



# SHRIMP: MEXICO WILD HARVEST

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## MEXICO INTRODUCES MEASURES TO ADVANCE SHRIMP SUSTAINABILITY EXCEEDING US REQUIREMENTS

The 2010 US re-assessment of the Mexican wild shrimp fisheries presented several major findings which not only confirmed compliance with US laws and requirements, but also showed that Mexico has measures in place which exceed US enforcement systems to assure legal production of wild caught shrimp. BRDs are required on all shrimp trawlers; VMS use which are not required in comparable US fisheries is heavily enforced; and TED use was certified by the US State Department as being in compliance with US laws and regulations. Mexico is also engaged in pilot testing catch shares in the inshore shore shrimp fishery, and like the US has an active testing program on net modifications in the trawl fishery to reduce fishery bycatch.

### Fishery

The Mexican Pacific shrimp fishery consists of an inshore artisanal fishery and an offshore trawler fishery. The inshore fishery has approximately 25,000 small open vessels (panagas) that operate as day-boat fishery in near shore waters. The trawler fishery consists of approximately 1,100 vessels fishing in offshore waters. Fishing zones have been established for each fleet with different gear requirements. The fishery is managed with closed season (Apr-Aug) to protect spawning. The status of the Pacific fishery is stable (45,000 mt/y) producing blue and mainly white shrimp. Challenges include overexploited regions (“old” coastal lagoons; uncontrolled fishing); high operating costs and decreasing trend of market price; and bycatch. Current efforts are focused on technological developments (environmental friendly gear, lower costs); ITQ pilot program in Sinaloa for artisanal sector (ca. 10,000 fishers).



### TEDs Compliance Recertified

On October 15, 2010, the US recertified Mexico as being in compliance with Section 609 US Public Law 101-162 which prohibits the import of shrimp and shrimp products harvested in ways that may adversely affect some sea turtle species. This certification is based on a determination that Mexico's turtle excluder devices (TEDs) program is comparable in effectiveness to the U.S. program. The United States and Mexico have been working in close cooperation on sea turtle conservation since mid-1970's. Mexico implemented a plan of action in 2010 to strengthen sea turtle conservation and use of TEDs in its shrimp trawl fisheries as described below. US certification means that wild-harvested shrimp from Mexico's commercial trawl fisheries are in compliance with US TED laws and may be imported into the US.

## TEDs

Vessel inspections are conducted annually prior to the fishing season for all trawlers before vessels are allowed to leave port to ensure compliance with Mexican regulations including proper installation of TEDs. In season enforcement of TED compliance for 2009-2010 covered 1,219 vessels out of fleet of 1,234 or 98% of the offshore fleet. Thirty-eight percent of these inspections (462) took place in port. Sixty-two percent (757) occurred at-sea of which 519 were daylight inspections and 238 were night inspections. TED compliance violations are subject to new stiff penalties which include loss of fishing license, fines and imprisonment. In the 2009-2010 season, six captains were imprisoned for turtle violations. If a sea turtle is found on a vessel, the vessel can be confiscated.

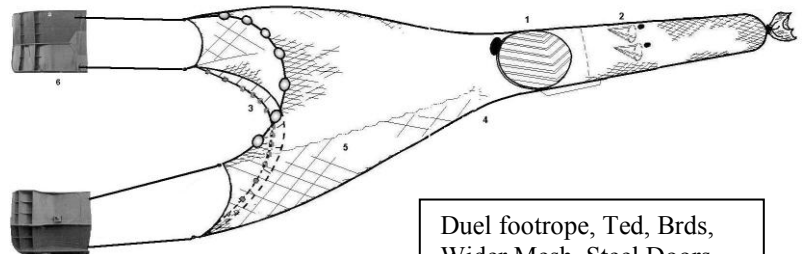


## BRDs

BRDs (bycatch reduction devices) also referred to as fish excluders which have been required in protected areas in the upper Gulf of California for several years are now required on all trawlers operating in Mexican waters. New measures were introduced into the Mexican regulations as part of its Mexican Official Standards (NORMA) early in 2011.

## Bycatch

In 2010, Mexico released results from gear research and tests on new trawl nets which allow bottom fish to escape through a duel foot rope system, wider net mesh sizes, and BRDs placed near cod end. Initial tests show a potential for bycatch reduction. The net also incorporates new hydrodynamic steel doors with higher fuel efficiency, lower carbon footprint and less impact on the bottom. The project was conducted by INAPESCA with support from World Wildlife Fund and the Walton Family Foundation.



## Enforcement Enhancements (VMS)

The Mexican Government upgraded its capacity to enforce fishing activities with Zodiac vessels to enhance at-sea night inspections in preparation for the 2010-2011 shrimp season. Mexico also has a full 100% Vessel Monitoring System (VMS) program to monitor the Mexican fishing fleet 24/7 to track each vessel's operations and location allowing the government remote capability to monitor closed areas and seasons and vessel fishing activities. Large offshore shrimp vessels have VMS monitors mounted in the wheel house and signal monitors if a vessel enters a prohibited zone. Inshore pangas have microchips installed on each individual vessel in addition to vessel registration and crew identification documents. New video monitoring program is being tested on shrimp vessels to allow active surveillance of catch and bycatch composition on deck as well as disposition of catch to prevent illegal handling of protected species or transfers of permitted catch at-sea to other vessels.



