

**SCIENCE  
MUSEUM**

**WORKING TOGETHER TO ENGAGE  
AUDIENCES WITH CLIMATE  
CHANGE**

MAY 2021



# THE SCIENCE MUSEUM AND CLIMATE CHANGE

**“Britain is holding the presidency of climate change for the world next year and this has to be the ultimate golden opportunity to respect the experts. Mass international action is not only vital, it’s completely doable.”**

Sir Ian Blatchford, Director and Chief Executive of the Science Museum Group

## THE SCIENCE MUSEUM AND CLIMATE CHANGE

With over 3 million visitors each year and an ambitious range of exhibitions, events and online resources, the Science Museum is a national leader in science, technology, engineering and maths (STEM) engagement. We bring informal science education to a diverse range of audiences and age groups, making STEM accessible and relevant to all.

Climate change has been part of our programme for more than a decade, starting with the Atmosphere gallery, which has inspired over 5.4 million visitors to date. In 2005 we became the first national museum to install solar panels on our roof, and one of the UK’s largest solar farms is hosted at our National Collections Centre in Wiltshire.

We now look ahead to a new decade of transformation at the Science Museum, during which time we will undoubtedly focus more closely on the challenges posed by a warming world.

**“The Science Museum Group places science at the heart of Britain's creative economy, celebrating its potential to change our lives for the better.”**

Dr Simon Chaplin, Former Director of Culture & Society, Wellcome Trust



# OUR FUTURE PLANET

## Can carbon capture help us fight climate change?

(April 2021 – October 2022)



### THE OPPORTUNITY

Over the coming years, the pressing issue of climate change will be a key theme of the Science Museum's programming, starting with our next contemporary science exhibition: *Our Future Planet Can carbon capture help us fight climate change?*

The public discussion around the climate crisis has focused primarily on reducing the carbon we emit into the atmosphere. But with emission reduction not happening fast enough, countries around the world must also look at ways to remove carbon dioxide to meet global emissions targets.

This exhibition will be the first on carbon capture technology to take place in a national museum, encouraging visitors to engage with this timely and topical subject and understand how people and organisations are driving change.

As an institution uniquely placed to interpret complex subjects through engaging content, the Science Museum will enable visitors to explore how carbon capture can be achieved using various technologies and practices, from the protection of ancient woodland to the development of artificial trees.

To ensure a variety of expertise is reflected in the exhibition, content is informed by an advisory group with members bringing knowledge from academia, industry and science journalism.

Complemented by digital media, the exhibition will present the stories of scientists, technicians and citizens playing a part in research and action to remove CO<sub>2</sub> from the atmosphere.

As the world looks towards COP26, the 26th United Nations Convention on Climate Change, the exhibition will give visitors an opportunity to understand the impact of this emerging technology on society.

Beyond its run at the Science Museum, a blueprint version of *Our Future Planet* will be available to tour venues internationally. These easy-to-update digital format exhibitions can be exhibited easily and adapted for local audiences. International partnerships will support us in maximising the reach and impact of this important exhibition.

Please refer to Appendix A for further information on the blueprint pack version of the exhibition.

# EXHIBITION STRUCTURE

## BRINGING CARBON CAPTURE TO LIFE

### 1. INTRODUCTION

The first section of *Our Future Planet* will remind visitors of the context in which carbon capture and storage (CCS) technologies are being developed.

It will discuss the impacts that climate change has and will have on our lives, now and in the coming decades.

It will introduce visitors to the various forms that carbon can take, from coals to greenhouse gas, and explore why technologies are being developed to remove carbon dioxide (CO<sub>2</sub>) specifically from the atmosphere.

Objects on display will include protest posters from the recent school climate strikes, now part of the SMG Collection.



Above: Climate strike protest posters displayed in the exhibition.



Above: Klaus Lackner's Mechanical Tree. A pilot project of 1200 of Klaus Lackner's mechanical trees is expected to capture enough carbon to offset the emissions of 8000 cars per year.

### 2. DIRECT AIR CAPTURE

*Our Future Planet* will introduce visitors to Direct Air Capture technologies, which remove carbon dioxide from the ambient air around them.

