

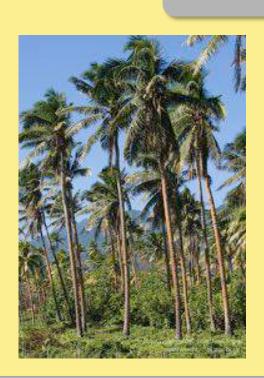






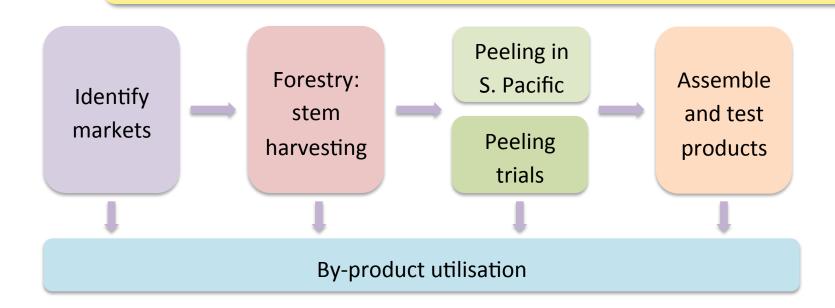
Objective 2

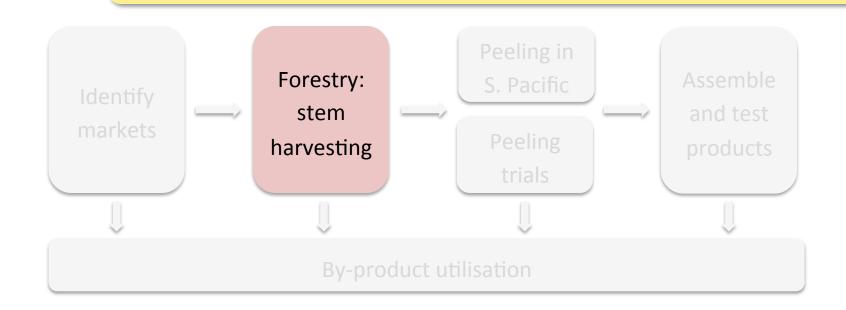




Develop protocols and capacity for sustainable low-impact coconut wood harvesting, plantation rehabilitation, and log grading, handling and transport.

Project objectives





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

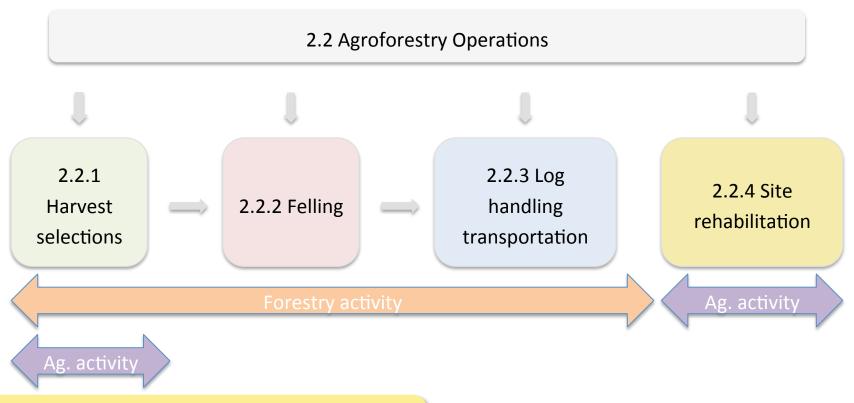
- 2.1 Local resource assessment and harvesting
- 2.2 Development and training in harvesting and handling protocols Agroforestry operations.

2.1 Local Resource Assessment and Harvesting

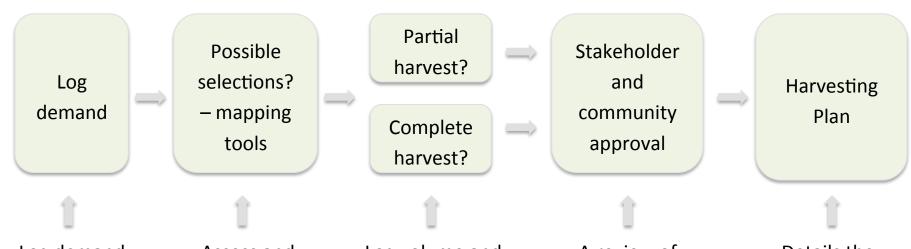
- Material for Trial 1 collected from a representative Fijian site.
 - Dispatched to ENSAM, France.
- Trial 2 material sourced from an Australian site.
 - Sourced material was not sufficiently dense to be representative.
- Hollow high-density Fijian stems sourced for Trial 2 through Pacific Green.
 - These satisfied Australian Customs import requirement but were unsuccessful trial specimens.



