



# The importance of market access for timber growers in small island developing states: A Solomon Island study

Timothy J. Blumfield<sup>a,\*</sup>, Frédérique Reverchon<sup>a,b</sup>, Vaeno W. Vigulu<sup>a,c</sup>

<sup>a</sup> Environmental Futures Research Institute, School of Natural Sciences, Griffith University, Nathan, Qld 4111, Australia

<sup>b</sup> Instituto de Ecología A.C., Red de Estudios Moleculares Avanzados, Carretera antigua a Coatepec, Xalapa, Veracruz 91070, Mexico

<sup>c</sup> Solomon Islands Government Ministry of Forestry Research, Honiara, Solomon Islands



## ARTICLE INFO

### Keywords:

Teak  
Community forestry  
Market opportunities  
Value adding  
Smallholder plantations  
Solomon Islands

## ABSTRACT

The planting of exotic tree species such as teak (*Tectona grandis* L.f.) and mahogany (*Swietenia macrophylla* King) in Solomon Islands was encouraged through various governmental and foreign aid programmes. While the programmes were very successful, resulting in thousands of individual woodlots or plantations throughout the country, lack of infrastructure to give access to export markets, reluctance to thin except for financial gain, poor land use planning and very little structural support has resulted in overstocked woodlots full of poor quality trees. The situation is made worse by the problems inherent in being a small island developing state. This study examines the problems facing smallholder growers who need to access international markets for their timber and the steps being taken to attain market access for growers. We also provide some recommendations to give the growers returns on their investment, thereby encouraging a sustainable timber industry in one of the poorest countries in the World.

## 1. Introduction

Solomon Islands is an archipelago of around 1000 islands with a total land area of approximately 29,000 km<sup>2</sup>. The islands form part of the Pacific Ring of Fire and are prone to earthquakes and tsunamis. The capital Honiara is situated around 1800 km due east of the tip of Cape York, Australia. Solomon Islands ranks among the 50 Least Developed Countries (LDCs). LDCs are recognised by the United Nations as having the lowest indicators of socio-economic development and the lowest Human Development Index ratings in the world (UN (United Nations, 2016). Further, Solomon Islands is also one of the Small Island Developing States (SIDs), a series of developing countries facing unique challenges typified by: a narrow resource base; small domestic market with a heavy reliance on a few distant external markets; high energy costs; poor infrastructure, transport and communications; and limited opportunities for private sector growth (UNOHRLLS, 2011).

There is an existing external market opportunity in Solomon Islands for timber and this market has provided the main source of foreign income for many years. Logging of the native forest has been carried out at unsustainable levels and there is a widespread expectation that the logging of native forests will collapse in the near future as the resource depletion becomes complete (Vigulu, 2018). However, Solomon Islands has the near perfect combination of climate and soils that makes

it the ideal environment for growing high value timber and the potential income generation from plantation timber is significant (Reverchon et al., 2015). Yet the nascent community timber growing industry that has been developing over the past 20 years is struggling to survive with growers rapidly becoming disillusioned with the nearly insurmountable problems they apparently face (Blumfield and Reverchon, 2013). This case study will examine the development of that industry, the problems that it faces and some of the potential solutions to those problems.

### 1.1. Teak

Teak is one of the most important species for plantations in the tropics and is highly valued for its durable heartwood (Kaosa-ard et al., 1998). Teak native forests are now disappearing and the clear-felling of teak was banned in 1986 in most of the teak-growing provinces of India and this was enhanced by more stringent restrictions against the felling of any trees in native forest areas in 1997 (Satyanarayana Rao, 2017). The harvest in Myanmar is also considered unsustainable and export of logs was banned in 2014 (FAO, 2015) with a ban enforced on all logging of teak in 2016 (Reuters, 2016). This has since been overturned and was considered ineffective in the face of illegal harvesting and export activities. The reduction of natural teak forests has resulted in a

\* Corresponding author.

E-mail addresses: [t.blumfield@griffith.edu.au](mailto:t.blumfield@griffith.edu.au) (T.J. Blumfield), [f.reverchon@griffith.edu.au](mailto:f.reverchon@griffith.edu.au) (F. Reverchon), [ps@mofr.gov.sb](mailto:ps@mofr.gov.sb) (V.W. Vigulu).

rapid expansion of plantation teak (Fernández-Moya et al., 2014), especially in Asian countries such as India, Laos, Indonesia and Thailand. These plantations, as in Solomon Islands, are often small community or individual woodlots (Bartlett, 2016). Plantation teak is held in lower regard than 'natural' teak though this distinction will become far less important once the supply of natural teak diminishes (Ladrach, 2009). Testing of Solomon Islands teak has shown that it is as good as any plantation teak currently available and compares favourably with regrowth Burmese Teak (QDEEDI, 2012; Blumfield and Reverchon, 2013) with the advantage that it will grow to harvestable size within 20–25 years, compared to 40–50 years in Thailand (Kaosa-ard et al., 1998). This is a real market advantage, allowing 2 rotations for every 1 in Thailand. The decline in natural forest derived teak has kept the prices high throughout the recent years of financial turmoil and currently (January 2018), plantation teak is selling into the Indian market at between US\$ 225–876 (mean US\$ 369–623) per m<sup>3</sup> for round logs; US\$ 333–872 (mean US\$ 408–600) per m<sup>3</sup> for squares; and US\$ 307–900 for sawn timber (mean US\$494–757) (ITTO, 2017).

