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# Galápagos Islands

# A living museum and showcase of evolution

The Galápagos Islands area situated in the Pacific Ocean some 1,000 km from the Ecuadorian coast. This archipelago and its immense marine reserve is known as the unique “living museum and showcase of evolution.”

Galápagos Finch  
Credit: Gabriel Drozdov



Its geographical location at the confluence of three ocean currents makes it one of the richest marine ecosystems in the world. Ongoing seismic and volcanic activity reflects the processes that formed the islands. These processes, together with the extreme isolation of the islands, led to the development of unusual plant and animal life, such as the many different subspecies of mockingbirds and finches, all of which inspired Charles Darwin's theory of evolution by natural selection following his visit in 1835.

The Galápagos Marine Reserve is an underwater wildlife spectacle with abundant life ranging from corals to sharks to penguins to marine mammals. No other site in the world can offer the experience of diving with such a diversity of marine life forms that are so familiar with human beings that they accompany divers. The diversity of underwater cannot be found anywhere else.

The archipelago's geology begins at the sea floor and emerges above sea level where biological processes continue. Three major tectonic plates meet at the basis of the ocean, which is of significant geological interest. In comparison with most oceanic archipelagos, the Galápagos are very young.

The site demonstrates the evolution of the younger volcanic areas in the west and the older islands in the east. Ongoing geological and geomorphological processes, including recent volcanic eruptions, small seismic movements, and erosion provide key insights to the puzzle of the origin of the islands. Almost no other site in the world offers protection of such a complete continuum of geological and geomorphological features.

The origin of the flora and fauna of the Galápagos has been of great interest to people ever since the publication of the *Voyage of the Beagle* by Charles Darwin in 1839. The islands constitute an almost unique example of how ecological, evolutionary and biogeographic processes influence the flora and fauna on both specific islands as well as the entire archipelago.

Darwin's finches, mockingbirds, land snails, giant tortoises and a number of plant and insect groups represent some of the best examples of adaptive radiation which still continues today. Likewise, the Marine Reserve, situated at the confluence of three major eastern Pacific currents and influenced by climatic phenomena such as El Niño, has had major evolutionary consequences and provides important clues about species evolution under changing conditions. The direct dependence on the sea for much of the island's wildlife (e.g. seabirds, marine iguanas, sea lions) is abundantly evident and provides an inseparable link between the terrestrial and marine worlds.

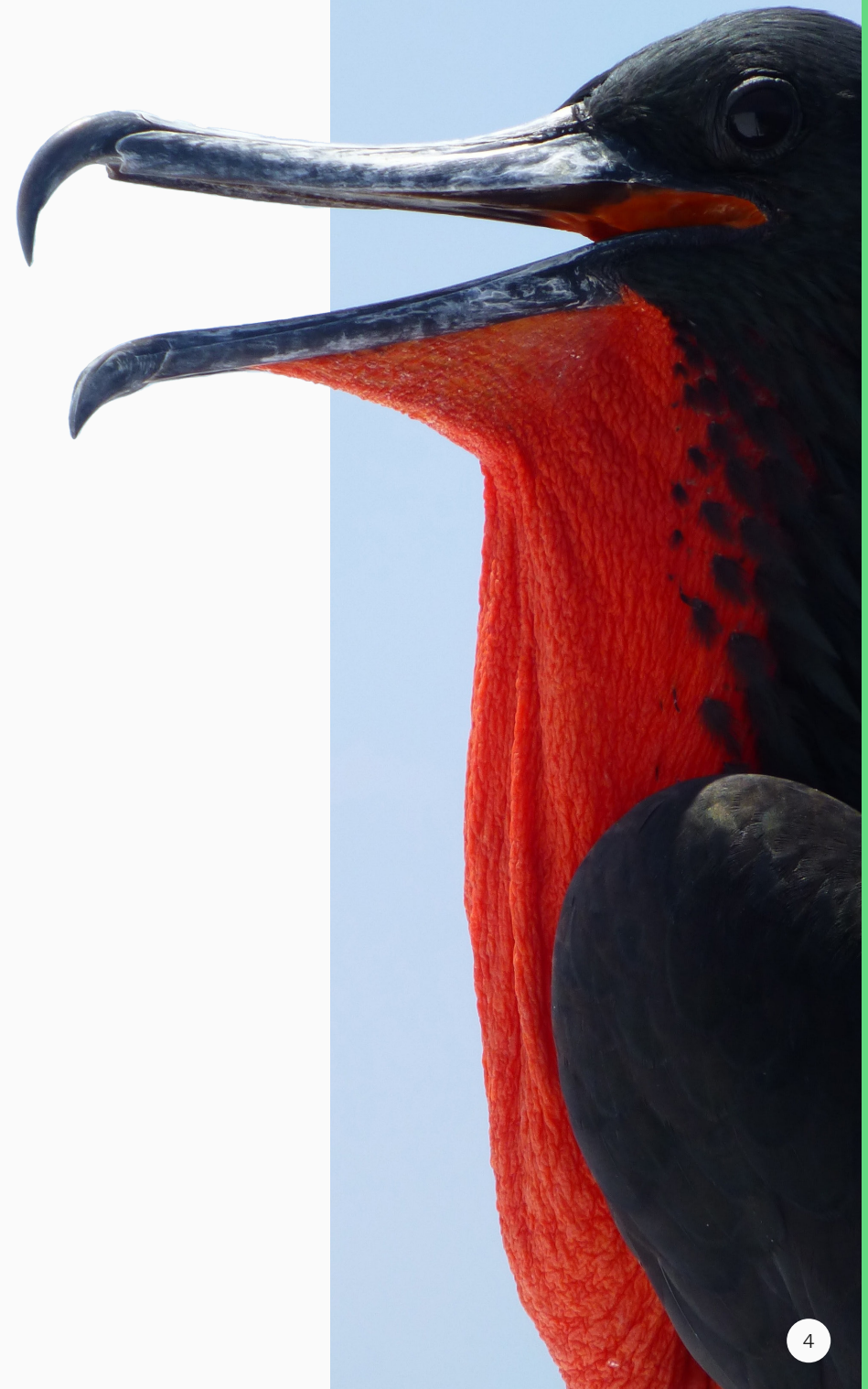
The islands have relatively high species diversity for such young oceanic islands, and contain emblematic taxa such as giant tortoises and land iguanas, the most northerly species of penguin in the world, flightless cormorants as well as the historically important Darwin's finches and Galápagos mockingbirds.

