

5th World Heritage Marine Managers Conference SUMMARY



Introduction

Since the first marine site was inscribed on UNESCO's World Heritage List in 1982, the network has grown to include 50 unique marine sites in 37 countries that stretch from the poles to the tropics. Although they cover less than 1% of the planet's oceans, these 50 sites protect at least 21% of the world's surface area of blue carbon ecosystems, are home to 35% of the world's threatened marine species and cover 15% of the world's coral reef ecosystems. Protecting and conserving these global places of Outstanding Universal Value (OUV) is key to meeting the ambitious global target, through the Kunming-Montreal Global Biodiversity Framework, to safeguard at least 30% of the ocean as well managed marine protected areas by 2030.

Every three years, the managers of these 50 marine World Heritage sites come together to share best practices in marine protected area conservation, brainstorm solutions and jointly build a more resilient future for the ocean's most unique ecosystems and biodiversity. The 5th edition took place in the transboundary Wadden Sea World Heritage site (Denmark, Germany, Netherlands (Kingdom of the)) in October 2023.

Over five days, representatives from the global network of marine World Heritage sites, together with renowned experts from around the world, discussed topics such as adapting to climate change and building community resilience, managing invasive species, securing sustainable finance and engaging local businesses, young people and volunteers. Themes were carefully chosen to reflect key management priorities and knowledge gaps as identified by the network of marine World Heritage managers via an online survey completed ahead of the conference, as well as focused sitespecific outreach and feedback from other initiatives throughout the past three years. The results of this survey are reflected throughout this document.

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The conference celebrated conservation achievements from across the network, including the implementation of cross-site partnership agreements to foster sustainable tourism and protect migratory bird species. It also highlighted the development of climate resilience strategies that are now underway in more than half of the marine World Heritage sites. This is especially significant since the third World Heritage Marine Managers Conference held in 2016 illustrated how ill-equipped and overwhelmed World Heritage managers were in tackling climate change.

This 5th conference builds on previous editions held in Glacier Bay National Park and Preserve, United States of America (2019), Galapagos Islands, Ecuador (2016), Scandola Reserve, France (2013) and Hawaii, USA (2010).

The learnings and gaps identified at this conference, as outlined in this document, will set the priorities for marine World Heritage capacity building for the years to come. The next World Heritage Marine Managers Conference will be held in 2026.

The conference was organised in collaboration with the Common Wadden Sea Secretariat of the Trilateral Cooperation for the Protection of the Wadden Sea and financially supported by the Principality of Monaco, the French Biodiversity Agency, the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection of Germany, the Environmental Protection Agency for the Ministry of Environment of Denmark, Schleswig-Holstein Ministry for Energy Transition, Climate Protection, Environment and Nature (Germany), the Nature Conservancy's Reef Resilience Network, the Great Barrier Reef Foundation, Schleswig-Holstein Ministry for Energy Transition, Climate Protection, Environment and Nature, and the Municipality of Esbjerg (Denmark).



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About the <u>Wadden Sea</u> World Heritage site (Denmark, Germany, Netherlands)

The Wadden Sea is the largest unbroken system of intertidal sand and mud flats in the world. It is a large, temperate, relatively flat coastal wetland environment, formed by the intricate interactions between physical and biological factors that have given rise to a multitude of transitional habitats with tidal channels, sandy shoals, sea-grass meadows, mussel beds, sandbars, mudflats, salt marshes, estuaries, beaches and dunes. The area is home to numerous plant and animal species, including marine mammals such as the harbour seal, grey seal and harbour porpoise, making it one of the world's most important biodiversity hotspots for this type of ecosystem. The Wadden Sea is one of the last remaining large-scale, intertidal ecosystems where natural processes continue to function largely undisturbed. It is a crucial stopover for millions of migratory birds on their journey to their wintering or summering grounds.





Marine World Heritage at a glance



50

outstanding ocean places in 37 countries



100%

have management systems in place



Covering over

20%

of the planet's blue carbon ecosystems



Home to nearly

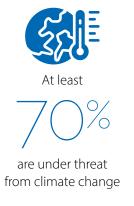
35%

of the world's marine IUCN red-list threatened species













Conservation in a rapidly changing ocean

Climate change is the greatest threat to marine World Heritage sites, with at least 70% of sites at risk, as per the 2020 IUCN World Heritage Outlook. The latest IPCC report predicts ongoing ocean warming until at least 2300, more frequent global marine heatwaves, rising sea levels, and shrinking Arctic sea ice. These climate-related impacts, along with other local challenges like overfishing, marine pollution and coastal development, create unprecedented challenges for marine World Heritage.