Although largely experimental at present, these devices could one day be an important component in the suite of methods required to mitigate the impacts of climate change.

The exhibition will explore questions like:

- Will this technology be economically viable?
- What can and should we do with the captured carbon?
- And how are scientists working to overcome these challenges?

A crucial object in telling this story is Professor Klaus Lackner's prototype Mechanical Tree. Professor Lackner was one of the very first champions of this technology in the 1990s, and his Mechanical Tree represents the beginning of innovation in this area.

# EXHIBITION STRUCTURE

## BRINGING CARBON CAPTURE TO LIFE

### 3. EMISSIONS REDUCTIONS

Reducing our carbon emissions will be an essential component of mitigating the impacts of climate change.

Carbon capture and storage can prevent CO<sub>2</sub> from being emitted by power stations and factories, allowing industries like steel and concrete to drastically reduce their impact on the environment.

*Our Future Planet* will present a range of ways this captured carbon be used and stored, such as in underground basalt rock formations, or within the concrete itself.

This section will explore questions like:

- How will we scale up this technology to the level we need?
- Will we be able to do this soon enough?

Objects in this section will include items made from captured carbon, such as carbon negative jewellery made in association with Climeworks, a Swiss company specialising in Carbon Capture.



Above: Toy car that runs on fuel made of carbon dioxide, donated by the Carbon XPrize.



Above: Tree rings from ancient and newly-planted woodlands illustrate how forests are managed and how this affects their ability to absorb CO<sub>2</sub>.

### 4. TREES

*Our Future Planet* will encourage visitors to look at trees and other plants through the eyes of a scientist, exploring how different species sequester carbon. This story will be told through samples of trees, demonstrating how they sequester carbon, and new media such as drone fly-throughs of native woodland.

Visitors will also have the opportunity to explore the ways scientists are increasing the amount of carbon plants can absorb, from genetically modifying their roots to preserving urban forests and ancient woodland.

This section will explore questions like:

- Could planting billions of trees be enough to mitigate the impacts of climate change?
- How best should we use the land we have?
- Why are ancient woodlands so important?

Thank you for taking the time to consider this exhibition partnership opportunity.

Together, we can empower audiences to understand potential solutions to the climate crisis.

For more information, please contact:

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# APPENDIX A: BLUEPRINT PACK EXHIBITIONS



## WHAT IS A BLUEPRINT PACK?

Blueprint Packs allow us to share exhibition concepts in a way that provides flexibility and adaptability for a local hosting venue to create a unique temporary exhibition.

Each exhibition Blueprint Pack contains the Science Museum Group's content, concept, designs and research in the form of a digital package shared electronically with your organisation. This way of working allows for greater flexibility so that a local team can reproduce the exhibition and take it in new and exciting directions.

Created by the team at the Science Museum, London, these exhibitions explore science topics that are important in today's world and demonstrate how science is relevant to visitors' lives. By working with local industry and scientists, you can use these exhibitions to provide a platform showcasing modern research angles and open young visitors' eyes to the endless opportunities in STEM careers.

## WHAT ABOUT THE OBJECTS IN THE EXHIBITION?

A Blueprint Pack does not include any objects, or the collections as seen in the exhibition in London. Content is entirely delivered in a digital format allowing a local team the flexibility to create an exhibition fully adapted to local audiences. This enables your local team to showcase objects from your own collection or it provides opportunities for collaboration with important stakeholders such as universities, research institutes, government and local industry.

Above: 'Superbugs: The Fight for our Lives' exhibition at the Science and Technology Museum in Chongqing, China. This exhibition has also toured extensively as a Blueprint Pack version worldwide.

## ARE THEY EXPENSIVE?

No, hiring a Blueprint Pack avoids typically high costs such as transportation and insurance. The packs enable you and your local team to build and design an exhibition in line with your own available budgets, knowing that you have the reassurance of the high standards of a Science Museum Group exhibition at its core.

For a typical exhibition display period of 3 to 5 months, the Blueprint Pack costs GBP £20,000. This includes the content package and a display license for above mentioned display period.

For longer display periods or to tour the same exhibition once created to several local hosting partners within your country or region, please enquire so we can offer you a bespoke pricing model for your plans.