BBC TEACH

Climate change: Ade on the frontline
Peatlands in Sweden

Video summary	Before watching the film	During the film
Ade Adepitan travels to Sweden to see how restoring peatlands can help us fight climate change. Peatlands can store more than twice as much carbon as all the forests in the world. However, if they are drained, the stored carbon is released. Around the world, there are millions of hectares of degraded peatlands that could be easily and cheaply restored, turning them from dangerous polluters, into carbon sinks. Download/print a transcript of the video.	What do students already know about peat and its role in climate change? It may be worth finding this out if you haven't already been studying this. What is peat? Compost is still sold that is peat based so you might show some of this for example, as well as some images of peatlands in different parts of the world. The International Union for Conservation of Nature (IUCN) state that: *'Peatlands are a type of wetlands that occur in almost every country on Earth, currently covering 3% of the global land surface. The term 'peatland' refers to the peat soil and the wetland habitat growing on its surface.'* Peatlands have been severely overexploited and damaged as a result of human actions. The IUCN estimate that 15% of the world's peatlands - covering less than 0.4% of the global land surface - have been drained. This has released huge amounts of green-house gases, such as carbon dioxide (CO_2), from the carbon stored within peat soils.	You may wish to stop at relevant points during this short film to pose questions and check understanding or wait until the end. Useful questions might include: • What is peat? • How does it capture carbon? (Plants take in carbon dioxide, using the carbon to grow and store it away). • What makes peat mosses and peatland so special? (You could discuss that whereas plants release carbon back into the atmosphere when they die and decay, the water in peat bogs prevents this from happening and so the carbon remains locked up). • How much carbon do peatlands store compared with all the forests in the world? (Twice as much). • You might ask students how they feel on learning about this capacity of peat to store carbon. • What is peat drained for? In the film they mention fuel and fertile soils. It's even worse for the climate than burning the Amazon rainforest. • How much of Sweden's greenhouse gases come from drained peatlands? (The answer is a quarter. As much as all the country's domestic cars).You could also ask students to report back on the sad and the hopeful aspects of the film. Were they surprised, for example, just how simple the solutions are for peatland resto-ration? You could ask students to identify two important steps in peat restoration. (First, restoring the water so that no more carbon is lost, and second, replanting peat mosses to ensure a living peat environment that will capture more carbon).

After watching the film (continued)

You could ask students to create a glossary of useful definitions such as ‘peat’ and ‘carbon sink’.

Students could explain using statistics how peatlands lock up carbon on a global scale and how degraded peat releases carbon and other greenhouse gases back into the atmosphere, contributing to climate change.

Students could research projects where peatlands are still being exploited or are degraded, mapping these and evaluating human impact and ways to restore them. How much of the UK is peatland for example? How much needs restoration? Students might investigate how much of a contribution restored peatlands in the UK could make to our carbon budget and mitigate the effects of climate change.

This short film is suitable for teaching KS3 and KS4 students. It can be used alongside the other Ade Adepitan films about climate change or watched on its own. All the films build on students’ understanding of climate change issues and enable them to make global connections.

This film supports the KS3 geography curriculum by enabling understanding about the impact of human behaviour on natural systems and the sustainable use of resources.

At KS4 this supports work on understanding environmental challenges and human impacts, and the challenge of resources management.

This clip could be used to support the delivery of geography to KS3 and KS4 students. Specifically, this topic appears in OCR, Edexcel, AQA, WJEC KS4/GCSE in England and Wales, CCEA GCSE in Northern Ireland and SQA National 4/5 in Scotland.