



Inter-American Convention for the Protection and Conservation of Sea Turtles Peru 2006 Annual Report

Second Annual Report Form **[Translation]**

Directory

Country	PERU
Agency or institution responsible for preparing this report	- Ministry of Foreign Relations - Ministry of Production - Ocean Institute of Peru-IMARPE - National Institute of Natural Resources- INRENA - Collaboration from NGOs. APECO. ACOREMA, WWF
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Focal Point

Institution: Ministry of Foreign Relations

Name: Liliana Gómez de Weston

Signature:

Date: August 2006

1. Biological Information

1.1. Species present

Species	Pacific Ocean	Atlantic Ocean	Caribbean Sea
	Phase(s)	Phase(s)	Phase(s)
<i>Lepidochelys olivacea</i>	F, M		
<i>Lepidochelys kempii</i>			
<i>Dermochelys coriacea</i>	F, M		
<i>Eretmochelys imbricata</i>	F, M		
<i>Chelonia mydas</i>	F, M		
<i>Caretta caretta</i>	F, M		

Phases: R = Reproduction; F = Foraging; M = Migration; D = Phase Unknown

1.2. Important sites for sea turtle conservation

	Name of Site	Species (s)	Season	Geographic Location (Lat/Long)	Area (km or hectares, if applicable)	Protection Category	Observations*
Nesting Site	-----	-----	-----	----	----	----	There are none
Foraging site	Paracas National Reserve	Cm, Dc and others	All year	13.9°S/76°3	335,000 of which 217,594 are (marine) 117,406 (terrestrial)	Marine Reserve	
	S. N. Tumbes Mangrove	Cm, Lo and others	All year	Tumbes	2,972	National Sanctuary	
	Pisco	Cm, Lo, Dc	Spring and Summer	13°50, 76°15´			



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	Sechura	Cm	All year	05°50´, 80°56´			
	Isla Lobos de Tierra	Cm		06 °26´ 80 °51´			
Migratory Routes	-----	-----	-----	-----	-----	-----	Unknown
The status of the populations in Peru is unknown; however, it is believed to be similar to the Pacific Southeast population.							

2. Information regarding the use derived from sea turtles

	Types of use	Specie	Products	Ocean Basin	Origin*		Estimated annual quantity	Information source	Actions
					L	I			
Consumptive Use	Commercial, domestic, medicinal	Cm, Dc, Lo, Cc, Ei	Carapace Meat Oil Eggs Others	Pacific Southeast - Peruvian Ocean		X	ND	IMARPE PRODELPHINUS ACOREMA APECO Hays & Brown Aranda & Chanderler	Awareness. Environmental Education. Hook exchange.
Non-consumptive Use	Scientific	Cm, Dc, Lo, Cc, Ei		Pacific Southeast - Peruvian Ocean	X			IMARPE PRODELPHINUS ACOREMA APECO	Information.

* L = legal, I = illegal

3. Main threats

3.1 Habitat and other threats

Threats	Specie(s) Affected	Size of Impact	Geographic Region(s) Affected	Information Source	Actions
Agricultural and industrial wastes, runoff	Cm, Dc, Lo, Cc, Ei	Small	Lima, Callao, Pisco, Chimbote, Paita, Ilo	Not Available	
Contamination from hydrocarbons	Cm, Dc, Lo, Cc, Ei	No data	Lima, Callao, Pisco, Chimbote, Paita, Ilo	Not Available	
Non biodegradable wastes and plastic debris	Cm, Dc, Lo, Cc, Ei	Intense	Lima, Callao, Pisco, Chimbote, Paita, Ilo	Not Available	
Affects on other associated habitats (coral reefs, mangroves, etc.)	Cm, Dc, Lo, Cc, Ei	No Data	Tumbes Mangroves, Algae beds and benthic communities in RNP and Bayóvar.	Not Available	
Debris in ocean	Cm, Dc, Lo, Cc, Ei	No Data	Entanglement occurs only in lines used in aquiculture	Not Available	