Examples of endemic and threatened species include 12 native terrestrial mammal species (11 endemic, with 10 threatened or extinct) and 36 reptile species (all endemic and most considered threatened or extinct), including the only marine iguana in the world. Likewise the marine fauna has an unusually high level of diversity and endemism, with 2,909 marine species identified with 18.2% endemism. High profile marine species include sharks, whale sharks, rays and cetaceans.

The interactions between the marine and terrestrial biotas (e.g. sea lions, marine and terrestrial iguanas, and seabirds) are also exceptional. Recent exploration of deep sea communities continues to produce new additions to science.

The Galápagos archipelago is located about 1,000 km from continental Ecuador and is composed of 127 islands, islets and rocks, of which 19 are large and four are inhabited. 97% of the total emerged surface (7,665,100 ha) was declared National Park in 1959. Human settlements are restricted to the remaining 3% in specifically zoned rural and urban areas on four islands (a fifth island only has an airport, tourism dock, fuel containment, and military facilities). The islands are surrounded by the Galápagos Marine Reserve which was created in 1986 (70,000 km<sup>2</sup>) and extended to its current area (133,000 km<sup>2</sup>) in 1998, which makes it one of the largest marine reserves in the world.

The marine reserve includes inland waters of the archipelago (50,100 km<sup>2</sup>) in addition to all those contained within 40 nautical miles, measured from the outermost coastal islands. Airports on two islands (Baltra and San Cristobal) receive traffic from continental Ecuador with another airport on Isabela mostly limited to inter-island traffic. All the inhabited islands have ports to receive merchandise. The other uninhabited islands are strictly controlled with carefully planned tourist itineraries limiting visitation. Around 30,000 people live on the islands, and approximately 170,000 tourists visit the islands each year.



# This is what UNESCO stands for

The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity.



UNESCO's mission is embodied in an international treaty called *Convention Concerning the Protection of the World Cultural and Natural Heritage*, adopted by the organization in 1972.

*Cultural Heritage* refers to monuments, groups of buildings and sites with historical, aesthetic, archaeological, scientific, ethnological, or anthropological value. *Natural Heritage* refers to outstanding physical, biological and geological formations, habitats of threatened species of animals and plants, and areas with scientific, conservation, or aesthetic value.

### UNESCO's World Heritage mission is to:

1

Encourage countries to sign the World Heritage Convention and to ensure the protection of their natural and cultural heritage.

2

Encourage States Parties to the Convention to nominate sites within their national territory for inclusion on the World Heritage List.

3

Encourage States Parties to establish management plans and set up reporting systems on the state of conservation of their World Heritage sites.

4

Assist States Parties in safeguarding World Heritage sites by providing technical assistance and professional training.

5

Provide emergency assistance for World Heritage sites in immediate danger.

