

New coastal flood warning schemes significantly enhance resilience of Scottish communities in face of climate change

 18 September 2018

Impact of climate change on Scotland's most flood prone communities projected to place over 169,000 at risk of flooding by 2080. Estimated cost to Scottish economy £53 million annually from coastal flood damage. New Coastal Flood Warning Schemes for Orkney, Aberdeenshire and Angus covering 2589 properties, significantly enhances Scotland's resilience to coastal flooding.

In the face of rising sea levels and the promise of more frequent extreme weather events, the impact of climate change on Scotland's most flood prone communities is projected to place over 169,000 homes and businesses at risk of flooding by 2080.

Estimated to cost the Scottish economy £53 million annually from coastal flood damage, national resilience against the impact of flood events has been significantly enhanced with the addition of new coastal flood warning schemes, covering 19 priority areas across the Orkney Islands, Aberdeenshire and Angus.

The new flood warning areas, launched today (18 September, 2018), will extend the Scottish Environment Protection Agency's (SEPA) Floodline service to include almost the whole of the east coast of Scotland. This includes an additional 2589 properties and provide accurate, advanced warning to prepare communities against the impact of coastal flood events.

As Scotland's national authority for flood forecasting and warning, SEPA operates a 24-hour Flood forecasting and warning service to inform first responders, local authorities and emergency services of emerging flood events and the potential impact on local communities and critical infrastructure. Operating 365 days a year, over 300 Flood Alerts and 400 Flood Warnings are issued annually via Floodline directly to 26,944 customers nationwide, with many thousands more accessing them online.

The new warning areas for Orkney and the Northeast coast represents a significant investment and enhancement of Scotland's overall resilience to the impact of climate change and extreme weather.

Orkney Island's Coastal Flood Warning launch event

Improving the resilience of vulnerable communities formed the core theme at the official launch of the Orkney scheme in Kirkwall today, which included a gathering of representatives from local emergency responders and resilience

partners.

With over 90% of flood risk in Orkney originating from the sea, the benefits of the new coastal flood warning scheme in providing advance warning of extreme weather events were emphasised by SEPA's Head of Hydrology and Flooding, Vincent Fitzsimons and Councillor Graham Sinclair from Orkney Island's Council, particularly in the wake of Storm Caroline in December 2017, which resulted in widespread flooding of coastal communities and travel disruption across Orkney. Real time forecasts will provide emergency partners and first responders with detailed information on the impact of potential flooding from wave over-topping and tidal surges and offer direct notification via SEPA's Floodline service to residents who sign up to the service.

Developed in close collaboration with flooding specialists from Orkney Island's Council and partner agencies within the Scottish Flood Forecasting Service, the new scheme uses 18 forecasting points to model coastal waters and the potential impact from elevated water levels on the most exposed communities and critical infrastructure. The launch marks the start of a week-long series of drop in sessions across the islands to raise awareness of the 11 priority areas, the benefit of the Floodline service and to encourage islanders to sign up to receive free advance warnings in the event of future coastal flooding.

Environment Secretary Roseanna Cunningham said:

"Scotland's climate is changing, and this means extreme weather events, including floods, are expected to occur more frequently in the years ahead. The Scottish Government realises that it's vital that we work alongside partners like SEPA and local authorities, to do everything in our powers to improve resilience against issues like flooding, in some of our most vulnerable communities.

"We have committed £420 million over 10 years to protect homes in many of Scotland's most flood-prone communities, in places like the Orkneys, and North East of Scotland.

"We know that we can't control the weather, but we can change how we respond to it. These coastal flood warning schemes provide an invaluable tool for doing that"

"Scotland needs to be prepared more powerfully for weather extremes and rising sea levels, which as we know, is only ever-increasing as a result of climate change," said Vincent Fitzsimons, Head of Hydrology and Flooding Services at SEPA.

"As sea levels rise all around the UK coastline, it brings with it the risk of coastal erosion and more frequent flooding for Scotland's exposed coastal communities. The Orkney Islands are one of three regions particularly at risk from the impact of coastal flooding and SEPA has spent two years developing the new coastal warning scheme in close partnership with Orkney Island Council to provide a state of the art system which will deliver accurate,

real time warnings to those who need it most.

“As the Scottish flood forecasting, flood warning and strategic flood risk management authority, our work will continue with the latest National Flood Risk Assessment, due to be published in December, to ensure that Scotland remains resilient in the face of increased flooding.”

Councillor Graham Sinclair, Orkney Islands Council, Chair of the Council’s Development and Infrastructure Committee, said:

“SEPA’s Coastal Flood Warning Scheme offers our residents, business and road user’s valuable information in the lead up to bad weather. The additional and advance notification gives everyone extra time to take necessary precautions in terms of any potential risk to property, or in terms of planning their journeys.

“In periods of severe weather the SEPA flood warnings will come in advance of the Council’s own warnings about areas which could be impacted by coastal flooding, including potential Churchill Barrier closures.

“We welcome the introduction of this new warning system and hope that the greater notice it provides will give locals valuable extra time to plan in periods of severe weather. I’d urge everyone in Orkney to consider the warnings they should be signing up for.”

“Forewarned, is definitely forearmed” said, Sarah Taylor a resident of Stromness whose home was devastated in January 2005 by a sudden storm surge which left the ground floor of her sea front property under a metre of sea water.

