

Adapting the Somerset Levels

Somerset Council

Thursday 27 July 2023

Summary

Adapting the Levels is a partnership project dedicated to empowering those who live and work on the Somerset Levels to take action on Climate Adaptation. The aim is to develop and roll-out approaches to co-creation of Nature Based Solutions to improve our adaptive capacity to the water-related effects of climate change.

Cllr Dixie Darch, Associate Member for Environment and Climate Change at Somerset Council, said:

“We have some significant challenges ahead, but with these challenges come some real and exciting opportunities which we must seize for the people and businesses of Somerset. By tackling the climate crisis and by focusing on nature based solutions, Adapting the Levels helps us transition towards a healthier environment that both accelerates the transition to Net Zero and makes Somerset’s communities resilient for future generations”.

The problem

Currently only 10% of Somerset can be classified as being in good natural or semi-natural condition. This is particularly the case outside of protected areas, where ecosystems are in poor condition. With a significant coastline, extensive areas of low-lying land, river catchments and one of the UK’s most important areas of wetland in the Somerset Levels, the county is especially vulnerable to the impacts of climate change that are exacerbated by fragmented and depleted habitats.

The vulnerability of the Somerset Levels and Moors was starkly illustrated in the winter of 2013/14, when the Levels experienced severe and extensive flooding. 18% of Somerset is below high tide level and this level will increase with climate change. Furthermore, projections developed by the Environment Agency as part of the ‘Climate Change Allowances’ show that peak river flows are expected to increase by around 40% by 2080 (over and above 2013/14 levels), with increases of 85% possible by 2080. Although under the more severe climate change scenario increases of 85% are possible by the same date. The 2013/14 flooding led to a Somerset 20 Year Flood Action Plan, one of the aims of which is to facilitate “better management of the most vulnerable and challenging parts of the Somerset Levels, with the consent of owners and occupiers, with the intent of helping them to remain profitable and build greater resilience to climate and economic change.”

Restoring ecosystems across the county is critical for ensuring climate adaptation and resilience. Nature recovery networks, healthy water and soils, and protected areas, can all help tackle climate change. Supporting local people to deliver functioning ecosystems can have wide reaching impacts, including helping store carbon and improve air and soil quality and mitigate the impacts of flooding, heat, drought and eco-anxieties. The

Somerset Levels emit approximately 300,000 tCO₂e every year, around 10% of the whole county's emissions. Restoring these ecosystems to a natural state is about eliminating those emissions.

That's why, building on our Climate Emergency Strategy developed in 2020, we declared an Ecological Emergency in 2022 to help protect and restore Somerset's natural environment.

However, a particular challenge to progressing restorative ecological action in this region is that one of the dominant characteristics of the landowning community is its disparate and fragmented nature. With little cohesion, the development of adaptation measures that impact upon a wide geographic area is very labour intensive. Doubled with the fact that Somerset is sparsely populated, meaning that in the face of national pressures, the county may struggle to attract flood defence and other adaptation funding, we needed a bold vision to adapt for the future.

The solution

Conscious of the threats the county faces, Somerset Council and our partner organisations created the Adapting The Levels Project. It is a forerunner in adaptation, designed to help develop effective long-term plans and implement climate-friendly, nature-based solutions to climate adaptation on the Somerset Levels.

Adapting The Levels is a partnership project led by Somerset Council, Somerset Wildlife Trust and Farming and Wildlife Advisory Group South West (FWAG SW). It is dedicated to bringing together and empowering those who live and work on the Somerset Levels - including farmers, landowners, councils and communities - to take positive action for climate adaptation, and ultimately to develop a co-created suite of adaptation options, tailored to the needs of Somerset's communities and landscapes.

This project developed a methodology and approach to help the county develop effective long-term plans and implement climate-friendly, nature-based solutions to climate adaptation. There was a particular focus on two communities, Wedmore and Langport. The project also piloted an Adaptation Toolkit for general use, a unique and pioneering new web-based app which will enable communities to co-create plans to prepare and adapt to the impacts of climate change.

Understanding the climate impacts for nature and communities for individual localities will mean that adaptations are likely to be more successful in the longer-term, encouraging shifts in behaviours and equipping local people as leaders and champions in their area. Addressing climate change in this way uses nature-based solutions to help resolve societal problems, which can have a positive socio-economic benefit by reducing costs to business and individuals, and reducing negative impacts on local communities, such as flooding.

The development of Moor Associations across the region is intended to provide a long-lasting, bottom-up organisational structure that overcomes the challenges of the disparate and fragmented nature of the landowners. The creation of united community groups representing all landowners in each hydrological block provides a common platform on which co-created designs can be developed and implemented, which is more time and resource efficient than separate groups holding often conflicting meetings.

Timeline

In 2017 Adaptation Pathways In Somerset (APIS) was created to bring together the main infrastructure and public bodies to underline the challenge, ensure adaptation planning was happening and most importantly to ensure there was join-up between all relevant plans.