Since 2016, nearly half of the marine World Heritage sites are on a journey to develop comprehensive climate resilience strategies after the third World Heritage Marine Managers Conference illustrated how ill-equipped and overwhelmed World Heritage managers were in tackling climate change. It also marked the start of the Resilient Reefs Initiative through which resilience strategies were launched across sites in Australia, Belize and Palau in 2023 and New Caledonia in 2024. However, many sites have not been able to begin development of climate resilience strategies due to financial and capacity limitations.

A particular concern revolves around the 29 coral reefs inscribed on the World Heritage List. A <u>UNESCO report</u> from 2018 predicted that all World Heritage-listed coral reefs would cease to exist as functioning coral reef ecosystems by the end of this century under a business-asusual emissions scenario. As a first line of defence, these sites require enhanced understanding of bleaching alert systems and implementation of coral bleaching preparedness practices to be able to rapidly deploy monitoring and evaluation measures during such events.

Three significant gaps are evident for ensuring effective conservation of marine World Heritage in the face of climate change. Firstly, a lack of financial



93% of the extra heat trapped by the increasing greenhouse gases is ending up in the ocean.

Professor Stefan Rahmstorf, Potsdam Institute for Climate Impact Research (Germany)

capacity is the most pertinent obstacle to preparing for and responding to climate impacts across marine World Heritage sites. More than half of marine World Heritage managers surveyed consider an increase in funding to be one of the most urgent needs in their site, either for purchasing specific equipment or infrastructure (e.g., research centres, monitoring equipment or elevated trails to protect mangroves) or to realise specific projects and programmes (e.g., development and implementation of site-specific climate resilience strategies). Protecting marine World Heritage for future generations demands more stable and continuous funding streams.

Secondly, there's a clear need for more scientific innovation and equitable and accessible sharing of knowledge, tools and resources among marine World Heritage sites and global marine protected areas. Managers, scientists, and donors are eager to support healthy oceans and marine World Heritage sites, but there's a challenge: the 2021 UNESCO science assessment survey revealed that nearly 75% of sites lack knowledge on protecting their OUV from climate change impacts, and about two-thirds lack the tools to understand climate change effects on their biodiversity and ecosystems. We

An inclusive approach to resilience building in Palau.



© Sachi Singeo Jones

A collaborative effort involving local management, the community, NGOs, and scientists led to the launch of a comprehensive Resilience Strategy for the Rock Islands Southern Lagoon World Heritage Site (Palau) in 2023. This strategy, part of the Resilient Reefs Initiative (RRI), complements the existing management plan and prioritizes

policy coherence to effectively align resilience actions with broader reef conservation plans. It identifies three core areas—Ecosystem Protection, Good Governance, and Community Engagement—to deliver outcomes for a resilient reef ecosystem and the communities that are reliant on the reef for their livelihood, national economic base, physical protection, and cultural identity. Implementation of the strategy is being supported through the RRI with the launch of four identified projects, valued at USD\$620,000. These projects aim to address resilience challenges in the key areas for the marine World Heritage site of sustainable fisheries, cultural preservation, adaptive management, and sustainable financing.

Key resource: The Reef Resilience Network.



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To respond to the knowledge gaps on the ground, The Nature Conservancy's Reef Resilience Network (reefresilience.org)