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Few existing laws or laws not applied	Cm, Dc, Lo, Cc, Ei	Intense		Not Available	
Responsibilities of State agencies are unclear regarding the management and control of nesting beaches and their associated habitats	Cm, Dc, Lo, Cc, Ei		Although in Peru there are no nesting areas, this threat is intense in foraging areas	Not Available	
Coastal development with inadequate environmental control	Cm, Dc, Lo, Cc, Ei	Intense		Not Available	
Natural Phenomena (El Niño)	Cm, Dc, Lo, Cc, Ei	Intense		Not Available	
Development of unplanned cultivation of scallops and Extraction of macroalgae in feeding areas. (Lack data)	Cm, Dc, Lo, Cc, Ei	Lack data		Not Available	
Scallop hatcheries	Cm		Pisco, Sechura	Acorema 2000 De Paz, 2005	

3.2. Capture (Intentional/incidental)

Threats	Specie(s) Affected	Size of Impact	Geographic Region(s) Affected	Information Source	Actions
Capture of sea turtles in the ocean	Cm, Dc, Lo, Cc, Ei	No Data	Data unavailable to classify by area.	IMARPE, PRODELPHINUS, ACOREMA, APECO Hays-Brown 1982 & Chandler 1989, Kelez et al 2003a	
Fishery	Cm, Dc, Lo, Cc, Ei	No Data	Bottom trawling in Sechura Fisheries	Not available	
Gillnet fisheries	Cm, Dc, Lo, Cc, Ei	Intense	Pisco, Constante-Sechura.	ACOREMA Hays-Brown 1982 & Chandler 1989, Kelez et al 2003a	
Longline fisheries	Cm, Dc, Lo, Cc, Ei	Small	Pacific	IMARPE, PRODELPHINUS, ACOREMA, APECO	Hook substitution Program
Direct capture in the ocean	Cm		Paracas	Acorema 2000	Awareness
Gillnet fisheries	Cm, Dc, Lo		Constante, Salaverry, Pucusana, Pisco Chincha, Callao, Chimbote, Huacho	Acorema, 2000 Alfaro, 2002 De Paz, 2002	Awareness
Longline fisheries	Cc, Cm, Dc, Lo		Paita, Ilo, Callao, Pucusana	Alfaro 2004 Kelez 2005	Substitute Hooks
Fishing line			Pacific	Kelez et al 2003a	
Beach seines (<i>chinchorros</i>)			Pacific		



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4. Legal Framework

4.1. International instruments

Treaty, Convention, Agreements, Memorandum of Understanding	Year signed and/or ratification
Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES).	27 / 06 / 1975
Convention on Migratory Species (CMS)./ Bonn Convention	Signed : 28/01/1997, Ratified : 1999 D.S.002-97-RE
Convention on Biological Diversity (CDB), adopted in Río de Janeiro.	05 /06 /1992 through the Legislative Resolution N°26181.
Protocol for the Conservation and Administration of Protected Marine and Coastal Areas of the Southeast Pacific	Signed by Peru in 1995, Legislative Resolution N°26468.
Convention for the Protection of the Southeast Pacific Marine Environment and Coastal Zone	Signed by Perú in 1981.
Inter-American Convention for the Protection and Conservation of Sea Turtles	Signed in 1997 and ratified in 1997, through the Legislative Resolution N° 2717.
Code of Conduct for Responsible Fisheries (FAO)	Approved by the FAO Conference on Oct. 31 st , 1995
Inter-American Convention for the Protection and Conservation of Sea Turtles	Signed in 1997. Ratified in 1999.

4.2. National legislation

Type and name of legal instrument (No.)	Description (Range of application)	Sanction(s) Imposed
Law N° 27308 – Forestry and Wildlife Law	Regulates and supervises the sustainable use and conservation of Peru's forest and wildlife resources.	
D.S N° 014-2001-AG Forestry and Wildlife Law Regulation	Regulation of the Forestry and Wildlife Law that establishes measures for the protection of wildlife resources, standards for scientific research, and establishes the infractions in wildlife matters.	Depends on the severity of the infraction, without prejudice to the civil and/or penal actions that took place, sanctions are fines no less than 0,1 nor greater than 600 UIT
D.S N° 034-2004-AG	Approves categorizing wildlife species as threatened and prohibits their hunting, capture, possession, transportation or exportation for commercial purposes. For such Categories, the IUCN criteria are applied: <i>Derموchelys coriacea</i> (CR) critically endangered <i>Caretta caretta</i> (EN) endangered <i>Chelonia mydas agassizzi</i> (EN) endangered <i>Eretmochelys imbricata</i> (EN) endangered <i>Lepidochelys olivacea</i> (EN) endangered	Articulated in D.S N° 014-2001-AG Regulation of the Forestry and Wildlife Law



