Please note that this template is provided to facilitate information submission on a voluntary basis, only when the information provider finds this template appropriate. If the available information does not fit the format of this template, information can be submitted in another format, in consultation with the Secretariat.

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Appendix

Template for Submission of Scientific Information

to Describe Ecologically or Biologically Significant Marine Areas

*Note: Please **DO NOT** embed tables, graphs, figures, photos, or other artwork within the text manuscript, but please send these as separate files. Captions for figures should be included at the end of the text file, however.*

Title/Name of the area: Iztapa – Las Lisas (Iztapa-Monterrico-Hawai-Las Lisas-La Barrona)

Presented by (*names, affiliations, title, contact details)*

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Abstract (*in less than 150 words).*

The **Iztapa-Las Lisas** complex is located in the heart of Guatemala's South Coast. It comprises 279 square km of estuaries, mangroves and sandy and muddy beach ecosystems where important socioeconomic activities and ecologic processes are developed. It´s an habitat for several manine mammals, turtles, fishes and birds. Because these characteristics is ecological, sociological and economical pivotal. 46.14% of the protected south coastal areas is in the complex.Complex has been identified as one of the eleven prioritized Marine-Coastal Areas by the National Implementation Support Partnership (NISP) for the Programme of Work on Protected Areas (PoWPA) of the Convention on Biological Diversity (CDB), recommending that it be included as one of the ecologically and biologically significant areas (EBSA) in the Guatemalan Protected Areas System (SIGAP).

Introduction

(To include: feature type(s) presented, geographic description, depth range, oceanography, general information data reported, availability of models)

The **Iztapa –Las Lisas**, is considered a coastal marine area located in Guatemala south Pacifica rea. I comprises 3,559.77 km^2 including the marine and estuarine zone. The Pacific Coastal Plains geologic formation originated by Quaternary alluviums covering the strata of the continental platform. The alluviums were produced by different erosion processes of the volcanic highlands during the Quaternary period (ASIES 1992). Guatemala is part of the Central American Isthmus that was formed 3.5 million years ago. Being the geologic bridge between North and South America allowed the passing of many Nearctic species of fauna. Nevertheless, what was a connection for land species became a barrier for marine species. For example, the Centropomidae family comprises a series of species that appeared after the separation of Caribbean and the Pacific by Central America (Rivas 1980).

The Eastern Tropical Pacific Ocean is one of the most productive oceans in the world, it's important in climatic variation and fish production, influenced by the Intertropical Convergence Zone (ITCZ) (Cabrera & Ortiz 2010).

The coastal-marine zone have an important interchange of productivity, and alimentation, imgration and reproduccion of marine vertebrates zone (Dávila 2008, Cabrera 2010, Boix 2011). Is one of the most important worldwide sites of sport sailfish fishing (Andrade 2003, Erhardt y Fithchett. 2006, Dávila 2011), provided by the warm and productivity waters (Prince et al 2002). Also represent an important habitat for Spotted Rose Snapper (*Lutjanus guttatus*), the Common Dolphinfish (*Coryphaena hippurus*), Striped Weakfish (*Cynoscion reticulatus*), jacks (Carangidae), and tuna (*Thunnus* sp.), among others.

The beaches are nesting sites for marine turtles like *Lepidochelys olivacea*, *Chelonia spp*. y *Dermochelys coriacea.* Also is part of the migration of Cetaceans, including Balaenopteridae, Delphinidae and Ziphiidae (Cabera y Ortíz 2012). Some research are directed for fishing species, marine turtles, birds and cetaceans (Dávila 2009, Ixquiac 2009, Ixquiac 2010, Cabrera y Ortíz 2010).

This is an economical important area for the country, due to the multiple agroindustrial, artisanal and port activities, causing high population in the area. The proposed area is high threatened by land use change, loss of mangroves, eutrophication and natural resourses overexplotation (Oliva et al. 2009). The poverty is one of the common natural degradation in the area, because the economic dependence of the families, tourism and fisheries are important economic activities.

Policies are a challenge for the governmental institutions (CONAP, INAB, OCRET & Marine gard) in the proposed EBSA complex Iztapa-Las Lisas. Stills represent a natural area for wildlife and have economical develop potential for rural communities. Specially sport fishing and natural tourism, in accord with the National Policies for Biological Diversity. Therefore, the area should be considered for inclusion in the National System of Protected Areas and has been proposed as a marine ecologically or biologically significant area (EBSA), in the gap analysis developed by the National Agreement for Conservation (NISP) for the work program on CDB protected areas(PoWPA).

Location

(Indicate the geographic location of the area/feature. This should include a location map. It should state if the area is within or outside national jurisdiction, or straddling both. It should also state if the area is wholly or partly in an area that is subject to a submission to the Commission on the Limits of the Continental Shelf)

The marine coastal area denominated **Iztapa –Las Lisas** is located in the East Pacific, as part of the territorial sea limit of Guatemala. (**¡Error! No se encuentra el origen de la referencia.**).

Feature description of the proposed area

(This should include information about the characteristics of the feature to be proposed, e.g. in terms of physical description (water column feature, benthic feature, or both), biological communities, role in ecosystem function, and then refer to the data/information that is available to support the proposal and whether models are available in the absence of data. This needs to be supported where possible with maps, models, reference to analysis, or the level of research in the area)

Descripción física

The **Iztapa – Las Lisas complex**, is located to the soth east pacific of Guatemala, in the marsh littoral pacific zone. Includes 3,559.77 km^2, with diferent morphologies such plain, coast and continental shelf (Jiménez 1994). Soils are composed by sediment deposition formed the last 6,500 years (Neff et al. 2006). The soils are dark and sandy, with volcanic gravel fragments (20%), and clay material in the channels producing different delta, lagoon, sandbar and estuary systems. The terrestrial zone provides sediments that constantly modify the canal and coastal areas, especially during the rainy season (Jiménez 1994; Boix 2011).

There are bathymetric variations since flat bottom with slow deep to high slopes aroud 2,000 m (Cabrera y Ortíz 2010). The edge on the coast identify a particular structure called San Jose Canyon, an important site for the productivity (Ladd et al. 1978, Boix 2011). The seawater has an average temperature of 30º and salinity around 34 g/L (Jiménez 1994).

The area show relevat features such: estuaries and mangroves, coastal lagoons, sand, muddy and rock beaches, and sediments. All of these have an importance in the ecosistem dinamics (CONAP y MARN 2009), and interactions in the water qualities (Jiménez 1994, Boix 2011).

