

WECAFC

WESTERN CENTRAL ATLANTIC FISHERY COMMISSION

Fish Spawning Aggregations in Honduras

Coral Reef Alliance
Roatan Marine Park

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This work is possible thanks to

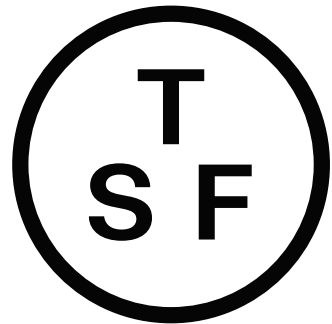


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MAR FISH

Knowledge, Monitoring and Protection of Mesoamerican Reef's Fish Spawning Aggregations

The overall objective of the MAR Fish Project is to promote the recovery of fisheries in the Mesoamerican Reef region; delivered by strengthening the network of protected FSAs of commercial fish, as critical areas in the life cycle of these species

COMPONENT 1:

Knowledge and protection
of Cayman Crown site

COMPONENT 2:

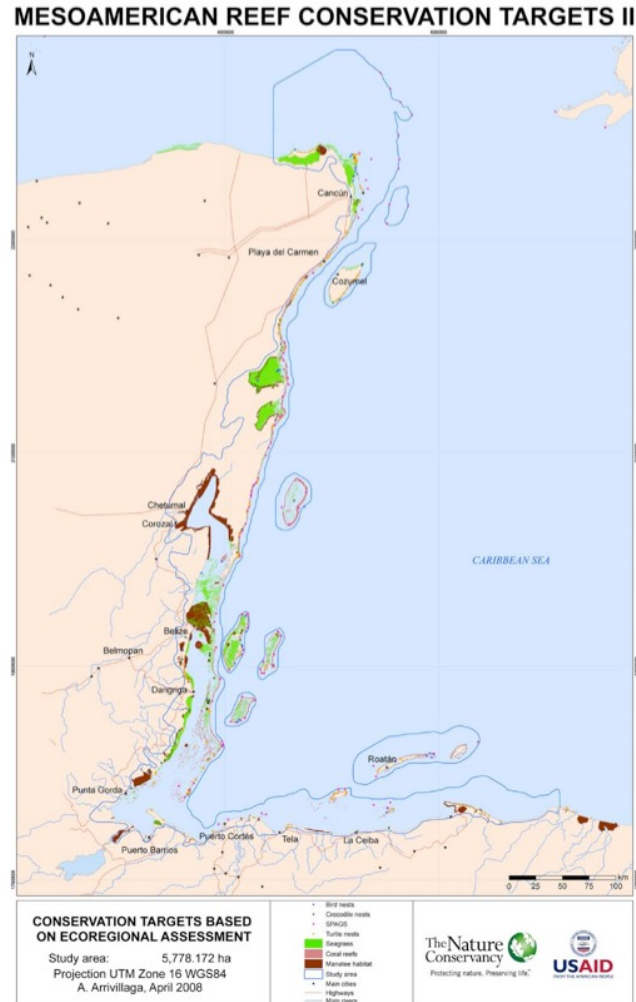
Sentinel Site
Observation Network

COMPONENT 3:

Promote the social
acceptability of protection
spawning grounds



Most information on Honduran FSAs is based on Local Ecological Knowledge



1 potential Mutton Snapper aggregation

19 potential grouper aggregation sites have been identified:

2 were validated: Roatan Banks and La Grupera in Cayos Cochinos

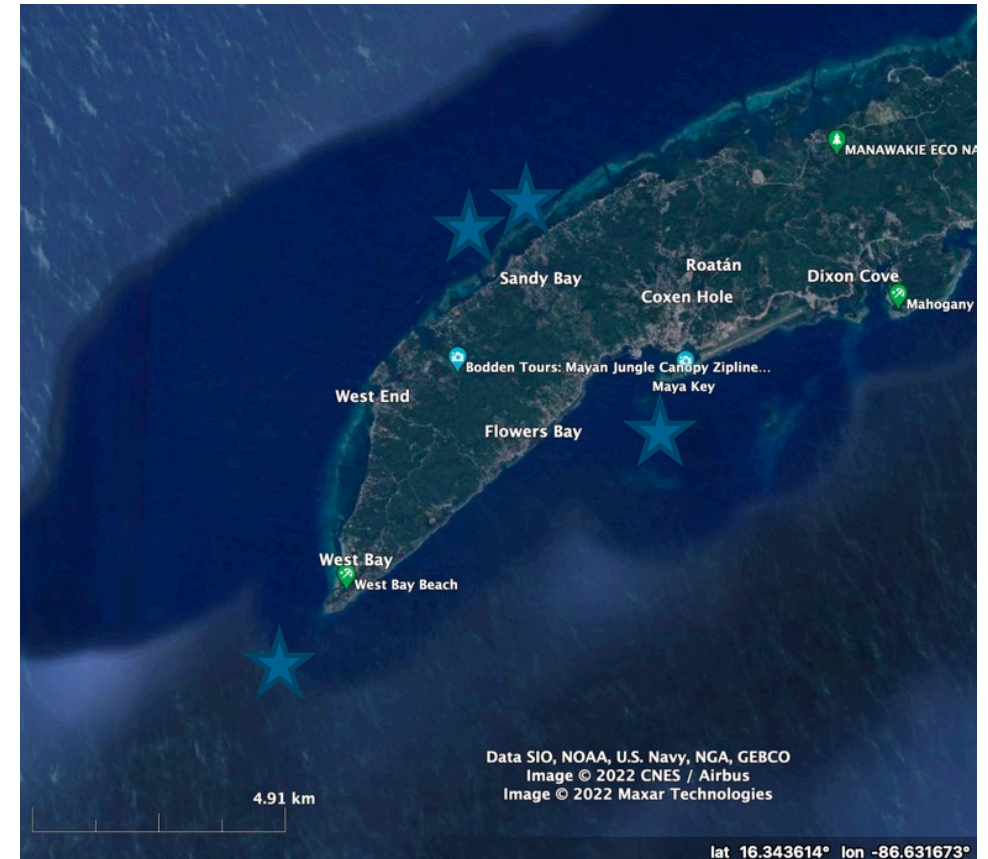
1 validated in Guanaja: Caldera del Diablo – possibly extirpated

3 potential sites in Roatan: Cordelia Banks, Northeast Bank, Texas



Our work in Honduras

1. Ecological - Studied 4 FSAs part of the Bay Islands National Marine Park
 - Sandy Bay
 - Texas
 - Cordelia Banks
 - Man O War
2. Socioeconomic - Assessment of Honduran communities that harvest in the Cayman Crown FSA



* Approximate locations



Our work in Honduras

1. Ecological -

- Underwater visual surveys from 2021 - 2023
- Record physical parameters
- Hydrophones 2022 - 2023

2. Socioeconomic –

- 117 household surveys in 13 communities
- 2 LEK systematization workshops
- 3 training workshops
- 2 scientific articles



What we now know of Honduran FSAs

Credit: Daniel Giraldo



Sandy Bay: is a confirmed tiger grouper spawning site

- Spawning peaks occur 5-10 dafm in March and April
- Tiger grouper abundances have increased for the entire (3 seasons) monitoring period
- However, total biomass has decreased
- Territorial behavior

Man O War: appears to receive spillover from Sandy Bay.

Tiger groupers have been observed spawning ($n = 24$).