Continuing from APIS, in 2019 Adapting The Levels was established with funding from the Interreg 2 Seas EU fund and match funding from the Somerset Rivers Authority. The funding bid took around 8 months from start to finish, with a number of partnership meetings to develop the bid. Once successful, from February 2019 until March 2023 Adapting The Levels was part of a larger Interreg 2 Seas Climate Adaptation project called [Co-Adapt](#)

. This involved 12 partners spanning 4 countries: the UK, France, the Netherlands and Belgium.

Stakeholders

Between December 2019 and March 2020 in Wedmore and Langport, Adapting the Levels held two large public drop-ins which attracted 330 visitors, as well as four smaller workshops with Parish and District Councillors.

For the councillor workshops, each parish council with a footprint on these moors was invited, as well as the District and County Council representatives for the area. The workshops were divided into two parts, with the first session dedicated to exploring climate change projections, what the implications of this might be and potential blocks to adaptation. In the second workshop, attendees were invited to create their own plans for the future, using their local knowledge and experience to draw up adaptation pathways.

Furthermore all landowner stakeholders within five complete “whole moor” hydrological blocks (35-40 landowner stakeholders/block) have been involved.

Impact

The timely nature of the climate change adaptation focus of the project has meant that officers, politicians and the public have been upskilled and have experience of engaging with the challenges of climate change adaptation.

One of the key outputs of Adapting the Levels has been the development of Moor Associations, which will leave a legacy of self-organising and motivated landowner stakeholders that will continue to support sustainable water management. These Associations have become a relatively fixed entity in the local political landscape, allowing previously marginalised stakeholders to participate in the decision-making process affecting the land.

2500 hectares on the Somerset Levels are now better adapted for flooding and drought through improved accessibility to five moors, and three structures adapted to deliver more naturally functioning water management with less reliance on traditional engineering techniques. An adapted water management regime on 1500 hectares will manage flooding using natural processes rather than pump drainage, saving €200,000+ in a major flood event. This will significantly reduce the current total costs of flood and drought management in the pilot area.

The development of the climate adaptation toolkit will also leave a legacy - this will continue to be hosted online, along with other resources such as the Adaptation Pathways tool. Physical copies of the toolkit will be posted out to relevant organisations and local councils, and partner organisations will retain stocks of the toolkit for future use.

Through our collaboration and engagement with partners and water management bodies, we have moved the conversation on water management in the Levels and Moors along. The ‘status quo’ is now recognised as being untenable, and there is a recognition and interest in adopting more sustainable practices that are more ‘future-proof’, given local projections for climate change. Through our work with farmers and landowners, we have demonstrated alternative and feasible ways to make an income from the land that enable climate adaptation at scale, or that will help farm businesses become better adapted and more resilient to climate change.

The work of Adapting the Levels has also been embedded into guiding policy, including Somerset Rivers Authority’s Flood Action Plan.

Lessons learned

- Opportunities for participants to express their feelings about climate change and local projection should be built in from the off. This enabled participants to acknowledge their emotional responses, and prevent blockages to the programme in the early stages.
- Project communications need to be adapted for different audiences, based on existing experience and knowledge. The Climate Adaptation Toolkit approach was developed after we found that lay audiences struggled to engage with the adaptation pathways approach, which can require specialist knowledge of climate projections and adaptation options to be effective. We felt this was preventing communities from taking positive action on adaptation, and so developed this new approach to engaging with communities. For example, we included simpler advice for adaptation planning that communities could use. Whereas more detailed Adaptation Pathways will likely be used in professional capacities for planning adaptation responses.
- The Climate Adaptation Toolkit approach to climate adaptation planning in communities should be recognised and championed by local authorities, and become common practice in Somerset and other counties or areas looking to support communities in adapting to climate change.
- Short term funding for projects of this kind is unsustainable. Instead, longer term funding is needed to increase the impact and viability of future climate adaptation work in Somerset and across the UK. Limited funding resulted in a knowledge drain due to staff departing after short-term contracts, as well as limitations on the actions designed by the communities.
- Though critical to the success and legacy of the project, Moor Associations (MAs) are resource intensive at the outset. Without funded secretariat support, their longevity and impact will be severely constrained, undermining the huge biodiversity, reliance and economic opportunities available from operating at true “landscape scale”.

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The budget for the project was £950K. 60% of this was funded by Interreg 2 Seas and the remaining 40% was matched funding from other sources – primarily from the Somerset Rivers Authority.

The project will not develop any future income, but it has provided an excellent platform upon which to further develop climate adaptation campaigns in the county. The Somerset Rivers Authority (SRA) is funding Adapting the Levels for a further year, but, due to other demands on its resources, future support is unclear.

Next steps

It is important that there is continuity to nurture what Adapting the Levels has delivered, because we have a ready-to-go methodology for community engagement that we can apply to different geographic areas and communities guided by identified recovery pathways identified within Somerset's Nature Recovery Network. That's why we've developed 'Adapting The County' as the planned next step in Somerset's climate adaptation journey; expanding the learnings from the previous projects and designed to engage and empower all communities and tackle a range of climate threats across the county's diverse landscapes.

To ensure a strong future for Moor Associations (MAs), an overarching Moor Association organisation is being developed alongside a mosaic/blend of funding streams to support growth where there is an identified need (e.g. green finance, water level management or support requirements).

Links, contact, and credits