The south coastal wetlands are highly impacted by basin contaminants. There is a complex of estuarine lagoons that form the Chiquimulilla chanel, it receives waters from Maria Linda River, wich comes from an industrial area, plus many populations throughout the area (FAO 1987). Parameters such as nitrates, ammonium and total phosphorus exceed allowable limits for unpolluted waters (EPA) wich indicate an eutrophication process (Oliva et al. 2007). The rural communities around are subject to flooding, and causes health and economic implications.

Comunidades biológicas y Función del ecosistema

The **Iztapa Las Lisas** area, show relevant features such: mangroves, estuaries, sand and rock beaches, muddy beaches and sediments, and the offshore structure the San José Canyon
Is part of the ictical Chiapas –Nicaragua province (Miller 1966), that shows a series of similar characteristics in terms of habitat, influence of current species composition and regional systemic. (CONAP y MARN 2009, Estrada et al. 2012).

The characteristics of the marine zone are relevant for the biological diversity in different ecosystems. There are migratory and resident vertebrate species, some of them are enlisted by the UICN, and have a socioeconomic importance.

According to Cabrera, Dávila y Morales (2012) there are vegetation that allow diminishing beach erosion caused by wind and tides. The mangrove system is another important natural associations in the area. *Rhizophora mangle*, is the most relevant specie.followed by *Laguncularia recemosa, Avicennia germinans* and *Conocarpus erectus*. These ecosystems are basic for many ecological processes and fundamental habit for the life cycle of marine and wetland species. Specially mangroves represent refuge and nesting sites for migratory birds (Sigüenza y Ruíz-Ordoñez, 1999).

Economic and biologic important fishes species use the coastal and marine zone (Quintana 2007). Is an important complex to fishes like Centropomidae (snook), Scianidae (weakfish), Lutjanidae (snnaper), Ariidae (catfish), Caranjidae, especialmente para common dolphinfish (*Coryphaena hippurus*), Scombridae (tunas) and Istiophoridae (sailfish and black spearfish). Species with economic (artisanal, industrial and sport fishing) and nutrition importance, (Boix 2011). Is consider the most diverse and abundance site for Batoidea in the pacific coast (Ixquiac 2009), reporting at least 10 species, 3 of them with the most important incidental fish biomass: Longtail stingray (*Dasyatis longa*), Whiptail stingray (*Dasyatis brevis*) y Pacific Cownose Ray (*Rhinoptera steindachneri*).

Is the most important site for shark breeding, at least 15 species are recently reported, specially for the Scalloped hammer head (*Sphyrna lewini*) and smooth hammerhead (*Sphyrna morrakan)* endangered species (UINC 2012). Also there are vulnerable species (UICN 2012) such: pelagic thresher (*Alopias pelagicus*), smooth hammerhead (*Sphyrna mokarran*) y whitetip oceanic shark (*Carcharhinus longimanus*). Near threatened or Data Deficient estan: Silky shark (*Carcharhinus falciformis*), Blacktip shark (*Carcharhinus limbatus*), Whitenose shark (*Nasolamia velox*), Mexican hornsharrk (*Heterodontus mexicanus*), Nurse shark (*Ginglymostoma cirratum*), Blue shark (*Prionace glauca*), tiger shark (*Galeocerdo cuvier*) y Bull Shark (*Carcharhinus leucas*).

There is a report of the vulnerable species, Whale Shark *Rhincodon typus,* the only report is from San Jose Iztapa.

Istiophorus platypterus (sailfish), is an important specie with pacific tropical distribution, iztapa represent one of the most important worldwide sport fish site, by the abundance of the specie (Ehrhardt and Fitchett 2006, OSPESCA 2007).

There are migratory vertebrate species, among which primary consumers and predators are important ecological species.

Beaches are important for marine turtles nesting, from July to December (Sigüenza y Ruíz-Ordoñez 1999). 3 species are reported in Monterrico: *Lepidochelys olivacea* (White ridley), *Chelonia spp*. (Ridley black) y *Dermochelys coriacea* (leather back) (Dix y Hernández 2001); also is reported the uncommon species *Eretmochelys imbricata,* that is common in El Salvador(Gaos et al 2010). Las Lisas is an important site only for *Dermochelys coriácea* y *Lepidochelys olivácea, Carreta m. agassizii* is reported like rare species in the area (CONAP S/A, Dávila 2011, López y del Cid 2011).

Recent studies report 11 species of Cetaceans including the Balaenopteridae, Delphinidae and Ziphiidae. Among these species, the sighting of endemic subspecies of the Eastern Tropical Pacific *Stenella longirostris centroamericana* and *Stenella attenuata graffmani* is highlighted (Cabrera, Ortiz & Romero 2012), observing calf on ocations. Furthermore, Bryde's Whale (*Balaenoptera edeni*) is also reported in the area.

The area is the most important in Guatemalan Coast for breeding and rearing of humpback whales during migrations (Cabrera y Ortiz 2010, Dávila 2011). San Jose Canyon, has been identified as an important area with high productivity, this is associated with the abundance of 7 cetacean species (Cabrera y Ortíz 2010).

There is a food-vertebrate presence or abundance associations, marine turtles, birds and cetaceans are distributed limited by this item (Velásquez 2008, Del Cid & López 2011). Littoral birds are reported: *Procellaria parkinsoni, Puffinus auricularis, Puffinus griseus, Puffinus pacificus, Oceanites oceanicus,* ***Puffinus nativitatis****,* ***Stercorarius longicaudus, Stercorarius maccormicki*** **(the last 3 are rare)**. Species like *Puffinus creatopus Puffinus lherminieri, Oceanodroma Melania, Oceanodroma microsoma, Oceanodroma tethys, Sula leucogaster, Stercorarius parasiticus, Stercorarius pomarinus,* have been observed in the marine and coastal area. And *Oceanodroma Leucorhoa, Sula dactylatra, Sula granti (*commun*), Sula sula,* only in the marine zone.

Información que está disponible

There are some researches related to fisheries exploitation, ecology and marine vertebrate migrations. There are old data from 1975, estimating 10,000 MT/year extractions. However evidence of overecploitation of the resource were detected in shrimp fisheries (FAO 1987).
There are a few recently studies and most of them are focused on biology, ecology and some fishes elements.

Some of them are the sailfish study by Ehrhardt y Fitchett (2006), related to migratory events. Ixquiac et al (2007), study with Batoidea abundance and distribution in the pacific coast, and the breeding shark areas for the pacific coast, detecting Iztapa Las Lisas such one of the most important breeding places. Some marine turtles are made with management and breeding sites (Higginson y Orantes 1987, Mucio 1998, Rivas 2002, Montes 2004, Sánchez, Jolón y Girón 2005). Sigüenza, Velásquez y Dávila (2009) detected 24 pelagic birds, 4 species from Procellaridae, 6 Hydrobatidae, 5 Sulidae, and 4 Stecoraridae. Some of these are asociated to cetaceans distribution (Dávila, 2011). Sigüenza, Velásquez y Dávila (2009) detected 6 of these species are incidental fishig.: *Stercorarius parasiticus, Stercorarius pomarinus, Sula sp*., *Puffinus creatopus,* la pardela *Puffinus lherminieri,* and P*elecanus sp*.