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Supreme Decree N° 026 –2001-PE: reaffirms the Ministerial Resolution N°103-95-PE	Maintains the prohibition of the capture of all of the diverse species of whales and of all species of sea turtles in jurisdictional waters of Peru.	
Ministerial Resolution N° 01065 –76-PE (Fisheries Ministry), January 7 th , 1977	Prohibits the capture of a) <i>Dermochelys coriacea schlegellii</i> along the entire coast, and b) <i>Chelonia mydas agassizii</i> less than 0.8 m long.	
Ministerial Resolution N° 103-95-PE (Fisheries Ministry), as of March 6th, 1995	Prohibits the capture directed at all species of sea turtles present in waters under Peruvian jurisdiction.	
Supreme Decree N°013-99-AG (Ministry of Agriculture)	Approves a systemization of threatened wildlife species, which classifies the sea turtles (<i>Dermochelys coriacea</i> , <i>Chelonia mydas</i> , <i>Eretmochelys imbricata</i> , <i>Lepidochelys olivacea</i> and <i>Caretta caretta</i>) as “species in a vulnerable state”. Prohibits their hunting, extraction, transportation and/or exportation of the entire specimen for commercial purposes, products and/or sub-products of the wildlife species listed, with the exception of those originating from zoo hatcheries or wildlife management areas. However, under the new Forestry and Wildlife Regalement, the categories must be modified using the IUCN criteria.	

4.3. Indicate any legal instruments that are currently in the process of being approved.

.....NO.....

4.4. Public and private institutions involved in sea turtle conservation

Institution/ Entity	Responsibilities
Ministry of Foreign Relations	IAC Focal Point
Ministry of Production	Regulation and Inspection
Ministry of Agriculture	Regulation
National Institute of Natural Resources (INRENA)	Regulation and Control
Ocean Institute of Peru (IMARPE)	Research
General Direction of Captaincy and Ports, Peru Navy	Control and Inspection
Municipalities (RM 103-95-PE)	Control
Regional Fisheries Bodies (Regional Governments)	Regulation and Control
Fisheries Training Center of Paita	Training



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Peruvian Association for Nature Conservation (APECO)	Together with the Sea Turtle Group – Perú, they develop sea turtle conservation projects that include the fields of research, conservation and communication. Develop the Sea Turtle Conservation Project along the entire Coast of Peru with the support of CMS and other institutions.
Sea Turtle Group – Peru	Together with APECO, they develop sea turtle conservation projects that include the fields of research, conservation and communication. Develop the Sea Turtle Conservation Project along the entire Coast of Peru with the support of CMS and other institutions.
NGO - Coastal Areas and Marine Resources (ACOREMA)	
NGO - Association PRO DELPHINUS	A non-profit organization with the goal of protecting endangered species, among others.
NGO – World Wide Fund for Nature WWF- Perú	Implement the hook exchange program to contribute to the reduction of incidental capture of sea turtles.

5. Exceptions

Programs involving extractive use (include Management Plan)

None

6. Conservation Efforts

6.1 General description of the sea turtle protection and conservation program

- 1) The existing national legislation not only prohibits hunting, possession, transportation or exportation of sea turtles for commercial purposes, but also provides measures for their conservation and preservation.
- 2) A campaign aimed at continually circulating information regarding the protection and conservation of sea turtles through holding permanent workshops, such as the ones indicated below:
 - A workshop for the National Working Group to Define the Guidelines for Priority Actions of a Sea Turtle Conservation Program, involving governmental as well as non-governmental institutions.
 - Training in sea turtle monitoring in the Artisanal and Industrial Fisheries, intended for the observers on the Compass Fishing project (industrial purse seine fisheries), landing observers for artisanal fisheries and Technical Scientific Researchers (TCI).
 - Workshops for artisanal fishermen on the use of circular hooks and de-hooking devices.
 - Workshops in various points along the Peruvian coast geared towards artisanal fishermen for the purpose of informing them on the problems related to the incidental capture of sea turtles, introducing mitigation alternatives



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to these problems, presenting the results of applied experiences in Ecuador and within the Northern Atlantic, and seeking participation in looking for joint solutions.

