



Research Note: CocoVeneer Project Overview

This research note outlines an ACIAR-funded project that aims to develop means to sustainably convert senile coconut stems into veneer and veneer-based products, and complementary agricultural products for export or use in Pacific Island economies, particularly Fiji, Samoa and the Solomon Islands. The project supports economic development in these and other Pacific countries.

The project has six objectives, namely; identify the most promising product options for coconut wood veneer product, provide viable protocols and developing capacity for effective and sustainable supply, establish experimental veneer-peeling capacity in the South Pacific, determine optimum processing parameters and protocols, assemble product suite and establishment of product characteristics, and finally develop uses for the cortex and soft central cores. The project team includes researchers and collaborators from the University of Tasmania, the Queensland Department of Agriculture, and Fisheries (DAF), the Secretariat of the Pacific Community (SPC), the Fiji Department of Forests; Forest Research and Development Section, the Samoan Ministry of Natural Resources and Environment; the Ministry of Forestry of the Solomon Islands, and industry in Australia and Pacific Islands.

Introduction

This research note outlines the ACIAR-funded CocoVeneer project FST/2009/062: *Development of advanced veneer and other product from coconut wood to enhance livelihoods in South Pacific communities*. The project supports economic development in Fiji, Samoa and the Solomon Islands.

The project team includes researchers and collaborators from the University of Tasmania, the Queensland Department of Agriculture and Fisheries (DAF), the Secretariat of the Pacific Community (SPC), the Fiji Department of Forests; Forest

Research and Development Section, Forestry Division, Ministry of Natural Resources and Environment, Samoa; Ministry of Forestry of the Solomon Islands, and industry in Australia and Pacific Islands. The project supports economic development in Fiji, Samoa and the Solomon Islands and includes activity in market and value-chain assessment, log harvesting, veneer production and product manufacture, and the development of viable uses for coconut residues at the harvest site or the production facility. More information about the project is available at www.cocowood.net.



Figure 1: Senile coconut stand in Fiji

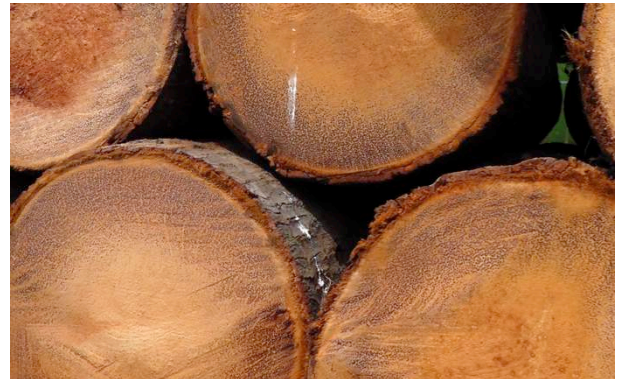


Figure 2: Coconut logs illustrating the harder outer 'woody' tissue

Why Coconut Plantations?

The Pacific's senile coconut plantations present a significant opportunity for a sustainable increase in wood production and act as a major constraint on improved agricultural production. There is an expanding regional and international market for wood veneers and composite wood products. As access to the traditional resources for these products, particularly tropical rainforests, are constrained, a significant opportunity exists for the volume of wood held in the estimated 120,000 hectares of senile coconut plantations in the Pacific islands to become an attractive alternative resource. With the development of suitable technologies, processes and expertise, a sustainable cocowood veneering industry sector may be established to use this resource. Such an industry could include the harvest and re-establishment of coconut plantations, conversion of recovered stems into veneer, assembly of composite products for local use or export, and production of useful agricultural products and fuel from stem and crown residues.

In the agricultural value chain, a demand for coconut wood establishes an incentive for plantation owners to remove low-productivity senile stems and realise the potential of more productive land uses.

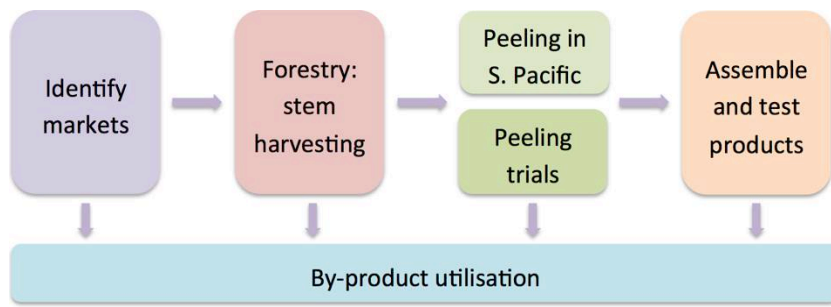


Figure 3: Relationship of project objectives



Figure 4: Cocoveneer table legs with various stains

Project Objectives

The project's six objectives sit across five research areas. See Figure 3.

1. Identify the most promising product options for the veneer from coconut stem. This involved economic analysis of the value chain, product development, improvement of processing and marketing skills in the Pacific, and increase in market appreciation for coco-wood veneer products in market centres.
2. Provide viable protocols and developing capacity for effective and sustainable log supply, establishment of sustainable low-impact harvesting techniques and the compiling of acceptable plantation rehabilitation procedures and log grading, handling, preparation and transport protocols.
3. Establish experimental veneer-peeling capacity in the South Pacific. This involved the acquirement of a spindle-less lathe equipment suite, optimisation of the lathe at DAF's Salisbury Queensland research facility, commission of the lathe and support equipment at collaborator facilities in Fiji and assessment of the potential for a regional trial and demonstration program.
4. Determine the optimum processing parameters and protocols for peeling coconut stems and the properties of the recovered veneer through determination of the primary characteristics of dry and graded veneer.
5. Assemble the product suite and establish its characteristics and in-service performance in local and export markets - verified through material testings and monitored use in service.
6. Develop uses for the cortex and soft, central cores remaining after logging and peeling; or by-product utilisation.

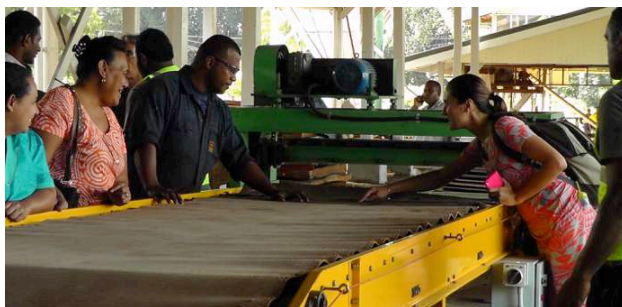


Figure 5: Cocoveneer on the Fiji lathe



Figure 6: Adjusting the lathe blade at Suva, Fiji

Contact for further information

In Australia: Associate Professor Gregory Nolan, Centre for Sustainable Architecture with Wood, University of Tasmania
E: gnolan@utas.edu.au P: +61 3 6226 7282

In Fiji: Mr Semi V. Dranibaka, Principal Utilisation Officer, Fiji Ministry of Fisheries & Forests
E: semi.dranibaka@gmail.com P: +679 339 3611

In other Pacific Islands: Mr Sairusi Bulai, Coordinator, Forest and Trees Programme, SPC
E: SairusiB@spc.int P: +679 337 0733