# The Effects of Seafood Import Tariffs on Market Demand for Nassau Grouper in the Turks and Caicos Islands

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ABSTRACT

This study examines the market demand for reef fishes from the artisanal inshore fishery in the Turks and Caicos Islands (TCI). The rapid growth of tourism in the TCI has dramatically increased the demand for seafood but, as yet, the reef fish fishery is relatively undeveloped. Large carnivorous reef fish such as Nassau grouper, *Epinephelus striatus*, are particularly vulnerable to overfishing because of their biology and their popularity in restaurants. The local fishing sector is protected by tariffs up to 40% on imported seafood products: theoretically, this should increase demand for local fishes as it makes imported products comparatively more expensive. This study uses a paired comparison conjoint survey of TCI restaurants to assess the effects of changes in the import tariff rate on market demand for fresh domestic and frozen imported grouper, and potential substitute products. I find that the import tariff significantly increases demand for local Nassau grouper and, hence, could place increasing fishing pressure on these vulnerable reef fish. The policy implications and alternatives for Nassau grouper conservation are briefly examined.

Keywords: Nassau grouper; tariffs; seafood demand; conjoint analysis

## INTRODUCTION

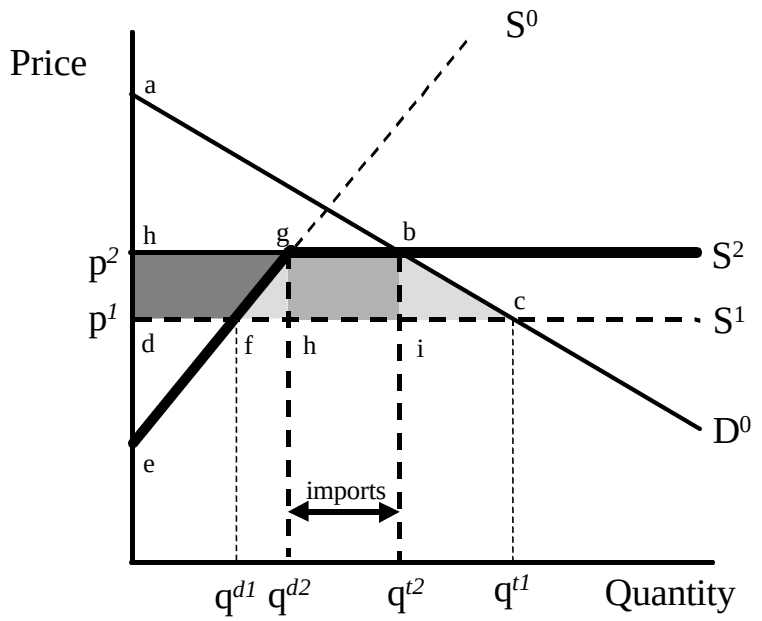
Rapid growth of tourism in the Turks and Caicos Islands (TCI) has dramatically increased the demand for seafood but, as yet, the reef fish fishery is relatively undeveloped. This situation is changing, however, as increasing numbers of fishers from South Caicos, the center of the commercial lobster and queen conch fisheries, are increasingly willing to make the 60-km trip across the Caicos Bank to sell reef fishes to restaurants and hotels. Fishers receive prices around US $3.25 per kg for grouper and snapper species from the South Caicos processing plants, which are primarily set up for handling export-oriented queen conch and spiny lobster landings (author's personal observation). On the resort island of Providenciales, on the other hand, fishers receive up to $15.00 per kg for the same fish.

Imported seafood products in the TCI are subject to tariffs of up to 40%. This policy generates revenue for government and should, theoretically, increase income in the artisanal fishing sector (the *de facto* social safety net for rural TCI

'Belongers'). An import tariff makes local reef fish more competitive relative to expensive imported products. While an import tariff causes some economic welfare losses (deadweight losses), local governments gain tariff revenue and fishers producer surplus (PS) increases as a result of the tariff. Hence, local actors capture increased resource rents at the expense of consumers – largely foreign tourists in the TCI – and there are economic incentives for both government and fishers to support the maintenance or expansion of import tariffs.

