

# ILLEGAL AND IRREGULAR FISHING IN MEXICO:

## A BARRIER TO COMPETITIVENESS

PROJECT PREPARED IN COOPERATION WITH:

Centro de Colaboración Cívica, A.C.  
Comunidad y Biodiversidad, A.C.  
Environmental Defense Fund de México, A.C.  
Fundación Idea, A.C.  
Sociedad de Historia Natural Niparajá, A.C.





## Special Remark

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**A**nalyzing phenomena that occur in violation of the law –such as irregular fishing- is in itself a complex task. There are no concrete figures available that reflect the extent of this problem, nor reliable maps identifying the areas where this problem is more severe. Information on this topic is, to a great extent, based on perception and anecdotes, and not on time series with accurate data. The complexity of this problem rockets in the fisheries sector, where this type of activity often occurs in relatively isolated coastal areas, adding a level of difficulty to the intrinsic difficulties of fisheries data collecting. There is a saying among fishery biologists which illustrates this complexity by comparing the forestry and fishery sciences: “Counting fish is like counting trees; but trees that you cannot see, and which are moving around all the time.”

However, we think that this study is a step in the right direction. We are certain that it presents the scope of illegal fishing from a perspective never used before in our country: from an interdisciplinary and analytical standpoint. This makes it possible to recommend tangible changes to public policies in order to fight a phenomenon that has a significant impact on the competitiveness of our fishing industry and which has been the subject of little study to date.

Two points should be highlighted here: On the one hand, this report uses the terms “illegal” and “irregular” to describe the same phenomenon; fishing in violation of the law. For purposes hereof, both terms are interchangeable. But a closer look to these phenomena will reveal that they refer to two different practices: on the one hand, irregular or unreported fishing that is performed as a livelihood and is not recorded because of bureaucracy, but of which the main intention is not to violate the law. Coastal and isolated communities in Baja California Sur, for example, fall in this category, where fishing has been conducted in this way for generations now. Licenses are not obtained because of the difficulties involved, like bureaucracy, time constraints and distances, as opposed to being part of a medium-sized or large criminal operation. On the other hand, illegal fishing consists of fishermen who get organized in order to violate the law, for example, to access protected areas or sectors allocated to other people, and steal valuable species such as geoduck clam or sea cucumber. This fishing practice is usually linked to wider networks that allow the transportation and trading of stolen products, and often involve cross-border transit. Although the boundaries between such practices are not always clear, it is important to stress this difference.

Finally, this report is focused on the region of the Gulf of California, because this is the area where some of the organizations preparing this report conduct their activities. Further work is required to study other Mexican coasts, which will certainly pose particular challenges.

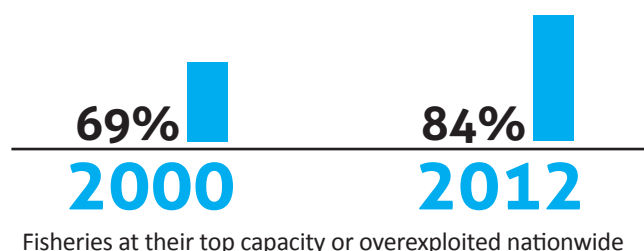
# “Counting fish is like counting trees; but trees that you cannot see, and which are moving around all the time.”

## Executive Summary

The purpose of this document is to analyze one of the least studied topics in the fisheries sector in Mexico: illegal or irregular fishing. One of the more severe consequences of this phenomenon is the reduced competitiveness of a sector that still represents a small share (0.06%) in the economic activities of the country, but which has great potential for growth and is the sole source of employment for hundreds of communities in the Gulf of California.

The driver behind this work is the conviction that by reducing illegal fishing, we may not only preserve fisheries that would otherwise disappear, but also favor significant improvements to competitiveness in this sector in Mexico.

Competitiveness in fishing goes far beyond productivity, as it includes both the sustainability of fish products and their aggregated value. These three aspects of Mexican fisheries face a critical moment in history. Although Mexico is the Latin American country with the longest coastline, and conditions vary widely in other countries, fish production in our country is surprisingly 10 times lower than that of Peru, and four times lower than that of Chile, in relation to their coastline. But it is not only in volume that we underperform, also in value: for each peso produced by fishing in Mexico, only 60 additional cents are added in the value chain, while the rest of the world averages three pesos. And, while in 2000, 69% of fisheries nationwide were fully exploited, or even overexploited, now 84% of them are in that situation, even though twice the number of species has been assessed. In other words, although more and more species are exploited to full capacity, the relative value of production has not increased, nor has the fishing industry gained more weight in the national economy. This is why the fishing industry is little relevant to GDP and its share is gradually dropping.



