



Investing in Grenada's Yellowfin Tuna Exports



A BUSINESS CASE TO INCENTIVIZE A REDUCTION IN BILLFISH MORTALITY

PREPARED BY:
WILDERNESS
MARKETS

PREPARED FOR:
CONSERVATION
INTERNATIONAL (CI)

IN SUPPORT OF:
THE BUSINESS CASE
DEVELOPMENT EFFORTS IN THE
CARIBBEAN OF THE FOOD AND
AGRICULTURE ORGANIZATION
(FAO).



DEVELOPED AS:

A PART OF THE GEF-FUNDED, WORLD BANK-IMPLEMENTED OCEAN PARTNERSHIPS FOR SUSTAINABLE FISHERIES AND BIODIVERSITY CONSERVATION (OPP), A SUB-PROJECT OF THE COMMON OCEANS ABNJ PROGRAM LED BY UN-FAO.

SEPTEMBER
2018



Improving the Sustainability of Grenada Tuna and Billfish Fisheries

AREA

Grenada Exclusive Economic Zone (EEZ) — 26,000km²

FISHERY

Yellowfin tuna longline fleet

PROPOSED INVESTMENT

US \$362,500

INVESTMENT TERM

5 years

INTEREST RATE

7%

ROYALTY RATE

1% of export value

EXPECTED FINANCIAL RETURNS

28% internal rate of return

INVESTMENT OPPORTUNITY

Investment in a special purpose vehicle to improve the export value of sustainably sourced headed and gutted yellowfin tuna landed by small-scale longline commercial fishers.

Support sustainable and profitable tuna fishing in Grenada while cost effectively reducing fishing mortality of blue marlin and white marlin, helping to protect these threatened billfishes from further overfishing.

CONSERVATION IMPACT

Reduce mortality of blue and white marlin

SOCIAL IMPACT

Increase incomes for up to 500 fishers

EXPECTED RETURNS

28% internal rate of return



MANAGEMENT AND GEAR
IMPROVEMENTS TO DRIVE
FISH STOCK PROTECTIONS

CORE INVESTMENTS

Fishery management

- Fishery Improvement Project (FIP) — an industry led, comprehensive FIP is proposed within the investment package. The investment budgets \$50,000 in the first year, and \$25,000 per year for the following 4 years for a total of \$150,000 to develop, implement and monitor the FIP.

Data

- Traceability Platform and Software — \$100,000 is included in the first year for the deployment of appropriate traceability software and equipment at the respective landing sites. It also assumes a further \$25,000 per year in annual management, monitoring and upgrade costs, for a total of \$200,000.



TRACEABILITY AND “STORIED FISH” TO ACHIEVE BETTER MARKET ACCESS

- Vessel Monitoring System — \$37,500 is estimated for the first year to install VMS systems on 150 participating vessels. It also includes an ongoing budget of \$15,000 per year to address the annual costs of monitoring, repairs and upgrades.

Infrastructure

- Cold Storage — the investment package includes \$150,000 in additional investment to improve cold storage in identified facilities on the island. This includes upgrades to storage on boats, at landing sites and in processing facilities.
- Cold Storage Truck — \$25,000 in the first year is allocated to ensure that cooperatives are capable of providing appropriately graded product to exporters.

FISHER INCENTIVE PAYMENT

20¢ per pound for higher quality tuna for compliance with proposed changes in gear and practices to successfully achieve a reduction in billfish landings.

SUPPLY-CHAIN INTERVENTIONS TO INCREASE OPERATIONAL EFFICIENCY



OTHER KEY NUMBERS

Exports of grade 1 tuna must increase from 22% to 31% of all tuna exports in the first year.

If this is achieved and sustained, over five years, fisher aggregate profits increase by US \$1.1 million based on an estimated aggregate of 5.92 million pounds of tuna landings and 55% grade 1 tuna by year 5.

- Start-up Capital: \$362,500
- Gross margin year 5: 15%
- Operating margin year 5: 10%
- Positive cash flow in year 3
- Payback expected in year 6

TARGETED ENVIRONMENTAL RETURNS

Protecting and Restoring Blue and White Marlin

Increasing the fishing depth of longline hooks and transitioning to circle hooks will decrease the number of hooked blue and white marlins and increase their post-release survival.