Figure 1 illustrates the general effects of a seafood import tariff. In the absence of trade, the domestic supply ($S^0$) and demand ($D^0$) curves would determine a market-clearing equilibrium at their intersection. When international supply is not subject to tariffs, the supply curve is kinked, forming supply $S^1$ at the world market price $p^1$. Total consumption is $q^{t1}$, of which $q^{d1}$ is supplied domestically and the balance ($q^{t1}$ - $q^{d1}$) imported. Total economic welfare under free trade is consumer surplus (CS), area *acd*, plus producer surplus (PS), area *def*. When an import tariff is imposed, raising the price of imports to $p^2$, the supply curve is given by $S^2$. Total consumption falls to $q^{t2}$, of which $q^{d2}$ is supplied domestically and the balance imported. PS increases by area *dfgh* (dark gray), government captures tariff revenues, area *bghi* (medium gray), and CS falls to area *abh*. Deadweight losses under the import tariff are the two lightly shaded triangles, areas *bci* plus *fgh*.

**Figure 1 – Welfare Impacts of an Import Tariff**



Whether the import tariff contributes to reef fish depletion depends on three factors. What is the market demand response to the tariff (i.e., the slope of, and shifts in, the demand curve)? What is the responsiveness of artisanal fishers to price signals in the local marketplace (i.e., the slope of the supply curve)? Finally, how inherently vulnerable are the target stocks (i.e., does the supply curve bend backwards, leading to the Gordon-Schaefer open access equilibrium)? This research addresses the first question and assesses whether the seafood import tariff increases domestic market demand for Nassau grouper, *Epinephelus striatus,* a vulnerable reef fish (Sadovy 1994; Coleman et al. 2000) that also holds considerable value for the dive tourism industry (Rudd and Tupper 2002).

## METHODS

A two-part survey was developed for restaurant managers and buyers in the TCI. In the first section, respondents were presented with open-ended questions regarding what seafood products they used, whether their buying decisions were influenced by the import tariff, and their general observations on trends in the availability of local fishes. This research focused on the 'tourist' restaurants of Providenciales and Grand Turk, but the qualitative survey was also used to interview a number of 'native' restaurants catering to TCI Belongers.

In the second part, a paired comparison conjoint survey was used to assess the marginal trade-offs that restaurant buyers make regarding key product attributes for reef fishes and potential substitute products. Paired comparisons of this type are designed to elicit maximum information about subtle preference trade-offs and have long been used in market research (Green and Srinivasan 1978). The survey was administered in person by trained student researchers during April 2000. Respondents were assured that all information collected would remain confidential.

Each seafood product is composed of a bundle of attributes that provide value for restaurant buyers (i.e., contribute to profitability) but that vary in level between two profiles. After a pilot survey of selected restaurant owners and managers, experimental design was finalized. Key attributes and levels that were included in the final survey instrument included: product form (fresh or frozen); product source (local or imported); product type (grouper - Serranidae, snapper - Lutjanidae, mahi or dolphin fish – *Coryphaena hippurus*, and wahoo – *Acanthocybium solandri*); and purchase price (US $5.00, 6.00, 7.00, 7.20, 8.00, 8.40, 9.60 or 11.20 per lb). Price is one of the relevant product attributes, allowing the assessment of marginal pricing trade-off's for other product attributes. It should be noted that almost all local grouper landed in the TCI and sold to restaurants is Nassau grouper. Some other grouper species (e.g., tiger grouper, *Mycteroperca tigris*) are occasionally consumed, but *Ciguatera* toxicity limits sales of other groupers in restaurants.