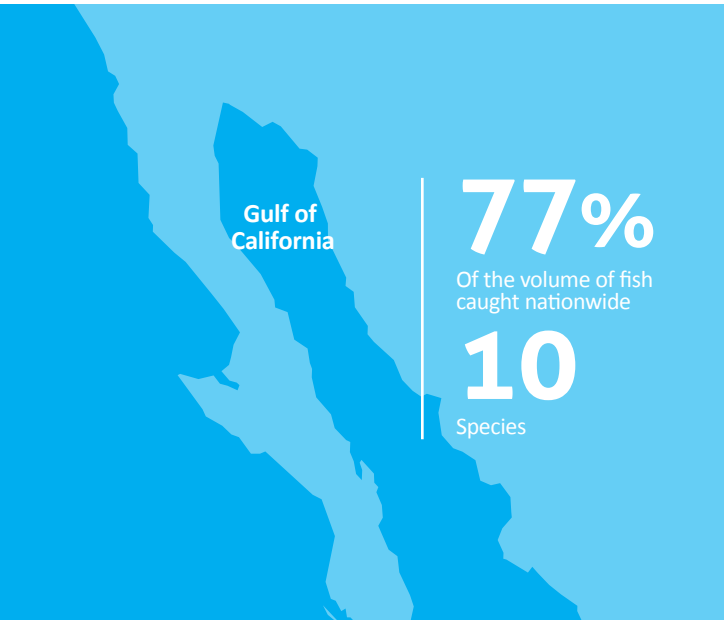
<sup>1</sup> Although fishing shrimp during the night is not technically an illegal practice, many fishing cooperatives have incorporated that rule into their codes of conduct, so they deem this practice as a violation of the rules.

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One of the main causes for this situation is illegal or irregular fishing: fishing performed in violation of applicable laws in our country. In particular, Mexico is vulnerable to this phenomenon because of the large size of its coastline and because the fishing fleet includes over 100,000 small vessels –or pangas-, making it extremely difficult to supervise their activities. It should come as no surprise then, that one of the main insights of this research was that illegal fishing accounts for between 45 and 90% more than the national official production.

Illegal fishing has a negative impact on our country because it raises the mortality rate of all species and generates conflict among fishermen. In the words of one fisherman from Sinaloa: “One legal fisherman catches between 5 and 6 kilos in one long fishing day, while an illegal fisherman catches about 12 kilos of shrimp during the night<sup>1</sup>.” This dynamic generates a vicious cycle: partly because of increasing and unchecked (illegal) fishing effort, fishermen see their income drop because they catch fewer fish, while facing higher production costs. As a response, authorities implement new controls but fail to solve the underlying problem, and this, in turn, causes more fishermen to adopt illegal practices in order to maintain a certain level of income.

In Mexico, this problem is even worse because fishing is concentrated both in specific regions and species: the Gulf of California accounts for 77% of the volume of fish caught nationwide, a volume concentrated in about 10 species. Efforts to regulate and supervise fishing practices are often focused on such species and regions, leaving the rest of the country and all other species in a situation of relative vulnerability.



**What has already been done  
and what should be done  
to regularize fishing activities?**



# Progress

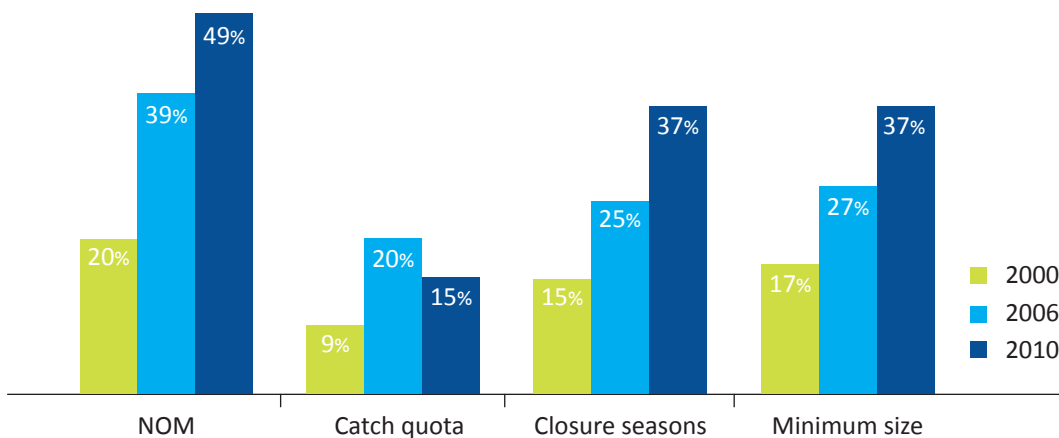
It is important to acknowledge that efforts have been made to regularize fish catches in Mexico, mainly by implementing fishery management instruments and inspection and surveillance actions. In recent years, both the use of traditional tools for managing fisheries and the Mexican Official Standards (NOM) have shown improvement, as have fishing seasons and techniques, and efforts to enforce such regulations, both regarding fishermen compliance and inspection and surveillance efforts.

