

NATURAL WORLD HERITAGE AND CLIMATE CHANGE

- Natural World Heritage sites are recognised as places of ‘Outstanding Universal Value’ under the 1972 UNESCO World Heritage Convention.
- While natural World Heritage sites make up less than 1% of the Earth’s surface, they protect over 20,000 globally threatened species and make a substantial contribution to global biodiversity, sustainable development and climate change solutions.
- The extraordinary values found in natural World Heritage sites are increasingly threatened by climate change, which interacts with other threats like invasive alien species.
- Enhanced efforts are needed to strengthen climate action at the site level, regionally and globally.

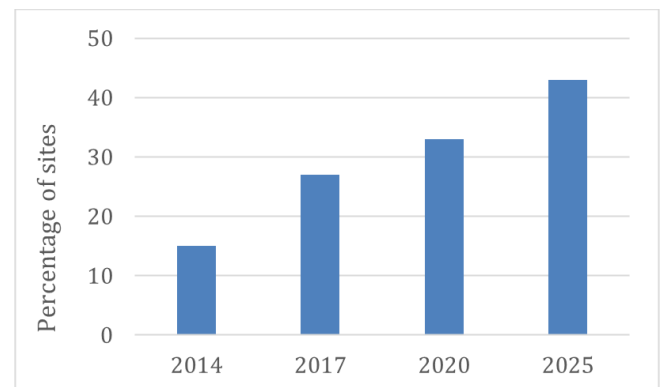
What is the issue?

World Heritage sites enjoy the highest level of international recognition under the 1972 UNESCO World Heritage Convention. They are places of such exceptional value that their protection transcends national borders, cultures and generations. Natural World Heritage sites are recognised for their nature conservation values and currently encompass 276 sites worldwide. While these sites cover less than 1% of the Earth’s surface, they harbour over 20% of mapped global species richness and contribute to nearly all 23 of the Kunming-Montreal Global Biodiversity Framework targets ([UNESCO, 2023](#)). IUCN has an important role as the Convention’s statutory Advisory Body on nature conservation.

The [4th IUCN World Heritage Outlook report](#) found that climate change remains the greatest current threat to natural World Heritage. Currently, climate change is a high or very high threat in 43% of all sites. Climate change also remains the fastest-growing threat to natural World Heritage. While in 2014 climate change and severe weather were assessed as significantly impacting 15% of sites, this increased to 27% in 2017, 33% in 2020 and 43% in 2025. Regionally, climate change is the greatest threat to natural World Heritage in the Arab States, Asia, Europe, Mesoamerica and the Caribbean, North America and Oceania.

The impacts of climate change are diverse and can vary depending on the values for which sites have been inscribed under the Convention. Especially the increasing frequency and severity of extreme weather events, as well as the rise in sea and air temperatures, affect World Heritage sites, for example, through the accelerated melting of glaciers and coral bleaching. A study by UNESCO and IUCN ([2022](#)) predicted that glaciers will disappear from one-third of the 50 World Heritage sites that host them by 2050. Furthermore, coral bleaching is expected to impact 30% of the 29 UNESCO World Heritage-listed coral reef ecosystems ([UNESCO, 2024](#)).

Some notable examples of World Heritage sites affected by climate change include: Garajonay National Park (Spain), where the exceptional remnants of the Laurel forest are increasingly stressed by severe and prolonged droughts and habitat shifting; the Sundarbans National Park (India), which is threatened by sea level rise and more frequent storm surges which reduce mangrove biodiversity; Tubbataha Reefs Natural Park (Philippines), where pristine coral reefs and associated marine life are affected by marine stress events and more frequent and severe typhoons, reducing hard coral cover; Monarch Butterfly Reserve (Mexico), where the manifestation of the monarch butterfly migration is impacted by severe weather conditions that directly cause butterfly mortality.



The percentage of natural World Heritage sites where climate change was assessed as a high or very high threat between 2014-2025.