6

Support States Parties' public awareness-building activities for World Heritage conservation.

7

Encourage the participation of the local population in the preservation of their cultural and natural heritage.

8

Encourage international cooperation in the conservation of our world's cultural and natural heritage.

Galápagos Blue-Footed Booby  
Credit: Andy Brunner



# A look back at the origins of UNESCO

## 1959

UNESCO launches an international campaign and collects \$80 million USD to save the Abu Simbel temples in the Nile Valley. A draft of the convention on the protection of cultural heritage is prepared.

## 1962

UNESCO presents its *Recommendation on the Safeguarding of the Beauty and Character of Landscapes and Sites*. This recommendation covers the preservation and restoration of natural, rural, and urban landscapes and sites, whether natural or man-made, which have a cultural or aesthetic interest, or form typical natural surroundings.

## 1965

A White House conference in Washington, D.C. called for a *World Heritage Trust* to protect “natural and scenic areas and historic sites.”

## 1966

UNESCO spearheads an international campaign to save Venice after disastrous floods threatened the city.

## 1968

The International Union for Conservation of Nature (IUCN) develops a proposal similar to the World Heritage Trust for its members.

## 1972

Following a United Nations Conference on the Human Environment in Stockholm, Sweden, and the work of expert groups involving IUCN, ICOMOS and UNESCO, all the proposals came together in the Convention concerning the Protection of World Cultural and Natural Heritage, which was adopted by the General Conference of UNESCO in Paris on 16 November 1972.

## 1978

The first twelve sites are inscribed on the World Heritage List.

## 1992

This year marks the 20<sup>th</sup> Anniversary of the World Heritage Convention, the creation of the UNESCO World Heritage Centre, and the adoption of the cultural landscapes category by the World Heritage Committee, making the World Heritage Convention the first international legal instrument to recognize and protect cultural landscapes.

## 1994

The Global Strategy for a Balanced and Representative World Heritage List is adopted by the World Heritage Committee with the goal of achieving better regional balance and greater thematic diversity in the World Heritage List. It encourages the nomination of sites in under-represented parts of the world and especially in categories which are not yet fully represented on the List.

UNESCO launches the Young People's participation in World Heritage Preservation and Promotion Project with the aim to develop new educational approaches to mobilize young people in becoming involved in the protection and promotion of heritage.

## 2002

The United Nations proclaims 2002 the *International Year for Cultural Heritage*.

To mark the 30<sup>th</sup> anniversary of the World Heritage Convention, UNESCO, with the help of the Italian Government, organizes in Venice the International Congress, *World Heritage: Shared Legacy, Common Responsibility* with the objective to assess the past 30 years of implementation of the World Heritage Convention and to strengthen partnerships for World Heritage conservation.

# How a site gets nominated

To be included on the World Heritage List, sites must be of outstanding universal value and meet at least one-out-of-ten selection criteria.

These criteria are explained in the Operational Guidelines for the Implementation of the World Heritage Convention which, besides the text of the Convention, is the main working tool on World Heritage.

Only countries that have signed the World Heritage Convention, pledging to protect their natural and cultural heritage, can submit nomination proposals for properties on their territory to be considered for inclusion in UNESCO's World Heritage List.

The criteria are regularly revised by the Committee to reflect the evolution of the World Heritage concept itself. Until the end of 2004, World Heritage sites were selected on the basis of six cultural and four natural criteria.

With the adoption of the revised Operational Guidelines for the Implementation of the World Heritage Convention, only one set of ten criteria exists.

The protection, management, authenticity and integrity of properties are also important considerations. Since 1992, significant interactions between people and the natural environment have been recognized as cultural landscapes.



Galápagos Marine Iguana  
Credit: Caterina Sanders

## Selection criteria:

1

Represents a masterpiece of human creative genius.

2

Exhibits an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town planning, or landscape design.

3

Bears a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared.

4

Is an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history.

5

Is an outstanding example of a traditional human settlement, land-use, or sea-use that is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change.

6

Is directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance.  
*The Committee considers that this criterion should preferably be used in conjunction with other criteria.*

7

Contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance.

8

Is an outstanding example representing major stages of earth's history, including the record of life, significant ongoing geological processes in the development of landforms, or significant geomorphic or physiographic features.

9

Is an outstanding example representing significant ongoing ecological and biological processes in the evolution and development of terrestrial, freshwater, coastal and marine ecosystems, and communities of plants and animals.

10

Contains the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.





# UNESCO World Heritage sites in **danger**

Armed conflict and war, earthquakes and other natural disasters, pollution, poaching, uncontrolled urbanization, and unchecked tourist development pose major problems to World Heritage sites.



