

Background and context

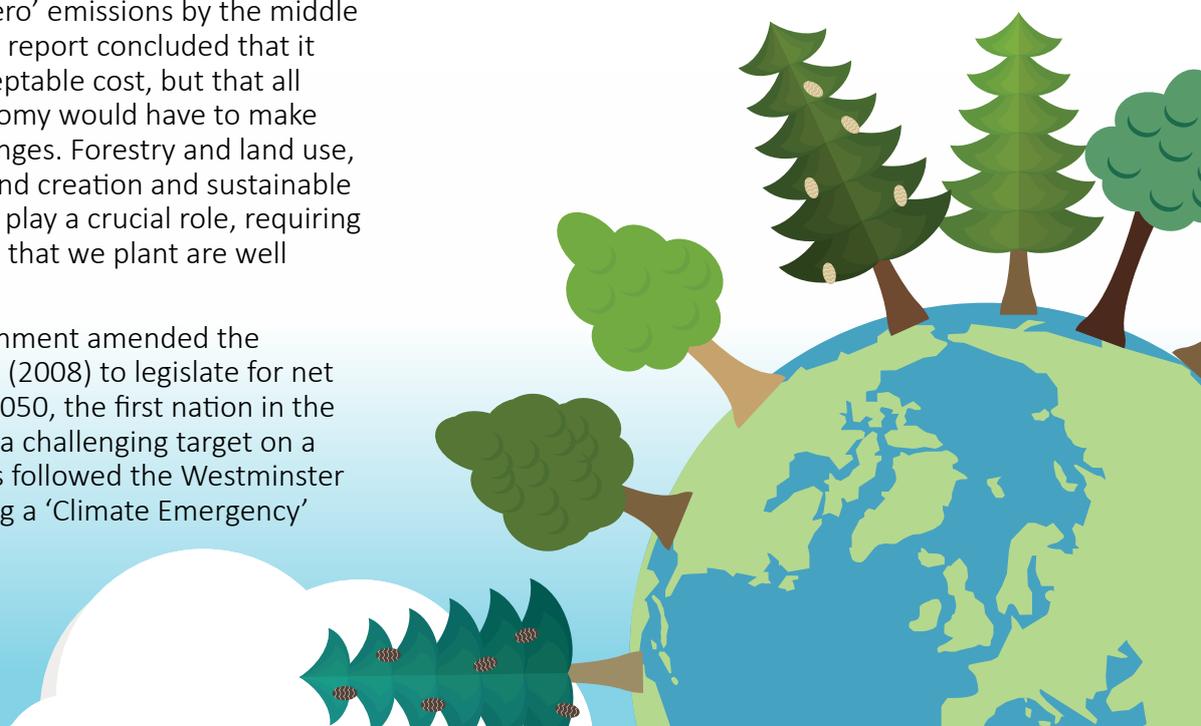
The **Action Plan for Climate Change Adaptation of forests, woods and trees in England**¹ was published in September 2018, to provide a single point of focus for collective action on adaptation, to identify priority actions and to provide a basis for monitoring progress in achieving its intended outcomes.

In the year since the Action Plan was published, the argument that concerted action is needed over its five-year lifetime has been strengthened following the publication of a series of key reports:

- In October 2018, the United Nations Intergovernmental Panel on Climate Change (IPCC) published a **Special Report**² on the implications of maintaining global warming to 1.5 degrees above pre- industrial levels compared to the likely impacts if warming was two degrees or more. The conclusion was that society has only 12 years (now 11) to avert a 'climate change catastrophe'.
 - In November 2018, the Met Office Hadley Centre released new climate change projections for the UK (**UKCP18**)³, which reiterated the very significant challenges to the landscape and way of life in the UK that are likely. Although broadly comparable with the previous projections (UKCP09) the new projections include a broader range of emissions scenarios, higher resolution projections and clearer communication of the implications of climate change for the weather that we will experience.
 - In June 2019, the Committee on Climate Change published its **advice to Government** on achieving 'net zero' emissions by the middle of the century.⁴ The report concluded that it was feasible at acceptable cost, but that all sectors of the economy would have to make very significant changes. Forestry and land use, particularly woodland creation and sustainable biomass supply will play a crucial role, requiring that the woodlands that we plant are well adapted.
 - In July 2019, Government amended the Climate Change Act (2008) to legislate for net zero emissions by 2050, the first nation in the world to place such a challenging target on a statutory basis. This followed the Westminster Parliament declaring a 'Climate Emergency' in May.
- In August 2019, the IPCC published its **Special Report** on Climate Change on Land, highlighting that climate change was already having a significant impact on land management, the scale of the contribution from land and land management to global greenhouse gas emissions and the nature of sustainable land use change that will be required if society is to meet the emissions reduction goals set out in the **Paris Agreement**⁵.

