

Demonstrating adaptation – lessons learned so far in the forestry sector

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1. Why demonstrate adaptation?

Demonstration can be a powerful means to promote and catalyse adaptation to climate change. On-the-ground, real-time demonstration of techniques and measures at specific locations creates a body of evidence about what works and helps to normalise adaptation actions. Demonstration partnerships explore novel ways of working together to drive forward adaptation planning and action. They give participants insights into how partnership working can best deliver adaptation outcomes, and offer lessons that wider stakeholders can apply to their own organisational approach to adaptation.

2. What are demonstration sites?

Demonstration is about showcasing approaches to adaptation using case studies or physical sites. Demonstration facilities should ideally provide opportunities for face-to-face communication. They should actively promote dialogue between innovators of change, early adopters and the more conservative majority. For example, in the UK, a '2050 Glade' is being created at Westonbirt Arboretum in Gloucestershire for visitors to learn more about the issues that surround tree selection and growing in a changing climate¹. Elsewhere, in Sweden² and the USA³, slightly different approaches are being taken to engage stakeholders and involve them in decisions around adaptation. For example, in Sweden, a series of workshops have been held to increase the awareness and the interest among forest owners; 3 D visualisation techniques have also been used to portray 'future forests'. Another effective method of communication is demonstrating through examples and narratives – 'telling the story' of a place, incident or organisation that can be used as a role model for others.

3. ClimateXChange's approach – working with the forestry sector

ClimateXChange is bringing together a number of research institutes, universities and agencies to actively explore how to use case studies, narratives and demonstration forests, farms, catchments, villages and other facilities to 'bring to life' the importance of adaptation. We are working with partners who are applying and testing on-the-ground adaptation measures and supporting them to understand and disseminate their lessons learned. Our initial focus is on forestry. We set out below (Box 1) some of the key lessons learned from our experience thus far of working with the forestry sector. These are specific to the forestry sector, but understanding them can help when exploring how best to employ adaptation demonstration in other sectors.

¹ <http://www.forestry.gov.uk/forestry/INFD-8KVKQW>

² <http://www.climatechangeadaptation.info/case-studies/adapating-a-local-woodland-management-plan/>

³ <http://www.sharedlandscapes.org/adaptation-demonstrations.html>

The need for the forestry sector to adapt in the face of climate change is generally understood – it is a central tenet of modern sustainable forest management, and has recently been restated in the revised UK Forestry Standard and the supporting Guidelines on ‘Forests and climate change’⁴. The main risks to the sector have also recently been evaluated, and published this year in the forestry sector report of the UK 2012 Climate Change Risk Assessment⁵. These include increasing damage from tree pests and pathogens, effects of drought, poorly suited tree species, forest fires and wind damage. Some solutions to mitigate these risks are already well known, such as practicing good biosecurity, diversifying species, growing trees under a wider range of silvicultural management systems, and planning for extreme events such as storms or fire. However, many acknowledge that a major barrier to the uptake of these management options is institutional conservatism – in other words, many people prefer to delay implementing change until there is clear evidence that this is necessary or that they will suffer financially unless they do. Of course, forest researchers continue to help provide the evidence. But it is clear from the projected pace of climate change that the forestry sector needs to embrace adaptation now. Overcoming reluctance to take action now is probably as big a challenge as providing the scientific decision support tools that will help to build a more resilient forestry sector.

Our current focus is on the experience gained in planning species diversification in Galloway Forest District, a wide breadth of different management approaches in Queen Elizabeth Forest Park, and the value of woodland expansion for building resilience at Glen Arkaig and the Great Glen, Lochaber. We have worked to bring players together to discuss adaptation through meetings and workshops. These have enabled fruitful discussions between the Institute of Chartered Foresters, Forestry Commission and the private forestry sector in order to explore how best to showcase and share on-going adaptation activity and experience, with the aim of encouraging faster adaptation across the sector.

Box 1. Demonstrating Adaptation: Foundations and prerequisites

1. Foundations from Scottish Government and supporting Organisations

Policy, incentives and associated actions: clarity and agreement needed

Work is still in progress in defining adaptation policy and must be done in the context of understanding attitudes and abilities across each sector. This takes time. The development of the Scottish Adaptation Programme and choice of appropriate actions is also on-going. In addition, existing sector funding incentives may not be aligned to proposed adaptation actions so the promotion of adaptation messages via demonstration projects and activities needs to be tied to the changing policy landscape.

