

Candidate Mid-term Measure Impacts on Transport and Trade Costs within Pacific SIDS

Vanuatu Profile

National Trade Data - Estimates from UN Comtrade

United Nations » Department Of Economic and Social Affairs » Statistics Division » Trade Statistics
En Fr Es

UN Comtrade Database
Data ▾ Bulk Files ▾ Visualization ▾ Metadata ▾ Publications ▾ References ▾
My Comtrade Premium ▾ Logout

New to this site ? [Start here](#)

Free access to detailed global trade data

Experience the new Quick Search

Show
Annual ▾ Exports ▾ of TOTAL - Total of all HS commo... ▾ from All ▾

to World

For more

Time Period

Mode of Transport

HS Commodity Code

Weight

	period	rt3ISO	pt3ISO	pt3ISO2	motCode	imp3ISO	exp3ISO	H3_cmdCode	TradeValue	motSource	TradeQuantity	TradeQuantity_source
0	201601	BLZ	USA	W00	1000	BLZ	USA	610510	3860.404846	trend	155.807669	corrected
1	201601	BLZ	USA	W00	2000	BLZ	USA	610510	5199.595154	trend	209.857989	corrected

'Reporter' and 'Partner' Countries

Importing and Exporting Countries

Value

National Trade Data - Estimates from Vessel Activity

PLOS ONE

RESEARCH ARTICLE

Global economic impacts of COVID-19 lockdown measures stand out in high-frequency shipping data

Jasper Verschuur^{1*}, Elco E. Koks^{1,2}, Jim W. Hall¹

¹ Environmental Change Institute, University of Oxford, Oxford, United Kingdom, ² Institute for Environmental Studies, Vrije Universiteit Amsterdam, Amsterdam, Netherlands

* jasper.verschuur@keble.ox.ac.uk



Abstract

The implementation of large-scale containment measures by governments to contain the spread of the COVID-19 virus has resulted in large impacts to the global economy. Here, we derive a new high-frequency indicator of economic activity using empirical vessel tracking data, and use it to estimate the global maritime trade losses during the first eight months of the pandemic. We go on to use this high-frequency dataset to infer the effect of individual non-pharmaceutical interventions on maritime exports, which we use as a proxy of economic activity. Our results show widespread port-level trade losses, with the largest absolute losses found for ports in China, the Middle-East and Western Europe, associated with the collapse of specific supply-chains (e.g. oil, vehicle manufacturing). In total, we estimate that global maritime trade reduced by -7.0% to -9.6% during the first eight months of 2020, which is equal to around 206–286 million tonnes in volume losses and up to 225–412 billion USD in value losses. We find large sectoral and geographical disparities in impacts. Manufacturing sectors are hit hardest, with losses up to 11.8%, whilst some small island developing states and low-income economies suffered the largest relative trade losses. Moreover, we find a clear negative impact of COVID-19 related school and public transport closures on country-wide exports. Overall, we show how real-time indicators of economic activity can inform policy-makers about the impacts of individual policies on the economy and can support economic recovery efforts by allocating funds to the hardest hit economic sectors.

OPEN ACCESS

Citation: Verschuur J, Koks EE, Hall JW (2021) Global economic impacts of COVID-19 lockdown measures stand out in high-frequency shipping data. PLoS ONE 16(4): e0248818. <https://doi.org/10.1371/journal.pone.0248818>