however, an analysis of the 2010 National Fisheries Charter (Carta Nacional Pesquera) suggests that there is no high correlation between the level of regulation to which a particular fishery is subject and its deterioration (see tables in Appendix 6). In other words, it seems that in Mexico, increased regulation fails to increase the chance of fisheries being overexploited. Suffice it to consider shrimp, sea cucumber or species reserved to sports fishing, for example, where illegal activities are commonplace, even though a significant number of rules and regulations are in place for such species. This may be for the following reasons:

1. Instruments available to control fishing are little relevant themselves.
2. Instruments are poorly designed.
3. Increasing fishery management instruments are precisely focused on fisheries which are in certain state of deterioration.

Interestingly, irrespective of their results, instruments to control fishing activities continue to be used more and more frequently (see Figure 28).

**Figure 28.**  
Percentage of fishing control instruments implemented in Mexico vs total fisheries in time.



Source: Prepared by the project collaborators based on the National Fisheries Charters for 2000, 2006 and 2010, and on an analysis by Miguel Angel Cisneros

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In other words, the relative frequency of official standards, closure seasons and minimum size for catches used in Mexico shows a year-to-year increase, while the number of species overexploited or exploited to their top capacity increases. This suggests that a radical change in the form or kind of instruments used is in order.

In addition to field inspections, 8 years ago CONAPESCA created an electronic monitoring system that allows them to track each registered vessel in the industrial fleet. This probably represents one of the main areas of progress in terms of inspection and surveillance in the sector.

The Satellite Monitoring and Inspection System for Fishing Vessels (SISMEP in Spanish) keeps track of the GPS of each vessel, allowing authorities to spot the location of each vessel in real time. This information may be used to verify compliance with fishing restricted areas, and it is an invaluable tool to guarantee that vessels will be safe. Any irregularity can be dealt with in real time, as CONAPESCA has radio communication with vessels, and all notices and paths are recorded into the system.

Efforts by INAPESCA to effectively document and include more and more species have also been crucial to determine the situation of fisheries in our country. Clearly, no correction action is possible unless the respective phenomenon can be measured, so this work is essential.

## Reasons for Optimism

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Today, although the huge challenge posed by reducing irregular fishing in the Gulf of California remains, some encouraging cases and results have been identified in the northwestern region of Mexico to improve the sustainability of fisheries and fight illegal fishing. The cases of lobster and abalone in the Northern Pacific region are often used nationwide as examples. The good management of such species by the federation of cooperatives that harvest them led to the red lobster being the first Mexican fishery certified by the Marine Stewardship Council.

In Lingüi, Baja California Sur, another success was recently recorded in the management of species protected under NOM-059, such as ornamental fish, in the form of a quota system. Encouraging stories about the importance of participation of the general public can be found in the recently prepared plan for the management of crab in Sonora and Sinaloa, or in the participatory processes to define fishing harbor networks in Baja California Sur and Quintana Roo.

The management of gulf curvina, in the Upper Gulf of California, in turn, also shows how, even in a fishery previously known for its conflicts, it is possible to move forward through processes that combine effective public participation and good disposition of both the authorities and the community, with the support of science.

These efforts are evidence that, even in the context of huge challenges, every day there is more and more social capital and with it, a more favorable context in which to make decentralized decisions in the marked fishing zones of our country (4 regions). And the number of regional consultation mechanisms is gradually increasing, so there is hope that it will be possible to revert current trends.

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# What should be done?

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It is evident that stagnation in marine catches, the inability to add value to the commercial chain of fishery products, and the potential risk of devastation of some of the main fishery species in the Gulf of California are clear signs that deep changes in this sector are necessary.