The relatively high incidence of billfish mortality in Grenadian fishing landings and the overall poor health of billfish stocks demonstrates a need for an urgent reduction in incidental billfish landings and mortality. These same actions promote the quality of tunas to support broader business case outcomes.

TARGETED SOCIAL AND ECONOMIC RETURNS:

Supporting Fishing Livelihoods

Pay fishers a price premium of US \$0.20 per pound (7% increase to market prices) for higher quality and for compliance with proposed changes in gear and practices to successfully achieve a reduction in billfish landings, increasing aggregate fisher income by US \$1.1 million over the investment period.

Improved billfish sustainability and increased incomes in Grenada may serve as a model for other nations.

As billfish mortality from tuna fishing is reduced, it may support a recreational fishing industry through enhanced billfish abundance.

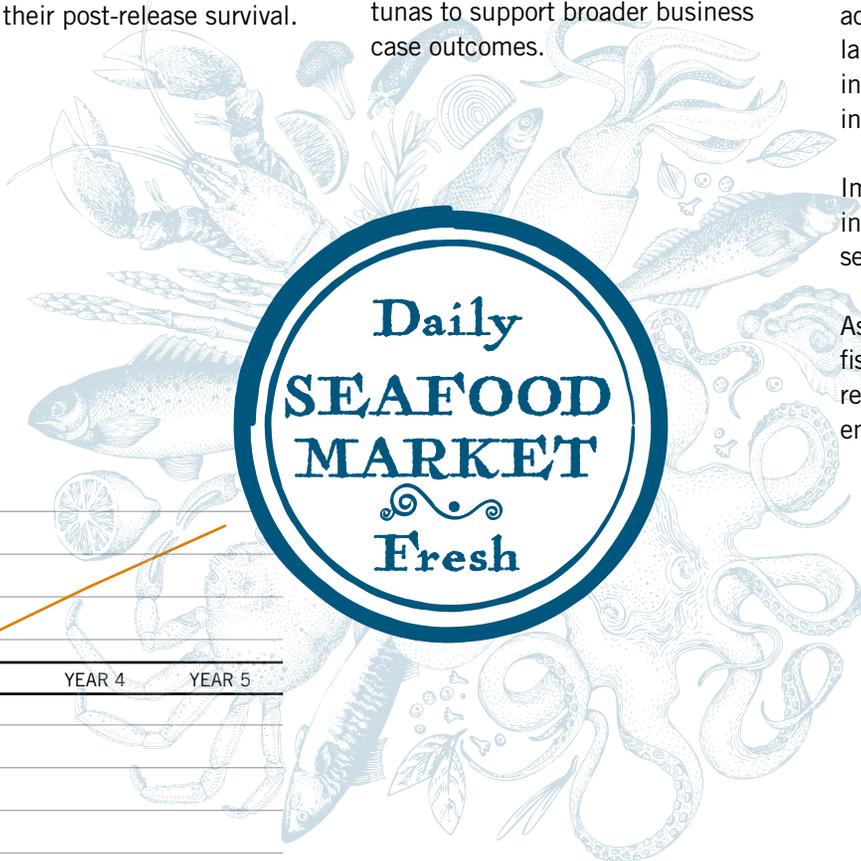
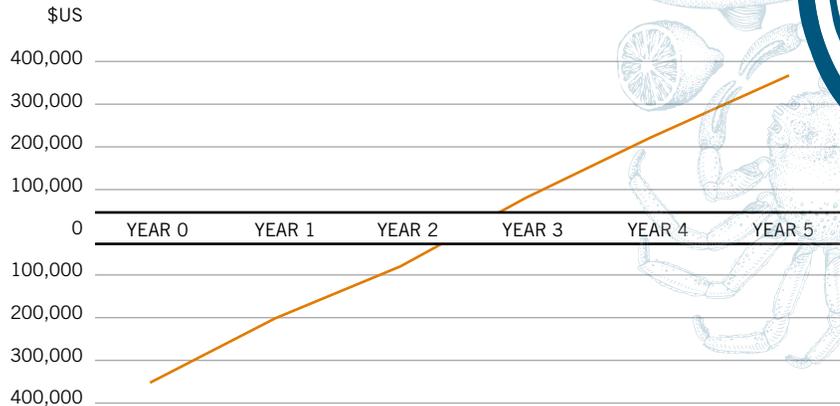