- With the goal of testing and implementing a technical solution to the problem of incidental capture of sea turtles in longline fisheries, the Ocean Institute of Peru together with the Paita Fisheries Training Center, agreed on carrying out an experiment using circular hooks in longline fishing. This project hopes to learn about the functionality and efficiency of circular hooks compared to the typical J hook; and test their efficiency in reducing sea turtle mortality. The success of the experience with circle hooks and their acceptance observed among the artisanal fisherman has served as the basis for trying to implement a similar program in Peru, under the guidance of IATTC.

Within the framework of the program, workshops regarding artisanal fishermen and the need to conserve sea turtles and the possible benefits that the use of circle hooks can provide fisheries plus protecting sea turtles. In addition, on board observers have been trained for the purpose of carrying out adequate data collection on the vessels.

- Sea turtle biology and conservation workshops intended for on board observers in industrial purse seine fisheries.

6.2 Relevant Projects and Activities

Project/Activities	General objective	Results obtained	Duration	
			From	Until
Project "Sea turtle mortality caused by artisanal fishing " Association Pro Delphinus	To quantify sea turtle mortality as a consequence of fishing in Peru, to perform mitochondrial DNA analyses in order to understand interpopulation relationships within Peruvian waters	<ul style="list-style-type: none"> - Identified individuals interested in compiling the data - 8 ports are being monitored, with an estimated total of 712 sea turtles, composed of the following species: (Chelonia mydas 74.5%, Caretta caretta 17.5%, Dermochelys coriacea 5.1%, Lepidochelys olivacea 2.5% and Eretmochelys imbricata 0.4%) - Creation of children's story books, as well as a poster for distribution. - The DNA from three samples of Caretta Caretta show their origin as the west coast of Australia. - Preliminary results of Chelonia mydas DNA samples suggest that they belong to the same stock that nests in the Galapagos. - Eight of the Dermochelys coriacea samples belong to the same species that nests in the Eastern Pacific (México) and Costa Rica. - The Lepidochelys olivacea samples are currently being processed. - Published Alfaro- Shigueto et al, First Confirmed Occurrence of Loggerhead Turtles in Perú. 	October 2003 /	September 2004



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Project "Genetic variability of sea turtles present in the Peruvian Ocean" Sea Turtle Group and Peruvian Association for Nature Conservation (APECO)	To contribute to the conservation of sea turtle populations present in Peru's marine environment.	- 51 samples have been collected, 20 of them are from individuals captured incidentally during fishing activities and 31 are from the remainders of slaughtered and/or stranded individuals. - The specimens captured were <i>Chelonia mydas</i> (32), <i>Lepidochelys olivacea</i> (8), and <i>Caretta caretta</i> (8)	Mayo 2002 to present
Sea Turtle Conservation Project along the entire Coast of Peru	To evaluate the impact caused by industrial fishing activities in areas of sea turtle aggregations	Publication Kelez et al, 2003, New evidence on the loggerhead sea turtle <i>Caretta caretta</i> (Linnaeus 1758) in Peru. <i>Ecología Aplicada</i> . Vol. 2, N 1. (summary)	February 2004-February 2005
IMARPE, under the Fisheries Ministry, prepared dissemination materials, using diagrams to present the basic information on the species of sea turtles that are found along our coasts as well as to introduce the law, RM-N° 103-95-PE, prohibiting the capture, sale and commercialization of sea turtles.	- Circulation of the laws protecting sea turtles - Encourage fishermen, merchants, tourists and the general public to collaborate in the conservation of sea turtles	Training and dissemination of information on the protection and conservation of sea turtles.	1995
"National Workshop to Define the Guidelines for Priority Actions of a Sea Turtle Conservation Program", organized by IMARPE with the support from the Permanent Commission of the Southern Pacific - CPPS, United Nations Environment Programme - PNUMA, World Wildlife Fund-WWF and the National Marine Fisheries Service.	- To determine the current status of sea turtles in Peru - To identify priority actions in implementing and assuring sea turtle conservation in the region.	Prepared the National Report on the Current Status of Sea Turtles in Peru, within the Action Plan for the Protection of the Marine Environment and Coastal Areas of the Pacific Southeast.	January 22-24, 2001
Training workshop in sea turtle monitoring in	Training	The workshop was directed at observers on the Compass Fishing project (industrial purse seine	2003