Objective 2 – CocoVeneer Agroforestry



2.2.1 - Harvest Selections



Log demand resulting from veneer product sales Assess and identify the best palm selection options to meet the log demand

Log volume and coupe location will determine the harvesting strategy

A review of environmental, social and commercial considerations

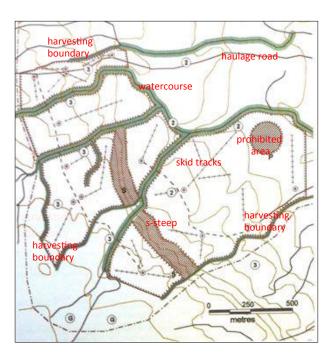
Details the harvesting in accordance with the local Forest Harvesting Code of Practice

2.2.1 - Harvest selections

Mapping can assist in identifying harvest selections



Collaboration has started with Wolf Forstreuter and his SOPAC team



A well defined Harvesting Plan must exist for larger scale clearances

2.2.2 - Felling operations



Likely controlled by Forestry regulations

Chainsaw operators must:

- Have morning briefing meetings to discuss the Harvesting Plan, any safety issues and the day's operations.
- Be trained and fell palms using only recommended local Forest Harvesting Code of Practice felling techniques.
- Work in pairs one feller, one assistant both with the appropriate safety equipment.
- Fell as close to the ground as practicable (unless defects or buttress exists) using directional felling methods.

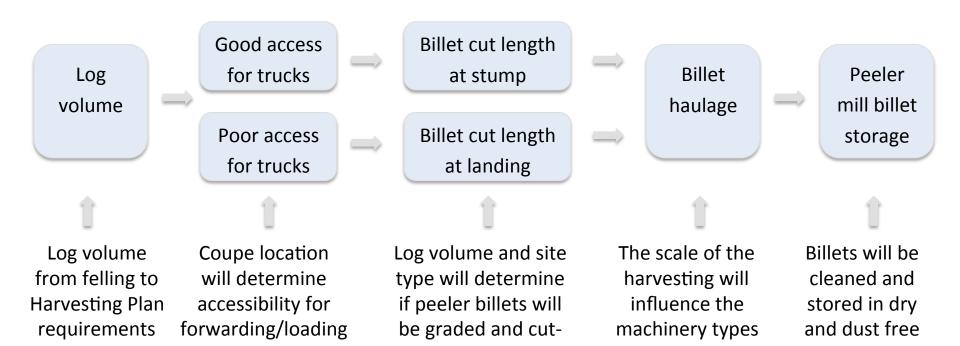
2.2.3 - Log handling and transportation

and haulage

trucks used

area above the

ground surface



to-length at the

stump or the

landing

equipment

and trucks

2.2.3 - Log handling and transportation





- Logs can be cut to length and graded at the stump or the landing.
- Cutting peeler billets to length at the stump for loading will have cost advantages.
- On more difficult sites, logs may be hauled or skidded full length to the landing.
- Similar to native logging, peeler billets will be graded and identified with the grade and stem position.





2.2.3 - Log handling and transportation



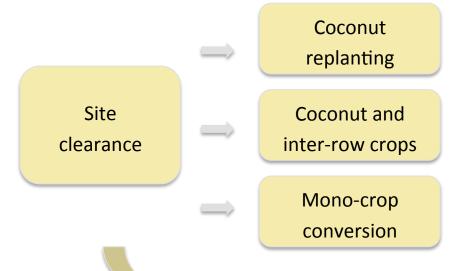




The scale of log handling and transportation will depend on:

 The volume of logs required, site location and accessibility, whether individual selections are taken, or the site is partially or wholly harvested.

2.2.4 - Site rehabilitation



Residue potential options:

- On-site burning (ash nutrients)
- Biochar
- In-field chipping composting growing mediums

Project Objective 6

Potential residue by-products

2.2.4 - Site rehabilitation



Efficient burning provides nutrient rich ash to the site



Replanting with new and productive varieties



Future multi-crop use of a site

Objective 2 – CocoVeneer Agroforestry

Summary

- Forestry and Agriculture authorities need to agree on scope of regulatory control.
- Peeler log demand and/or coupe clearances will determine the scale of harvesting operations.
- All relevant stakeholders and community groups will need to be consulted about proposed harvesting.
- Local Forest Codes of Practice will need to be amended to include an appendix detailing palm harvesting.
- A harvesting plan with maps will be necessary for site clearance, but may not be appropriate for smaller volumes.
 - An approval mechanism is recommended for individual palm selections.

Objective 2 – CocoVeneer Agroforestry

Summary

- All personnel engaged in harvesting operations will need to be adequately competent and certified.
- Harvesting and transportation must be coordinated with peeling operations.
- Log volumes will strongly influence the types of equipment and machinery used for log handling and transportation.
 - Native forest equipment may be used for larger site clearances.
- Peeler billets will be graded, identified and stored above ground in a dry dirt free environment.
- Future use of cleared sites should be included in the Harvesting Plan.

Forestry:
Stem
harvesting

Key completion dates -

Activity	Planned	Actual
Local resources assessed and obtained for peeling trial 1	August 2012	March 2013
Local resources assessed and obtained for peeling trial 3	November 2013	August 2014
Draft harvesting and handling protocols developed	August 2014	August 2014

Forestry:
Stem
harvesting

Key activities next 12 months –

Activity Anticipated

completion

Obtain stems for Trial 3.2 November 2014

Obtain stems for Trial 4 March 2015

Document procedures for harvesting May 2015

Questions













centre for sustainable