Paired comparison conjoint surveys are cognitively challenging. The design space for paired comparison questions rises exponentially with the number of attributes and levels considered. This survey used two attributes with two levels, one with four levels, and one with eight levels, yielding a potential design space of $4^2 2^4 8^2 = 16{,}384$ possible paired comparisons. The experimental design challenge was to select a limited number of questions from the design space in

such a way that useful information about attribute trade-off's is maximized. This was done using the Sawtooth Software Conjoint Value Analysis (CVA) software (Sawtooth Software 1996).

A nearly orthogonal and balanced experimental design consisting of 20 survey questions was constructed by choosing the design with the highest D-efficiency from a pool of 500 candidate surveys. The final survey instrument had $D = 0.932$ (where a score of 1.0 is fully orthogonal and balanced). Each of the twenty survey questions (e.g., Figure 2) asked respondents to express their preferences for one profile relative to another using a rating scale.

**Figure 2 – A Paired Comparison Question Rating Two Seafood Products**

| Category | Option A | Option B |
|---|---|---|
| **Product Form** | Frozen | Fresh |
| **Type of Seafood** | Mahi Mahi | Grouper |
| **Purchase Price (US $/lb)** | $9.60 per lb | $8.00 per lb |
| **Source of Seafood** | Imported | Local Fishery |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| A is much better | | A is somewhat better | | A & B are about equal | | B is somewhat better | | B is much better |

**Please circle a number from 1 to 9 that reflects your rating**

The results were collated and analyzed using the CVA software. An ordinary least square (OLS) dummy variable regression was conducted for each survey respondent. The regression coefficients, known in the marketing literature as part-worth's (the marginal valuations of choice variables), were then available for use in market simulations. See Rudd (2001) for a more detailed explanation of the CVA paired comparison analysis and simulation.

The CVA market simulation module was used to model the market share for various hypothetical seafood products. In these simulations, total utility for each alternative product was calculated based on the part-worth's for each individual survey respondent. Each respondent was assumed to choose the seafood product with the highest overall utility in the simulation. The individual choices were aggregated to determine market share (% of respondents choosing the option) for each seafood product.

The simulations included six potentially competitive seafood products and used average prices reported in the qualitative survey: (1) imported frozen grouper at US $5.20 per lb; (2) local fresh grouper at $5.75 per lb; (3) local fresh snapper at $6.54 per lb; (4) imported frozen snapper at $6.88 per lb; (5) local fresh mahi at $7.60 per lb; and (6) local fresh wahoo at $8.00 per lb. Market shares were calculated for two simulations in which the price of either frozen imported or local fresh grouper fluctuated. Other prices and products were held constant across simulations.

The first simulation, which varied the price of imported frozen grouper, simulates the effects of a change in the TCI seafood import tariff. The second

simulation, which varied the price of local fresh grouper, simulates the effects of a change in local seafood prices (e.g., due to local depletion or by policies that make fishing more expensive). Two-tailed paired *t*-tests (using Bonferroni adjustment, total $\alpha$-level of 0.05) were used to test the hypotheses that the market shares of the survey respondents for different products were significantly different (e.g., was market share for imported frozen grouper at $5 per lb different from that of local fresh grouper at $6 per lb?).

## RESULTS

Of 25 restaurants surveyed, 24 completed the qualitative surveys and 20 completed full conjoint surveys. These restaurants likely account for > 90% of TCI tourist restaurant consumption and approximately 50% of total TCI seafood consumption.

### General Market Observations

Approximately 3,200 kg of fish were consumed weekly during the study period; grouper (725 kg) was the single most popular seafood. This implies the annual consumption of grouper is about 85 t (52 * [725 kg / 0.90] / 0.5), of which approximately 50 t (60%) is landed locally. Weekly consumption of other types of seafood was 650 kg spiny lobster, 550 kg queen conch, 440 kg snapper, 400 kg mahi, 125 kg wahoo, and 265 kg of other products (primarily salmon, tilapia and tuna).

