

GHG Reduction On Fiji's Domestic Fleet

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INTRODUCTION

It is well recognised that shipping accounts for 2% of GHG global emissions which continues to increase in parallel with the continuing number of newly constructed ships.

Therefore, shipping has to do its part to contribute to achieving the UNFCCC Paris Agreement that is holding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C .

As such, it is important that the shipping sector address the issue of shipping emission by way of short term and long term measures since it is of paramount concern to the international community, including Fiji.



Make up of Fijis shipping sector

- ❖ Inter-Island ships (Cargo/passenger);
- ❖ Ro-Ro Ships;
- ❖ GSS Ships;
- ❖ Tourist ships;
- ❖ Fishing ships
- ❖ Private/pleasure;
- ❖ Yachts;
- ❖ Tugs/barges;
- ❖ Small Boats;
- ❖ Others.



Registered Ships Data

- Barges 42 (55-12 m/750 - 7.5GRT)
- Cargoes 4 (70-13 m/ 1260 -14 GRT)
- Dredgers 15 (72-9 m/750 - 8 GRT)
- Fishing 507 (55-7 m/650 - 0.14 GRT)
- Lines Boat 5 (8-6m/ 9-2 GRT0)
- Medical 15 (9.5 -7.5m/ 3.5m-1.5 GRT)
- Passenger & passenger/cargo 1024 (55 – 4m/ 700 – 1 GRT)
- Pilot Boats 8 (25 – 7m/ 70 – 1GRT)



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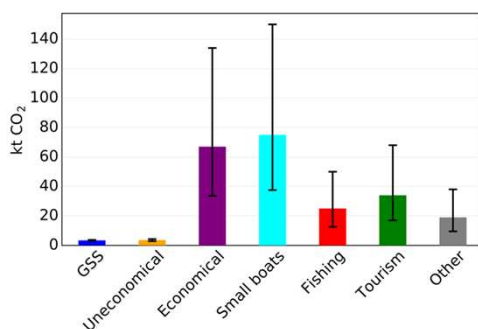
- Barges 42 (55-12 m/750 - 7.5GRT)
- Pleasure/Private Craft 81 (19-5m / 45- 1.2 GRT)
- Police Boats 18 (16-7m / 19- 1 GRT)
- Research/survey boats 10 (9-6m 9-1 GRT)
- RO-RO Ship 11 (130-50m / 6000-230 GRT)
- Tourist ships 400 (75-5m/ 3200- 0.5 GRT)
- Tugs 25 (70-6m 250- 1GRT)
- Yachts 5 (15-8.5m / 31-4.0 GRT)
- Others 12 (45-7m/ 2300- 1GRT)

Total registered ships – 2224 as of 31st October 2017



GHG (CO2) Emissions from Fiji's shipping sector

- Total estimated CO2 emitted from ships is about 227KT



By Percentage

1. GSS – 1.5%
2. Uneconomical – 1.6%
3. Economical – 29.5 %
4. Small Boats – 33%
5. Fishing – 11%
6. Tourism – 15%
7. Others – 8.4%



National Plan and Policies to address GHG Emissions

- ❖ National climate policy (2012)
- ❖ Green growth framework (2015)
- ❖ Maritime transport policy (2015)
 - ❖ Under National Transport Plan
 - ❖ Ratification of Maritime International Conventions that address ship based marine pollution including air pollution
 - ❖ Improved and resilient infrastructure and equipment
 - ❖ Human resources capacity
 - ❖ Multi agency approach
 - ❖ Energy/carbon efficient propulsion systems and hull designs



5-20 YEAR Fiji's NATIONAL DEVELOPMENT PLAN

- Fiji Govt. commitment to reduction of GHG emissions focusing on strategies such as:
 1. Support transition towards low carbon transport;
 2. Improving operational efficiency of ships;
 3. Re-introducing age limit on second had ships;
 4. Support Tech Advancement- efficient hull & Propeller designs



Short-Medium Term Measures

- ❖ Ships in Fiji using lighter diesel fuels moving away from heavier fuels such as HFO/MDO. (Reducing reliance on imported fossil fuels- fossil fuel Fiji's imports as of 2013 stats amounts to \$660 million)
- ❖ Transition to low sulphur fuel content fuel for transport systems
- ❖ Cleaner hulls which raises fuel efficiency and lowers fuel consumption (Regulations prescribes any ship over 24 years required to be docked annually).
- ❖ Moving away from the use of two stroke engines for outboard motors to four stroke which is more efficient and finally electric outboard engines.



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- ❖ optimized routing for ship operators and owners
- ❖ slow steaming - ships in Fiji are normally running on economical speeds (less fuel consumption and therefore reduction on CO2 emissions).
- ❖ Planned maintenance systems for under water gears and machineries. (part of Fiji Maritime Laws that all ships have a planned maintenance system in place and that it is implemented).
- ❖ Alternative fuel sources, Biofuel – Supply & Cost needs to be address and change in technology to electric/ battery engines.



Projects already undertaken in Fiji to address GHG emissions

- ❖ Soft sail retrofits - Auxiliary rig retrofitted to two government vessels of ~300GRT. Rigs built and installed in-country resulted in 30% fuel saving, 30% engine/prop wear reduction and increased passage time.
- ❖ The Tai Kabara – a 50 ton primary sail powered trading vessel, designed and built on Kabara by local builders (1984-87) deregistered and scuttled in 2006
- ❖ Test trial on a propelled barge - use of bio fuel was successful however the lack of bio fuel supply and cost could not sustain the project
- ❖ Registered Canoes used for tourist travel – I Vola Siga Vou/ Uto Ni Yalo. More similar projects to be undertaken in future with the support of Government.



Long Term Measures

- ❖ Setting up Fijis NDC's in terms of GHG emissions –
 - ❖ Fiji has two outcomes:
 - Obligation on maritime sector to contribute to global efforts to reduce GHG emissions and take appropriate action to progress low carbon maritime transport;
 - Reduce reliance on fossil fuels
 - ❖ Maritime NDCs - Fiji is yet to set a target for ships emission for example:
 - ✓ a 27% emissions reduction by 2030. reduction target can also vary for small boats and larger ships.



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- ❖ Ratification of MARPOL Annexure VI – Air pollution and domesticating its requirement – targeted for last quarter 2018.
 - This is important as this a means of reducing emissions from Fiji ships trading internationally and domestically.
 - ADB Consultant work last quarter of 2017 for Fiji’s GHG emission reduction – resulting in a draft Maritime Transport Action Plan for GHG emission reduction (Maritime Transport NDC)



THANK YOU

QUESTIONS?