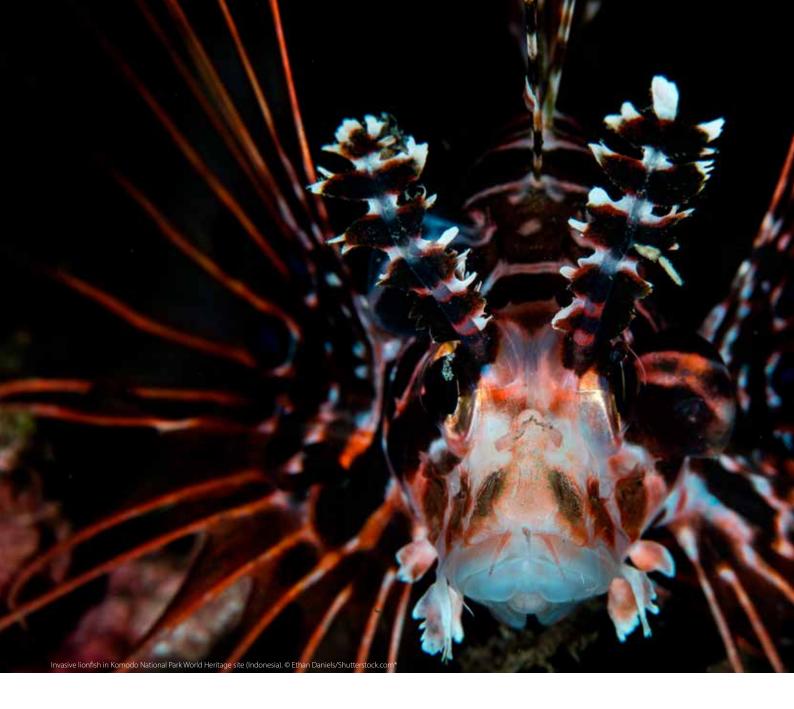
provides free online resources for coral reef managers worldwide. Trainings cover key management topics including resilience-based management, strategic communication, remote-sensing for coral reef and mangrove conservation, coral reef restoration and climate adaptation. The Network also offers webinars, case studies, toolkits, article summaries, and in-person and online support to help marine managers apply the latest science and strategies to effectively manage, protect, and restore coral reefs.

must establish a stronger network of evidence-based solutions to address these issues and help sites plan for an uncertain future.

Finally, successful adaptation requires a holistic approach that considers building resilience across both ecosystems and communities. It involves active and ongoing involvement of stakeholders from both private and public sectors as well from local communities who live in and adjacent to the World Heritage sites and depend on the ecosystem services for their livelihoods. This adaptive and inclusive approach to management should be integrated across all management plans and practices, with community stewardship of sites encouraged. Furthermore, management should consider not just physical

scientific knowledge, but also integrate behavioural, social and political science for climate adaptation.

Key challenges for resilience building, as identified through the Resilient Reefs Initiative, include integrating climate data into management, enhancing cooperation with indigenous communities, managing fisheries to reduce pressures on coral reefs, improving coastal development practices for the benefit of vulnerable communities and ecosystem health, building local capacity for largescale restoration and adaptation, strengthening the socio-economic resilience of coastal communities and recognising the value of coastal ecosystems to secure new sources of support for their protection.



Challenges and solutions to managing invasive species

Marine World Heritage safeguards some of the world's most crucial ocean biodiversity, from large tropical seabird rookeries and global stopover points for migratory birds, to extensive shark populations and vast coral reefs. A UNESCO and IUCN assessment shows that 35% of threatened marine species occur in UNESCO World Heritage marine sites. This includes a significant portion of the world's shark and ray

species, marine fish, hard corals, marine invertebrates, whale and dolphin species and sea turtles. These sites are also home to 40% of seabird species and 60% of penguin species.

According to the 2020 IUCN World
Heritage Outlook, 75 percent of the
50 UNESCO World Heritage marine
sites are threatened by invasive species.
When species are introduced to marine

ecosystems they can quickly proliferate, often causing drastic habitat changes and reducing endemic biodiversity in the process. The effects occur both at the land and sea areas of World Heritage sites with increasing linkages between the two. To protect the OUV and the communities relying on them, marine World Heritage sites are implementing advanced biosecurity measures and launching eradication efforts.





By prioritising comprehensive invasive species management in marine World Heritage sites, we ensure the trajectory toward a resilient and thriving future for their native biodiversity."