Most local grouper consumed was Nassau grouper. Imported grouper consisted primarily of frozen filets imported from Southeast Asia or Central America via Florida. Most mahi and all wahoo was landed by local sport fishing charter boats and sold directly to local restaurants.

The product mix in native restaurants was much different than in tourist restaurants. The native restaurants tended to use many more species of local fish interchangeably – several restaurants differentiated their purchases only as small or large fish. Native restaurant sales volume was variable, but was very high in some cases (e.g., one ‘small’ native restaurant used as much fish in one week as a large all-inclusive resort with over 1000 guests).

Several restaurant buyers commented on the declining availability of reef fish in the Providenciales area. Buyers in Providenciales also noted that inconsistent quality and delivery from local fishers was the main reason that they purchased imported seafood, despite the import tariffs. Most buyers indicated that the import tariff did have an impact on their purchase decisions and that a reduction of the tariff, from 40% to 20% on finfish, would alter their purchasing behavior.

A cluster analysis characterizing market niches for the 20 restaurants that completed the full survey was conducted using Datadesk (Velleman 1997). Four distinct clusters were identified: seven restaurants for which price was the most important factor (price sensitive ‘casual dining’ operations); two restaurants for which product form (fresh) was the dominant factor; four restaurants that placed equal importance on product form, type, price and source; and seven restaurants that put a low priority on source and that shared a characteristic of high entrée price (‘white tablecloth’ restaurants that source quality product from wherever they can find it).

**Conjoint Survey and Simulation Results**

Regressions were conducted for 20 individual respondents and part-worth's were calculated for use in simulations. $R^2$ for high (> 0.88) for all respondents, indicating internal consistency in decision making.

In Simulation 1, the price of frozen imported grouper was varied, simulating the effect of changes in the seafood import tariff. Market shares for various seafood products in the face of varying imported grouper prices are shown in Table 1. Frozen imported grouper might be available from U.S. wholesalers for as low as $3.15 per lb, so $4.00 per lb may already represent an import tariff in the 25% range. As the price of the imported grouper rises to $5.00 per lb, market share for that product falls from 30% to 15%. As price rises to $6.00 per lb, market share falls further to 5% and frozen imported grouper is priced totally out of the market at $8.00 per lb.

**Table 1 – Market Share for Seafood Products When Tariff on Frozen Imported Grouper Varies**

| | | Market Share (%) for Six Seafood Products | | | | | |
|---|---|---|---|---|---|---|---|
| | | Fresh Local Grouper | Frozen Imported Grouper | Fresh Local Snapper | Frozen Imported Snapper | Fresh Local Mahi | Fresh Local Wahoo |
| Price of Frozen, Imported Grouper (US $/lb) | $4.00 | 40% | 30% | 10% | 0% | 10% | 10% |
| | $5.00 | 45% | 15% | 20% | 0% | 10% | 10% |
| | $6.00 | 50% | 5% | 20% | 5% | 10% | 10% |
| | $7.00 | 50% | 5% | 20% | 5% | 10% | 10% |
| | $8.00 | 50% | 0% | 20% | 10% | 10% | 10% |

As frozen imported grouper market share falls from 30% to 0%, three other products gain market share equally: fresh local grouper, fresh local snapper, and frozen imported snapper. The average price of frozen imported grouper during the survey period (April 2000) was $5.20 per lb. Reducing the price of imported product from the $5.00 range, by reducing the import tariff, would lead to reduced market demand for local grouper and snapper, potentially reducing fishing pressure on local stocks.

Simulation 2 models the effects of changes in the price of local fresh grouper. This could happen if fishing pressure started to deplete local stocks, driving up prices. It could also happen if the costs of fishing changed, or if the value of grouper for the dive industry were taken into account, correcting for market distortions resulting from fishing externalities. Table 2 shows the market shares for various seafood products when the price of fresh local grouper varies.