Editor: Bing Xue, Institute for Advanced Sustainability Studies, GERMANY

Received: October 28, 2020

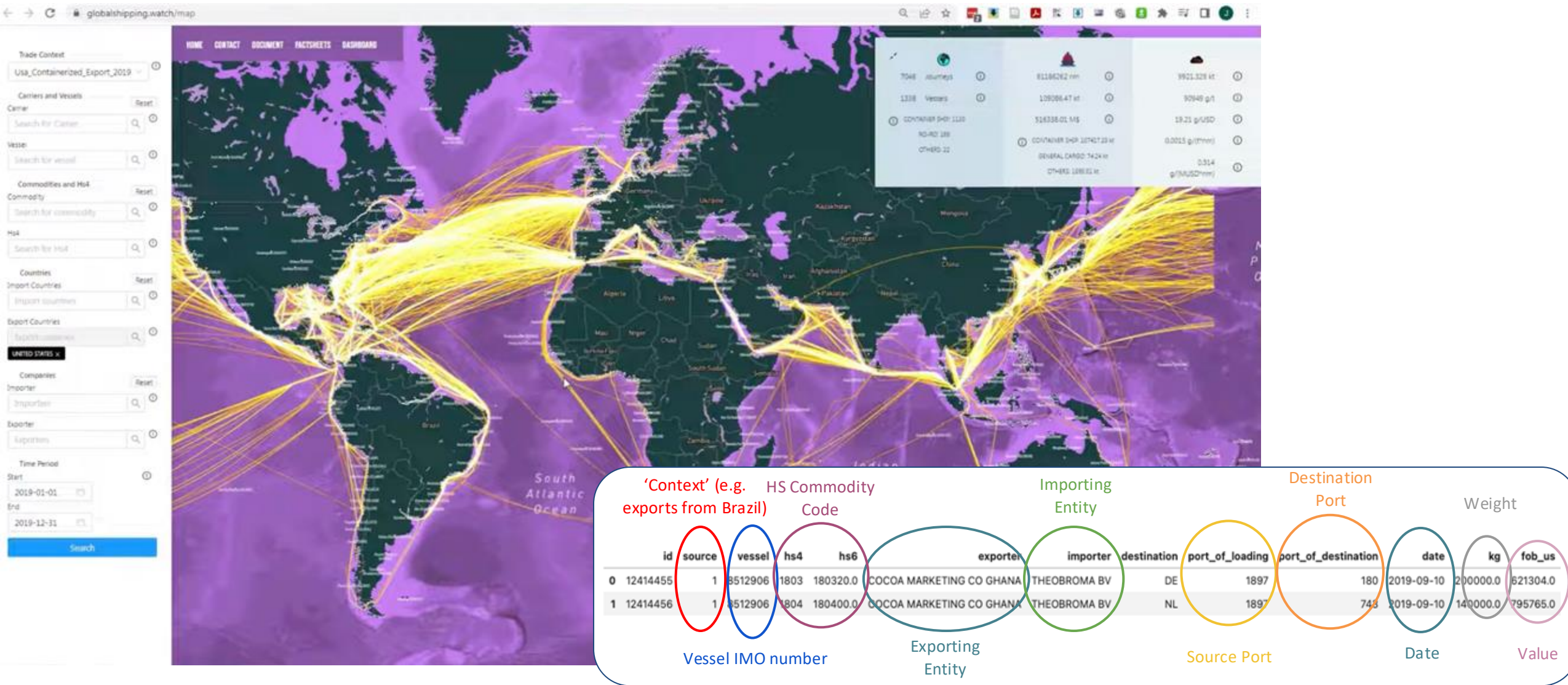
Accepted: March 6, 2021

Published: April 14, 2021

Peer Review History: PLOS recognizes the benefits of transparency in the peer review process; therefore, we enable the publication of all of the content of peer review and author responses alongside final, published articles. The editorial history of this article is available here: <https://doi.org/10.1371/journal.pone.0248818>