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<p>the Artisanal and Industrial Fisheries, carried out with the support from the Southwest Fisheries Science Center SWFSC/NOAA and the Association ProDelphinus.</p>		<p>fisheries), landing observers for artisanal fisheries and Technical Scientific Researchers (TCI).</p>	
<p>Workshops for artisanal fisherman on the use of circular hooks and de-hookers. IMARPE-CIAT-NOAA-WWF-PRODELPHINUS-ACOREMA. IMARPE, CIAT, NOAA and WWF-Perú jointly organized workshops at various points along the Peruvian Coast, with the collaboration and participation of the Peruvian NGOs ProDelphinus and ACOREMA, as well as the support from the Federation of Integration and Unification of the Artisanal Fishermen of Peru.</p>	<p>- To inform them regarding the problems related to incidental capture of sea turtles, introduce mitigation alternatives to these problems. - Present results of applied experiences in Ecuadorian and North Atlantic fisheries and seek participation in looking for joint solutions.</p>	<p>Workshops were directed at artisanal fishermen. Of the seven workshops organized, contact was made with 70 artisanal fishermen, of which various demonstrated interest in changing the type of hook once they have a large enough stock and/or the season for mahi mahi fishing starts (November – March). -</p>	<p>2004</p>
<p>Experiments with circular hooks in longline fisheries. Organized by the Ocean Institute of Peru, in cooperation with the Paita Fisheries Training Center.</p>	<p>Test and implement a technological solution to the problem of incidental capture of sea turtles in longline fisheries.</p>	<p>Trained 23 fishermen throughout Peru.</p>	<p>December of 2004</p>
<p>Study the eco physiology and morphometria of sea turtles in the San Andes, Ica. zone (GTM- PERU & UNALM)</p>	<p>To determine the diet of the Chelonia Mydas. Carry out morphometric studies and studies in reproductive physiology.</p>	<p>The diets of 3 Cm turtles, 2 captured in San Andrés and 1 in Chimbote, were analyzed. The most representative species in the diet of Cm from San Andrés were <i>Ulva costata</i>, <i>Gretoloupia doryphora</i> and <i>Prionites decipiens</i>; while those present in the turtles from Chimbote were of animal origin. Morphometric</p>	<p>2000</p>



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		<p>studies were performed on Cm and Lo. In the case of Cm, 32 carapaces were found. The range of the CCL max. was 84.1 - 51.5 cm, the average was 66.94 cm. For Lo, 4 carapaces were found, with the CCL max. ranging from 67.6 - 48.8 cm, with an average of 58.8 cm. Comparisons suggest that 4 of the Cm and 2 of the Lo carapaces were adults. Studies were carried out on the reproductive physiology of 1 Lo and 1 Cm. The Lo individual was a juvenile female and the Cm was a female with various sizes of follicles and heavy gonads; therefore, the individual was presumed to be close to sexual maturity.</p>	
Evaluate the captive rearing of a sea turtle clutch (GTM –PERU/ APECO)	Determine the species, survival rate and tagging of individuals, evaluate their size and weight at time of release.	The clutch was from the species <i>Lepidochelys olivacea</i> , 57 hatchlings emerged. 35 had survived after nine months. All hatchlings were measured, weighed and photographed; the largest of the group (9 in total) were tagged in their posterior flippers. The CCLn-t ranged from 22.4 - 15.3 cm, the average was 18.93 cm. Average weight was 935.49 gr., with a range of 1520 - 530 gr. The hatchlings were released 60 minutes from the coast in the open sea.	2001
Evaluate current status of sea turtles along the coast of Peru. (GTM-PERU / APECO)	Evaluate along the entire coast of Peru, the current status of sea turtle populations, covering the biological aspects related to these species.	Around 2500km of coastline was covered, visiting 57 zones between fishing villages, ports, beaches and islands. 103 carapaces from Cm, Lo, Cc and Ei were measured. Morphometric data was used from nesting beaches to determine the stage of sexual maturity of the specimens. The Cm were mostly immature, as well as all of the Cc, while for the Lo, the majority of our data surpassed the minimum obtained on nesting beaches, suggesting that the individuals were adults. As for the distribution of the species, the Lo was found in the most northern zone, Cm along the entire coast and Cc more in the southern zone. Strandings occurred only in the north, in Tumbes and Piura, of which 87.5% were Lo and 12.5% Cm. The turtle meat was used by coastal populations, after which the carapace was used for crafts and finally the oil and blood were used for medicinal purposes.	2001 – 2002
Study on incidental capture of sea turtles during medium scale longline fishing activities in Peruvian waters (GTM-PERU /	Determine the level of interactions between sea turtles and longline fisheries in addition to determining the areas and seasons of high	From the sample taken, a rate of 0.296 sea turtles captured per 1000 hooks was observed when fishing for mahi mahi and sharks; there was no significant difference between the capture rate within these two fisheries, mortality was 0%, most were captured in January and February, capture area ranged from 9° S.	2002 - 2003



