

Species Action Plan



Nassau Grouper

Scientific name *Epinephelus striatus*
Common names Jakupepu; Nassaubaaars
Key values Commercial fisheries, dive/snorkel tourism, important reef predator
Population status Threatened and [declining regionally](#)
 Populations severely fragmented
 Decline of mature fish and loss of spawning aggregation sites



Photo: [Randall, J.E. Fishbase](#)

Distribution FAO areas; Atlantic, Western Central, Southwest

Habitats Coral reef; 0-255m, typically 0-30m . Juveniles found in seagrass beds.

SPAW	IUCN Red List	CITES	CMS	Local legislation		Other
						Flagship: Saba, St Maarten
ANNEX III	Critical	NONE	NONE	Bonaire	Aruba	

Threats

Overfishing	Fishing pressure includes targeting of spawning aggregations, targeting of large adults and use of fish traps which can damage reef communities, catch non-target species and ghost traps. Some reports of ciguatera poisoning .
Invasive species	Invasive Lionfish are voracious predators, consuming large quantities of juvenile fish and are thought to be altering coral reef ecosystems. In addition to the effects of overfishing, lionfish will compete with grouper for food and shelter.
Climate change	Climate change is predicted to have a significant impact on grouper populations through the loss of reef habitats, herbivore die off, disease and bleaching. Warming oceans are expected to effect spawning aggregations.

Key resources

[NOAA Fisheries: Nassau Grouper recovery outline](#)

Management goals

<p>Overfishing</p> <ul style="list-style-type: none"> ○ Reverse population decline through year-round protection of adult Nassau grouper throughout their range ○ Ensure comprehensive and enforceable regulations on catch, gear and closed seasons ○ Integrate grouper management into existing fisheries management programmes and initiatives ○ Fully protect grouper spawning aggregation sites ○ Minimize mortality caused by lost/ghost traps
<p>Invasive species</p> <ul style="list-style-type: none"> ● Integrate grouper management with existing lionfish management programmes
<p>Climate change</p> <ul style="list-style-type: none"> ● Fully protect coral reef ecosystems to ensure suitable habitat for all life stages ● Monitor published information for updates regarding impacts of climate change on grouper ● Integrate new knowledge into monitoring and research programmes

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Recommendations

Despite ongoing conservation efforts, Nassau grouper populations are in decline region wide. There main causes of decline are overfishing and habitat loss. Invasive lionfish have a compounding effect, increasing competition for food and shelter. To reverse the regional decline of Nassau grouper, adult fish need year-round protection and spawning aggregation sites require strict seasonal protection.

Management

- Petition for the creation of a conservation platform, with representation from governments, park management authorities and fishers to address region wide conservation of grouper and other regionally threatened and endangered species (such as sharks)
- Work with Fisheries Commission and government to develop Nassau grouper fisheries management and conservation plan
- Initiate Nassau Grouper recovery plan with suitable platform for implementation
- Fully protect coral reefs to ensure adequate habitat for all life stages
- Address trade in grouper and consider the introduction of traceability schemes
- Explore opportunities for [aquaculture](#)

Legislation

- Review legislation to ensure it includes strict protection of spawning aggregations (seasonal site closure)
- Include legal protection for adult grouper and egg bearing females
- Prohibit use of spearguns
- Identify opportunities to regulate use of pots, traps and catch size as well as appropriate sanctions
- Introduce permitting system for fish pots/traps and/or to exclude non-local fishers

Enforcement

- Strictly enforce legislation protecting spawning aggregation sites, size limits and gear restrictions
- Strictly enforce closed season
- Ensure fish markets are aware of restrictions

Science and monitoring

- Monitor populations and population dynamics (size, distribution, numbers)
- Assess status of spawning aggregations using standardized methods
- Conduct socio economic monitoring to establish value of fishery ([IUCN Guidelines](#))
- Monitor landed catch (including catch per unit effort)
- Find effective solutions to reduce the impact of lost/ghost traps
- Improve understanding of larval and adult connectivity and habitat dependency
- Integrate lionfish data into management plan

Stakeholders

- Hold regular dialogue with fishers and support fishing co-operatives
- Facilitate collaboration to address invasive lionfish.

Networking

- Monitor information regarding regional population status, domestic and international trade.
- Attend GCFI to share lessons learned and to learn from other practitioners

Information - education

- Raise awareness about the need for full protection of Nassau grouper region wide
- Building awareness and a constituency for conservation of Nassau grouper and spawning aggregations through outreach and education highlighting the importance of preserving reproductive output
- Provide education, information, and outreach to generate public support and foster stewardship
- Develop information packages for use in schools.

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Gaps

- Population data not available for Dutch Caribbean
- Weak island legislation
- CITES designation
- CMS designation

General information

<p>Description (NOAA.gov):</p>	<ul style="list-style-type: none"> - Mature length 48cm (maximum length of up to 1.2 m) - Weight up to 25 kg - Maximum reported age 29 years <p>Distinctive features</p> <ul style="list-style-type: none"> • Generally light beige with large eyes and robust body. • Five dark brown vertical bars, a large black saddle blotch on top of the base of the tail, and a row of black spots below and behind each eye. • A dark band forms a tuning-fork pattern on top of the head, beginning at the front of the upper jaw, extending through each eye, and then curving to meet its corresponding band in front of the dorsal fin. • Juveniles exhibit a color pattern similar to adults. T • Nassua grouper can be distinguished from other groupers by the vertical bars and dark saddle coloring along the dorsal part of the area preceding the tail. • Color pattern can change within minutes from almost white to bicolored to uniformly dark brown, according to the behavioral state of the fish. • A distinctive bicolor pattern appears when two adults or an adult and large juvenile meet and is often seen at spawning aggregations
<p>Biology (fishbase)</p>	<ul style="list-style-type: none"> • Highly migratory • Feed on fish, shellfish and molluscs • Return to the same spawning sites every year (making them especially vulnerable to exploitation). • Spawning aggregations of up to 30,000 individuals take place once a year between December and January, males and females release their eggs and sperm into the water column. • Each female releases thousands of eggs which hatch after 48 hours, and the larval period lasts from 35 to 40 days. • Most grouper species change sex throughout their lifetime, Nassau Groupers typically mature as either male or female and remain that gender