



EXIM
IMPACT

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GREEN LOGISTICS FOR INTER-ISLAND TRADE

**A SUSTAINABLE MARITIME MODEL FROM
BARBADOS TO ST. VINCENT, ST. LUCIA, DOMINICA
GRENADA AND ANTIGUA**

INTRODUCTION

With increasing global attention on sustainability, green logistics is becoming a critical component of regional trade. The Caribbean, an archipelago with interdependent economies, presents an opportunity to implement eco-friendly transport solutions. This paper explores the viability of a 20-ton capacity sailing ship with a 30 cubic meter volume capacity, providing weekly green logistics services between Barbados, Grenada, and Antigua. By leveraging wind power, reducing fossil fuel dependency, and integrating sustainable logistics strategies, this model can support regional trade while minimizing environmental impact.



THE NEED FOR GREEN LOGISTICS IN THE CARIBBEAN

The Caribbean faces unique logistical challenges:

High fuel costs make traditional shipping expensive.

Small island economies depend on inter-island trade for food, raw materials, and manufactured goods.

Environmental vulnerability demands sustainable solutions to reduce carbon footprints.

**SAILING SHIPS OFFER A
LOW-EMISSION, COST-EFFECTIVE
ALTERNATIVE FOR SHORT-HAUL TRADE,
PRESERVING THE REGION'S NATURAL
BEAUTY AND REDUCING GREENHOUSE
GAS EMISSIONS.**



VESSEL SPECIFICATIONS AND ROUTE FEASIBILITY

The selected vessel is a medium-sized sailing cargo ship with:



Cargo Capacity:
20 tons



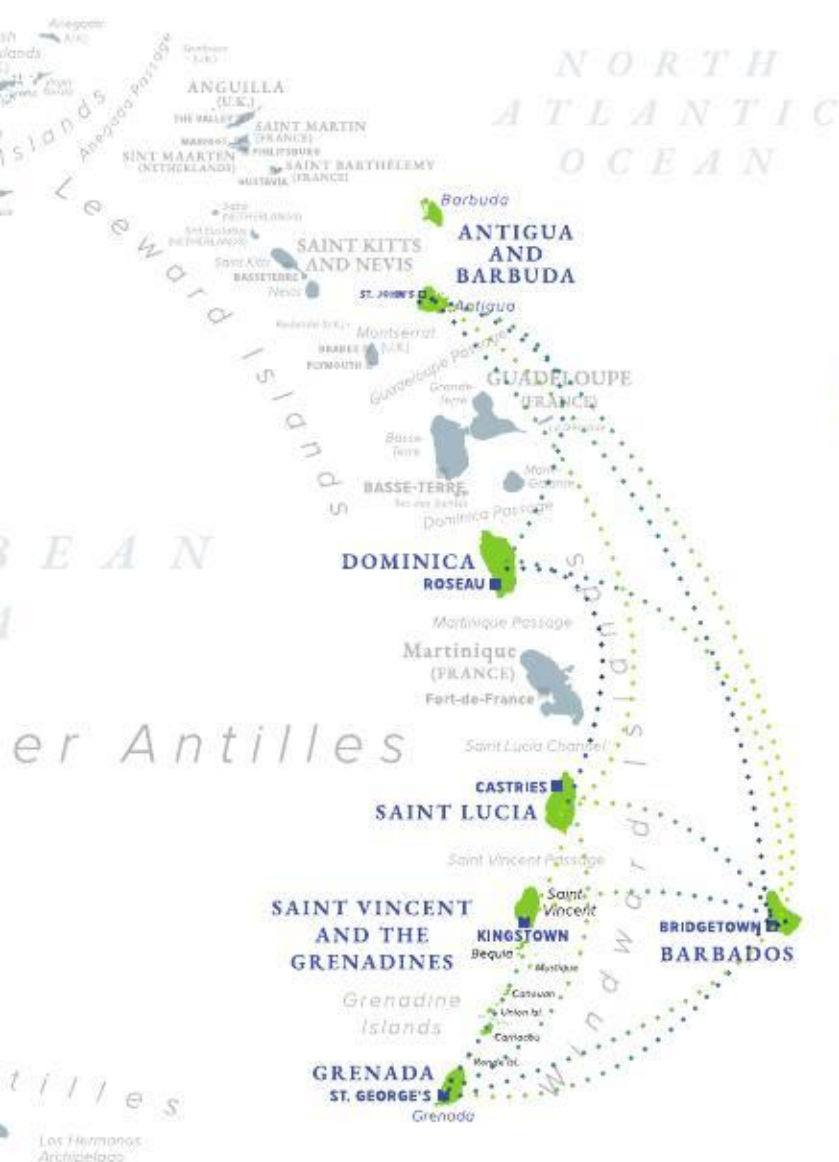
Propulsion:
Primarily wind-powered,
with auxiliary engine for
port maneuvering



Volume Capacity:
30 cubic meters



Speed:
6-10 knots depending
on wind conditions



Route Plan & Weekly Schedule

A weekly route covering Barbados, Grenada, Antigua, St. Lucia, Dominica and St. Vincent allows for efficient delivery cycles while maximizing wind conditions.