**Table 2 – Market Share for Seafood Products When Fresh Local Grouper Price Varies**

| | | Market Share (%) for Six Seafood Products | | | | | |
|---|---|---|---|---|---|---|---|
| | | Fresh Local Grouper | Frozen Imported Grouper | Fresh Local Snapper | Frozen Imported Snapper | Fresh Local Mahi | Fresh Local Wahoo |
| Price of Fresh, Local Grouper (US $/lb) | $5.00 | 70% | 5% | 20% | 0% | 0% | 5% |
| | $6.00 | 45% | 15% | 20% | 0% | 10% | 10% |
| | $7.00 | 15% | 30% | 35% | 0% | 10% | 10% |
| | $8.00 | 0% | 30% | 40% | 0% | 20% | 10% |

Table 2 demonstrates that there is a more complex reaction in the market to changes in the price of fresh local grouper. Buyers are very price sensitive, with market share falling from 70% at $5.00 per lb to 0% at $8.00 per lb. All other fresh local products – snapper, mahi, and wahoo – gain market share as the price of fresh local grouper rises. Market share for frozen imported grouper also rises.

Two-tailed paired *t*-tests were used to test the equivalence of market shares (i.e., restaurant buyer indifference between two products) for different seafood products under different pricing conditions. For instance, the null hypothesis that market shares were equal for frozen imported grouper at $5.00 per lb ($S_0$)and fresh local snapper at $6.54 per lb ($S_1$) could not be rejected (Table 3 – fail to reject $H_0$ at total $\alpha = 0.05$, $p > 0.05$). Conversely, market share equivalence for frozen imported grouper at $6.00 per lb ($S_0$) and fresh local grouper at $5.75 per lb ($S_1$) was rejected ($p = 0.004$) (i.e., cheaper fresh local grouper was significantly preferred).

**Table 3 – Tests of equality of profile market shares for frozen imported grouper ($S_0$) and other products ($S_1$). Two-tailed paired *t*-test *p*-values are for total $\alpha = 0.05$, individual $\alpha = 0.001$.**

| | | Market Share Test ($H_0$: $S_0 = S_1$) *p*-value | | | | |
|---|---|---|---|---|---|---|
| | | Fresh Local Grouper ($5.75/lb) | Fresh Local Snapper ($6.54/lb) | Frozen Imported Snapper ($6.88/lb) | Fresh Local Mahi ($8.00/lb) | Fresh Local Wahoo ($8.00/lb) |
| Price of Frozen, Imported Grouper (US $/lb) | $5.00 | 0.082 | 0.171 | 0.001 | 0.031 | 0.031 |
| | $6.00 | 0.004 | 0.110 | 0.004 | 0.017 | 0.017 |
| | $7.00 | 0.004 | 0.110 | 0.004 | 0.017 | 0.017 |
| | $8.00 | 0.004 | 0.110 | 0.017 | 0.017 | 0.017 |

Table 3 summarizes tests for frozen imported grouper, which has a statistically indistinguishable market share from that for fresh local snapper at all frozen imported grouper prices from $5.00 and $8.00 per lb and fresh local grouper at a frozen imported grouper price of $5.00 only. As frozen imported grouper price falls well below $5.00 we should expect to see restaurant buyers increasingly prefer the import product, perhaps to the extent that the equivalence of market share with fresh local grouper could again be rejected (i.e., when frozen imports are at $6.00, fresh local grouper is significantly preferred by buyers, when imports are at $5.00, buyers are indifferent, and when imports fall under $4.00, buyers may significantly prefer the imported product).

Similarly, Table 4 shows the two-tailed paired *t*-test results when fresh local grouper ($S_0$) at various prices of is compared with other seafood products at current prices. The patterns are more complex than in the previous case. For example, restaurant buyers exhibit indifference between fresh local grouper at $7.00 per lb and fresh local mahi at $8.00 per lb ($p = 0.666$). However, the equivalence of market shares is rejected when the price of fresh local grouper falls to $6.00 per lb ($p = 0.031$, indicating that the cheaper grouper is significantly preferred) or rises to $8.00 per lb ($p = 0.042$, indicating that the mahi is now significantly preferred to more expensive grouper).

