to include substantial and long-lasting effects on mental health and wellbeing<sup>2</sup>. Anxiety, depression, stress and social disruption frequently persist long after floodwaters recede<sup>3,4</sup>. Despite growing recognition of these impacts within Scottish climate and health policy, mental health considerations remain inconsistently integrated across flood risk management, flood resilience, spatial planning and housing.

This research, commissioned through Scotland's Centre of Expertise for Waters (CREW), examined how cross-policy actions may help to reduce the adverse mental health impacts of flooding. The study combined a systematic review of international intervention evidence with a comparative policy review and mapping of key Scottish policies and strategies.

The findings demonstrate that psychological harm from flooding is not inevitable. Adverse mental health impacts of flooding may be mitigated where flood management is integrated with housing support and stability (including insurance and property-level flood resilience grants in high flood risk areas), health and social care continuity, community participation, and clear risk communication. The strongest opportunities lie upstream, before flooding occurs, through flood adaptation, preparedness, and coordinated governance rather than post-flood recovery alone.

Scotland already possesses many of the statutory powers, delivery systems and policy frameworks required to act. The principal challenge identified is policy integration. Aligning flood risk management and resilience, public health and social policy within a shared preventative framework offers a realistic pathway toward climate adaptation that protects both physical safety and mental wellbeing.

## Research Undertaken

The aim was to identify effective cross-policy actions in Scotland to mitigate the adverse mental health and wellbeing impacts of flooding, including coastal change. The project was delivered through two complementary workstreams, outlined below and combined to produce the key findings and recommendations.

### **Workstream 1: Systematic Review of Interventions**

Workstream 1 addressed i) what interventions – socio-economic, health and psychosocial, property-level, nature-based and community – can mitigate the mental health and wellbeing impacts of flooding; and ii) how applicable and effective are these interventions in Scotland for different groups, particularly those at higher risk of flooding and poorer mental health outcomes. A systematic literature review was conducted and studies published between 2010 and 2025 were examined from countries with comparable climatic and socio-economic characteristics to Scotland. Twenty-eight eligible studies were identified across Europe, Australasia, North America and East Asia.

### **Workstream 2: Policy Review and Systems Mapping**

Workstream 2 addressed i) what cross-policy actions are being implemented in countries with similar geographic and socio-economic characteristics to Scotland to mitigate the mental health and wellbeing impacts of flooding; and ii) how can different policy areas in Scotland connect and work together to address the impacts of flooding on mental health and wellbeing. A desk-based policy review examined adaptation policies and case studies from countries comparable to Scotland in population size, governance structure and climate exposures. Policies published between 2000 and 2025 were analysed. Using a systems-thinking approach, Scottish policy frameworks were mapped to identify existing connections between flooding and mental health policy. The mapping process identified where policy actions already align across strategies and where integration gaps limit effectiveness. Full details can be found in the main report.

## Key findings

### 1. Emerging Evidence Highlights the Value of Upstream Adaptation and Preparedness Interventions

Most existing research focuses on interventions after a flood has occurred, during the recovery phase, rather than on actions taken to prepare for, or adapt to, future flooding. However, emerging evidence shows that upstream interventions could reduce anxiety, including early flood warnings ( $\geq 12$  hours notice<sup>6</sup>); property-level flood resilience measures; clear preparedness communication and community resilience initiatives. Property flood resilience measures may improve perceived safety and reduce long-term mental health deterioration<sup>5,7</sup>, highlighting the potential value of physical flood defences for mental wellbeing. Upstream interventions can help reduce the risk factors for poor mental health, such as uncertainty and financial strain.

### 2. Secondary Stressors Drive Mental Health Harm

Mental health outcomes are often worsened not purely by flooding itself, but by institutional and socio-economic consequences, such as insurance disputes<sup>8</sup>; housing delays; fragmented recovery support and loss of services<sup>9</sup>. Poor coordination between agencies directly contributes to psychological distress during recovery due to fragmented services and unclear accountability, which fails to provide timely, holistic support<sup>10</sup>.

