

The Ocean and Coasts

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The Ocean and Coasts in the UNFCCC process

The ocean plays an important role in regulating global climate and is very sensitive to the impacts of climate change and ocean acidification¹. This has yet to be fully recognized in the UNFCCC negotiations.

IUCN urges Parties to recognize, in the post 2012 regime, the contribution that healthy marine and coastal ecosystems can deliver towards both mitigation and adaptation strategies.

Well-functioning ecosystems with high natural biodiversity are able to sequester more carbon than degraded natural systems. Healthy marine ecosystems are highly resilient and provide benefits and services, such as shore protection, that help people adapt to the adverse effects of climate change. Healthy marine and coastal ecosystems are sustaining the Earth's natural life support systems, ensuring sustainable livelihoods, food security and enabling sustainable economic development.

IUCN welcomes efforts by Parties to highlight essential elements relevant to the ocean and coasts throughout the UNFCCC negotiation process, including through submissions to the LCA negotiating text². There is an urgent need to draw attention to the links between marine and coastal issues and climate change. In particular, IUCN emphasizes the following points for the consideration by Parties:

Coastal ecosystems are vital global carbon sinks

Coastal ecosystems, especially tidal salt marshlands, seagrass meadows and mangroves, are vital global carbon sinks. The management, conservation and enhancement of coastal ecosystems can increase the removal of CO₂ from the atmosphere without further harming marine ecosystems and provide a cost-effective way of offsetting emissions³.

IUCN recalls:

- **The commitments** made by Parties to the Convention on Climate Change to mitigate climate change:
UNFCCC, Article 4, paragraph 1 (d): to promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all GHGs not controlled by the Montreal Protocol, including biomass, forests and **oceans** as well as other terrestrial, **coastal and marine ecosystems**.

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¹ For more information please see IUCN's publication on: The Ocean and Climate Change. Tools and Guidelines for Action (2009).

² FCCC/AWGLCA/2009/INF.1 and FCCC/AWGLCA/2009/INF.2

³ For more information please see IUCN's publication on: The Management of Natural Coastal Carbon Sinks (2009).

IUCN accordingly calls on Parties to:

- Recognize the need for integrated management, conservation and enhancement of coastal ecosystems;
- Retain references to sustainable coastal and ocean management practices in the current negotiation texts.

Coastal ecosystems are being lost at alarming rates

Curbing the degradation and loss of natural coastal ecosystems can help to reduce emissions and hence contribute to climate change mitigation.

IUCN calls on Parties to:

- Consider drivers of coastal ecosystem destruction, with a view to reducing emissions from the degradation and the loss of coastal carbon stocks;
- Request the Subsidiary Body for Scientific and Technological Advice to initiate a programme of work on a range of methodological and policy approaches (e.g. positive incentives) that aim to maintain and enhance coastal carbon stocks as well as to reduce emissions from the loss and degradation of coastal ecosystems.

Ocean-based CO₂ sequestration technologies need to be approached with extreme caution

Several ocean-based CO₂ sequestration technologies such as Carbon Capture and Storage (CCS) and ocean • fertilization have been proposed as mitigation solutions to moderate increasing atmospheric CO₂ concentrations.

IUCN welcomes

- The references in the negotiation texts and supporting documents of AWG-LCA underlining the importance of an environmentally sound response to climate change.

IUCN accordingly calls on Parties to:

- Approach the promotion and development of ocean-based CO₂ sequestration technologies with extreme caution and refrain from their increased use before their safety, long-term effectiveness and net environmental benefits have been established.

Ocean and marine ecosystems should be allowed to adapt naturally to climate change

Negative impacts of climate change and ocean acidification are already evident and are affecting many marine and coastal

ecosystems. Even slight, temporary warming events of seawater temperature can lead to widespread mortality of coral reefs. Ocean Acidification⁴, caused by increased amounts of CO₂ dissolved in seawater, will trigger additional major alterations to marine and coastal ecosystems. In highly acidified waters calcifying organisms such as corals will slowly fail to calcify, thus causing coral reefs to crumble or dissolve. Ocean acidity has increased by 30% since the beginning of the Industrial Revolution. The rate of change is far greater than anything previously experienced during the last 65 million years and will accelerate in the coming decades because of CO₂ already emitted into the atmosphere¹.

IUCN recalls:

The objective of the UNFCCC:

- UNFCCC, Article 2, paragraph 1: The ultimate objective of this Convention [...] is to achieve [...] stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change [...].

IUCN accordingly calls on Parties to:

- Keep emission reduction targets under review in the light of emerging scientific findings to allow for ecosystems to adapt naturally to climate change.

Coastal Ecosystem-based Adaptation should be promoted

IUCN promotes Ecosystem-based Adaptation (EbA), or the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people and local communities to adapt to the adverse effects of climate change. Coastal environments, such as mangroves and coral reefs, play a crucial role in protecting the shoreline from flooding, erosion and other impacts of extreme weather events. Well-functioning coastal ecosystems provide resources for subsistence and commercial fishing, purify water and air, attract tourists, and provide cultural inspiration.

IUCN urges Parties to:

- Recognize the role that ecosystems can play in enabling people to adapt to climate change under the Adaptation Framework currently being discussed.

⁴ For more information on Ocean Acidification, please see: EPOCA: Ocean Acidification – The Facts. A special introductory guide for policy advisers and decision makers (2009).