“We didn’t have time to save any belongings on the ground floor, including Christmas presents or the food from our freezer, the sea just rose up and filled the house. Advance warning will be very worthwhile because it gives you the ability to plan ahead, move your valuables out of harm’s way

“We’re very lucky that we have such a strong, supportive community around us – we help each other when the worst weather hits, and with a day or two’s notice, it gives us ample time to check in on our more vulnerable locals and prepare for what might be coming.”

The Orkney Island scheme is complemented by the activation of a further 8 warning areas between Inverallochy in Aberdeenshire and Montrose in Angus, along Scotland’s tempestuous northeast coastline. Collectively spanning 147 miles, the new warning areas incorporate a further 1268 households and business premises from 17 communities into the Floodline service and bridges the gaps in SEPA’s coastal forecasting network to cover the entire length of Scotland’s east coast.

The Orkney and North East coastal schemes were earmarked as a priority for development in SEPA’s National Flood Risk Management Strategy in 2015. The strategies are developed and updated in close consultation with Scotland’s 32 local authorities. They set the national direction of future flood risk management, helping to target investment and coordinate actions across public

bodies. Each strategy is developed using the National Flood Risk Assessment which identifies Potentially Vulnerable Areas with the greatest flood risk, the factors affecting flooding, as well as the impact on communities and critical infrastructure when flooding occurs.

Assessments are published in six year cycles and provide a solid foundation for informed decision-making across flood risk management organisations. Following a public consultation over the summer, the National Flood Risk Assessment (NFRA) is currently being formally reviewed and will be published on the SEPA website in December 2018. This comprehensive technical assessment will support work to priorities further flood warning schemes, under the second round of Flood Risk Management strategies, to deliver increased resilience to Scotland's flood prone communities.

ENDS

Speech: Minister Mark Field's speech at the Global Climate Action Summit, Moscone Centre, 14 September 2018

Climate change is not an abstract threat. This year people around the world have suffered unprecedented heatwaves, wildfires, and monsoon rains. All are examples of the sorts of extreme weather events that scientists confirm are becoming more frequent and more severe due to climate change.

The [Paris Agreement](#) brought the world together in a shared ambition to reduce the man-made causes of climate change. We need to keep pressing ahead with that. But with the impacts of climate change already being felt, we must also start to adapt and build resilience to the changes that are already taking place. According to the World Bank, 100 million people could be pushed into poverty by 2030.

The need is urgent; failure to act now will hit poor countries first and hardest; but in our interconnected world, it will affect us all in one way or another. Regional climate disasters have global impacts. That is why the UK is leading work on resilience at the UN Secretary General's Climate Summit in 2019.

We want the summit to mark a step-change in the global approach to climate change. Our aim is to ensure we can all better anticipate climate extremes; adapt to them; and absorb their impacts, through effective disaster response. To achieve these goals we need to work across the globe to reduce exposure to disasters and build climate resilience into our economies by factoring our changing climate into investment decisions at home and abroad.

The UK is already working internationally to make this happen. Since 2011, we have helped 47 million people cope with the effects of climate change, in many cases through enhanced adaptation. This is not pure humanitarianism: it makes economic sense. Every dollar invested in climate risk mitigation today saves at least three dollars in disaster response later.

We are supporting the Climate Leadership in Cities Programme in partnership with the cities signed up to the C40 Group, and we will fund 15 city-level climate action plans across Latin America and Asia in the coming years. Another UK programme, called Building Resilience and Adaptation to Climate Extremes and Disasters, is doing what it says – helping 7 million of the world's poorest people cope with climate shocks.

Importantly, the programme works directly with affected communities and offers a tailored approach to the climate challenges they face – for example by using technology to achieve better harvests, greater access to finance and markets, more accurate weather information, and better disaster preparedness.

Households in target areas have seen their incomes rise by around \$200 dollars a year, and early warning systems have helped evacuate more than 12,000 people ahead of rising floodwater. I was recently at the Pacific Islands Forum. Few of us are impacted as directly by climate change as the people of the Pacific Islands, whose very existence is under threat from the seas creeping up their shores. Their plight is one of the world's most tangible examples of the security threat climate change can cause.

This is why we support the South Pacific Regional Environmental Programme and why, as we expand our diplomatic presence in the region with new High Commissions in Samoa, Tonga, and Vanuatu, climate change will be an increasingly important part of our work there. All countries also need to do what they can to build resilience within their borders. For our part, the UK Environment Agency is working with local partners to address both coastal and inland flood risks and reduce the risk posed to 300,000 homes by 2021.

Our recently published National Adaptation Plan requires public bodies to report on how they are adapting to current and future climate impacts; and later this year we will be launching a revised set of climate projections, through to the end of the century, which will help us plan a more climate-resilient future. We are applying lessons learned at home and abroad to address this global challenge.

In closing. Building societies that are resilient to the changing climate is a team effort. From emergency planning to infrastructure investment, from adaptations in agriculture and land-use to risk financing, and countless other areas. It is a global challenge requiring global solutions and global cooperation. The UK is committed to building ambition and action. We invite national and subnational-governments, the private sector, and civil society, to join us in making the summit next year a success. Galvanizing action to increase resilience in the countries and communities most affected by climate change.

Scientists closing in on source of Shetland tsunamis

Shetland has been hit by at least two more tsunamis in the past 10,000 years than previously thought, and scientists are working to identify where the giant waves originated.

Corporate report: On The Level Issue 17 September 2018

News and views from LLW repository.

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