### 3. Community and Social Capital are Protective

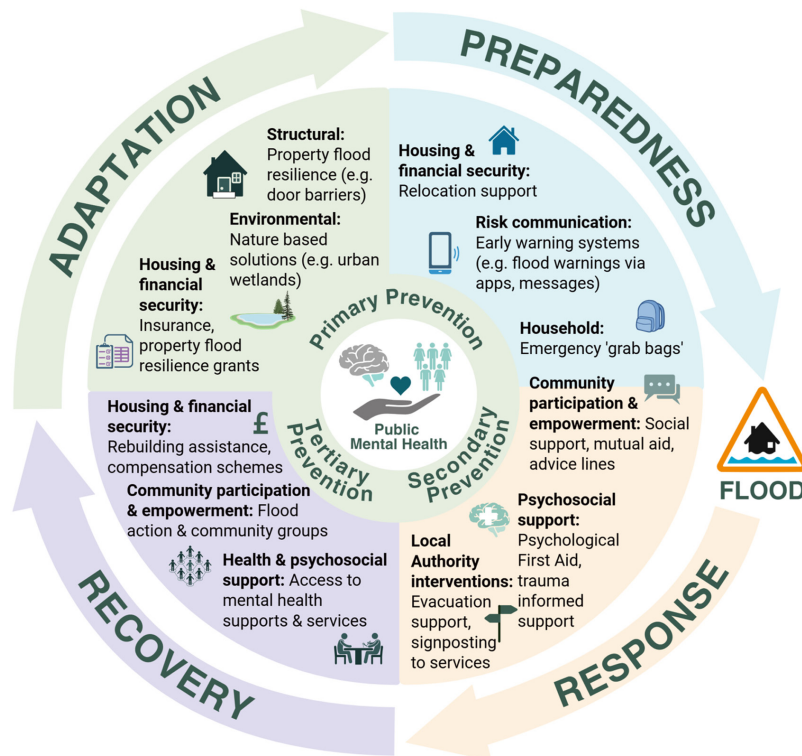
Strong community networks can reduce immediate post-flood distress through mutual support and collective coping<sup>11,12</sup>. However, cohesion can deteriorate when recovery processes are perceived as inequitable or poorly managed, or when disproportionate impacts are not responded to, emphasising the importance of sustained community engagement, a needs-led approach and institutional support<sup>9,13</sup>.

### 4. Addressing Mental Health and Wellbeing Impacts of Flooding Requires Cross-Policy Actions

UK and international case studies provide examples of approaches that consider flood adaptation alongside climate adaptation, public health and community development policy. Nine categories of cross-policy actions/interventions were identified listed below and shown in Figure 1 where they

are ordered according to stage along the flood resilience and public mental health pathways. However, despite the identification of several cross-policy interventions, it should be noted there is a lack of direct evidence on their effectiveness in reducing the adverse mental health and wellbeing impacts of flooding.

- **Governance & system-level interventions** involve structures that ensure collaboration across policy silos (e.g. joint flood-health governance working groups).
- **Planning & prevention interventions** embed consideration of mental health and wellbeing into flood planning and decision-making, not just response (e.g. mental health and wellbeing considerations in flood risk assessments).
- **Structural & environmental interventions** refer to a change in the physical infrastructure or built environment designed to reduce flood risk, which may also deliver psychological benefits as well as physical protection (e.g. multi-functional flood defences).
- **Ensuring continuity of health & social care infrastructure** involve physical measures for hospitals, clinics and pharmacies to ensure continued access to care (e.g. flood barriers, establishing backup utilities and approaches for care, and maintaining transport infrastructure and supply chains for medications and equipment).
- **Preparedness & risk communication interventions** consider mental health and well-being impacts in their design and delivery in order to reduce anticipatory anxiety (e.g. clear, consistent flood risk communication).
- **Community participation & empowerment interventions** encompass meaningful community involvement that builds agency and trust (e.g. community-led flood resilience groups) and uses best practice for community engagement and empowerment (e.g. Scottish Community Development Centre (SCDC) promotes best practice through the National Standards for Community Engagement).
- **Equity-focused interventions** involve targeted action for groups with greater need which may experience more adverse mental health impacts (e.g. additional support in disadvantaged or repeatedly flooded areas; tailored support for children, older people,



**Figure 1: Infographic summarising the different types of interventions reviewed, ordered according to stage along the flood resilience and public mental health pathways<sup>1</sup>.** <sup>1</sup>Created in BioRender. Niedzwiedz, C. (2026) <https://BioRender.com/mrrzddh>. Flood alert icon from Environment Agency, licensed under the Open Government Licence v3.0.

and disabled people; and rural and island-specific recovery models).

- **Health & psychosocial support interventions** involve psychological support embedded within flood response and recovery (e.g. training flood response and recovery services in ways that consider mental health and wellbeing, such as skills in Psychological First Aid; trauma-informed community services).
- **Housing & financial security interventions** involve measures that reduce post-flood financial and/or housing instability, a major driver of distress and secondary stressors (e.g. household flood resilience measures, insurance, rapid rehousing; support for renters and uninsured households).

**5. Scotland's Main Gap is Integration, Not Capacity** Scotland already has strong flood management, planning and public health systems. Initial policy mapping shows varying levels of interconnectedness between existing strategies (full details can be found in the main report). Case studies of UK and international cross-policy actions support a shift from reactive, siloed responses towards integrated, preventative, place-based and people-centred approaches that treat flood adaptation as both a climate and public mental health and wellbeing priority.

## Conclusions

The evidence demonstrates that adverse mental health impacts of flooding may be mitigated through coordinated, preventative and place-based policy action. Flood resilience should therefore be understood not solely as infrastructure protection, but as a public health priority.

Effective adaptation requires alignment across flood risk management, health and social care, spatial planning, housing, education, insurance support and community systems. Scotland already possesses most governance mechanisms needed to deliver this transition; the critical requirement is integration and implementation through a shared cross-government framework.

Moving flood adaptation policy from reactive recovery towards a preventative, wellbeing-centred adaptation approach is both achievable and necessary as climate risks intensify. Embedding consideration of mental health and wellbeing within flood resilience policy offers an opportunity to simultaneously strengthen climate adaptation, reduce inequalities and improve long-term community wellbeing. This represents a practical and cost-effective step towards climate-resilient communities across Scotland.

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