On the other hand, the burden of irregular fishing, which represents an additional 60% on top of the official production, makes it evident that such changes are urgent.

Although some progress has been made in policies to fight illegal fishing, notably the creation by CONAPESCA of a satellite monitoring and inspection system for large fishing vessels, there is still more to do. Hence, we propose 10 concrete actions to favor progress in the fight against illegal fishing in Mexico:

With this in mind, we propose the following 10 actions to fight irregular fishing, in a convenient and plausible way:

- 1. Create exclusive use rights over fishery resources.** Incorporate strong laws providing for the management of fishery resources based on the creation of ownership rights, including general use of long term concessions over a defined area (Territorial Use Rights for Fishing, or TURFs) or instruments such as a catch shares.
- 2. Adapt fines and penalties.** Modify the current fines and penalties scheme, using the best international practices to ensure that penalties in effect comply, at least, with the principles of proportionality and dissuasion. In this sense, the European Union has established fines in proportion to the economic value seized (5 times the seized value, and 10 times for recidivists). Another possibility includes giving irregular fishing the status of a criminal offense. This item is relevant because, as mentioned above, fines in Mexico are below the level of those in other countries, and are only of an administrative nature, with a cap of around 2 million Pesos, a negligible amount when it comes to valuable species.
- 3. Make a better use of technology.** Better use is needed of the technological tools available in the marketplace, which in some cases may be suitable for Mexico. This may include unmanned aerial vehicles, radars and X-rays, in appropriate sites and according to a solid maintenance and management program. Available evidence shows that technology would be useful not only to protect marine areas, but would also be a convenient and cheap option to solve the complex task of supervising irregular fishing logistics in highways and markets.
- 4. Improved coordination between law enforcement groups.** In the short term, it is crucial to clearly define the authorities of and establish effective coordination mechanisms between all institutions in charge of law enforcement, both in the water and elsewhere (CONAPESCA, CONANP, PROFEPA and SEMAR, customs).
- 5. Create a single police force for the sea.** In the medium and long term, the best option to ensure efficiency in law compliance is to separate the function of granting licenses and concessions from inspection and surveillance activities, both of which are currently held by CONAPESCA. The best option in this matter is to create a unique police force for the sea, similar to the Coast Guard that operates in several countries around the world.
- 6. Promote the participation of the general public in the decision-making process.** The most closely-observed laws are those which involved early participation by the citizens obligated to follow them. For such purpose, existing structures, such as state and federal fishery committees and councils already in place, but which fail to work speedily and dynamically, and should be used more effectively.



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7. **Create spaces for community surveillance.** Once exclusive use rights are created, it will be vital to promote schemes that will allow communities to effectively guard their resources, working together with the authorities in surveillance and monitoring activities, as mentioned above in the North Pacific region, and more recently, in some regions of the Gulf of California.
  8. **New structure of CONAPESCA budget.** CONAPESCA's budget is organized with a focus on promoting growth in the volume of landings, and not in their value. For such reason, in the short term, it will be crucial to allocate a higher proportion of the budget to the Inspection and Surveillance and Fishery Regulation functions.
  9. **Collect better information for the industry.** Good decisions require solid, consistent and transparent information. This is why it is really important to create a public and transparent database with consistent information on fishing activities, including information about fishing activities, catches, biology, legal framework, situation of the populations with fishery resources, trading, consumption, prices, etc. In particular, information in an interactive box is required, including:
    - a. Reliable reports, with as much detail as possible regarding catches per species and region in time (including date), based on landings information and monitoring efforts
    - b. Information on the current status of permits, licenses and concessions in effect nationwide
    - c. Information on laws, NOMs, instruments regulating the industry per species and region
    - d. Indices for the impact of applying fishing management instruments, and for inspection and surveillance programs
    - e. Information produced by INAPESCA regarding the health conditions of commercial species populations per species and per region
    - f. Indicators of trading, consumption, production, and prices of fishery products, per species and per region
    - g. Option of on-line facilities to obtain permits or licenses once all information requested by the system is provided.
  10. **Certification.** International demand for fishery products with one of the several types of certification available has consistently increased in recent years. Although not within their explicit aims, this kind of schemes promote legality, as producers are forced to verify that their products go through the entire formal supply chain. By promoting certification, we will be favoring legal behaviors. Thus, communication campaigns are necessary to permeate this concept in the society. A survey to determine the potential demand for certified fishing in our country may be a good starting point.