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APECO)	interaction.	to 17° S., species captured were Cm adults and sub-adults, Lo adults and Cc juveniles. The individuals most likely to bite the hook were Cc.	
Conserve sea turtle populations along the entire coast of Peru. (GTM-PERU / APECO)	Evaluate the impact from industrial fisheries on sea turtle populations, determine their genetic variability and develop awareness campaigns.		2003 –2004
Study on incidental capture of sea turtles in longline fisheries in Peruvian waters. (GTM-PERU)	To monitor and reduce sea turtle capture and morality from interactions with longline fisheries.		2004 - 2005
Reduce incidental capture of sea turtles by Peruvian longline vessels (GTM-PERU / APECO)	Reduce the rate of sea turtles caught incidentally in Peru's artisanal longline floats through massive substitution of hooks.		2004 - 2005
Evaluate the efficiency of using circular hooks to decrease incidental mortality of sea turtles.	Evaluate the efficiency of using circular hooks.	IMARPE – CEP Paita	2005
Action Plan	Prepare action plan.	Multisectorial coordination for the purpose of creating an outline for an action plan.	2005
Evaluate possible sea turtle nesting areas on the Northern coast of Peru	<ol style="list-style-type: none"> 1. Collect information available on the presence and nesting activity of sea turtles in places along the northern coast of Peru through surveys and meeting with inhabitants and entities representative of the region. 2. Locate current and historical nesting beaches for each species of sea turtle and carry out a rapid assessment of the beaches and their threats. 3. Identify and describe the uses given by local communities to the different sea turtle species and encourage their participation in 		2006



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	conservation actions favoring these species.		
Ecological aspects of Sea Turtles in the Lobos de Tierra Island area	Given the high concentration of sea turtles surrounding this island, population monitoring in this area may serve as an independent indicator of the population trends in the rest of Peru.	The study of sea turtle activities at the Lobos de Tierra Island has allowed the island to be declared an important foraging area for these species in Peru. The continuous follow up on their activities and population will allow a basis to be established to understand the factors that determine their distribution in the coastal zone of northern Peru and establish conservation measures. With these evaluations, new risk factors for sea turtles have been determined, associated with their interactions with fisheries.	2005-06
Hook substitution pilot project WWF-CIAT-PRODELPHINOS-APECO- FIUPAP	Reduce incidental capture of sea turtles. Compare circular hooks to traditional ones demonstrating that through their use one can continue fishing effectively. Promote the use of de-hookers.	This project has been implemented in the Paita, Pucusana and Ilo ports to determine which circular hook is the best for dolphinfish and shark fisheries. During the seasons of these fisheries, it was observed that less turtles were captured and being hooked in a less severe way.	December 2004-September 2006

7. International Cooperation

- Sea turtle biology and conservation workshops geared towards the industrial purse seine fisheries on board observers. IMARPE-SWFSC/NOAA
- National program to reduce incidental capture of sea turtles in artisanal longline fisheries. Workshops for artisanal fishermen on the use of circular hooks and de-hooker devices. IMARPE-CIAT-NOAA-WWF-PRODELPHINUS-ACOREMA.
- APECO and GTM-Peru jointly execute the Sea Turtle Conservation Project along the entire coast of Peru with support from the CMS.

8. National Directory

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9. Sources of Information

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10. Annexes