The series of reports published over the past year strengthens the need and urgency for the Action Plan to be implemented and this is articulated in a restatement of the rationale for the 2015 Forestry Sector Climate Change Accord in Annex 1 available to download at <https://www.rfs.org.uk/about/our-policies/climate-change/>

1. The Action Plan for Climate Change Adaptation of forests, woods and trees in England. <https://www.rfs.org.uk/media/512806/action-plan-for-climate-change-adaptation.pdf>
2. IPCC (2018) Global Warming of 1.5°C. IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. <https://www.ipcc.ch/sr15/>
3. Met Office (2018). UK Climate Projections 2018. <https://www.metoffice.gov.uk/research/collaboration/ukcp>
4. CCC (2019) Net Zero – The UK's contribution to stopping global warming. <https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/>
5. UNFCCC (2015). Paris Agreement https://unfccc.int/sites/default/files/english_paris_agreement.pdf



Progress in implementing priority actions

Policy:

Defra continues to develop the Environmental Land Management System with input from Forestry Commission (FC), Confor, Woodland Trust (WT) and other members of the Forest Climate Change Working Group (FCCWG).

Confor has launched its **'Think global, plant local' campaign**⁶ to enhance woodland cover and is working across the tree and woodland sector, including through the Horticultural Trades Association (HTA) and Nursery Producers Group to develop the Plant Health Assurance Scheme.

FC has made climate change resilience one of its priorities and has developed a forestry and climate change position statement and has instigated an internal review to assess where policies support, or stand in the way of, enhancing woodland's resilience to climate change. Initial findings indicate a need to better communicate and clarify policy guidance, including the flexibility inherent in those policies.

In addition to progress made on policy, the upcoming Tree Strategy and associated consultation announced in November 2018 will provide an opportunity to develop policy initiatives that will support climate change resilience.

6. <http://www.confor.org.uk/media/247403/woodland-carbon-targets-for-the-uk-april-2019.pdf>

Research:

Good progress has been made against some of the research priorities, with Forest Research (FR) using the wealth of resources from past trials and the National Arboreta in the search for alternative species and provenances for the future climate; undertaking new operational species trials on the public forest estate and continuing other research trials in collaboration with European partners.

FR's innovative research on landscape scale benefits of woodland creation is supporting efforts to enhance resilience and delivery of ecosystem services. FR also continues to produce guidance, case studies, training and decision support tools to encourage and facilitate forest managers and practitioners in their adaptation challenges.

The Royal Forestry Society (RFS), Institute of Chartered Foresters (ICF), Woodland Heritage (WH) and Sylva are communicating research findings and stimulating debate across the sector, while FC, FR, WT and Natural England (NE) have published joint interpretation and practical guidance on genetic considerations of climate change adaptation.

WH has entered its second decade of funding for the Acute Oak Decline project and is co-ordinating a wild service tree provenance trial. While good research progress is being made, the long time-frame for establishing forestry trials and uncertainty over the future climate means that expectations of research providing clear-cut guidance need to be managed and that adaptation will remain 'iterative'.



Practice:

Progress continues to be made in species diversification by Forestry England (FE) through investment in new nursery facilities to support its resilience programme and the work of HTA and the Confor Nursery Producers Group to enhance the biosecurity and availability of resilient planting stock.

ICF has embedded knowledge transfer on resilience through regular articles in its Chartered Forester magazine and as a standing topic in its regional meetings. RFS continues to support a forestry knowledge hub with a focus on resilience while Sylva has continued to maintain the SilviFuture website.

To date, no initiative has brought these individual sources of information together to create a single knowledge hub to support a more resilient forestry sector, but FR has committed to play this role as part of FC's wider focus on addressing climate change. Sylva has also committed to update the 2015 resilience baseline through the 2020 British Woodland Survey to provide evidence on the need for further action.

Despite the progress made in knowledge transfer, including of research findings, there is little evidence of an up-turn in the implementation of adaptation measures. Efforts, to date, do not appear to have been effective in eliciting change, suggesting that much further work, resources and commitment are required to deliver the scale and rate of change required.