Provide joined up communication about adaptation

There is a need to place demonstration within an overall adaptation communications strategy, and to ensure linkage and cross fertilisation with other components. Some of these will be in the hands of others, e.g. Scottish Government policy leads, and so clear lines of communication between the two will reinforce the messages and their impacts.

⁴ [http://www.forestry.gov.uk/PDF/FCGL002.pdf/\\$FILE/FCGL002.pdf](http://www.forestry.gov.uk/PDF/FCGL002.pdf/$FILE/FCGL002.pdf)

⁵ <http://randd.defra.gov.uk/Document.aspx?Document=CCRAfortheForestrySector.pdf>

Securing long-term project viability

Necessary investment for a demonstration site is unlikely if support (people, funding) for a project is short-lived, or perceived as such. Confidence in a project is important if it is to get off the ground. Working with established organisations, with the grain of their long term planning, is important to the effectiveness of the 'buy-in' to the demonstration programme.

Securing buy-in from collaborators

There is considerable preparatory work required to bring relevant players on board – not only high-level managers and practitioners but also the owners of the land on which the demonstration sites are located. Such projects are deliberately highly visible and require Executive Board sign-off, necessitating appropriate reassurance about scale and costs.

2. Development of robust systems with supporting players

Use expert opinion to shape effective communication plans

Demonstration resources should make use of known effective methods of influencing behaviour and practice in a sector. It may take time to enlist expert opinion on this, but it is vital if the communication of demonstration is to be effective. Site-based demonstration is intrinsically geographically limiting to some, and so must be augmented by other methods. These may include web based information including films and webinars, and the using existing channels, e.g. trade publications and e-bulletins.

Characterise Demonstration Sites and Outreach

There is a need for appropriate infrastructure to characterise (and monitor) demonstration sites / activities effectively, and to put them into an overall Scottish context. Discussion in the forestry sector suggested that messages from an individual demonstration site would not be credible unless appropriately contextualised.

Monitoring and Evaluation

It may be desirable to put adaptive monitoring in place before launch of a demonstration site in order to capture attitudes, attitude changes and promote genuine two-way communication (knowledge exchange) as visitors give input on what they find and feel.

3. Development of content and resources with collaborators

Resources to support actions must be available, tested, and easy to access and use

To help the sector once enthused, the timing of raising the profile of adaptation need via demonstration needs to be aligned with the provision of guidance (i.e. to answer the question: "what should I do next?") and access to robust and authenticated tools and instruments. In forestry, such work is in progress, but not yet at a stage such that Forestry Commission Scotland is comfortable about a step change in adaptation publicity.

Lost in Translation: Language and Approach

Advice on approaches to and decisions about adaptive action should be framed in suitable language (i.e. remove jargon) and presented as part of normal management appraisal and risk management practices.

Framing messages so as to address the needs of different audience groups

Different professionals will have different management aims and therefore different priorities and needs for adaptation (for example, the concerns and requirements of private and commercial foresters will be very different to those of public forest managers pursuing goals such as public amenity and biodiversity

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as well as commercial interest). Adaptation messages must accommodate different needs if they are to be credible.

Liability, Y2K and other cautionary tales

In the face of uncertainty, advice on appropriate action for adaptation and resilience must always call for the judgement of local managers. Local assessment is vital to avoid mal-prescription, liability for advice providers, or the possibility of over-reaction.

Relate messages to other sector drivers and pressures

Adaptation, and messages about its importance, should be couched in the context of competing pressures for sector time and energy, and put into the context of the overall sector business. Credible messages must acknowledge its complexity or they will fail to effect change in behaviour.

Barriers may lie beyond the initial target audience

Significant barriers to adaptation may lie well beyond the primary audience for demonstration messages. For example, climate-robust stock selection by forest managers will be affected by the stock available in tree nurseries, and the timber types accepted by saw-mills.

None of the points above is considered to prevent demonstration projects going forward, but they must be addressed. The power to address some of them is largely vested out-with ClimateXChange, in bodies that we can try to influence but of course cannot control. Hence, developing trusted relationships with such bodies in order to catalyse action and harness existing structures and resources to help deliver joined-up demonstration activity is one of the most effective ways of developing a credible demonstration resource in Scotland.