VMS monitor

## Observer & Data Collection

Mexico also uses observer coverage on boats in the Pacific and Gulf of Mexico shrimp fishery. Vessel owners are required to allow observers on vessels to provide additional confirmation on fishery compliance, logbook data collection, catch and bycatch composition, and interactions with prohibited species like sea turtles or vaquita marina as well as species of interest such as snapper. Observer coverage is reported to be 10%. Additionally, landing data are collected at the port along with vessel logbook data.

## TED Training & Certification

There are 1,234 vessels which have received permits to fish for shrimp. 100% of the crew are required to be licensed and complete a TED training course in order to fish. Between November 2009 to March 2010, CONAPESCA and PROFEPA conducted nine workshops with the shrimp fishing industry focusing on TED training and compliance. By July 2010, 4,500 people had been trained and received certification of completion of TED training. Three additional workshops were held in July in Tampico, Mazatlan and Guaymas. A total of 15 workshops were held with almost 4,000 people certified (3,957 people).



## Effort Reduction

In order to reduce fishing effort and capacity of the shrimp fleet, the Mexican government instituted a vessel buy-back program funded at \$2.54 million USD. During the past four years, 400 boats have been decommissioned. This initiative also reduces interactions with sea turtles.

## Catch Share Program

The Mexican government has also instituted a pilot project in the Upper Gulf of California to introduce a catch share program. The first phase of the initiative focuses on inshore shrimp “panga” fishery. Under this program, all vessels and fishermen are registered and quotas are set per boat to control catch volume. Small inshore “panga” fishermen who opt out of the shrimp gill net fishery may continue to fish with alternative gear such as traps or small drag nets, and are provided opportunities to become owners and work on a shrimp aquaculture farm run by professionals to reduce number of nets.



## Sea Turtle Protection

The Mexican government has been involved in sea turtle protection since 1966 when they instituted programs to prevent the harvest of sea turtle eggs from nesting beaches. The US government joined as a bi-national partner in the mid-70s. The bi-national initiative patrols nesting beaches on both Gulf of Mexico and Pacific coasts to prevent predation on endangered sea turtles. The US and Mexican shrimp industry has been a supporting partner in this program since 1995 providing funding and infrastructure support. The shrimp industry participation has been cited as a model for the restoration of all endangered species.



Nest Protection Camps

## Closed Areas

Several closed areas are established to protect shrimp spawning and juveniles as well as endangered species such as sea turtles and vaquita marina. Shrimp fisheries are closed from May to mid-August on the Gulf of Mexico and March to mid-September in the Pacific shrimp fisheries. In addition to seasonal closures, inshore areas are closed to trawler fleet and areas in the Upper Gulf of California are closed to for the protection of vaquita marina and biosphere zone where the Colorado River empties into the Upper Gulf.

## Industry Programs

The Mexican fishing industry manages two mandatory programs jointly with government agencies. These include the Clean Fleet Program where every summer fishermen are required to go through training for handling dangerous material such as oil, filters, plastics and procedures for recycling of oil during fishing season. The second program, Survival of Life At Sea conducted by the industry provides training on what to do in an accident, how to take care of instruments, and general vessel operations.

## Net Program

The Mexican shrimp fleet is in the process changing to knotless, lighter and more fuel efficient “Spectra” net. It is reported that 70% of vessels use “spectra” nets to reduce fuel consumption and impacts on the bottom. The remainder of the fleet uses a monofilament, still less weight than dipped nylon used in the Gulf of Mexico. The fleet is working cooperatively on a modernization program to improve fuel efficiency, handling of refrigeration equipment and cold storage, and other technological advances with matching funding support from the Mexican government.



## Conclusions

Mexico is a strong partner in sea turtle protection at nesting beaches and has enhanced its enforcement and compliance with US TED requirements which includes:

- Nation-wide mandatory TED certification workshops to fulfill new certification requirement on TED training for crew
- Licensing and documentation of crew for both trawl and panga fleet
- Zodiac vessel purchases for at-sea, night time enforcement of TED
- Satellite VMS on 100% of shrimp vessels operating in Mexico
- Dual TED inspections with 100% pre-season dockside and 98% in-season coverage
- BRD requirements in all trawl fisheries
- New net system testing to reduce bycatch
- Introduction of “Catch Share” management program in shrimp fishery
- Closed and prohibited area restrictions monitored by VMS
- Onboard observer coverage on shrimp vessels reported at 10%
- Introduction of live video deck monitoring system on trawlers
- Logbook and landing data collection

Mexican fisheries are strictly regulated with advancements not found in US shrimp fisheries. TED use is enforced with VMS and vessels inspections and BRDs are required on all trawlers.