FIGURE 1: INVESTOR CASH FLOWS, CUMULATIVE



POTENTIAL IMPACT METRICS

- 📍 Number of billfish landed
- 📍 Per pound price to fishers
- 📍 Percent of grade 1 yellowfin tuna exports

STRENGTHS

- Improve fisher incomes while reducing impacts on billfish
- Improve fisheries data timeliness and availability through use of digital data collection systems
- Streamline supply chain and reduce financial risk for various stakeholders
- Strengthen fisher organizations
- Implementation of FIP provides market differentiation
- Improve value chain transparency
- Support alignment of value chain
- Improve fisher access to markets
- Strengthen Grenada position in ICCAT
- No negative impact on subsistence fisheries

WEAKNESSES

- Compliance not legally mandated
- Data only as good as the inputs
- Inadequate fishery management (fisheries are “open access”)
- Limited capacity among fishers
- Stock-wide billfish mortality may still be too high relative to MSY and/or ICCAT quotas
- Country ease of doing business (ranked 142 of 190)

OPPORTUNITIES

- Provides economic incentive for changes in gear and practices
- Provides economic incentive to register fishers and begin to restrict access
- Supports improved fisheries governance
- Increases fisher participation in the value chain
- Tests viability of model for scale

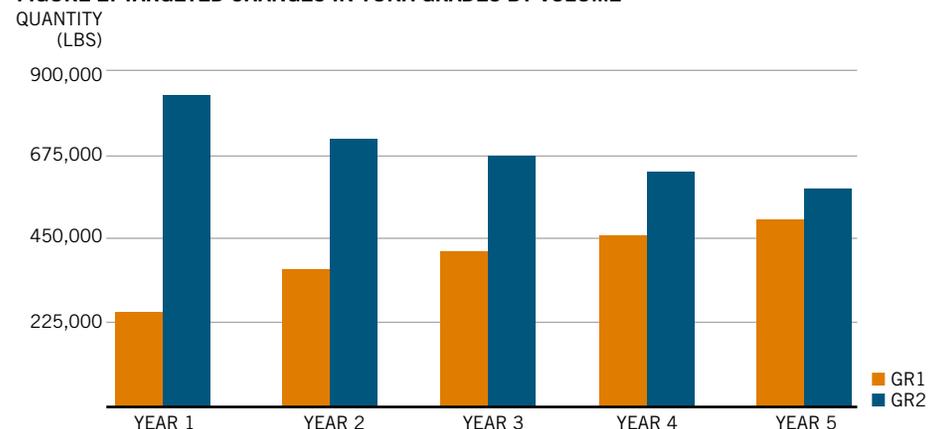
THREATS

- Fishers may increase effort in response to improved prices
- Tuna prices may decline overall in receiving market, jeopardizing investment and participation
- Competition from other sources may impact market access or pricing
- Markets may not reward fishers for changes in practices
- Fishers may decide not to comply for social or economic reasons
- Exporters may choose not to share upside with fishers
- Tuna stocks may decline and infrastructure may be affected by natural disasters and climate change

