



International workshop

A Priority Research Agenda to Inform Climate Change Adaptation and Mitigation for the Galapagos Marine Reserve



October 25-29, 2017
Charles Darwin Research Station
Galapagos Islands, Ecuador



The Galapagos Islands are a biodiversity hotspot and one of the most iconic places on Earth. This tropical archipelago is at the cross-roads of major current systems that bring both warm and cold waters and consequently harbors a rich and unique diversity of marine life.



Galapagos represents a perfect natural laboratory to predict the impacts of climate change upon marine ecosystems, as it lies at the epicenter of El Niño Southern Oscillation, which strongly influences its ocean-atmospheric and ecological systems.

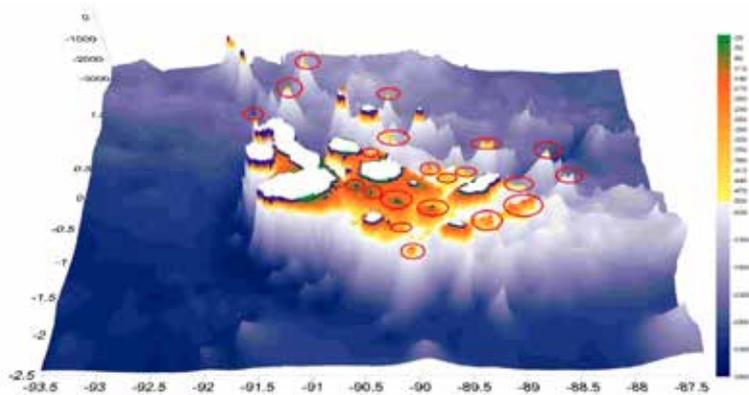
Within this context, the Charles Darwin Foundation (CDF) is organizing an international workshop to develop a long-term research agenda for climate change adaptation and mitigation in the Galapagos Marine Reserve.



The need for a priority research agenda

Modeling scenarios have predicted that the archipelago will be drastically affected by climate change and Galapagos has been defined as Ecuador's most vulnerable region. However, many of the bio-physical processes and systems that shape the Galapagos' marine ecosystems remain poorly understood and understudied.

Previous efforts have identified the possible impacts of climate change on the archipelago and local management authorities have acknowledged the need for quality science-based knowledge to inform adaptation and mitigation plans. However, no clear research agenda currently exists to tackle the possible effects of climate change on the unique Galapagos wildlife and its human population (approximately 25,000 residents and over 215,000 visitors a year).



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The Charles Darwin Foundation & Research Station

The CDF is a nonprofit organization that since 1964 has run the Charles Darwin Research Station. It is the oldest and most accomplished scientific research organization in Galapagos, relying entirely on donations and research grants. As the official scientific adviser to the government of Ecuador, CDF undertakes cutting edge research for the management and conservation of the Galapagos Islands.

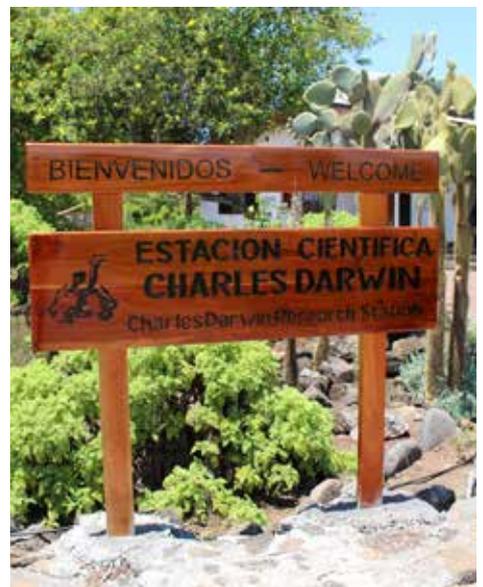
CDF has spear-headed many successful marine conservation initiatives, including the creation of the participatory fisheries management program; the design and establishment of the Galapagos Marine Reserve; and the creation of the newly declared Darwin and Wolf Marine Sanctuary.

CDF has a number of long-term environmental and ecological datasets that can set the baseline to understand the impacts of climate change and inform adaptation plans.

Some of these datasets include:

- 50+ years of environmental data: air and sea surface temperatures, precipitation and humidity.
- 15+ years of sub-tidal ecological monitoring data on fish, macro-invertebrate and benthic communities.
- 10+ years of fisheries data.
- 5-15 years of population trends for the most charismatic and socio-economically important species, including albatrosses, penguins, flightless cormorants, sea turtles and sharks.

CDF's international network of collaborators also includes over 100 scientists from top universities and research institutions.





An international workshop of climate change experts

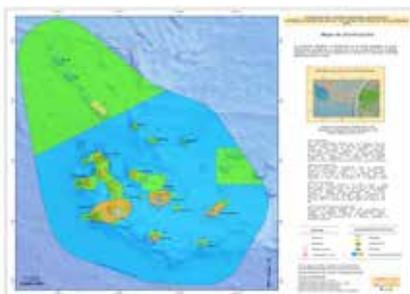
The workshop will be attended by a panel of leading international scientists and local researchers, with expertise in the areas of oceanography, marine ecology, fisheries science, policy and the socio-economics of climate change.

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Specific objectives:

- Identify existing knowledge and develop priority research lines.
- Define a climate change research agenda for Galapagos marine ecosystems.
- Obtain long-term funding sources to achieve set research objectives.



Workshop outcomes:

- A peer-review publication for a high-impact factor journal highlighting the workshop's main outcomes.
- A report outlining the prioritized marine research agenda.
- A concept proposal to secure long-term financial support for CDF's research agenda.



Contact:

Dr. Pelayo Salinas de León
Senior Marine Ecologist
pelayo.salinas@fcdarwin.org.ec
+593997478133

Claire Hobbs
CDF Grants Manager
claire.hobbs@fcdarwin.org.ec