Few studies are directed to marine mammals, recently Quintana-Rizzo y Gerrodette (2009), conducted the first diversity, distribution an abundance of the exclusive economic zone study. Cabrera y Ortiz (2010) reported 8 cetacean species, showing distribution and hábitat use patterns. Dávila (2009, 2011) and Siguenza (2009) study the megafauna diversity and incidental fishing of these megafaua, reporting sailfish, cetaceans, sharks, batoidea, marine turtles.

Feature condition and future outlook of the proposed area

(Description of the current condition of the area – is this static, declining, improving, what are the particular vulnerabilities? Any planned research/programmes/investigations?)

Pacific south is one of the most productive zones for Guatemala, tourism and fisheries are important economic activities (García y Franco 2008). However is highly impacted by human development (CONAP y MARN 2009). The **Iztapa-Las Lisas** complex is influeced by the most developed industrial zone. There are shrimp farms, salt mines, agricultural areas, port developmet and the major urban centers in the south coast (FUNDAECO 2002, Boix 2011).

The gap analysis, developed by the National Agreement for Conservation (NISP) in the CDB protected areas program (PoWPA), identify as the major threats: Pollution by urban areas, livestock, roads and port infrastructure, erosion, shrimp farms and salr mines, population density, lost of mangrove coverage, trawling (CONAP y MARN 2009). Also was identified basin deforestation, esturine degradation, and natural resourses overexploitation (FUNDAECO 2002).

The rural communities depends on natural resources (Boix 2011). The mangroves are used for domestic purposes. We estimate a mangrove exploitation for US $ 35 billion / year in the south coast (CONAP y MARN 2009). It is one of the most degraded forest, with losses of 70% in the last 50 years. But conservation efforts have made a recent recovery of 11% (2000-2007) (CONAP Y MARN 2009). Since 1945 to 1999, 16.39 ha has been lost in Iztapa-Monterrico (tomado de García et al. 2000).

The ictical community is used by the community. Commercial fishing has generated approximately US $ 49 M (CONAP y MARN 2009). Sailfish sport fishing generated $5M in 6 months in 2007, in Iztapa and San Jose (El Periódico 2008). His fishing is prohibited for other uses than sport. However, catches are reported by fishermen who sell their meat in the market (Dávila comunicación personal).

Shark fishing are made without size discrimination, neonates and juveniles are catching by fishermans thus threatening their populations. Endangered species (UICN 2012) are: the Scalloped hammerhead (*Sphyrna lewini*) y smooth hammerhead (*Sphyrna zygaena*). Vulnerable species (UICN 2012) are: pelagic thresher (*Alopias pelagicus*), smooth hammerhead (*Sphyrna mokarran*) y whitetip oceanic shark (*Carcharhinus longimanus*). Near threatened or Data Deficient species are: Silky shark (*Carcharhinus falciformis*), Blacktip shark (*Carcharhinus limbatus*), Whitenose shark (*Nasolamia velox*), Mexican hornsharrk (*Heterodontus mexicanus*), Nurse shark (*Ginglymostoma cirratum*), Blue shark (*Prionace glauca*), tiger shark (*Galeocerdo cuvier*) y Bull Shark (*Carcharhinus leucas*).

Its the most complex and diverse site for Batoidea, some of them are incidental catched by fishermans, especially in shrimp trawling. Some species are Near Treathened: Smoothtail Devil Ray (*Mobula thurstoni*), spotted Eagle ray (*Aeobatus narinari*), pacific cownose ray (*rhionoptera steindachneri*), whitesnout guitarfish (*Thinobatos leucorhynchus*).

A lot of the fishes species are threatening their long term survival (eg. Snapper and sailfish) showing population reduction the last 35 years (Andrade 2003, Ehrhardt y Fitchett 2006). Losses are stimated bycatch in shrimp trawling between US $5 y 66 M/año (período 2002-2005) (CONAP y MARN 2009). Fishermans are mostrly aware that they should protect the mangrove ecosystem available to maintain the fishery resources, ecosystem processes and avoid harmful to the communities (García y Franco 2008), but control of fishing at sea is difficulty.

Turtle eggs are used by rural communities (CONAP y MARN 2009), this is an threaten activity that risk turtles populations. There are efforts to conserve sea turtles, led by the National Strategy for the Management and Conservation of Sea Turtles in Guatemala (ENTM) (Sanchez et al 2002) Institutions as CONAP ARCAS CECON and have developed egg hatchery seed. Sanchez and colleagues (2006) proposed a national protocol for monitoring sea turtle populations. However, although there are programs hatcheries, not much is known about the ecology of this group, and efforts to conserve have been very weak (Sanchez et al 2002).

On the other hand while not target species in Guatemala, occurs catch by gear, longline fishing area and ghost (lost fishing gear), this fishery is primarily cetaceans (especially spotted dolphin, striped dolphin and common dolphin), sea turtles, batoids, sharks and pelagic birds (Dávila 2009). Despite conservation efforts that dictate the use of devices that prevent the capture of turtles in the nets, some trawl boats do not use it.

The scenic beauty and attractiveness of natural resources, are potential for tourism, visiting anglers and whale watching to the complex Iztapa-Las Lisas area tourism generates more than $ 1,055.00 per year. The use of natural resources to be a fundamental part of the economy of local communities and private sector engaged in fishing activities and tourism in the area, presents opportunities for employment and sustainable use of resources, which can be maximized for the benefit of local communities and the conservation of the place.