These can threaten the very characteristics for which a site was originally inscribed on the World Heritage List.

Dangers can be *ascertained*, referring to specific and proven imminent threats, or *potential*, when a property is faced with threats which could have negative effects on its World Heritage values.

These are some illustrative cases of sites inscribed on the List of World Heritage in Danger.

Galápagos Land Iguana  
Credit: Hans-Jurgen Mager

## City of Bam in the Islamic Republic of Iran

The ancient citadel and surrounding cultural landscape of the Iranian city of Bam, where 26,000 people lost their lives in the earthquake of December 2003, was simultaneously inscribed on UNESCO's World Heritage List and on the List of World Heritage in Danger in 2004. Important international efforts were mobilized to salvage the cultural heritage of this devastated city.

## Bamiyan Valley in Afghanistan

This cultural landscape was inscribed on the List of World Heritage in Danger in 2003 simultaneously with its inscription on the World Heritage List. The property is in a fragile state of conservation considering that it has suffered from abandonment, military action and dynamite explosions. Parts of the site are inaccessible due to the presence of anti-personnel mines. UNESCO, at the request of the Afghan Government, coordinates all international efforts to safeguard and enhance Afghanistan's cultural heritage, notably in Bamiyan.

## Kathmandu Valley in Nepal

The exceptional urban and architectural heritage of Kathmandu, Patan and Bhaktapur has been severely affected by uncontrolled urban development. The property is composed of seven Monument Zones, which, since the time of inscription in 1979, have unfortunately been seriously altered, resulting in a general loss of authenticity and integrity of the property as a whole. For these reasons the site was inscribed on the List of World Heritage in Danger in 2003. UNESCO is working with the Nepalese authorities to help them develop a long-term management plan to conserve the remaining

World Heritage values of the property and adopt corrective measures to address illegal building activities.

## Walled City of Baku in Azerbaijan

Representing an outstanding and rare example of medieval architecture at the crossroad of the many different cultures in the region, the Walled City of Baku sustained significant damage during the earthquake of November 2000 and has been increasingly affected by the pressure of urban development, the absence of conservation policies and by questionable restoration efforts. For these reasons, it was inscribed on the List of World Heritage in Danger in 2003. Since then, UNESCO has been working with the State Party and the Advisory Bodies to set up a plan of action to address the conservation issues as well as with stakeholders to coordinate the implementation of safeguarding measures.

## Historic Town of Zabid in Yemen

The outstanding archaeological and historical heritage of Zabid has seriously deteriorated in recent years. Indeed, 40% of its original houses have been replaced by concrete buildings. In 2000, at the request of the State Party, the Historic Town of Zabid was inscribed on the List of World Heritage in Danger. UNESCO is helping the local authorities to develop an urban conservation plan and to adopt a strategic approach for the preservation of this World Heritage site.

## Rio Platano Biosphere Reserve in Honduras

Commercial and agricultural intrusions into the site threaten the World Heritage values for which it had been inscribed in 1982. The advancing agricultural frontier at

the west side of the reserve, pushed by small farmers and cattle ranchers, is already reducing the Reserve's forest area. The southern and western zones of the Reserve are subject to massive extraction of precious wood such as the caoba. The site was thus inscribed on the List of World Heritage in Danger in 1996. An eleven-point corrective action plan has been elaborated and the management plan for Rio Platano is being carried out with a World Heritage Fund contribution.

## National Parks of Garamba, Kahuzi-Biega, Salonga, Virunga, and the Okapi Wildlife Reserve in the Democratic Republic of Congo

Since 1994, all five World Heritage sites of the DRC were inscribed on the List of World Heritage in Danger

as a result of the impact of the war and civil conflicts in the Great Lakes region. In 1999, an international safeguarding campaign was launched by UNESCO together with a number of international conservation NGOs to protect the habitat of endangered species such as the mountain gorilla, the northern white rhino and the okapi. This resulted in a 4-year \$3.5 million USD emergency program to save the five sites, funded by the United Nations Foundation and the Government of Belgium. In 2004, international donors, non-governmental organizations and the governments of Belgium and Japan pledged an additional \$50 million USD to help the Democratic Republic of the Congo rehabilitate these World Heritage parks.



Galápagos Sally Lightfoot Crabs  
Credit: Rod Long

# UNESCO World Heritage stories of success

The World Heritage Convention is not only “words on paper” but is above all a useful instrument for concrete action in preserving threatened sites and endangered species.



By recognizing the outstanding universal value of a site, States Parties commit to its preservation and strive to find solutions for its protection.

