

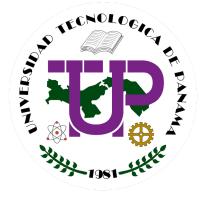
DESCARBONIZACIÓN EN ACCIÓN – INICIATIVAS REGIONALES Y LECCIONES APRENDIDAS

Corredores marítimos verdes en el Canal de Panamá ante el riesgo climático

> Dr. Gabriel Fuentes, PhD. Norwegian School of Economics gabriel.fuentes@nhh.no

> > 21 de agosto 2025

Participantes y colaboradores















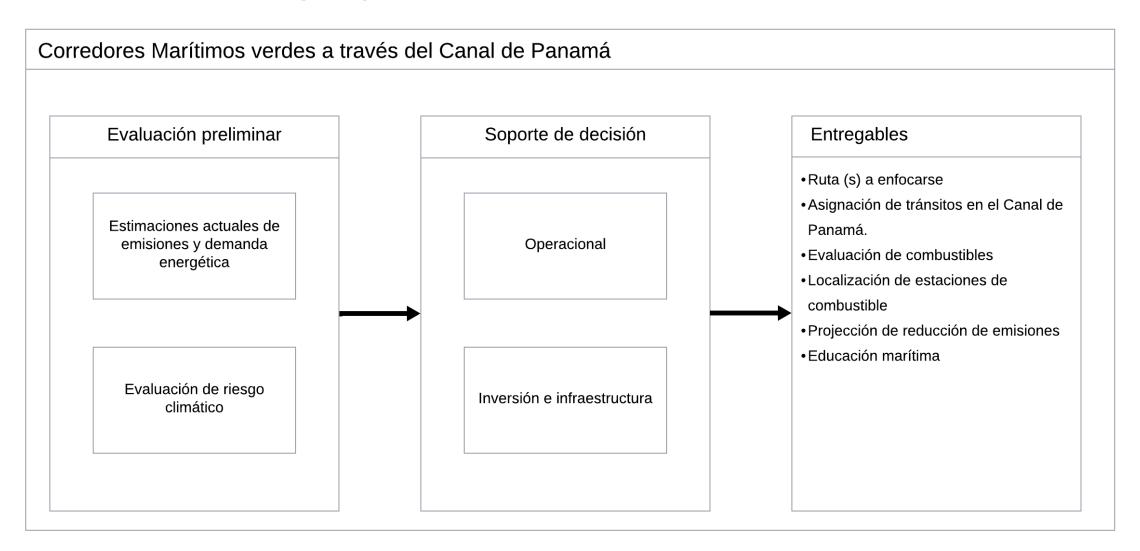




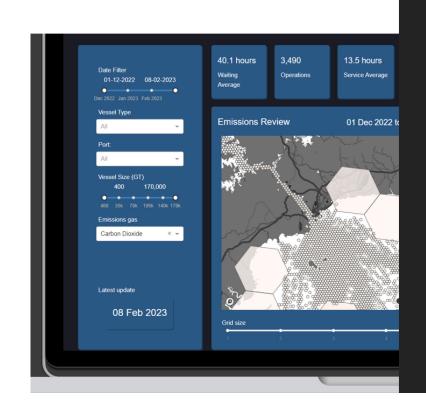




Estructura del proyecto



Tablero de emisiones v .1.0



MTCC Latin America's Innovative Dashboard Premieres at IMO Cares workshop

At a hybrid event, logistikk.io introduced the beta version of the emissions dashboard for the MTCC Latin America Pilot Project 3. The dashboard is fed with statistics generated by a joint project between MTCC Latin America and the UN Global Platform.

Validez de los datos y el dashboard

UMIP recibe premio Innovación Verde del Sindicato de Industriales de Panamá





Sustainability Research & Innovatio...

S/R/1²⁰²⁵ 3.124 followers 1yr • Edited • 🕓

PReflections from the #SRI2023 Idea Market Winners & how they plan to use their prize money to further their already incredible projects!

Mariana Martínez Balvanera won for her collaboratory kitchen for sustainability in the tropical rainforest.

Gabriel Fuentes-Lezcano won for his submissoin, "The Panama Connection: A Green Corridor from Busan to New York to Tackle Climate Change." Norwegian School of Economics (NHH)

f https://bit.ly/3Qg53Nv

Belmont Forum



International Association of Maritime Eco...

2,745 followers 6mo • Edited • 😯

Dear IAME Members,

We are thrilled to announce the winners of the 6 awards given out by IAME, in its Conference 2024 at Valencia.

P Best Paper on the Smart Maritime Ecosystem

This prize is awarded to Gabriel Fuentes-Lezcano & Ziaul Haque Munim for their paper titled Predicting the Panama canal water times with integrated climate data.