Assessment of the area against CBD EBSA Criteria

(Discuss the area in relation to each of the CBD criteria and relate the best available science. Note that a candidate EBSA may qualify on the basis of one or more of the criteria, and that the boundaries of the EBSA need not be defined with exact precision. And modeling may be used to estimate the presence of EBSA attributes. Please note where there are significant information gaps)

CBD EBSA Criteria (Annex I to	**Description** (Annex I to decision IX/20)	**Ranking of criterion relevance** (please mark one column with an X)

decision IX/20)		**Don't Know**	**Low**	**Some**	**High**
Uniqueness or rarity	*Area contains either (i) unique ("the only one of its kind"), rare (occurs only in few locations) or endemic species, populations or communities, and/or (ii) unique, rare or distinct, habitats or ecosystems; and/or (iii) unique or unusual geomorphological or oceanographic features.*				
Explanation for ranking: • Endemism of exclusive subspecies of easthern tropical Pacific (ETP): *Stenella longirostris centroamericana and Stenella attenuata graffnmani* • It is one of the main breeding sites of sharks, especially for hammer shark (*Sphyrna lewini*). • On of the sites having more abundance and richness of batoidea family for the country. • High concentration of sailfish (*Istiophorus platypterus*) relevant at the international level. • The deep submarine canyon known as Canyon of San José (Ladd et al. 1978) is a high productive habitat of hunchback whales (*Megaptera novaeangliae*) that remain in the area. • The zone of Iztapa is the unique site where Whale shark has been reported for Guatemala. • *Reports indicate that the Canyon of San José es a potential area for the conservation of cetaceans, most sightings occur in the neighboring area (Cabrera et al. 2010).*					
Special importance for life-history stages of species	*Areas that are required for a population to survive and thrive.*				
Explanation for ranking The productivity of the zone and its environmental characteristics provide favorable conditions for the site to be important for different groups of marine species, especially during migrations. • Diverse species of marine fishes use the coastal zone during part of their life cycles (reproduction and feeding) and in the marine zone. • The warm waters of the zone form part of the migratory route of sailfish (*Istiophorus platypterus*). • It is one of the most important zones for the breeding and reproduction of sharks, especially hammer shark (*Sphyrna lewini*). • The beaches are nestling sites for marine turtles *Dermochelys coriacea, Lepidochelys olivácea* and *Chelinia spp* • The coastal zone is visited by 8 species of cetaceans, at least 6 species use it among their migratory route for feeding and social behavior. Humpback whales of the North have reproductory and breeding activity from November to april, some reports exist from whales on the southern region. It has been detected that some individuals exhibit fidelity to this site.					
Importance for threatened, endangered	Area containing habitat for the survival and recovery of endangered, threatened, declining species or area with significant assemblages of such species.				

or declining species and/or habitats					

Explanation for ranking

- Its coastal zone has an important and vulnerable remnant area of mangrove, represented mainly by red mangrove *Rizophora mangle.*
- *It is a system of marine coastal ecotone, that enables complete life cycles of a variety of fishery species and feeding of migratory species, most of which have vulnerable populations due to over-exploitation, which have been reduced during last years (e.g. snapper and sailfish).*
- It is an important habitat for shark breeding, there are 15 species reported and considered in UICN red list:
  Endangered: Scalloped Hammerhead (*Sphyrna lewini*), squat headed hammerhead shark(*Sphyrna mokarran*)
  Vulnerable: pelagic thresher (*Alopias pelagicus*), Smooth hammerhead (*Sphyrna zygaena.*)
  Near threatened: Silky shark (*Carcharhinus falciformis*), blacktip shark (*Carcharhinus limbatus*), blue shark (*Prionace glauca*), tiger shark (*Galeocerdo cuvier*), bull shark (*Carcharhinus leucas*)
  Data deficient: whitenose shark (*Nasolamia velox*), Mexican hornshark (*Heterodontus mexicaus*), nurse shark (*Ginglymostoma cirratum*).
- It has been reported as an important site for the richness and abundance of 10 species of batoidea family, among which 5 species are considered near-threatened (UICN) and the rest have deficient data to establish their status.
- The beaches are part of the life cycles of threatened marine turtles and considered in the CITES Convention and International Red List: *Dermochelys coriacea* and *Lepidochelys olivacea.*, that use the beaches as nesting sites.
- All cetaceans of the Delphinidae family are in level 2 of the List of threatened species of the country and Appendix 3 of CITES. 2 cetaceans of the Balaenopteridae family are in level 2 of the LEA list and Appendix 1 of CITES.

Vulnerability, fragility, sensitivity, or slow recovery	Areas that contain a relatively high proportion of sensitive habitats, biotopes or species that are functionally fragile (highly susceptible to degradation or depletion by human activity or by natural events) or with slow recovery.				

Explanation for ranking

- The mangrove have been disturbed by land use change by salt industries, shrimp farms and agricultura farms, as well as for logging. The south-east zone is the more polluted zone by the effects of agroindustry, urbanism and soil erosion. This has altered the natural dynamics of the system, mainly in water quality, which has showed chemical parameters values above EPA´s permissible limit values, especially regarding the one related to nutrients.
- Exploitation of natural resources is done in an unsustainable manner. The collection with trade interests of eggs marine turtles, by putting their populations at risk, which is a source of threats due to the vulnerable status of their populations.
- The artisanal fishing of guillnets and the fishery of shrimps trawling are performed in a disorganized manner. This fishing do not discriminate between sizes and even capture fishes

of low sizes. In the case of sharks populations, many of them fall into some category of the international Red List, however neonate and young individuals that did not reproduced are fished. Trawling fishery has impact on marine megafauna; turtles, pelagic birds, sharks, rays and cetaceans captures have been reported. These species are also disturbed by lost fishing gears.

- In the case of cetaceans, some are captured to use their meat as capture bait for sharks.

Biological productivity	Area containing species, populations or communities with comparatively higher natural biological productivity.				

Explanation for ranking

- It is a highly productive zone which influences the quantity and quality of fishery products, including shrimps.
- The site shows one of the most important populations of sailfishes.
- There are important populations of sharks using the site for breeding.
- It is one of the most important sites for richness and abundance of batoidea family for the Pacific zone in the country.
- The canyon of San José proves to be a special area for productivity, which is important for a variety of fish species, migratory birds, marine turtles and cetaceans that remain o migrate along the country´s coast.

Biological diversity	*Area contains comparatively higher diversity of ecosystems, habitats, communities, or species, or has higher genetic diversity.*				

Explanation for ranking

- The mangrove zone is formed by 4 species and is also a site used for nesting, sheltering and feeding of various species of aquatic birds.
- 6 species of shrimps have been reported, including as the most important *Xiphopenaeus riveri y Panaaeus vannamei.*
- At least 3 species of marine turtles use the beaches as nesting sites: *Dermochelys coriacea* y *Lepidochelys olivacea.*
- Ictyofauna is composed of several species of trade importance like snuck, common-dolphin fish, snapper, mugilidae and carangidae among other marine species reported for the Pacific coast of Guatemala. Sport fishing species like sailfish and marlin use this habitat during their migrations.
- It is the unique site where whale shark has been reported.
- 15 species of sharks and 10 species of batoidea family have been reported.
- There are reports of 8 species of cetaceans (*Turiops truncatus, Stenella longirostris, Delphinus delphis, Grampus griseus, Steno bredanensis, Megaptera novaeangliae* and *Balaenoptera edeni*).

Naturalness	Area with a comparatively higher degree of naturalness as a result of the lack of or low			**X**	

	level of human-induced disturbance or degradation.				