Priority actions

■ on target
 ■ some progress made
 ■ no progress

	ACTION	COMMENTS	STATUS	
POLICY	1	Integrate forest climate change adaptation policies into the new environmental land management scheme (ELMS), specifically to ensure those managing to the UKFS can access ELM payments.	In progress; national trial due to start in 2024 [tbc].	
	2	Strengthen the requirement for climate change adaptation in the woodland management plan template and guidance.	Plan template reviewed by ICF. Initial planning underway for BWS2020 to update 2015 baseline survey [Sylva].	
	3	Update the UKFS climate change guideline to reflect most recent learning.	To be addressed at next review point [2022]. England-specific guidance may be updated earlier following climate change resilience policy review.	
	4	Embed climate change actions in forestry regulations when opportunity arises.	Opportunities most likely to arise as a result of the Tree Strategy.	



	ACTION	COMMENTS	STATUS	
RESEARCH	5	Continue research to identify alternatives species and provenances and better understand the genetic basis of resilience of a range of tree species, including establishing more trial plots.	<p>Publication of a series of 4 articles on forest resilience and articles on alternative species in the Quarterly Journal of Forestry (QJF) and on the RFS web-site.</p> <p>FR is progressing alternative species research using the network of Arboreta as a first stage assessment for new species, revisiting old trials, undertaking operational species trials with FE, partnering in European provenance trials (REINFFORCE) and continuing work on species climate classifications.</p> <p>WH is co-ordinating wild service tree provenance trial at three sites.</p>	
	6	Understand the impacts of increased connectivity and resilience across a range of scales, in relation to key topics (species migration, spread of pests, pathogens, invasives, urban forestry, biodiversity and ecosystem services).	FR's work with the Woodland Creation and Ecological Networks (WReN) network of past woodland creation sites is building our understanding of connectivity for biodiversity. FR is also testing and developing a framework for operationalising the implementation of resilience measures in different situations.	
	7	Review, develop and integrate decision support systems (DSS) such as ESC and resources such as Silvifuture to increase usability for practitioners and encourage uptake.	<p>FR is integrating UKCP18 into ESC and other DSS such as ForestGALES and has created the Alice Holt Research Forest Climate Change Adaptation Trail to provide a resource for practitioner engagement.</p> <p>The Woodland Wildlife toolkit has been launched by WT, Sylva and FC.</p>	
	8	Commission research and produce case studies of developments and planting to develop a longitudinal research base.	Eight case studies of forestry adaptive practice have been developed and will be published in the forthcoming UKFS Practice Guide on adaptation.	

	ACTION	COMMENTS	STATUS	
PRACTICE	9	Build and promote case studies of successful initiatives and increase effectiveness of knowledge sharing.	<p>Adaptation feature in each edition of Chartered Forester.</p> <p>Adaptation integral to all regional ICF and WH events.</p>	
	10	Create a knowledge hub that supports correct species choice, use of mixtures and silvicultural choices.	Silvifuture website continues to be maintained by Sylva; RFS and FC have published 10 ash dieback case studies.	
	11	Provide CPD training opportunities for climate change adaptation skills: e.g. forest soils, ESC, CCF.	<p>Information on adaptation content requested from all HE courses; adaptation theme considered for future national events.</p> <p>RFS has run training courses on forest soils, pests and diseases, ESC and grey squirrel control.</p> <p>FC/FR held a UKFS masterclass on climate change in East England.</p>	
	12	Provide guidance on the financial impact of silvicultural choices now and in the future.	No progress.	
	13	Incentivise nurseries to grow adequate stocks of adapted planting stock in the UK that meet best biosecurity standards as set by the Plant Health Assurance Scheme.	HTA and Confor Nursery Producers Group working to finalise the Plant Health Assurance Scheme and to increase the availability of UK-grown stock.	

Progress against strategic recommendations

The Action Plan proposed that a representative cross-sector group is empowered to own and drive it forward on behalf of the sector by working closely with Defra policy teams.

To date, progress has been limited with little or no opportunity to provide input into policy, Government Strategy development, or the review of regulations or the Science and Innovation Strategy for Forestry in Great Britain. Some input has been provided for the development of the Environmental Land Management System, but as individual organisations rather than as a cross-sector group on behalf of the sector.

The year ahead will provide opportunities for the FCCWG to act collectively and provide considered input to the consultation on the English Tree Strategy.