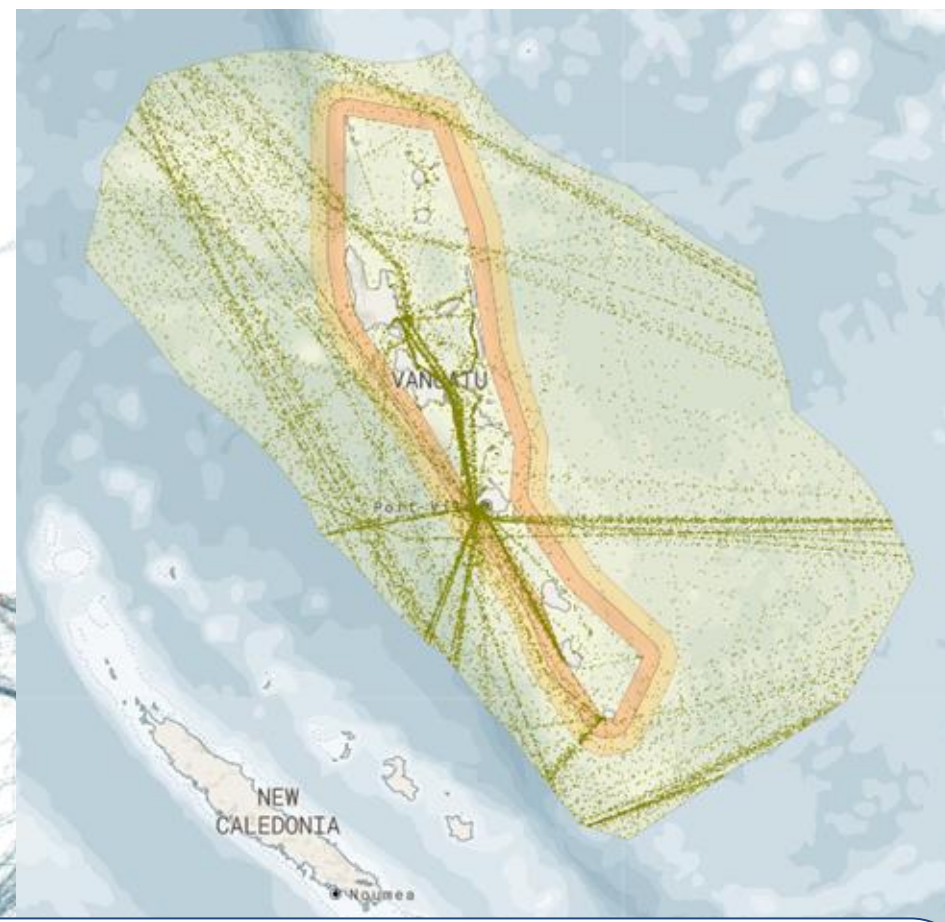
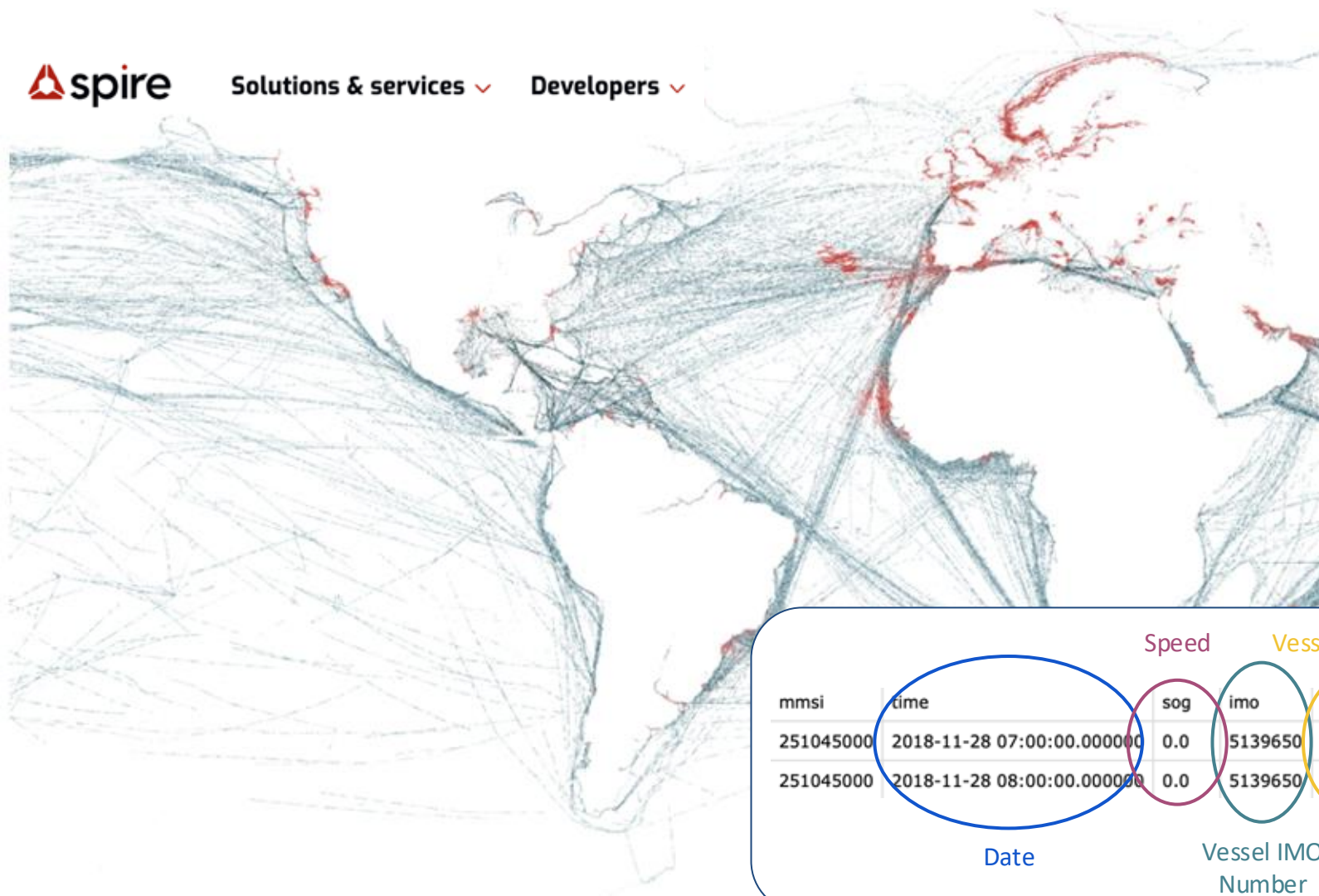
	Time Period	'Reporter' and 'Partner' Countries		Mode of Transport		Importing and Exporting Countries		HS Commodity Code	Value		Weight	
	period	rt3ISO	pt3ISO	pt3ISO2	motCode	imp3ISO	exp3ISO	H3_cmdCode	TradeValue	motSource	TradeQuantity	TradeQuantity_source
0	201601	BLZ	USA	W00	1000	BLZ	USA	610510	3860.404846	trend	155.807669	corrected
1	201601	BLZ	USA	W00	2000	BLZ	USA	610510	5199.595154	trend	209.857989	corrected