Explanation for ranking

The complex is fairly urbanized and populated by rural communities that have over-exploited natural resources there and agriculture and shrimp and salt production are major activities in the area. However, it still represents a natural ecosystem complex and a natural habitat for marine fisheries, cetaceans, turtles and birds populations.

Even though artisanal and industrial fishing are economical, high impact activities have taken place for many years, current efforts have been promoted to support sport fisheries and nature tourism as alternative activities.

Sharing experiences and information applying other criteria (Optional)

Other Criteria	**Description**	**Ranking of criterion relevance** (please mark one column with an X)			
		Don't Know	**Low**	**Some**	**High**
Equitable Access and Benefit Sharing (ABS) for all goods from nature (oceans).	It is important to find a right balance between the natural productivity of the sea for industry and local livelihoods especially in areas beyond national jurisdiction, in accordance with national and regional policies and the CBD objectives.		**X**		

Explanation for ranking

Natural resources have socio-economic importance for rural communities, going from exploitation of natural resources (mangrove, fisheries, wild raw materials and handicraft items) to the employment in salt and shrimp productions, industrial fisheries and private tourism companies.

Rural communities receive some benefits but there is no certainty that they have an equitable access from the perceived benefits in the overall process (e.g. fishing, tourism).

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(e.g. relevant documents and publications, including URL where available; relevant data sets, including where these are located; information pertaining to relevant audio/visual material, video, models, etc.)

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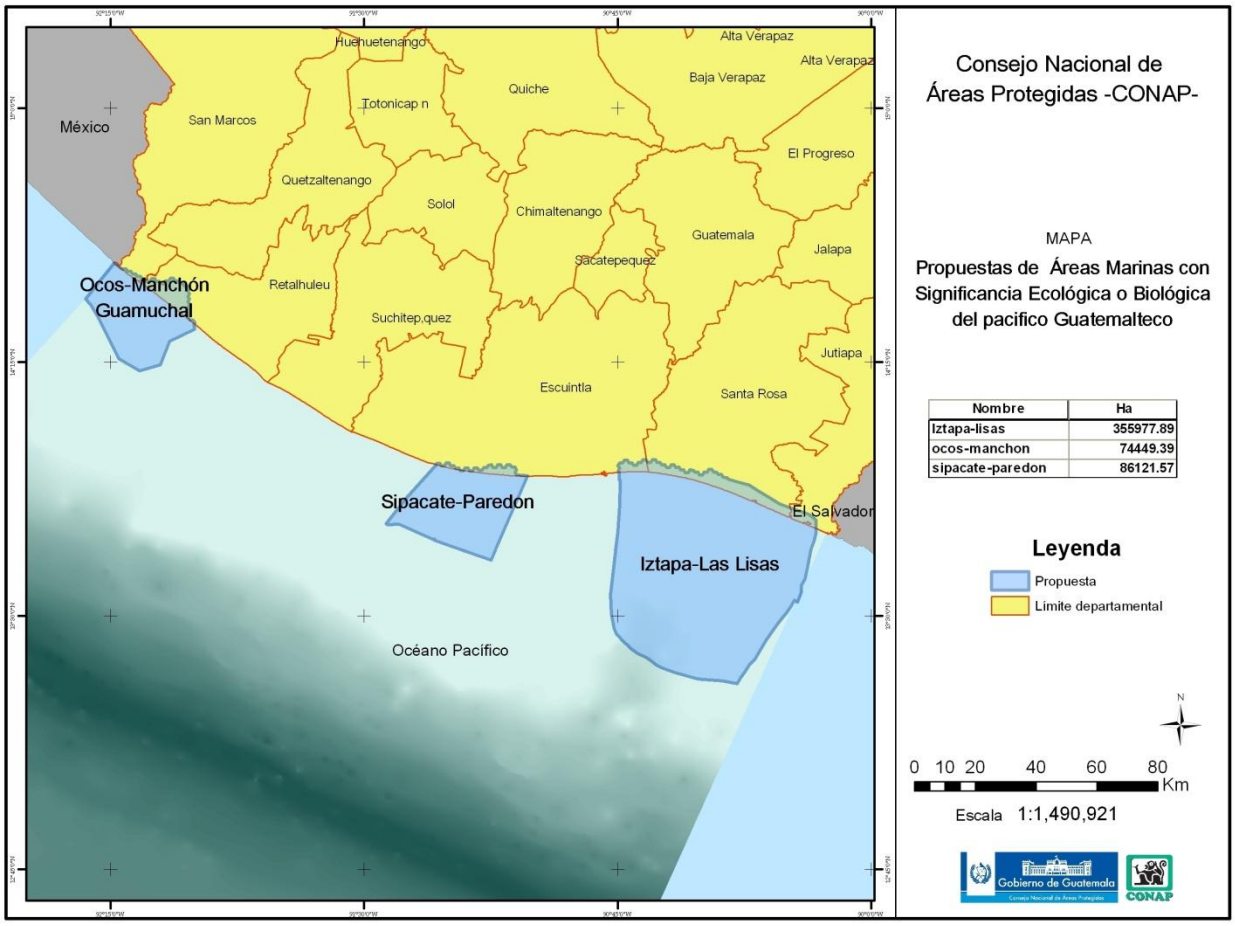
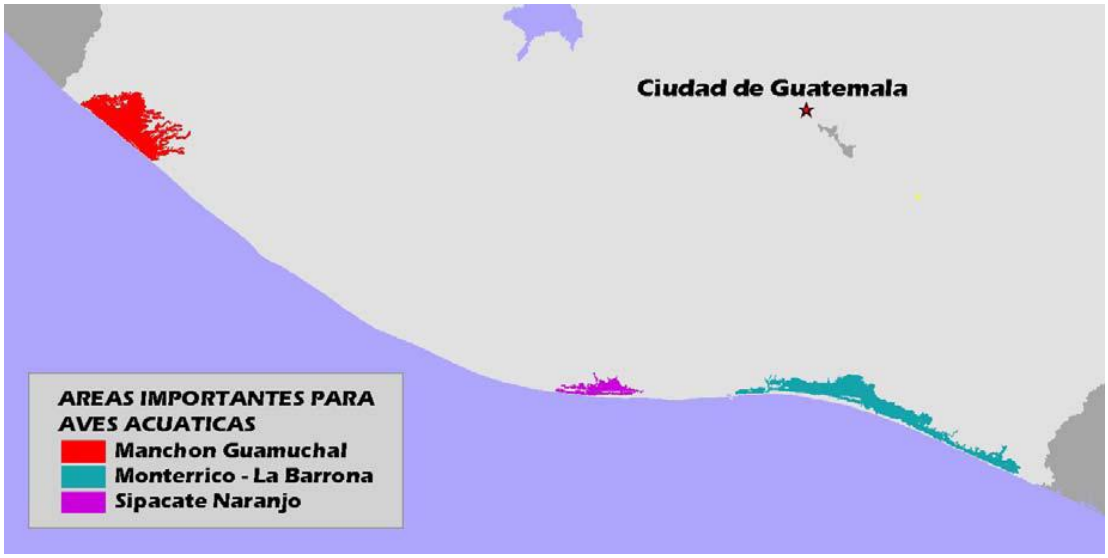
Maps and Figures:

Annex 1. Iztapa-Las Lisas Complex

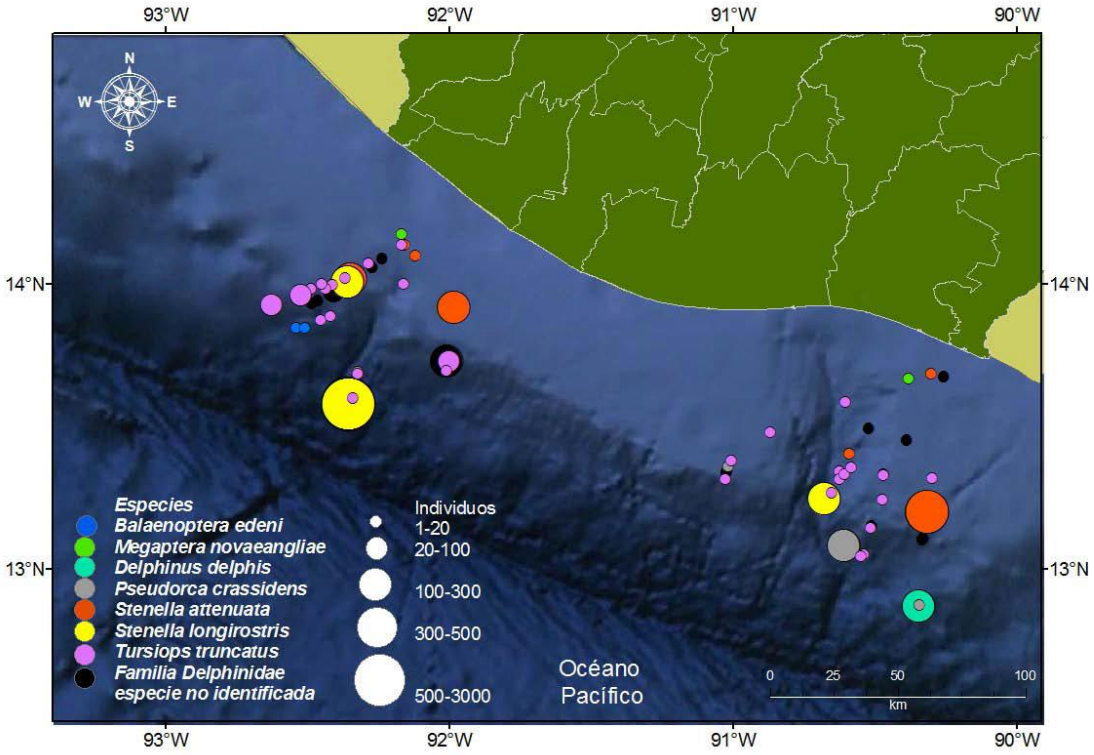


Aquatic Birds Important Areas



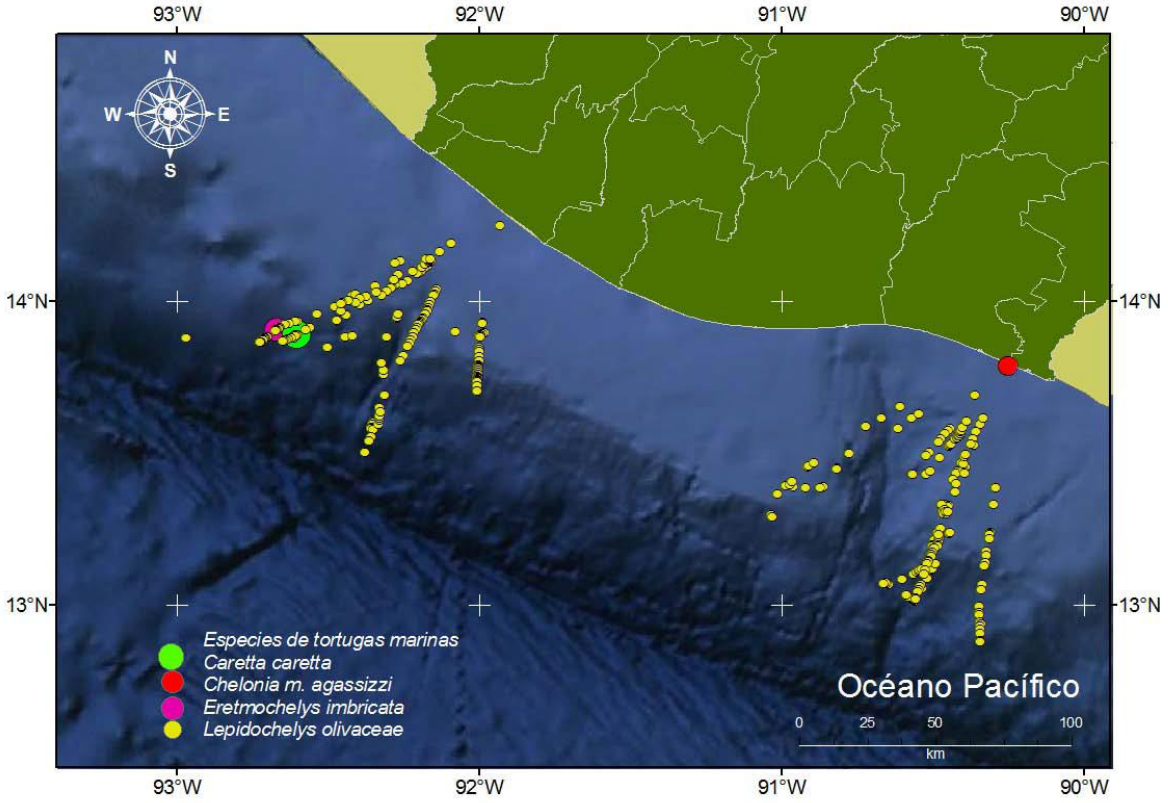
CONAP y MARN, 2009

Spatial distribution of cetaceans in the study area. Shows the number of individuals according to the size of the circle



