Potential for sustainable sea transport: A case study of the Southern Lomaiviti, Fiji islands

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1. Introduction

This paper discusses a case study of the local sea transport use and potential options for the future for three related islands, the Southern Lomaiviti group in Fiji. A comprehensive needs survey building on preliminary assessments on Kadavu Island, Fiji, is being conducted. The sea transport context facing Small Island Developing States (SIDS) in the Pacific is given and the rationale for prioritising baseline survey work at the village and island level explained. The potential of using this assessment methodology in other island locations to build data sets needed for projects which seek to address the issue of sustainable transport for the Pacific is highlighted.

This research seeks to replicate and extend an initial village scale survey to an island group scope. It is believed that such surveys have not previously been conducted for this level in Fiji. It is intended that the survey methodology developed will prove replicable in other Fiji and Pacific locales and can eventually be used as a basis for collating much needed data on the lowest common denominator of the sea transport sector. Our preliminary analysis suggests that fuel used for local level sea transport, as a proportion of national use, has either been discounted or heavily underestimated in previous analysis of Pacific Island Countries’ (PICs) transport need and fuel use.

Issues of sea transport remain universal and primary, a basic human need of Oceanic peoples today and tomorrow [22]. The region’s transport issues are unique; tiny economies scattered at the ends of some of the longest transportation routes in the world [2,25] and the most challenging network to maintain per capita and per sea mile with the resource base available to support it [24]. Transport is a priority for Pacific Island Forum leaders under the Pacific Plan, the overarching regional policy framework for PICs, and its importance as an essential facilitator of economic growth is well recognised [33].

Sea transport in this region is about much more than facilitating economies and trade. Fijians, like most Pacific Islanders, are highly mobile; maintaining family connections is a vital concern and there is considerable travel between kin throughout Fiji [24]. Any increase in transport costs immediately impacts social and cultural connectivity. The agenda needs to be considered in a...
wider context than just economics and the research is seeking to provide the basis for an analysis that includes social, cultural and environmental bottom-lines.

This village level research is an essential building block for the University of the South Pacific's (USP) current research programme on sustainable sea transport for PICs. Analysis of the sector is severely hampered by a lack of reliable and up-to-date data on which to base recommendations for future action. For future solutions to be demonstrated as truly sustainable an accurate picture of both current use and projected need is essential and data availability, especially at the lowest common denominator of the island and village is currently almost entirely lacking.

2. Pacific island sea transport context

The Pacific region is the most dependent on imported fossil fuels in the world with PICs importing more than 95% of fuel [36]. Such dependency is recognised as having a crippling effect on national budgets and revenues and impacts on key productive sectors in the region [33,28,25]. Various strategies to reduce this dependency are being considered and implemented but primarily target electricity generation. Transport generally has received far less attention, despite being the region’s single largest sector user of transport except by sea. All maritime transport is fossil fuel dependent. There are a number of private shipping operators throughout the Pacific inter-island and coastal shipping services are usually run by governments or small, independent shipping companies. Many routes are commercially unviable and some are simply uneconomic. Governments are required to subsidise or otherwise provide for these with continually accumulating costs.

This is illustrated using Fiji as an example. Fiji has 332 islands, of which 100 are inhabited, and an area of 1.3 million square kilometres of ocean. For many communities there is no other form of transport except by sea. All maritime transport is fossil fuel dependent. There are a number of private shipping operators serving the major economic routes. However, the Fiji Government’s budget for 2014 includes FJS 1.725 million for the Government Shipping Franchise Scheme which subsidises private sector vessels to ensure provision of maritime transport services to ten identified “uneconomical” sea routes (based on 42% of shipping company operating costs/trip) [18]. For instance, the government subsidy for sea transport between Suva and Rotuma costs FJK$25,000 per 700 nautical mile trip.

Because the vast bulk of commodities and manufactured goods are transported by ship in the Pacific, and considerable domestic travel is by sea, the cost and quality of shipping immediately affects the welfare of the consumers and producers [25]. Additionally, the marginal nature of the industry means that financing shipping investment, either for governments or private operators, is problematic [2,25].

Generally for many PICs at a domestic level, shipping services are restricted to an aging and inefficient fleet. The marginal returns and financing barriers, especially for domestic services, means most operators are trapped in a cycle of replacing old ships...
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