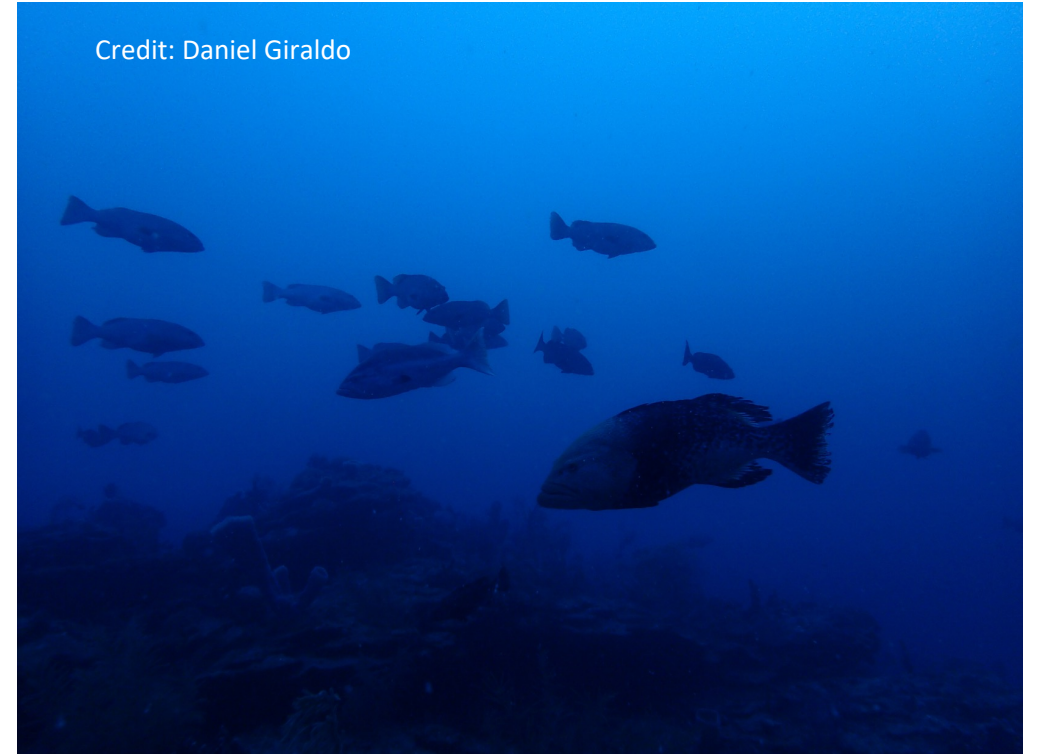


What we now know of Honduran FSAs

Texas: Sentinel site is **not** an FSA (2 years of continuous monitoring)

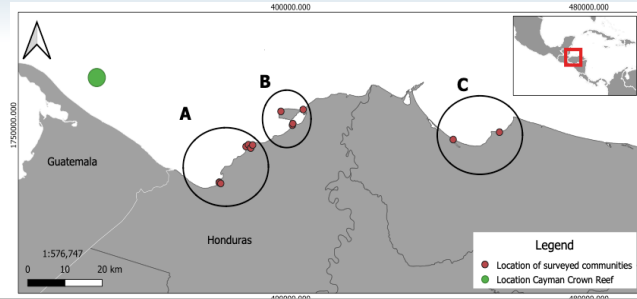
Cordelia: According to both hydrophone and visual census data Cordelia is a multispecies FSA for Nassau, Yellowfin, Black and Tiger groupers.

- Mating happens at >20m depths
- Preliminary data suggest that spawning peaks for Nassau and Yellowfin groupers in Honduras happen 8 dafm in April.
- For Black groupers the peak was observed 4 dafm in March.



