Development of advanced veneer and other products from coconut wood to enhance livelihoods in South Pacific communities
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Advanced veneer and other product from coconut wood

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Project Objectives

- Identify markets
- Forestry: stem harvesting
- Peeling in S. Pacific
- Peeling trials
- Assemble and test products

By-product utilisation

Advanced veneer and other product from coconut wood
Objective 1 – Identify Markets

**Objective 1** – Identify the most promising product options for the veneer from coconut stem.
Objective 2 - Develop protocols and capacity for sustainable low-impact coconut wood harvesting, plantation rehabilitation, and log grading, handling and transport.
Objective 3 – Establish experimental veneer-peeling capacity in the South Pacific

Advanced veneer and other product from coconut wood
Spindle-less lathes

- A spindle-less lathe uses periphery drive rollers to pushes the log against the blade for peeling.
- This increases recovery over spindled lathes as small diameter logs can be peeled efficiently down to a small residual core.
Objective 4 – Peeling trials

**Objective 4** – Determine the optimum processing parameters & protocols for peeling coconut stems & the properties of the recovered veneer.
Objective 5 – Assemble the product suite and establish its characteristics and in-service performance.
Objective 6 - By-product utilisation

**Objective 6** - Determine the costs and benefits of using the residual cortex and soft, central cores for bio-char and other agricultural products.
Objective 6 – By-product utilisation
Cocowood - A new sustainable wood product?

The Cocowood Project: 2012-16

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The AGNAR funded project aims to develop the technologies, processes and expertise to produce veneer and veneer-based products of various grades from senile coconut stems. Residues from the process will be used to develop soil conditioning products. Senile coconut stems are widespread and have very low value. Livelihoods in South Pacific communities will be enhanced by developing a valuable product from the senile stems.

The Cocowood Project: 2007-2010

Improving value and marketability of coconut wood

The AGNAR funded project provided the science to underpin coconut wood production, engineering and marketing initiatives and address gaps in our understanding of cocowood properties and suitable processing technologies.
Coconut wood has a high mineral content and appears brown to black in colour, with a pleasing, pleasing appearance. It is a development of the coconut tree's vascular structure and is considered suitable for many applications. Coconut wood consists of hard and soft zones, which are differentiated from the log's standpoint. High density, dry coconut wood is not susceptible to insect pests and can be used in fully exposed conditions. It is a hardwood timber that can be kiln-dried at 60°C, whereas fresh boards should be dried at 10°C. As such, it is best suited for vertical storage. Coconut wood has a high density and is resistant to termite damage. However, it is unsuitable for underground applications due to its high density.
Training is being provided through:

- Participation in university courses.
- Experience in Australian institutions
- Onsite training in equipment in Suva, Fiji.
This is the last year of a four-year, collaborative project with six specific objectives:

1. Identify the most promising product options for the veneer from coconut stem.
2. Develop protocols and capacity for sustainable low-impact coconut wood harvesting, plantation rehabilitation, and log grading, handling and transport.
3. Establish experimental veneer-peeling capacity in the South Pacific.
4. Determine the optimum processing parameters and protocols for peeling coconut stems and the properties of the recovered veneer.
5. Assemble the product suite and establish its characteristics and in-service performance. Characterisation would be to local and export performance standards.
6. Determine the costs and benefits of using the residual cortex and soft, central cores for bio-char, growing mediums and other agricultural products.
Questions