### 1.2. The development of community forestry in Solomon Islands

An isolated incident where a single grower managed to sell some teak and mahogany sparked what is known as Teak Fever in Solomon Islands around 16–20 years ago (Hughes et al., 2010). This sudden interest in timber growing was supported by the Solomon Island Government (SIG) Ministry of Forestry Research and was recognised as a potential source of foreign currency as well as being a sustainable and technologically appropriate way for the rural population to develop. Solomon Islands population is over 80% rural with little opportunity to make more than a subsistence living from agriculture (Furusawa et al., 2014). Various cash crops have flourished and then declined on the whim of market forces. Copra, coffee and cocoa are still grown but the income is uncertain (Maurice and Davis, 2011). Timber, especially teak, is seen as a far more stable and valuable commodity.

The advent of community forestry in Solomon Islands was reasonably spontaneous as word spread through the rural communities of the profits that could be made from selling teak. However, this was soon taken up by the Ministry of Forestry and then by the AusAID funded Forest Management Project (SIFMP), which actively encouraged the planting of small, community woodlots. AusAID had 2 phases (SIFMP1 and SIFMP2) which ran from 1999 to 2009. These programmes were operating under extremely difficult conditions due to the civil unrest and its aftermath that has dominated much of Solomon Islands life. These programmes and those of other aid agencies operating in Solomon Islands had a goal of encouraging the development of a community forest industry. SIFMP2 had a stated goal of 1000 ha of plantation to be established annually by smallholder growers, with the emphasis on small area plantings (Raymond and Wooff, 2006).

There is a belief among foresters that once a significant and valuable resource is developed, the infrastructure to exploit that resource will follow. This has proven to be the case in countries such as Australia and New Zealand where sawmills and roads have been established to exploit the matured resource. It has not worked in Solomon Islands (Blumfield et al., 2014). Using data gathered during SIFMP 2, it is clear to see that the woodlots that have been developed are small in size, averaging 0.25–1.00 ha and owned by over 9000 individuals or communities. These woodlots are scattered throughout the islands, usually on customary land that has no transport infrastructure or roads. A single village may own as many as 50 woodlots belonging to individual members of the community. These will be scattered through the tribal land, usually forest, connected only by footpaths with single log bridges spanning streams. Plate shows the scatter of identified plantations around one community on the eastern side of Rendova Island in Western Province. Sizes of the plantations range from 0.1 ha to 7.4 ha (mean 1.5 ha) while the distance to the shoreline via navigable tracks ranges from 0.4 km to 3.7 km (mean 1.63 km) (Table 1). The

fragmented nature of this resource mitigates against the development of the infrastructure needed to harvest, and even the possibility of interesting logging companies to invest in harvesting plots that are less than a few hectares in size is extremely remote (Blumfield and Reverchon, 2013). The instances where logging companies have approached the communities to harvest the teak plantations have always occurred when a logging road has been re-opened and allowed access to an existing plantation. The teak logs have then been incorporated into the existing infrastructure of roads, jetties and log ponds (holding areas), the authors are not aware of infrastructure being developed specifically for harvesting of teak plantations. It is possible that this would happen if the plantations had been properly managed as our research has shown that it is reasonable to expect a commercial standing log volume of around 400–600 m<sup>3</sup> per hectare. However, existing plantations do not approach this figure and are therefore not commercially attractive.

## 2. Current situation

The SIG does not have the resources to make an adequate inventory of community and smallholder plantations in Solomon Islands and there is no accurate record of the area, age or condition of plantations around the country (Blumfield et al., 2013). Recent inventories of some of the smallholder woodlots in Western province have revealed the true state of the plantings. The plantations are overstocked due to lack of thinning (Vigulu et al., 2017), leaving small diameter trees that are difficult to process yet still too heavy to manually handle to the water's edge for transportation. Most of the Solomon Island plantation resource is in poor condition, with the majority of the timber falling outside the grading rules that are currently in operation (Reverchon and Blumfield, 2013). Despite all these limitations, there are thousands of cubic metres of commercial timber available inside the plantations.

### 2.1. Market access

Teak is not used locally to any extent and there is a lack of knowledge regarding the qualities of the timber. This means that teak is mainly grown with the expectation that all the timber, including thinnings, will be exported. This reduces the ability to sell locally, severely limiting the market for lower grade timber.

There are also issues related to transportability. Plantations were often established in areas where logging companies had effectively cleared the forest (Furusawa et al., 2014) but with little thought of the problems of getting the matured trees from the plantation to the water's edge for transportation. In the ensuing years the logging roads have been reclaimed by the forest and, even when the roads survive there are no vehicles available to transport the logs. Round logs are simply too difficult to handle by communities. The round log market has been developed for commercial operations with mechanical handling and sophisticated transportation. In Solomon Islands village communities everything is manually handled and transportation is by open boat, between 4–7 m in length and powered by an outboard motor (Blumfield and Reverchon, 2013).

The sale of teak from community, smallholder woodlots on Kolombangara Island in 2015 provides some important pointers about the opportunities and the challenges facing smallholder growers in Solomon Islands. Thinnings from these plantations fetched between US \$ 150–US\$ 350 per m<sup>3</sup>, depending upon quality, as round logs (P. Whitehead, General Manager, Kolombangara Forest Products Limited (KFPL), pers. comm.). The quality in general was similar to that of the other community woodlots so this is a good indicative price for teak thinnings in Solomon Islands. The conditions that set these growers apart from every other grower in Solomon Islands was the active support of KFPL who facilitated the sale of the timber and provided the harvesting teams, sniggers and transport to the log pond. In addition, all the smallholder woodlots were alongside existing forestry roads.

Access to export markets has therefore to deal with the realities that

Download English Version:

<https://daneshyari.com/en/article/6546188>

Download Persian Version:

<https://daneshyari.com/article/6546188>

[Daneshyari.com](https://daneshyari.com)