Consignment-level Trade Data - Estimates from Global Shipping Watch



Vessel Activity - Estimates from Unprocessed AIS Data

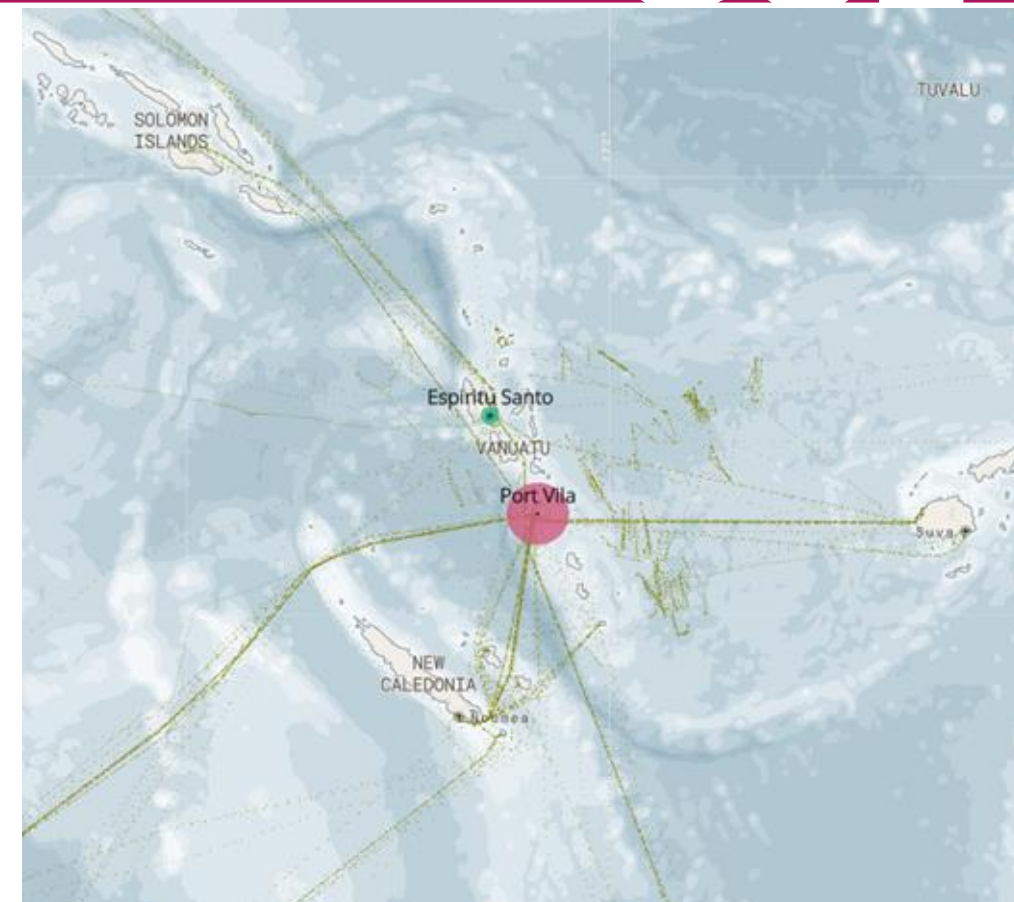
 **Solutions & services** ▾ **Developers** ▾



mmsi	time	Speed	imo	Vessel Draught	region	observed_data	period	longitude	latitude
		sog		draught					
251045000	2018-11-28 07:00:00.000000	0.0	5139650	0.0	15	1	01012018_31122018	-23.12432	66.0700283333
251045000	2018-11-28 08:00:00.000000	0.0	5139650	0.0	15	1	01012018_31122018	-23.1242666667	66.0700233333

Date Vessel IMO Number Reliability Information Geographical Coordinates

Vessel Activity - Estimates from Processed AIS Data



Vessel Type				Voyage End Time		Destination Port					
imo	type_bin	ship_type_standardized	size_bin	start_date	end_date	source_id	dest_id	source_iso	dest_iso	source_name	dest_name
9379442	16	Service - tug	1	2018-01-10 05:00:00	2018-01-13 07:00:00	5845	5843	AEQWE	AEFRP	Jebel Ali Free Zone	Free Port
9379442	16	Service - tug	1	2018-01-18 07:00:00	2018-01-22 05:00:00	5843	14	AEFRP	AESHJ	Free Port	Sharjah