Cargo Suitability & Trade Goods

The vessel is suited for high-value, low-volume cargo and perishable goods, benefiting regional agriculture, artisanal production, and small-scale manufacturing. Typical goods transported include:



From Barbados:

- Processed foods, condiments (e.g., Bajan pepper sauce)
- Light manufactured goods
- Pharmaceuticals and cosmetics



From Grenada:

- Nutmeg, cocoa, and spices
- Handmade crafts and specialty products



From Antigua:

- Tourism-related products (artisan goods, fashion)
- Fresh seafood and agricultural exports



SUSTAINABILITY AND ECONOMIC BENEFITS

Environmental Benefits

Carbon footprint reduction: By relying on wind energy, emissions are reduced by over 80% compared to conventional fuel-powered vessels.

Low-impact docking: Using smaller ports and eco-friendly cargo handling minimizes coastal disruption.

Economic & Trade Benefits

Lower operating costs: Wind propulsion reduces dependency on expensive imported fuel.

Regional trade enhancement: Strengthening commercial ties among the three islands benefits small businesses.

Resilient supply chains: Sailing logistics ensures goods flow even during fuel crises.



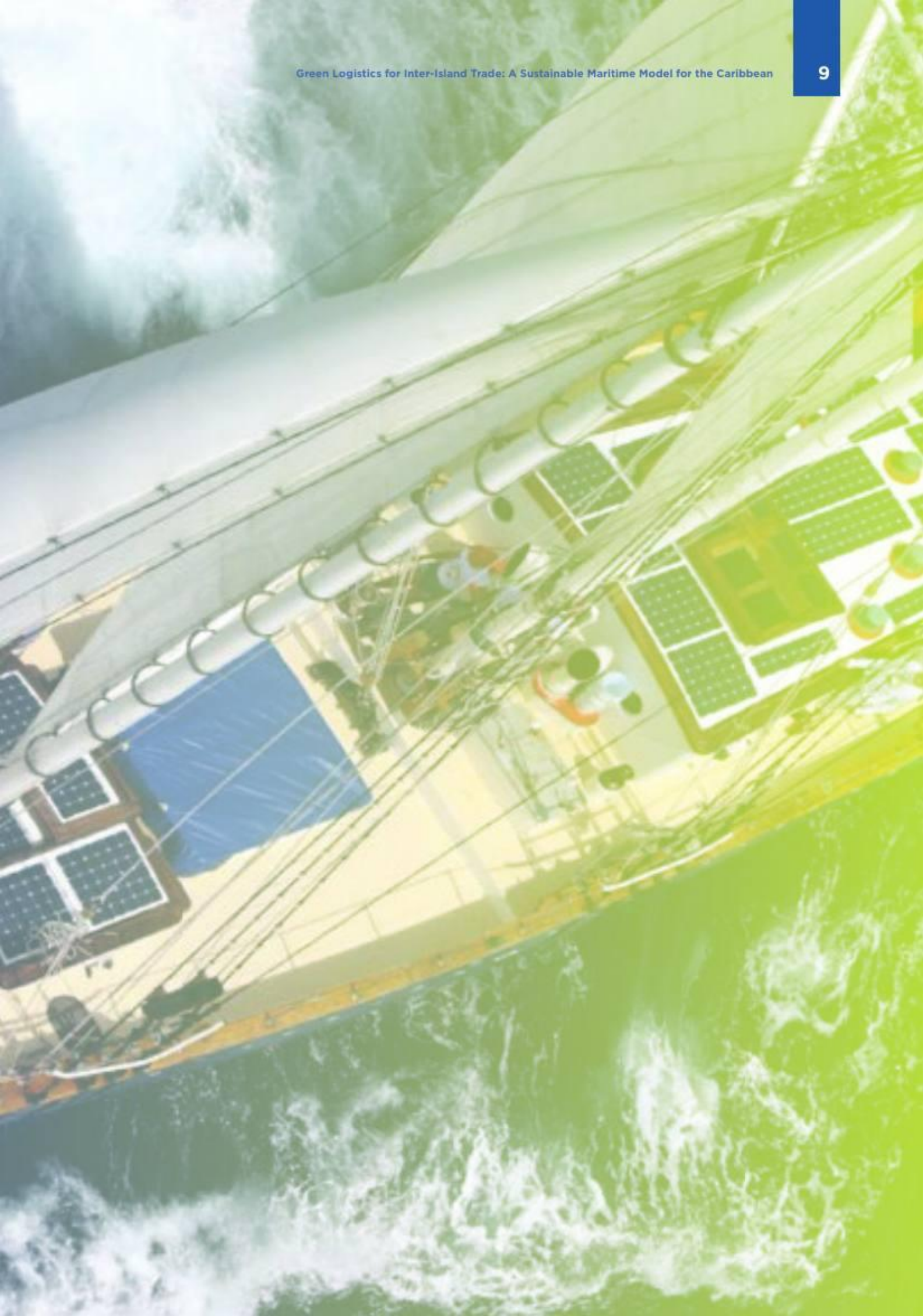
CHALLENGES AND MITIGATION STRATEGIES



CONCLUSION

A weekly sailing cargo service between Barbados, Grenada, and Antigua presents a viable green logistics solution, balancing sustainability with economic benefits. By leveraging wind power, optimizing trade routes, and focusing on eco-friendly, high-value trade, this model supports regional resilience and fosters a sustainable Caribbean supply chain. Investing in such initiatives aligns with global decarbonization goals while empowering small island economies to thrive in an era of climate-conscious trade.







FEEL THE DIFFERENCE