If a site is inscribed on the List of World Heritage in Danger, the World Heritage Committee can take immediate action to address the situation. This has led to many successful restorations. The World Heritage Convention is also a very powerful tool to rally international attention and actions through international safeguarding campaigns.

Often, the World Heritage Committee and the States Parties, with the assistance of UNESCO experts and other partners, find solutions before a given situation deteriorates to an extent that would damage the site.

## Giza Pyramids in Egypt

These pyramids were threatened in 1995 by a highway project near Cairo which would have seriously damaged the values of this archaeological site. Negotiations with the Egyptian Government resulted in a number of alternative solutions which replaced the disputed project.

## Royal Chitwan National Park in Nepal

This Park provides refuge for about 400 greater one-horned rhinoceros characteristic of South Asia. The World Heritage Committee, in the early 1990s, questioned the findings of the environmental impact assessment of the proposed Rapti River Diversion Project. The Asian Development Bank and the Government of Nepal revised the assessment and found that the River Diversion project would threaten riparian habitats critical to the rhino inside Royal Chitwan. The project was thus abandoned and this World Heritage site was saved for the benefit of future generations.

## Archaeological Site of Delphi in Greece

At the time of its nomination in 1987, plans were underway to build an aluminum plant nearby the site. The Greek Government was invited to find another location for the plant, which it did, and Delphi took its rightful place on the World Heritage List.

## Whale Sanctuary of El Vizcaino in Mexico

In 1999, the World Heritage community campaigned against a plan for enlarging an existing salt factory to commercial scale in Laguna San Ignacio in El Vizcaino Bay, the last pristine reproduction lagoon for the Pacific grey whale. The World Heritage Committee forewarned the Mexican Government of the threats posed to the marine and terrestrial

ecosystems, the grey whales as key species, as well as the overall integrity of this World Heritage site by locating saltworks inside the Sanctuary. As a result, the Mexican Government refused permission for the saltworks in March 2000.

## Mount Kenya National Park/National Forest in Kenya

The nomination of this site was first referred back to the State Party on the basis of findings during the evaluation that suggested there were serious threats to the site, primarily illegal logging and marijuana cultivation inside the Park. The State Party responded with an action plan which included provision of additional vehicles, increased patrols, community awareness projects, training of forest guards and a review of the policy affecting the adjacent forest reserve. Based on these assurances, the Committee inscribed the site in 1997. Today, some threats still remain but there has been significant progress in the management of the site.

## Angkor in Cambodia

One of the most important archaeological sites in South-East Asia, Angkor Archaeological Park contains the magnificent remains of the different capitals of the Khmer Empire, from the 9<sup>th</sup> to the 15<sup>th</sup> century. In 1993, UNESCO embarked upon an ambitious plan to safeguard and develop the historical site carried out by the Division of Cultural Heritage in close cooperation with the World Heritage Centre. Illicit excavation, pillaging of archaeological sites and landmines were the main problems. The World Heritage Committee, having noted that these threats to the site no longer existed and that the numerous conservation and restoration activities coordinated by UNESCO were successful, removed the site from the list of World Heritage in Danger in 2004.



St-Barthélémy Island, Galápagos  
Credit: Nathalie Marquis

## Old City of Dubrovnik in Croatia

The “Pearl of the Adriatic,” dotted with beautiful Gothic, Renaissance and Baroque buildings had withstood the passage of centuries and survived several earthquakes. In November and December 1991, when seriously damaged by artillery fire, the city was immediately included on the list of World Heritage in Danger. With UNESCO providing technical advice and financial assistance, the Croatian Government restored the facades of the Franciscan and Dominican cloisters, repaired roofs and rebuilt palaces. As a result, in December 1998, it became possible to remove the city from the List of World Heritage in Danger.

## Wieliczka Salt Mine in Poland

This property was inscribed in 1978 as one of the first twelve World Heritage sites. This great mine has been actively worked since the 13<sup>th</sup> century. Its 300 kilometers of galleries contain famous works of art with altars and statues sculpted in salt, all of which were seriously threatened by humidity due to the introduction of artificial ventilation at the end of

the 19<sup>th</sup> century. The site was placed on the List of World Heritage in Danger in 1989. During nine years of joint efforts by both Poland and the international community, an efficient dehumidifying system was installed, and the Committee, at its session in December 1998, had the satisfaction of removing the site from the List of World Heritage in Danger.

## Ngorongoro Conservation Area in the United Republic of Tanzania

This huge crater with the largest concentration of wild animals in the world was listed as an endangered site in 1984 because of the overall deterioration of the site due to the lack of management. By 1989, thanks to continuous monitoring and technical cooperation projects, the situation had improved and the site was removed from the List of World Heritage in Danger.

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