This recognition is supported by the Valenciaport Chair of Port Economy APV - UV (Autoridad Portuaria de Valencia and University of Valencia).

Aplicaciones – El Niño como indicador de número de tránsitos



Best Paper on the Smart Maritime Ecosystem

This Certificate is Awarded to

GABRIEL FUENTES & ZIAUL MUNIM

for presenting the 'Best Paper on the Smart Maritime Ecosystem' at IAME 2024 Conference titled:

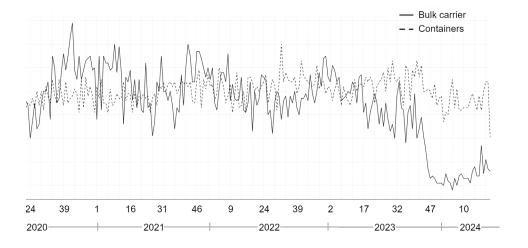
PREDICTING THE PANAMA CANAL WATER TIMES WITH INTEGRATED CLIMATE DATA

This recognition highlights the excellence and significant contribution of the work presented in the field and is supported by the ValenciaPort Chair of Port Economics (Valencia Port Authority and University of Valencia)

Aurelio Martínez Estévez

Aurelio Martínez Estévez President of the Scientific Committee IAME Conference 2024





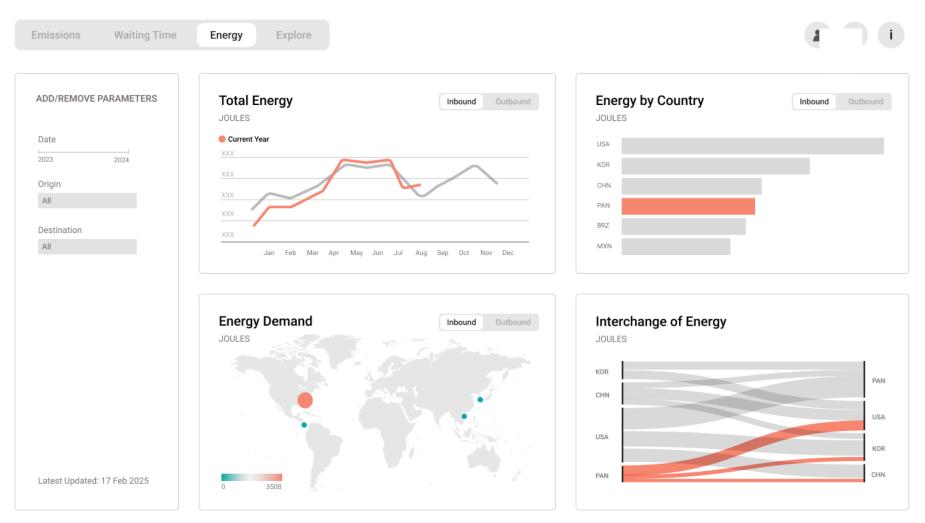
	Number of Transits			
Variables	Bulk Carriers	Containers	LNG Tankers	Oil Tankers
ONI 6 weeks lag	-3.563***	-0.273***	-0.110	0.0951
9	(0.232)	(0.086)	(0.157)	(0.090)
NeoPanamax transit	-14.922***	4.775***	2.678***	-1.288***
	(0.310)	(0.144)	(0.129)	(0.154)
Northbound transit	3.149***	2.694***	-0.916***	-0.518***
	(0.335)	(0.142)	(0.287)	(0.154)
Constant	16.711***	8.150***	2.648***	4.996***
	(0.199)	(0.102)	(0.129)	(0.113)
Monthly Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.609	0.497	0.157	0.100
Observations	1083	1530	271	557
df	14	14	14	14

Notes: Clustered standard errors. Significance levels: * p < 0.1; ** p < 0.05; *** p < 0.0