What we know on the impact of FSA closures in Honduras

- No fishers from Tela harvest in Cayman Crown
- Only 34% of fishing households harvest in CC, most of them occasionally
- Only 1.5% harvest depend almost exclusively in CC for their livelihood, all from Omoa
- 5 potential solutions



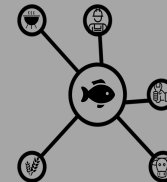
Potential solutions to Illegal, Unreported and Unregulated (IUU) Fishing



Governance



Capacity building



Diversification



Environmental awareness



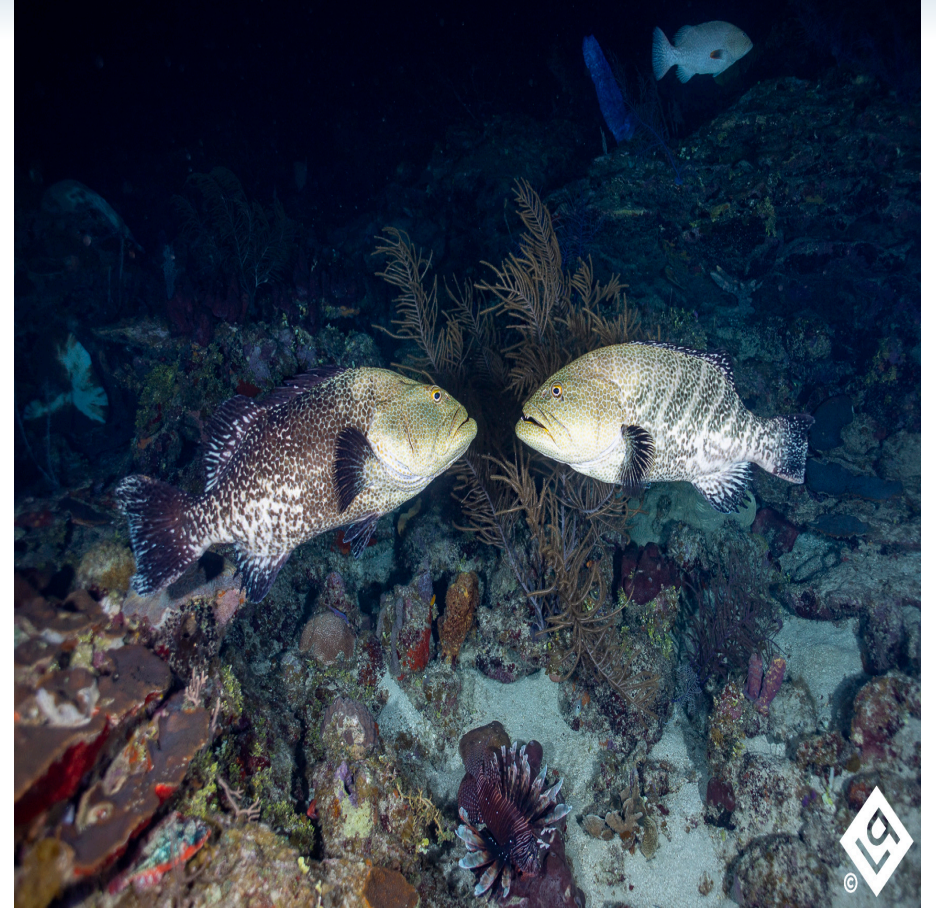
Bilateral cooperation

Holistic and participatory solutions are required to reduce IUU fishing and promote sustainable fishery management



Challenges

- Limited personnel (Advanced divers or dive masters)
- COVID19
- Weather
- Technical issues with equipment – hydrophone, dropcam, buoys
- Generating community buy in
- Enforcement



Current governance



- Honduras has a general ban on the Nassau grouper (started in 1 FSA in 2012)
- BINMP regulations on harvesting FSAs
- Cordelia Banks is a special protection area but other two sites do not have specific protection



Next steps

- Work on declaring a no-take in the Sandy Bay FSA
- Improve enforcement
- Pilot livelihood diversification projects
- Continue monitoring and promoting knowledge exchange
- Validate new sites



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We protect what we know!
Validation and community
involvement are key





Food and Agriculture
Organization of the
United Nations

6ª reunión del grupo de trabajo sobre agregaciones de desove, 6-7 junio 2024



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