Professor James Russel, University of Auckland (New Zealand)

The acceleration in the global increase of invasive species numbers and distribution has alarming implications, especially for islands. As biodiversity hotspots, islands and the unique species found there are particularly vulnerable to invasive species. On a global scale, there is now enough data and knowledge to identify the major threats to island biodiversity and know what actions are needed to prevent further extinctions and range reductions. However, this information is not always openly transferred to marine World Heritage site management teams. For example, 60% of marine World Heritage sites lack knowledge of how climate change will shift geographical distribution of species and which species are most at risk. Sites and their research partners need financial support to upgrade existing

research infrastructure, deploy the latest technologies for data collection and train staff to operate technologies and interpret results in the context of longterm monitoring programmes.

In the meantime, a key aspect of protecting the OUV of islands contained within marine World Heritage sites is biosecurity to prevent invasive species establishing, or re-establishing. Often just minor changes in visitor behaviour can help prevent major impacts from invasive species. Nature-based solutions, such as restoring land-sea connections and involving local and indigenous communities, can enhance island resilience and align human and biodiversity needs.



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Controlling invasive species in the Seychelles and Brazil.

A comprehensive effort has been made to enhance biosecurity within the Aldabra Atoll World Heritage site (Seychelles) to protect its unique biodiversity. In the Aldabra Atoll, efforts involve implementing strict procedures across all pathways to prevent invasive alien species incursions, including strengthening quarantine facilities, improving biosecurity, finalising surveillance, and incursion response protocols, and building local capacity. To date, the site has successfully eradicated feral goats, red-whiskered bulbuls, Madagascar fody and agave sisalana.

The Brazilian Atlantic Islands: Fernando de Noronha and Atol das Rocas Reserves World Heritage site (Brazil) has experienced success in feral cat management through the development and implementation of a cat control plan. The plan was developed and implemented advocating for ongoing sterilization of both pet and stray cats. The approach includes raising community awareness about responsible ownership and educating people about the impact of cats on native wildlife. Monitoring strategies that aid adaptive and integrated cat management are also recommended. Thanks to a collaborative effort involving the local government, NGOs and the community, 96% of urban area cats in Fernando de Noronha have been sterilized within four years of introducing the plan.

Removing invasive terrestrial species in these World Heritage-listed islands is essential to re-establish healthy populations of native 'connector' species on the islands that transfer nutrients from the ocean to the islands and vice versa, including seabirds, seals and land crabs.



Community empowerment for conservation

From training volunteers to assist in eradication of the invasive Burmese python in the Everglades National Park (USA) to building community support through establishing sustainable jobs at iSimangaliso Wetland Park (South Africa), empowering indigenous peoples and local communities has a key role to play in the ongoing conservation of marine World Heritage sites. A recurrent theme from across the conservation successes explored during the conference was the importance of establishing trust between the various

stakeholders, including the local and indigenous communities, tourism operators and tourists, fisher people and the local management teams. Through establishing these connections, sites have overcome financial and social challenges previously hindering the conservation of their sites and established community stewardship that helps to ensure protection in a sustainable manner for generations to come. Another important aspect is the involvement of youth, including young volunteers, to raise awareness

and strengthen commitment for the safeguarding of the site.

At the same time, it is important that visitors to marine World Heritage sites are engaged through strategic storytelling that provides a sense of understanding of the OUV of the site and the need to protect it, as well as what to do when visiting. Practices encouraged to fulfill this include ensuring that all staff have a degree of interpretation ability, developing short films, and updating park displays to iterate the World Heritage values of the site.



Sharing traditional knowledge to care for country is important for our culture and the protection of World Heritage values. Together, we go on this journey with the younger generation following in the footsteps of elders past."

Hazel Walgar, Department of Biodiversity, Conservation and Attractions (DBCA) Cultural Advisor and Baiyungu Elder and Nyinggulu Traditional Owner, Ningaloo Coast (Australia)

Integrating cultural perspectives in the management of Ningaloo Coast (Australia) and Papahānaumokuākea (USA).



© Inel Johnsson/DBCA

The day-to-day responsibility for the management of the Ningaloo Coast World Heritage area (Australia) is jointly shared by the Traditional Owners and the local government agency, the Department of Biodiversity, Conservation and Attractions. The active involvement of the Traditional Owners ensures there is an ongoing mutual exchange of knowledge between cultural and contemporary management practices to best preserve, protect, manage and promote the World Heritage area and meet the obligations of the World Heritage Convention.