Panama Maritime Statistics

Efficiency and Sustainability Indicators



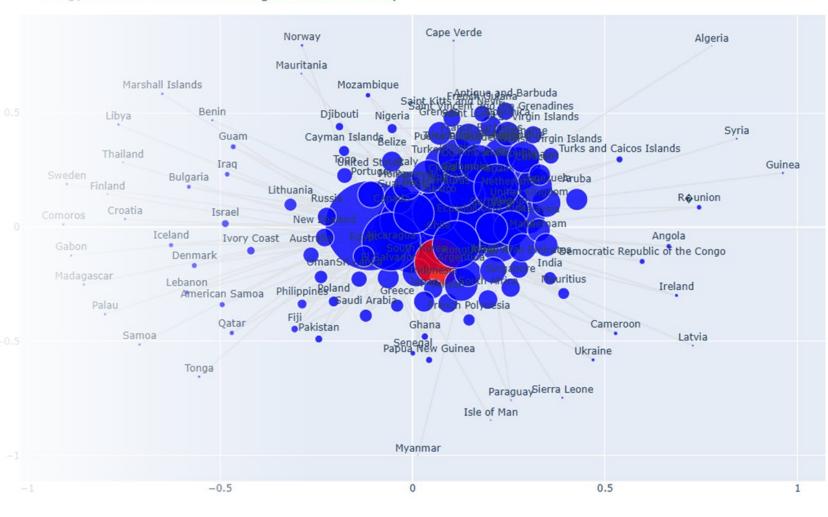


Fuente: Data Impacta para el proyecto Corredores Marítimos Verdes en Panamá

Recursos

- Tiempos de fondeo
- Tiempo de servicio en puerto
- Demanda energética por país
- Emisiones locales y alcance 3
- Gráficas de centralidad
- Ranking de rutas por demanda energética

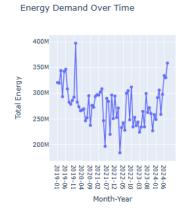
Energy Network: Countries and Eigen Vector Centrality

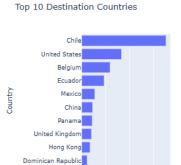


Rank	Port/Country	Eigenvector Centrality
	United States	0.28
	Panama	0.25
	Dominican Republic	0.24
4	Brazil	0.23
	Colombia	0.23

Recursos

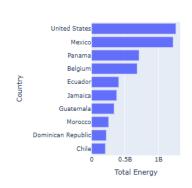
Colombia





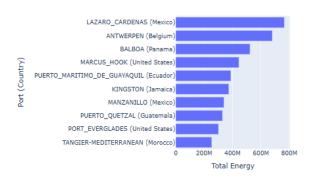
1B 2B

Total Energy



Top 10 Origin Countries

Top 10 Origin Ports

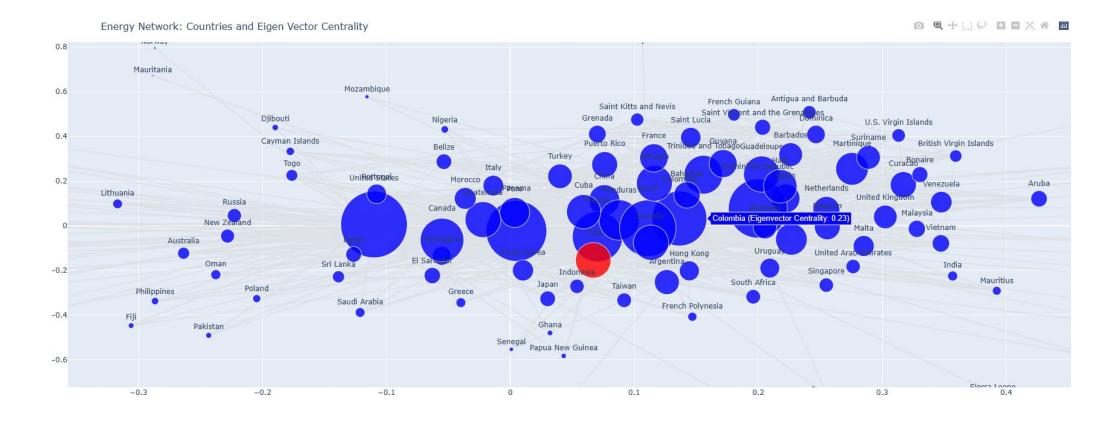


Top 10 Destination Ports



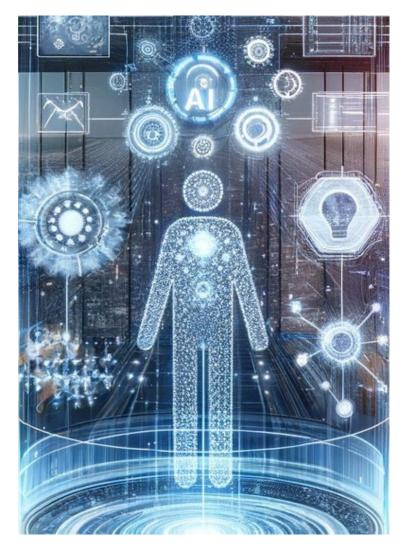


Recursos



Nuestra vision de futuro -> Dashboard v3?

- Sugerencia de asignación de tránsitos y puertos basado en datos históricos y optimización
- Dashboard y sus métodos certificado por una sociedad clasificadora
- Retroalimentación de las decisions sugeridas para entrenar un sistema para la toma de decisions
- Escenarios de riesgo climático y predicción de afectaciones
- Eventualmente un modelo de IA que permita sugerir alternativas operativas para la reducción de emisiones y mejoras operativas
- Dashboard integrado al corredor verde que pase por Panamá



Gracias