Interactions between climate change and other significant threats to natural World Heritage, like invasive alien species and pathogens, exacerbate and compound the problem. Extreme climatic events, such as hurricanes, floods and droughts, can transport invasive species to new areas and increase their spread by decreasing the resistance of habitats to biological invasions. Climate change is also opening up new pathways for the introduction of invasive species. Therefore, the cause-and-effect relationship between climate change and other threats needs to be better understood and planned for in management approaches.

Currently, however, climate action is falling short of what is needed. Less than half of all natural World Heritage sites (42%) have been assessed as having effective climate action in place.

Why is this important?

The ability to conserve natural World Heritage sites is a litmus test for conservation success more broadly, and the progress towards achieving the targets of the Global Biodiversity Framework. The growing threat from climate change has significantly contributed to the overall decline in the percentage of natural World Heritage sites with a positive conservation outlook over the past decade. Only 57% of all natural World Heritage sites assessed since 2014 have a positive conservation outlook in 2025. This represents a 6% decrease over the last 11 years. The situation has continued to worsen for sites recognised for their threatened biodiversity, with only 52% of these values in a good state, or of low concern.

Yet, these sites are critical for the protection of globally endangered and endemic species. The continued impact of climate change, in combination with other threats, and ineffective climate action at many biodiversity sites is resulting in an increasingly poor conservation outlook. This emphasises the need to focus on improving these sites' capacity to realise the contribution natural World Heritage sites can make to global goals.

What can be done?

Many natural World Heritage sites offer examples of effective management for species conservation and climate solutions that can be replicated elsewhere. For example, in Northern Ireland, a Climate Change Adaptation Programme has been developed along with Climate Adaptation guidance, which recognises natural capital as a key priority area and outlines government functions to support and develop mitigation measures at the site level. The responsible management authority for the Giant's Causeway and Causeway Coast World Heritage site has initiated the development of an Environment Strategy for Northern Ireland, which presents an opportunity for climate change impacts and other key matters at the World Heritage site to be recognised, and actions attributed. The revised conservation management plans for components of the site will include information on climate change and appropriate management measures to mitigate against adverse changes. Both the national environment agency and the department of environment have a key role in raising awareness of the site's vulnerabilities and in supporting research, management and mitigation activities.

Such good practice examples need to be scaled up and shared through capacity building programmes to enhance climate action at the local site level, as exemplified by the [World Heritage Leadership Programme](#). Support for practical action is needed, such as a climate action toolkit



The Giant's causeway, Northern Ireland © Guiseppe Milo, CC BY 2.0

currently being developed by the UNESCO World Heritage Centre, IUCN, the International Council on Monuments and Sites and the International Centre for the Study of the Preservation and Restoration of Cultural Property. The toolkit is being tested in a diverse range of cultural and natural sites in partnership with their local managers. Effective action at the site level alone is not sufficient. Climate change is a global issue that needs concerted action and resources.

The recent policy document on [Climate Action for World Heritage](#) offers high-level guidance on enhancing the protection and conservation of heritage of outstanding universal value through comprehensive adoption of climate action measures, including climate adaptation, mitigation, resilience building, innovation and research. In so doing, it can help create coherence with and leverage synergies between the objectives and processes of the World Heritage Convention and those of the Paris Agreement, as well as other multilateral agreements, frameworks, processes and instruments.

World Heritage sites offer vital avenues to connect with people and their cultural values and adopt inclusive, landscape and seascape-level approaches to conservation. Issues facing the World Heritage Convention are a rallying point for stronger international action on climate change.

Where can I get more information?

- [IUCN World Heritage Outlook 4](#)
- [UNESCO and IUCN \(2023\). World Heritage: a unique contribution to biodiversity conservation](#)
- [UNESCO, IUCN and WRI \(2021\). World Heritage forests: carbon sinks under pressure](#)
- [UNESCO and IUCN \(2022\). World heritage glaciers: sentinels of climate change](#)
- [UNESCO Policy Document on Climate Action for World Heritage](#)