In <u>Papahānaumokuākea</u> World Heritage site (USA), efforts are made to integrate Native Hawaiian culture into management plans through a collaborative framework called Mai Ka Pō Mai. This framework, based on Hawaiian cosmology, articulates values and principles guiding strategies in five management areas across the World Heritage site that align with Native Hawaiian culture and values, as well as the various federal and state agency mandates and missions.

Balancing conservation, tourism and community interests in South Africa.



© iSimangaliso Wetland Park

The <u>iSimangaliso Wetland Park</u> World Heritage site (South Africa) has implemented interventions to encourage the participation of the local and indigenous peoples in the economy of the World Heritage site. These initiatives empower historically disadvantaged communities, enabling them to establish small businesses that support various park operations, from tourism services to construction and maintenance of infrastructure. Today, after 25 years of World Heritage designation, iSimangaliso Wetland Park supports over 12,000 jobs, and hosts an environmental education program that reaches 150 schools and more than 2,400 future leaders every year.



5th World Heritage Marine Managers Conference. © UNESCO/Hjortborg Tauser

Establishing sustainable financing and partnerships

Most marine World Heritage sites rely on traditional sources of funding, such as government support and international development resources. Surveys conducted by UNESCO among the 50 World Heritage marine sites indicate, however, that many sites fall short of their conservation goals due to a lack of adequate finance. While financing lacks, conservation challenges are mounting.

At the same time, climate change is causing rapid changes to ocean biodiversity and ecosystems globally. Taken together with the responsibility to conserve places of OUV for future generations, it becomes imperative for UNESCO World Heritage marine sites to diversify financing mechanisms to allow for long-term conservation. Many sites lack an understanding of available financial resources, their suitability and cost-benefit analysis. Considerations explored during the conference include creating or partnering

with foundations, crowdfunding, Blue Bonds and debt-for-nature swaps and blue carbon credits. There are plenty of solutions at all different price-points for the challenges faced and the World Heritage Marine Managers Network is an excellent forum for learning about these solutions and sharing them rapidly.

Partnerships with non-government organisations can amplify messages, accelerate impact, increase funding, develop new solutions and enhance awareness of sites' value. Site managers are encouraged not to undersell themselves and should establish clear funding priorities. Exploring emerging markets, like biodiversity credit markets, and leveraging monitoring programs are also useful to allow sites to establish biodiversity baselines.

There is a strong demand for greater cooperation across marine World Heritage sites, both North-South and at the regional level, including financial support, technology transfer and knowledge sharing and joint scientific research and patrols. Access to a global pool of expertise, inter-site mentoring networks and best practices can replicate management successes across the network, as well as to global marine protected areas, and avoid duplication of failures.

Since the inaugural World Heritage Marine Managers Conference in Hawaii in 2010, global partnerships have blossomed among various UNESCO World Heritage marine sites. Notable collaborations include the 2014 agreement between the Wadden Sea (Denmark, Germany, Netherlands) and Banc d'Arguin National Park (Mauritania) World Heritage sites, focusing on bird monitoring to protect migratory birds along the East Atlantic Flyway. In 2019, Glacier Bay National Park and



The challenges
we face are too
big for each of
us on our own –
partnering is the
only way in which
we can rapidly
accelerate and
scale our impact
in the face of
increasing threats."

Theresa Fyffe, Great Barrier Reef Foundation

Preserve (USA) joined forces with West Norwegian Fjords - Geirangerfjord and Nærøyfjord (Norway) to enhance cruise ship operations, visitor programs, and community engagement practices. Meanwhile, the Sundarbans (Bangladesh) and Sundarbans National Park (India) World Heritage sites collaboratively monitor and patrol their shared heritage.

In between the tri-annual in-person meetings, the World Heritage Marine Managers Network connects local managers and their teams digitally several times each year to share solutions around key conservation challenges. Online meetings to date have covered key themes as identified across the network, including blue carbon credits, building climate resilience, debt-for-nature swaps, coral bleaching preparedness, managing invasive species, ocean science gaps and managing the impacts of the global COVID-19 pandemic on marine World Heritage.