**Table 4 – Tests of equality of profile market shares for fresh local grouper ($S_0$) and other products ($S_1$). Two-tailed paired *t*-test *p*-values are for total** a **= 0.05, individual** a **= 0.001.**

| | | Market Share Test ($H_0$: $S_0 = S_1$) *p*-value | | | | |
|---|---|---|---|---|---|---|
| | | Frozen Imported Grouper ($5.20/lb) | Fresh Local Snapper ($6.54/lb) | Frozen Imported Snapper ($6.88/lb) | Fresh Local Mahi ($8.00/lb) | Fresh Local Wahoo ($8.00/lb) |
| Price of Fresh, Local Grouper (US $/lb) | $5.00 | 0.000 | 0.014 | 0.000 | 0.000 | 0.000 |
| | $6.00 | 0.083 | 0.171 | 0.001 | 0.031 | 0.031 |
| | $7.00 | 0.330 | 0.214 | 0.083 | 0.666 | 0.666 |
| | $8.00 | 0.010 | 0.002 | 0.000 | 0.042 | 0.163 |

Table 4 demonstrates that fresh local grouper is a substitute for each of the other five products. At a low price of $5.00 per lb, it is significantly preferred to all other seafood products. At intermediate price levels, market shares are not significantly different for fresh local grouper and other products. When the price of fresh local grouper rises to $8.00 per lb, all products except fresh local wahoo are preferred to expensive grouper. By contrast, frozen imported grouper can only be viewed as a substitute for fresh local snapper and grouper.

## DISCUSSION

A variety of market niches exist in the TCI restaurant sector. Preferences for seafood products varies substantially, but total annual seafood consumption in the TCI probably is in the 325- to 425-tonne range, assuming that consumption in restaurants during the study period (April) is average, our sample accounted for 90% of tourist restaurant purchases, and that tourist restaurants account for about 50% of total seafood consumption in the TCI.

### Characteristics of Market Demand

Frozen imported grouper and fresh local grouper are substitute products. In Simulation 1, a 50% change in the import price (from $4.00 to $6.00 per lb) induced a 10% increase in market share for both fresh local grouper and snapper. Frozen grouper is generally viewed as a low-quality product; changes in prices had no impact on high-end local products (mahi and wahoo), and the main impact of frozen imported grouper on fresh local grouper market share occurred at prices less than the current import price ($5.20 per lb).

Market demand for fresh local grouper is very price sensitive. A 60% increase in price, from $5.00 to $8.00 per lb, resulted in market share falling from 70% to 0%. The biggest market share gainer was frozen imported grouper (+ 30%), but fresh local snapper and mahi also increased 20% in market share as fresh local grouper price rose over this range. Fresh local grouper is viewed as a high-quality product and can substitute for high-end mahi and wahoo.

The results of both simulations imply that market demand for fresh local Nassau grouper in the TCI is quite elastic (i.e., the demand curve is relatively flat), and that the curve will shift up or down based on the price of substitute imported grouper, which is partially determined by the import tariff.

### Characteristics of Market Supply

What are the next steps that need to be taken in an analysis of Nassau grouper management options in the TCI? The second step is to assess the response of local fishers to changes in market price signals. If fishers were profit maximizers, we would expect to see increased effort allocated to reef fish capture as demand rises. Fisher behavior and motivations in tropical artisanal fisheries are likely more complex, however, and factors such as risk preferences, alternative fishing opportunities, and revenue goals (rather than profit) may come into play. Many Nassau grouper caught on the South Caicos fishing grounds, for example, are taken by lobster divers who opportunistically spear fish (Tupper and Rudd in press). Few data are available from fisher logbooks regarding the allocation of effort between different fishing activities, fishing locations or landing volumes. Further work on the supply-side of the market is clearly required.