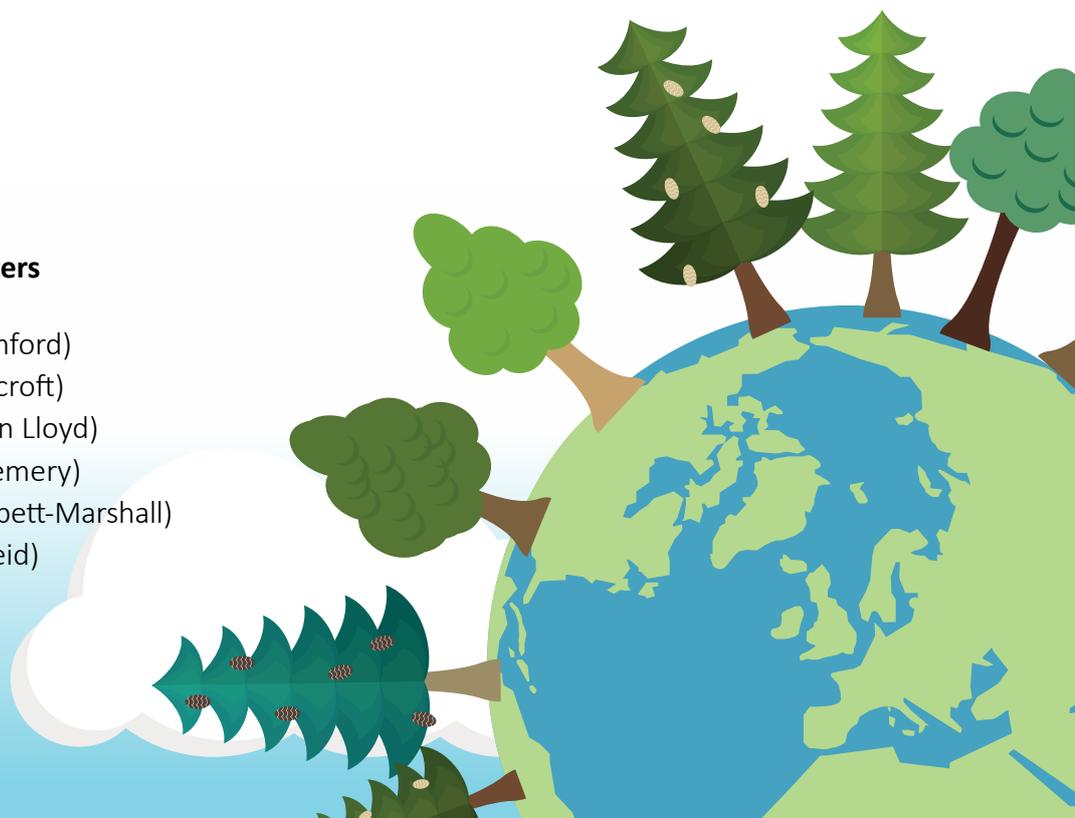
The focus of this progress report is on the priority actions identified in the 2018 Action Plan. However, the 2018 National Adaptation

Programme highlights that expanding the woodland resource through woodland creation and increasing the proportion of woodland in active management are also crucial activities - although both are proving challenging.

The proportion of woodland in active management remains static at 58%, while despite initiatives such as the Woodland Creation Planning Grant, Woodland Carbon Fund amendments to the EIA regulations and the Forestry Investment Zone pilot together with concerted advocacy from FC, WT, Confor, Woodland Heritage and RFS, rates of woodland creation have not accelerated as anticipated. Woodland creation and management initiatives and activities are also therefore material considerations for adaptation.

Members of the Forestry Climate Change Working Group

- **CLA** (Mathew Taylor)
- **CONFOR** (Caroline Harrison)
- **Defra** (Steven Penlington)
- **Forestry Commission** (Mark Broadmeadow)
- **Forest Research** (James Morison)
- **Institute of Chartered Foresters** (Martin Glynn)
- **Lockhart-Garratt** (Justin Mumford)
- **Natural England** (Mike Morecroft)
- **Royal Forestry Society** (Simon Lloyd)
- **Sylva Foundation** (Gabriel Hemery)
- **Woodland Heritage** (Guy Corbett-Marshall)
- **Woodland Trust** (Christine Reid)





FCCWG (2019).

Forestry Climate Change Adaptation Action Plan.
Prepared by the Forestry Climate Change
Working Group (FCCWG). www.rfs.org.uk