

This publication was printed on Mohawk Options, 100% PCW, paper which is 100% post consumer waste, is made with process-chlorine-free, manufactured with non-polluting, wind-generated energy through a contract with Community Wind Energy, and is certified by Green Seal and the Forest Stewardship Council, which promotes environmentally appropriate, socially beneficial and economically viable management of the world's forests. Smartwood certifies that Mohawk Options 100% PCW is FSC-certified under the guidelines for 100% recycled paper (FSC-STD-40-001).

The conservation impact of using this paper instead of virgin fiber is equivalent to:

- 3 trees preserved for the future
- 4 kg. waterborne waste not created
- 5,423 lt. wastewater flow saved
- 72 kg. solid waste not generated
- 142 kg. greenhouse gases prevented
- 2,388,994 (BUTs) energy not consumed

Additional savings because the paper is made with windpower and carbon offsets;

- 72 kg. emissions not generated
- 37 m3, natural gas unused



WWF Peru
Programme Office
www.wwfperu.org

Trinidad Morán 853 Lince
Lima 14 – Peru
Tel.: +51 (1) 440 5550



for a living planet®

This publication was made possible by WWF Austria.
2009



MARINE Programme

conserving the world's most productive sea

© Kjeld Nielsen

The Peruvian Sea: biodiversity and productivity

The Peruvian sea combines the best of two natural worlds: the biodiversity of the northern tropical sea and the unusual productivity of the central and southern cold sea. Despite its tropical latitude, the Peruvian marine current is made up of cold waters (13°C - 17°C) full of plankton, produced by coastal upwelling (i.e. when cold waters and nutrients rise to the surface from the seabed), that sustain the largest fishing productivity in the world. This is reflected through the presence of the largest seabird colonies in the world – with historic populations that reach nearly 20 million -, as well as in the exports of over US \$ 1500 million per year in fishmeal and fish oil. The northern coast is very different. The tropical current has temperatures that surpass the temperature of 20°C required for the existence of completely different species and ecosystems such as the mangroves, whose southern distribution limit in the Eastern Pacific is here.

The WWF Peru Marine Programme promotes the conservation of the marine and coastal biodiversity by means of promoting sustainable fishing practices – either by testing options to reduce sea turtle and dolphin bycatch with artisanal fishermen or promoting transparent actions in industrial fishing - and supporting conservation tools as key marine protected areas.

“the Peruvian marine current is made up of cold waters (13°C - 17°C) full of plankton, produced by coastal upwelling that sustain the largest fishing productivity in the world”



Important goals

In line with the WWF Smart Fishing Network Initiative, WWF Peru aims to guarantee the sustainability of the anchovy population in order to contribute towards stabilizing the most important tuna, whitefish, and forage fish (such as the anchovy) populations by 2020.



Bycatch To the rescue of sea turtles

Achieving changes in the fishing practices within the demanding and traditional artisanal fishing operations is not an easy task. The WWF Peru team works directly with artisanal fishermen, living with them, training them and promoting the adoption of improved fishing practices that reduce bird, dolphin, turtle and other bycatch in situ.

At a global level, marine turtles are one of the most endangered species by bycatch and their populations are rapidly declining. For this reason, **WWF Peru works since 2004 in the most important artisanal ports in Peru**, such as Pucusana, Paíta, Salaverry, Chimbote and Ilo **alongside hundreds of fishermen, in order to reduce sea turtle bycatch by replacing common hooks with circle hooks, which drastically reduce bycatch by making it difficult for the turtles to become hooked when trying to take the fish bait.** Aside from substituting these improved hooks, the team of WWF observers trains the fishermen on their use and on the use of the turtle release gear (tool that facilitates the unharmed release of hooked turtles) and accompanies them as they work. By doing this, the observers promote turtle conservation in situ and gather unknown information on fishing practices and sea turtle and other bycatch in Peru. A present accomplishment is that already some vessels have permanently adopted these improved hooks and hundreds of fishermen have received training on the need to protect sea turtles as well as on how to achieve this goal.

Quick facts:

- Despite the tropical location of Peru, the Peruvian or Humboldt marine current contains cold waters that give way to the largest fishing productivity in the world.
- The north coast, located off Piura is the transition point between the Peruvian and tropical current that comes from the north, whose temperatures above 20° provide the conditions for the existence of other species and ecosystems such as the mangroves.

Sustainability and transparency in industrial fishing For a productive and healthy sea

In Peru, the sea is a very important source of income. From seabird guano sales to industrial and artisanal fishing, marine resource management has always been decisive for the national economic growth. WWF Peru works under the WWF Smart Fishing Network Initiative framework, fostering the sustainability of anchovy fishing, one of the main industrial activities in Peru.

The Peruvian anchovy (*Engraulis ringens*), is considered by WWF as a global priority since, aside from supporting the largest fishery in the world, it plays a key role in the eastern Pacific food chain. Peruvian anchovy oil and fishmeal exports surpass US\$ 1500 million per year, for this reason, one of WWF's approaches consists of promoting the market to foster proper industrial and commercial practices through tools such as certification.

In this sense, WWF Peru works along with the Ministry of Production and other authorities to propose the first actions towards a future certification of proper practices (e.g.: the Marine Stewardship Council certification) since 2008.

To achieve this, **WWF promotes transparency mechanisms such as access to information on captures**



– to supervise the established quota - and others that contribute towards recovering anchovy populations and reducing fishing and transformation generated impacts within marine ecosystems.



Marine biodiversity conservation An integrated effort for the Peruvian Sea

The conservation of ecosystems as complex and intensely exploited as those in the Peruvian sea requires a comprehensive strategy. In this sense, aside from promoting the sustainability of artisanal and industrial extractive activities, **WWF promotes the protection of natural marine spaces, in order to contribute to its global commitment of protecting at least 10% of the sea surface to guarantee its biodiversity conservation.**

Since the nineties, WWF Peru has contributed towards the management of the Paracas National Reserve, the only protected marine area in Peru, where it has worked along with its authorities to develop its main management and planning instruments, such as the Master Plan (Plan Maestro), as well as with important research to identify its conservation objects and to propose protective actions, and even implement its own interpreting center and parkguard post.

Key information:

- Dolphins and sea turtles are key conservation species prioritized by WWF, which is why WWF Peru centers its efforts in reducing their bycatch during artisanal fishing.
- WWF Peru promotes the sustainable management of the anchovy (*Engraulis ringens*), one of the main natural and economic resources in Peru and the Pacific, for being a key part of the marine food chain.