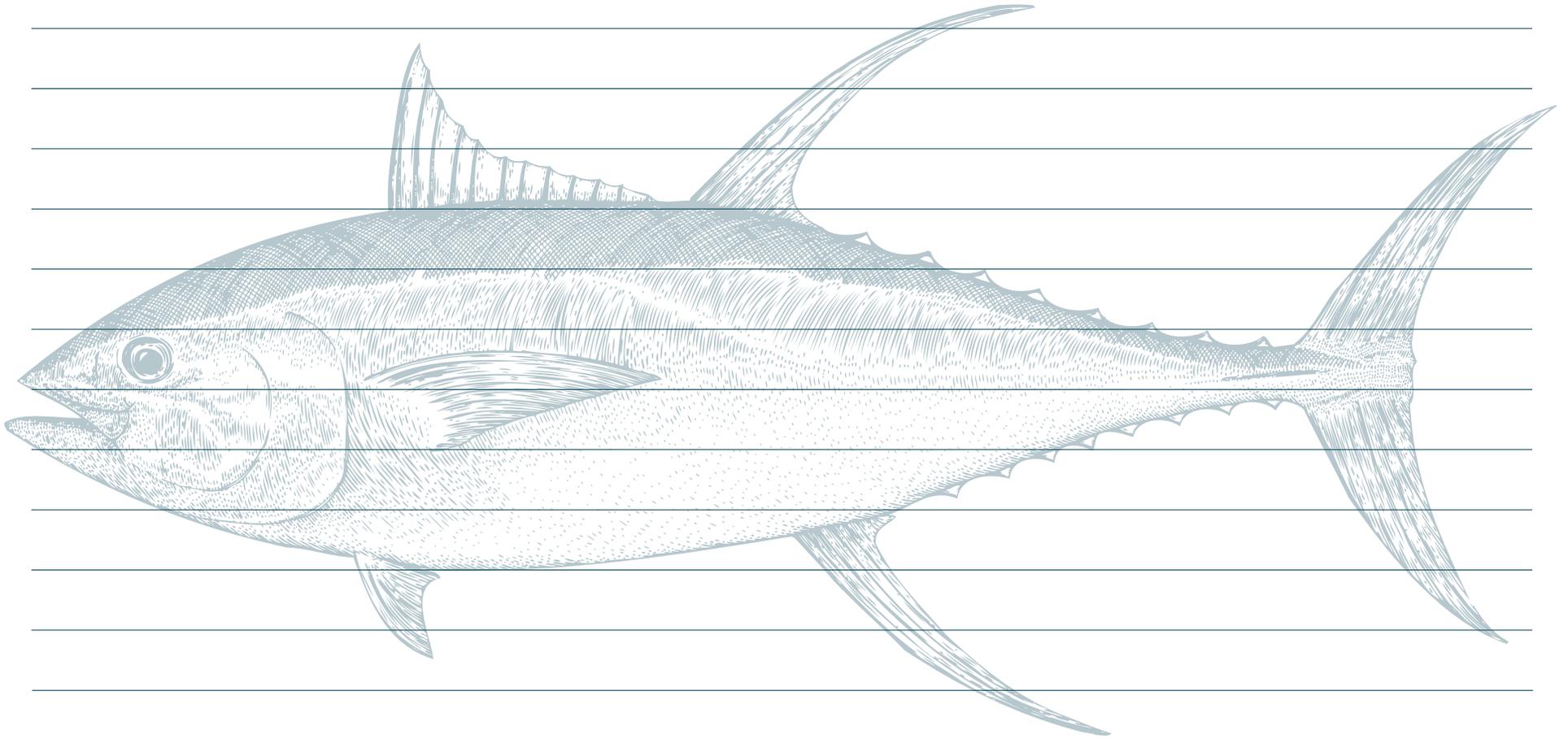
- Unknown effects on social norms due to increased income
- Structural relationships within the supply chain will need to be realigned in order to ensure quality standards

This model does not require or assume any increase in landings in any of the projected five years. It also does not assume any improvements in price. Should either export amounts increase or prices improve, the financial incentives realized may be further improved.

FIGURE 2: TARGETED CHANGES IN TUNA GRADES BY VOLUME



Notes:



DISCLAIMER

The findings and conclusions in this report represent the interpretations of Wilderness Markets and do not necessarily reflect the view of the study funders or expert stakeholders. This document has been prepared solely for informational purposes, and has been prepared in good faith on the basis of information available at the date of publication without any independent verification. Wilderness Markets does not guarantee or warrant the accuracy, reliability, adequacy, completeness or currency of the information in this publication nor its usefulness in achieving any purpose. Charts and graphs provided herein are for illustrative purposes only. Nothing contained herein constitutes investment, legal, tax, or other advice nor is it to be relied on in making an investment or other decision. Readers are responsible for assessing the relevance and accuracy of the content of this publication. This publication should not be viewed as a current or past recommendation or a solicitation of an offer to buy or sell securities or to adopt any investment strategy.



<http://www.lib.utexas.edu/maps/americas.html>