Vessel IMO Number

Voyage Start Time

Source Port

Vessel IMO Number

Voyage Start Time

Source Port

Available Online - Vanuatu Bureau of Statistics

International Merchandise Trade Statistics

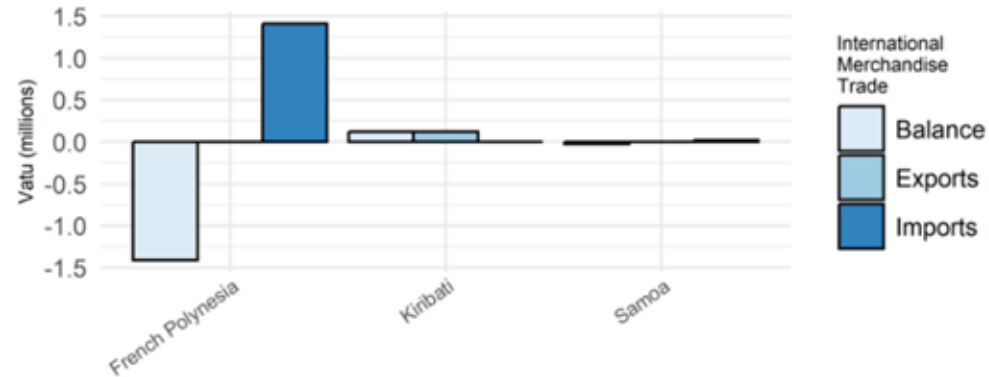
OFFICIAL



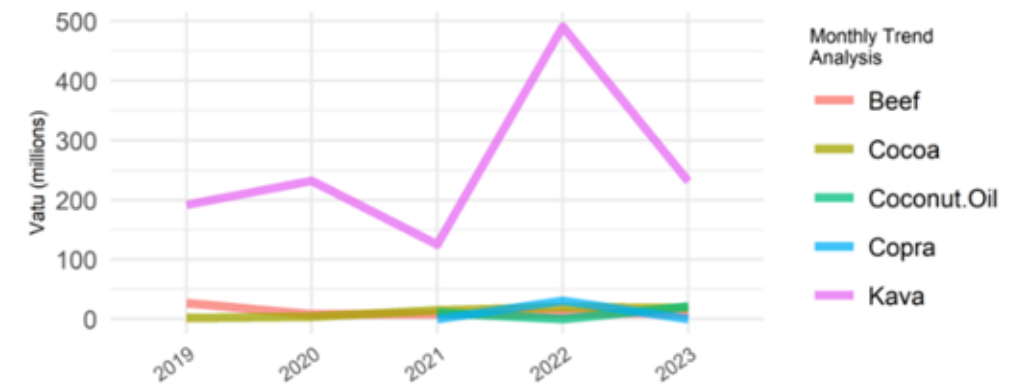
VANUATU BUREAU of STATISTICS
Private Mail Bag 9019
Ministry of Finance and Economic Management
Port Vila, Vanuatu
+678 33040/22110/22111
VBoS_stats
stats@vanuatu.gov.vu
www.vnsa.gov.vu



3. Trade Balance of Pacific Islands (excluding Melanesian Islands, Australia and New Zealand)



5. Principle Exports



The level of production of the top five Major Principal Exports is VT 280 million. The

Vanuatu

- There is reasonable alignment (within 15%, exc. UNCTAD exports) between the four Comtrade consolidation methodologies for Vanuatu.
- **There is significant divergence in import and export weight estimates between Comtrade- and activity-derived data (12x imports, 29x exports).**
- **Petroleum-oriented commodities likely form the lion's share of imports into Vanuatu with estimates suggesting 0.42 - 0.54 by weight.** Both estimates suggest that Food & Beverage products form a significant secondary import market of between 0.16 - 0.25 by weight.
- **Both estimates agree that Fishing and Food & Beverage commodities likely form Vanuatu's greatest export market, representing 0.65 - 0.90 by weight.** Agriculture commodities also likely to form an important export market (0.08 - 0.32).



Vanuatu

- Bill of Lading records are available capturing between below 5% of Comtrade-derived import and export weight estimates, however less than 1% of activity-based estimates.
- Bills of Lading associated with imports represent 1.9 kt, all carried on container vessels. Around 86% originated from Indonesia, 12% from the US and 2% from Brazil. Around 87% by weight were Agriculture commodities, with a further 7% related to Food and Beverages. Those associated with exports represent just 66 tonnes.
- **IMO IV data suggests 42 incoming voyages (0.31) from the Solomon Islands into Vanuatu, followed by New Caledonia (36, 0.27) and Fiji (24, 0.18).** The data suggests 46 voyages to New Caledonia (0.27), with 25 (0.22) to Fiji and 18 (0.16) to New Zealand. **Around half of IMO IV incoming and outgoing voyage data is associated with Containerships (0.48 - 0.54),** followed by General Cargo (0.23 - 0.27) and Tankers (0.19 - 0.21).
- **Containerships, Bulk Carriers and Tankers form the top 3 vessel types in terms of 'transport supply' across all shipping zones considered.** Containerships appear the most common ship type in terms of vessel types operating around Vanuatu. Containerships were associated with 0.25 - 0.32 of individual 'records' associated with the EEZ, 24nm and 12nm zones, whilst those records themselves translate to 0.27 - 0.38 of total gross-tonne nautical-miles associated with those schedules.

