

ACIAR projects



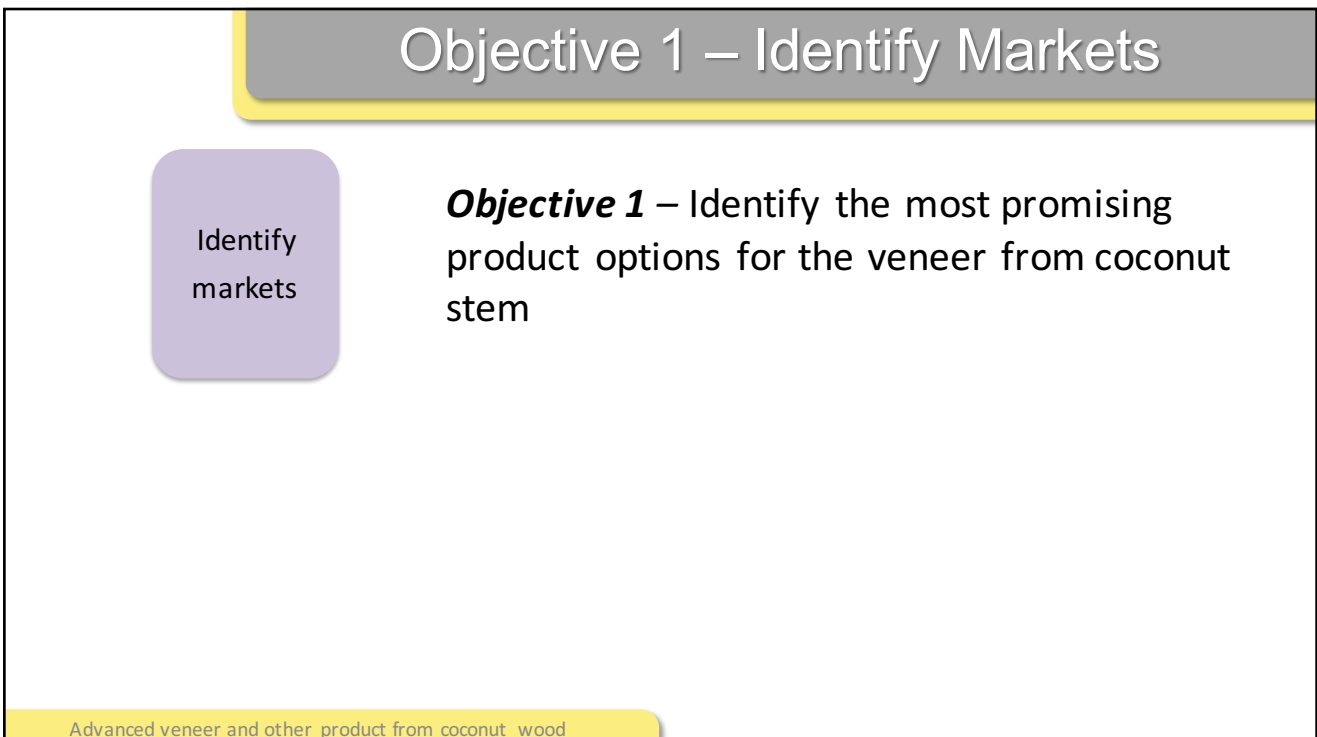
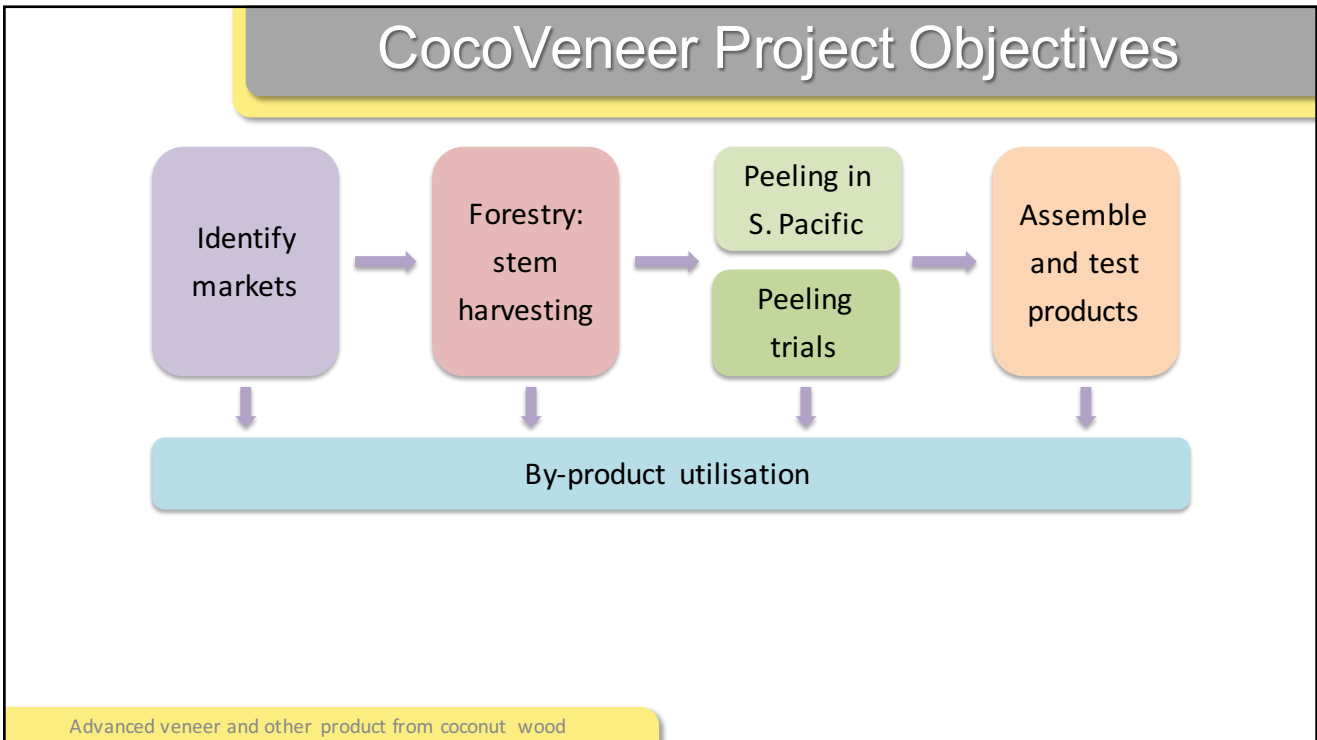
FST 2004/054: Improving value and marketability of coconut wood - 2007-2010