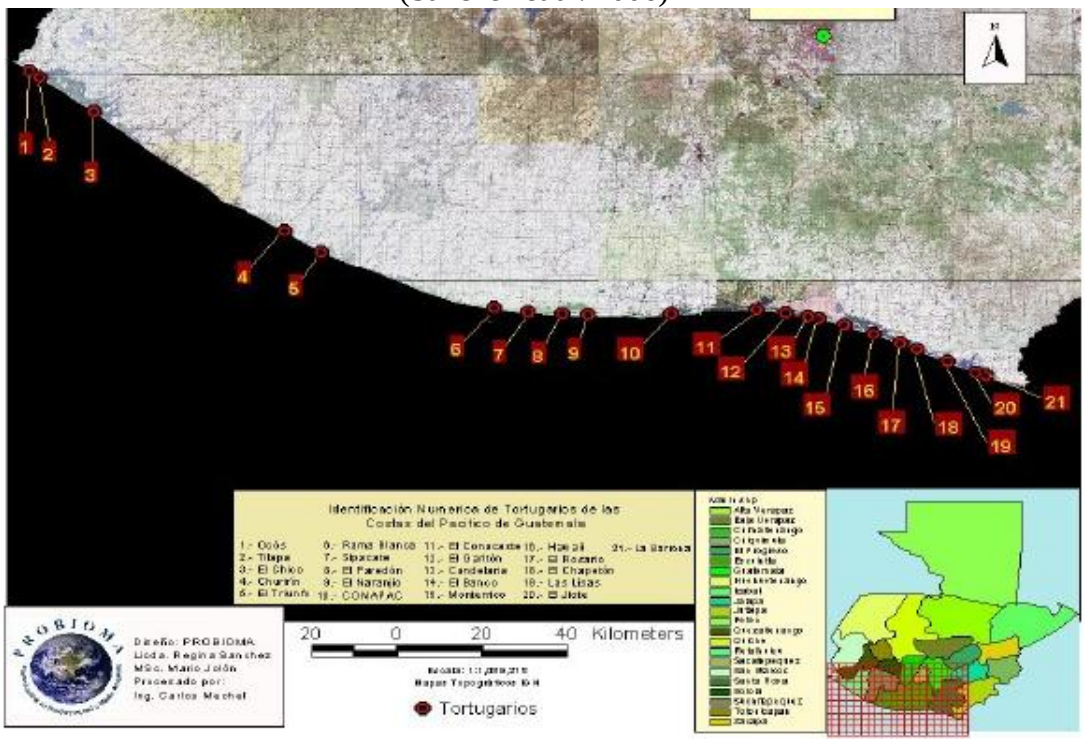
Dávila 2011.

Spatial distribution of sea turtles in the study area. Shows the number of individuals according to the size of the circle.



Dávila 2011

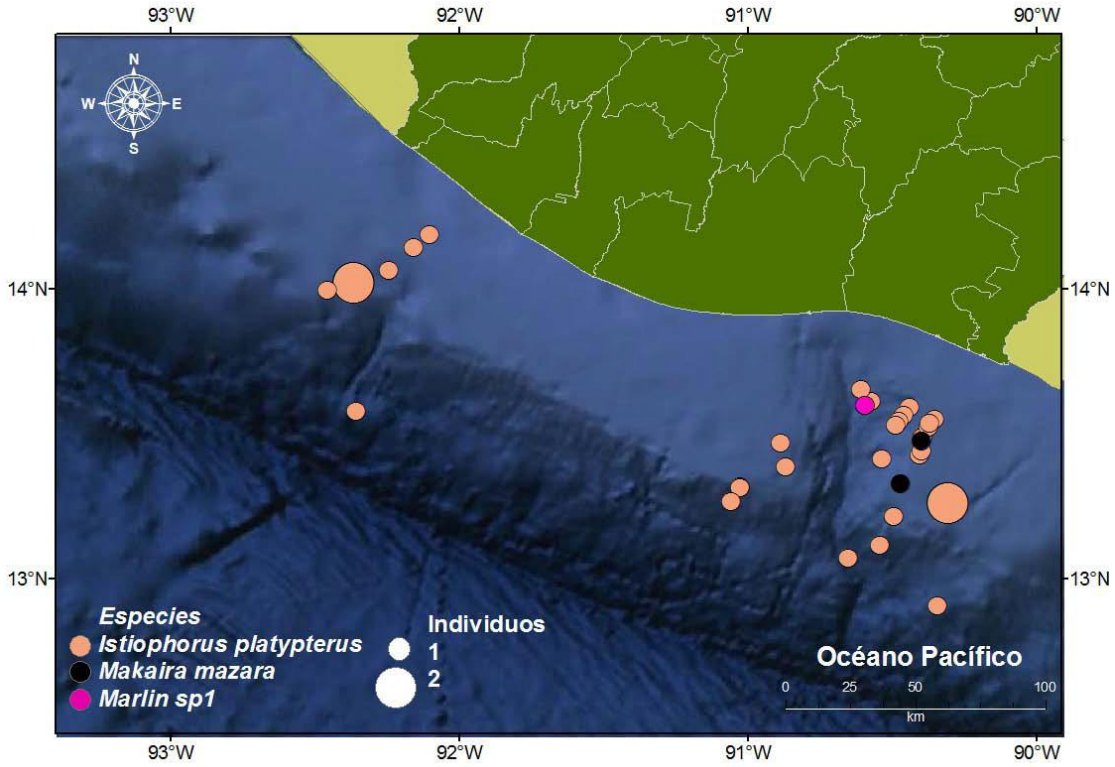
Location of hatcheries in operation during the 2005-06 season on the Pacific Coast of Guatemala. (Sanchez et al. 2006)