### Policy Implications

Further complications arise in economic analyses of reef fish management options. First, large reef fish such as Nassau grouper provide non-extractive economic value for the dive tourism industry (Williams and Polunin 2000; Rudd and Tupper 2002) as well as being popular in restaurants. This makes policy decisions based on economic maximization criterion difficult because of

nonmarket valuation challenges. This may also lead to conflicts between policy actors with different goals. For instance, the finance division of government may have a goal of revenue generation (in the TCI, there are no income, property or business taxes – substantial government revenue is raised by license fees and import tariffs) while other departments might have goals of efficient resource utilization, promotion of tourism, or conservation. Fishers and the dive tourism operators may also have conflicts over reef fish utilization.

Secondly, the biology and ecology of many reef fishes, including Nassau grouper, make them extremely vulnerable to overfishing (Coleman et al. 2000). They will have the classic backward-bending supply curves of the Gordon-Schaefer model that, in the absence of effective property rights, lead to an open access equilibrium where average, not marginal, cost just equals demand (i.e., total rent dissipation).

When an import tariff is imposed, consumer surplus falls. When harvest levels are relatively low, the tariff may increase producer surplus as local fishers increase production and get higher prices (recall Figure 1). Government gains tariff revenue. Once harvests rise above MSY, however, further increases in fisher revenue can be completely offset by rising costs. Strong incentives may still exist, however, for government to maintain or increase import tariffs if they are having difficulties meeting revenue generation goals. Thus, at low levels of fishing, goals of increasing fisher income and generating government revenue may coincide, but this will not necessarily remain the case as tariffs rise.

Nassau grouper stocks in the TCI are still in relatively healthy condition. In fact, densities in the TCI are the highest observed in the Caribbean region (Tupper in press; Tupper and Rudd in press). However, given the particular vulnerability of grouper to even low levels of fishing (Sadovy 1994; Coleman et al. 2000) and their value to the dive tourism industry (Rudd and Tupper 2002), it would seem prudent to implement pro-active policies that effectively protect this valuable resource as well as meeting other social and government revenue generation goals.

The optimal policy mix must account for species ecology, fisher behavior, government revenue generation, and market demand in both the restaurant and dive tourism sectors. Setting a total allowable catch (TAC) for Nassau grouper may be unfeasible because of problems monitoring catch. Similarly, minimum size limits are likely of limited usefulness because of monitoring difficulties and because Nassau grouper are sequential hermaphrodites (see Coleman et al. 2000) (i.e., harvesting only larger fish could still impair reproductive capacity).

Marine protected areas (MPAs) have been advocated for groupers (e.g., Coleman et al. 2000). Tupper (in press) and Tupper and Rudd (2002) have not found Nassau grouper to be more abundant within a small MPA near South Caicos, however. This is likely due to the relatively small size of the MPA relative to the comparatively large home range of Nassau grouper (the MPA had significant positive effects on the size, abundance and biomass of smaller, more sedentary hogfish, *Lachnolaimus maximus*). Full protection of essential Nassau grouper habitat and spawning migration corridors on the very narrow fringe of the Caicos Bank would impose economic hardship on local fishers who depend on those areas for commercial species (spiny lobster) and subsistence fishing.

Enforcement, again, would be problematic and a large MPA could degenerate into another 'paper park'.

An alternative option may be a commercial trade ban (i.e., no purchase of, or trade in, Nassau grouper by restaurants, but no restrictions on subsistence fishing). This policy could have a number of pragmatic advantages: local fishers would maintain access to fishing grounds for lobster and reef fishes other than Nassau grouper; government would maintains tariff revenues (a trade ban may even increase imports of substitute frozen grouper, increasing overall revenue); enforcement efforts could focus on shore-based restaurant buyers, reducing more expensive fisheries field enforcement costs; and Nassau grouper conservation would continue to provide valuable non-extractive economic value for the dive tourism industry.

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