FST/2009/062: Development of advanced veneer and other products from coconut wood to enhance livelihoods in South Pacific communities – 2012-16

Projects summary

Two projects:

1. *CocoWood: 2007-2010*
provided the science to underpin coconut wood production, engineering and marketing initiatives for high quality flooring and address gaps in understanding of cocowood properties and suitable processing technologies.
2. *CocoVeneer: 2012-2016*
aims to develop the technologies, processes and expertise to produce veneer and veneer-based products from senile coconut stems. Residues from the processes will be used to develop soil conditioning products.



Objective 2 – Forestry

Forestry:
stem
harvesting

Objective 2 - Develop protocols and capacity for sustainable low-impact coconut wood harvesting, plantation rehabilitation, and log grading, handling and transport



Advanced veneer and other product from coconut wood

Obj. 3 – Veneer peeling in S. Pacific

Peeling in
S. Pacific

Peeling
trials

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 push 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

Peeling in
S. Pacific

Peeling
trials

Objective 4 – Determine the optimum processing parameters & protocols for peeling coconut stems & the properties of the recovered veneer.



Advanced veneer and other product from coconut wood

Objective 5 – Products

Assemble
and test
products

Objective 5 – Assemble the product suite and establish its characteristics and in-service performance



Advanced veneer and other product from coconut wood

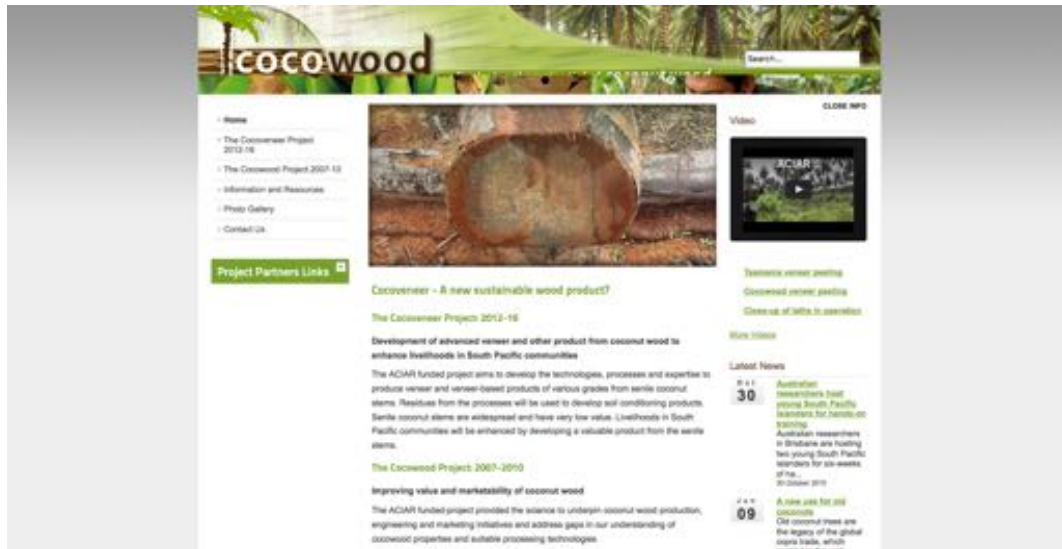
Objective 6 – By-product utilisation

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

Advanced veneer and other product from coconut wood

Information: Cocowood.net



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Cocowood.net contains:

- Videos
- Project notes
- Research reports and more ...

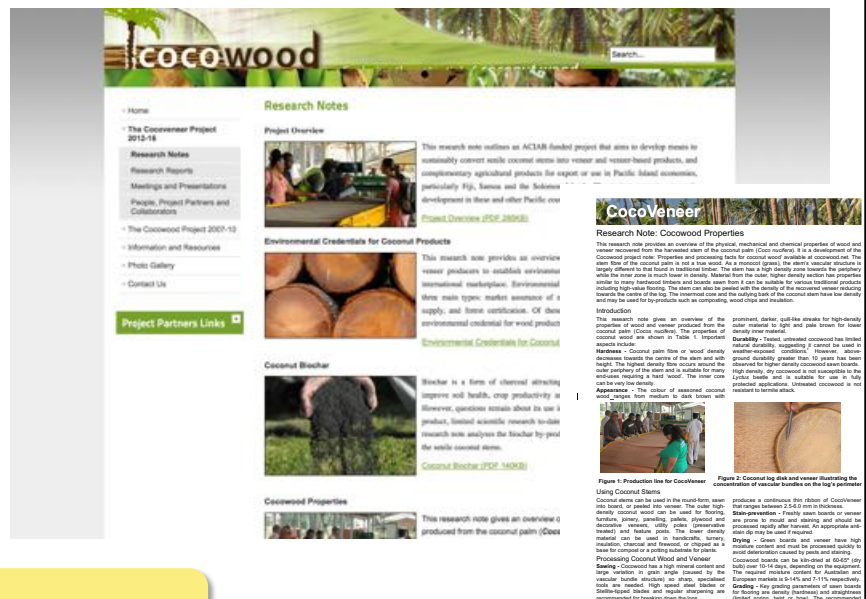


Figure 1: Production line for Cocowood Using Coconut Stems
 Coconut stems can be used in the production of board or panel like timber. The outer high-density coconut husk can be used for flooring, furniture, joinery, paneling, pallets, plywood and decorative veneers, utility cases. Compressive strength can be used in handrails, bracing, trussing, cladding and fencing, or clipped as a base for composite or a joining substrate for cladding.
 Sawing - Cocowood has a high mineral content and large variation in grain angle. Caution by the manufacturer is advised. Blunt chisels and sharp tools are needed. High speed water blades or double-edged blades and regular sharpening are recommended for breaking down the logs.
 Finishing - A minimum 60% moisture content is recommended. Finishing coats should be applied in a well-ventilated area. An appropriate and suitable material should be used. The use of water-based finishes is recommended. The use of oil-based finishes is not recommended.
 Drying - Green cocowood and veneer have high moisture content and are prone to warping and distortion caused by joints and staining. Cocowood boards can be kiln-dried at 60°C dry bulb over 10-14 days, depending on the equipment. The required moisture content for finishing and staining is 10-12%.
 Grading - Very good preservation of grain boards for flooring are specially prepared and engineered (limited joint, joint or knot). The recommended

Questions