Nesting sites for *Lepidochelys olivaceae y Dermochelys coriaceae*

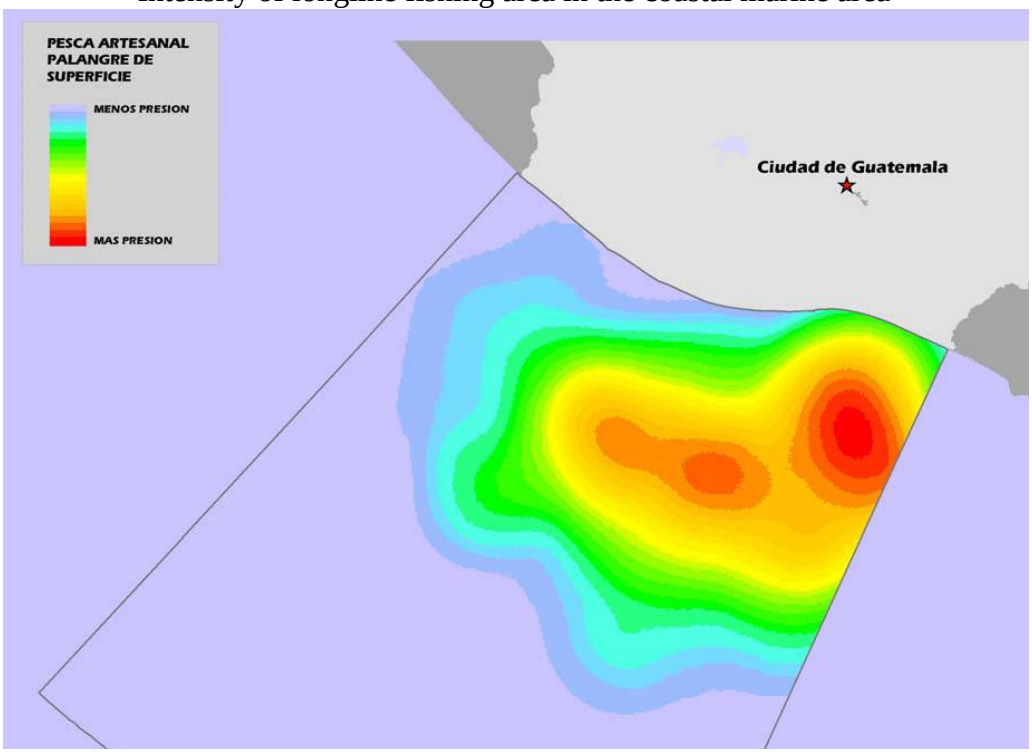
CONAP y MARN 2009

Spatial distribution of billfishes in the study area. Shows the number of individuals according to the size of the circle.



Dávila 2011

Intensity of longline fishing area in the coastal marine area



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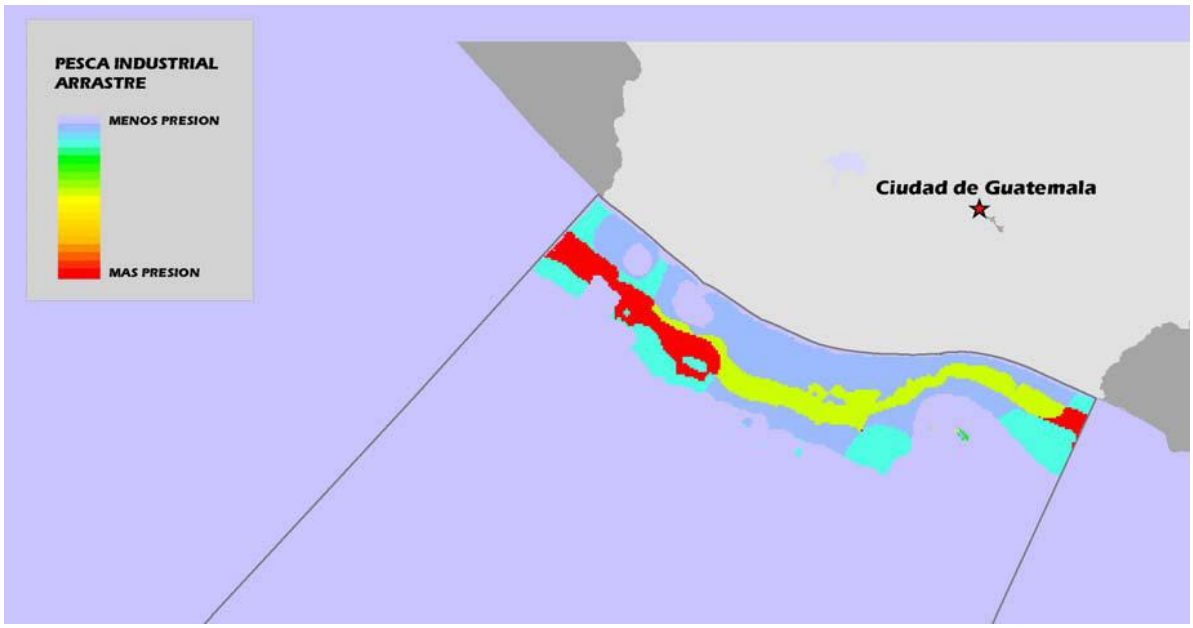
Intensity of industrial trawl fishing in the Coastal Marine



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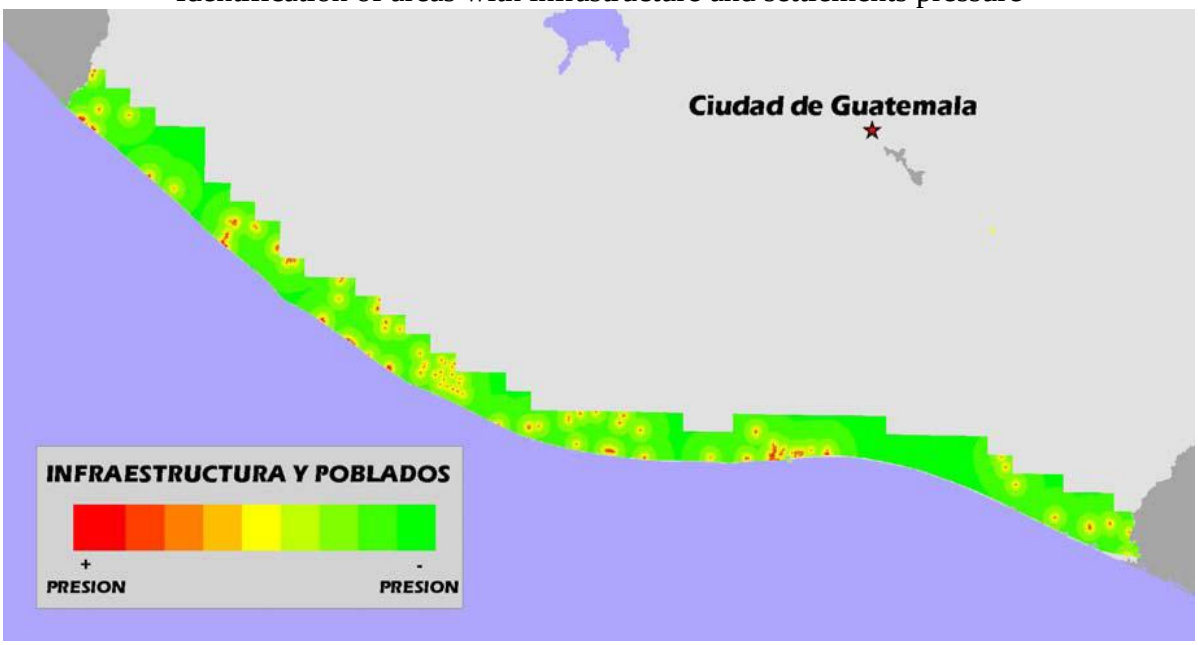
Identification of areas with infrastructure and settlements pressure



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