

UNESCO PROJECTS FOR MANGROVE ECOSYSTEMS RESTORATION THROUGH THE MAB BIOSPHERE RESERVES

UNESCO is investing in the implementation of mangrove restoration projects through its networks of world heritage sites in the framework of the UN Decade on Ecosystem Restoration. In particular, UNESCO realizes projects in alliance with the local communities involved in the management of the [738 MAB Biosphere Reserves operating in 134 countries](#) around the world, most of which include coasts and marine areas.



UNESCO is one of the six core UN collaborating agencies to the UN Decade on Ecosystem Restoration that is led by UNEP and FAO. As a partner of the UN Decade, their website underlines that *UNESCO's ambition is to change the mindset of 100% of humans so that they reconcile with the rest of nature and become all custodians of Earth, our common home and heritage, that we inhabit and share with all other living species.*



The UNESCO website informs about the vital role developed by the formidable ecosystem of mangroves for the environment and for the living conditions of local populations and about the strategies and activities adopted in the framework of the UN Decade on Ecosystem Restoration. In the article [An Inside Look at the Beauty and Benefits of Mangroves](#) which is presented in the section Stories of the website, the benefits brought by the mangrove ecosystems in different aspects are described with data and examples, which make an investment urgent to collaborate with local communities in their restructuring. In particular, the article highlights that Mangroves are climate heroes because they reduce emissions and remove carbon from the atmosphere; they protect against extreme weather and disasters and they are a haven for threatened animals



With its unique designated sites, UNESCO is a leader in promoting on the in-situ solutions to the global challenges of terrestrial, coastal, and marine biodiversity loss and UNESCO strategy for biodiversity is implemented in its designated sites. Over 10 million km², roughly 6% of the earth's landmass, is already under one or more designation, through its 1,154 World Heritage sites^[1] (including 252 [natural and mixed sites](#) and 114 [cultural landscapes](#), its 738 [Biosphere Reserves](#) and its 177 [Global Geoparks](#). In these sites, UNESCO works directly on conserving nature, but also brings diverse stakeholders, knowledge holders and decision-makers into dialogue so that together become change agents for the ecosystem restoration movement. Many of these sites have been implementing restoration activities and are now sharing their experience during.



For example, [a 2015 UNESCO survey found that people living in 84% of biosphere reserves considered natural hazards to be an important issue and 89% of them reported their biosphere reserve as being exposed to natural hazards](#). UNESCO's global network counted more than 600 biosphere reserves at the time and a follow-up two years later showed that 94% of biosphere reserves surveyed were exposed to natural hazards and had suffered significant damage. For example, the [Savegre Biosphere Reserve](#) is Costa Rica's only coastal and marine biosphere reserve and it is exposed to tsunamis, storm surges and flooding from heavy rainfall. These natural hazards threaten not only the population but also a rich and very localised biodiversity that is sometimes endemic to the biosphere reserve.

Although mangrove forests along the coast can bolster the population's resilience to both geological and climate-related hazards by breaking the strength of incoming waves, these have become fragmented in Savegre Biosphere Reserve. [To address this situation, UNESCO experts worked with national and local emergency agencies](#), local government officials, Costa Rican experts and at-risk populations from 2021 to 2022 to strengthen the resilience of coastal communities by developing an integrated approach to preparedness for coastal hazards. UNESCO mapped mangrove cover in the biosphere reserve, held a community workshop on how nature-based solutions like mangroves could mitigate coastal hazards and also identified opportunities for restoring the coastline. With UNESCO's support, the biosphere reserve plans to implement local projects to restore its coastal mangrove forests to shield the reserve from future hazards.

Since 2022 UNESCO has also been implementing a project aimed at surveying and monitoring the progression of ecosystem restoration in 7 Biosphere Reserves of Latin America and Caribbean in the framework of the World Network of [Man and the Biosphere MAB Programme](#). This project in particular involves the Seaflower Biosphere Reserve (Colombia), the Guanahacabibes Peninsula Biosphere Reserve (Cuba), the Macizo del Cajas Biosphere Reserve (Ecuador), the Encrucijada Biosphere Reserve (Mexico), the Darien Biosphere Reserve (Panama) and the Noroeste Amotapes-Manglares Biosphere Reserve (Peru).

[The website of the UNESCO project highlights that](#) *In Latin America and the Caribbean, healthy mangroves are a precious resource for indigenous peoples and local communities, including afro-descendants. Healthy mangroves provide them with a source of food and serve as a natural buffer against hurricanes, storms and floods. They also provide habitat for various species of bird, reptile and amphibian and, thereby, generate employment through ecotourism.*

UNESCO is working with these local communities and with local MAB management committees in the participating biosphere reserves to restore their mangrove forests. In order to support communities in their mangrove restoration and conservation efforts, the Man and the Biosphere Programme will implement over three years (2022-2025) the project "[Mangrove restoration as a nature-based solution in biosphere reserves in Latin America and the Caribbean](#)" (MangRes).

This project, realized with the support of several donors, aims to carry out an assessment of the state of mangrove ecosystems and their restoration potential, as well as to implement restoration campaigns using local knowledge and science, promoting education for sustainable development. Education is a strong component of the project and young people will be involved to support implementation



within their own communities. The project will also strengthen grassroots networks as a means of raising awareness and developing skills to facilitate collective action.

[A special website informs in detail about the activities that will be carried out and the results progressively achieved.](#) Through the specific sections dedicated to each Biosphere Reserve, it will be possible to follow the results achieved in each of the territories involved.

To know more

[United Nations Decade on Ecosystem Restoration | UNESCO](#)

[An Inside Look at the Beauty and Benefits of Mangroves -Article in UNESCO Stories](#)

[UNESCO Support mangrove conservation in UN News](#)

[Global awareness critical to protect world's mangroves Article in UN News](#)

[Mangroves: Our Allies Against Climate Change UNESCO event](#)

[Celebrating mangroves as sustainable solutions for climate change in the Caribbean – UNESCO News](#)

[Against coastal hazards in Biosphere Savegre reserve in Costa Rica](#)

[Savegre Biosphere Reserve in Costa Rica](#)

[MangRes UNESCO Programme](#)

[UNESCO publishes 125 posters of mangroves around the world](#)

Photography.mangroveactionproject.org/gallery/gallery-2023

[Protecting biodiversity, reconciling all forms of life: the example of the Amazon Biosphere Reserves Project](#)

[UNESCO stories from the field](#)

[UN Decade on Ecosystem Restoration](#)

[2022 State of the World's Mangroves report](#)