Cross-continental collaboration for migratory species conservation on the East Atlantic Flyaway



© Common Wadden Sea Secretariat*

In 2014, the <u>Wadden Sea</u> (Denmark, Germany, Netherlands) and the <u>Banc</u> <u>d'Arguin National Park</u> (Mauritania) signed a partnership agreement to protect the

migratory birds visiting both marine World Heritage sites as part of the East Atlantic Flyway. Both sites understand that the preservation and wellbeing of migratory bird populations depends on the conservation status of their World Heritage areas. They are closely interlinked and decided to join forces to cooperate on monitoring and management, support capacity building, share best management practices and learn from one another embedded in the Wadden Sea Flyaway Initiative. The Wadden Sea provides support to migratory birds as a staging, moulting, and wintering area. Meanwhile, every year approximately 30% of the estimated 7 million wading birds that use the East Atlantic Flyway spend the winter at the Banc d'Arguin National Park.

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Debt-for-nature swaps for ocean conservation in Belize and **Ecuador**



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Through innovative national debt restructuring and Blue Bond arrangements, both the Belize Barrier Reef Reserve System (Belize) and the Galápagos Islands (Ecuador) are securing sustainable finance to help conserve their marine World Heritage sites over the next decades.

In 2022, Belize's national debt refinancing unlocked USD\$180 million for ocean conservation efforts, extending notable benefits to the Belize Barrier Reef Reserve System World Heritage site among other marine areas nationally. A yearly allocation of approximately USD\$4 million, lasting until 2040, is directed towards plans that encompass increasing biodiversity protection zones to 30% by 2030, enhancing fisheries governance and establishing a Blue Carbon Framework. Key achievements to date include designating all remaining public lands within the World

Heritage site as strict mangrove reserves and increasing biodiversity protection zones nationally to 20.5%, with 11.63% falling under High Biodiversity Protection. An additional USD\$90 million endowment fund is being established for ongoing financial support beyond 2040.

Similarly, Ecuador entered a Blue Bond arrangement of USD\$656 million in 2023, marking the largest in the world to date. The arrangement will funnel at least USD\$12 million each year into management of the Galápagos Islands World Heritage site until 2041. The funds generated from the Blue Bond have been strategically allocated to support conservation efforts and promote ecosystem resilience in the World Heritage site and its surroundings. A fund has been created in parallel that will make available an additional USD\$5.4 million per year for marine conservation projects.

Next steps and call to action

In the face of escalating threats to marine World Heritage sites, urgent and collaborative action is imperative. The 5th World Heritage Marine Managers Conference revealed critical challenges, particularly in the context of climate change, invasive species, community empowerment while stressing the importance of sustainable financing and partnerships. The conference emphasised the need for a unified, global effort to address these challenges. The success stories and collaborative initiatives presented at the conference underscore the potential for positive change. The conference was both an important platform for exchange and inspirational input for the participants,

but also an excellent opportunity to foster collaboration between sites that face similar challenges. This summary outlines priorities crucial for protecting UNESCO World Heritage marine sites against the challenges of a warming ocean.

The 50 marine sites inscribed on the UNESCO World Heritage List are vital in meeting global environmental and climate commitments. While global efforts are aimed at reducing climate emissions, enhancing resilience by alleviating local pressures is crucial for ensuring the survival of marine World Heritage. By safeguarding these sites, we uphold a substantial portion of the world's crucial ecosystems. This includes safeguarding over 20% of the planet's blue carbon ecosystems and 15% of the global coral reef cover. Additionally, it encompasses the protection of 35% of the marine species listed on the IUCN Red List of Threatened Species. This strategy provides the best opportunity to protect threatened species and retain billions of tons of CO2 and other greenhouse gases in the ground by protecting these critical carbon sinks. Member States, funding platforms, philanthropists, NGOs, and research institutions should use this summary document to support marine World Heritage, recognizing their role in biodiversity conservation and carbon sequestration.



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What brings us together are the challenges that we face in modern times, such as climate change, sea level rise and the invasion of exotic animals and plants. Together, we stand much stronger, so that we can protect these UNESCO World Heritage marine sites far into the future."

Pedro Ramos, Everglades National Park World Heritage site (USA)



The work we are doing is not only for our UNESCO World Heritage marine site: we are all connected. The ocean is one ocean. Whatever actions we take are going to spill over to the coastal areas where many people are living and depending on these resources."

Frauke Fleischer-Dogley, Aldabra Atoll World Heritage site (Seychelles)



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