The Australian forest and wood products industries are challenged to maintain economic viability as a result of increasing production costs, increased competition from imports, and variable construction sector activity. As a result, there is an increasing need to develop biorefinery technologies, knowledge, and capacity that improves revenue from existing forest products and by-products. Integration of value-added bioproducts will be a significant ‘step-change’ for the Australian forestry and wood product industries and offers a genuine opportunity to help these industries mitigate the effects of existing, emerging, and likely future challenges to profitability. This project aims to identify key opportunities for biorefining to add value to existing forestry products and by-products.

Benefits for agriculture: Outputs from this project will accelerate the adoption of conversion technologies and end products which maximise the potential for value adding to forestry and wood processing derived residues. More productive utilisation of total above ground forestry biomass will provide greater economic returns to the industry. The associated diversity of products will significantly increase the industry’s ability to respond to and thrive in rapidly changing market conditions.

Benefits for producers: Regionally the additional revenues from new bio-based industries will increase employment opportunities as well as stimulating broader economic development. Forestry-based commodities will see national increases leading to growth in export opportunities and trade returns. The replacement of oil derived fuels and chemicals by renewable forestry derived products will enable Australia to meet and potentially exceed its international commitments to reducing global warming.
More information about this project

The main objectives of this project are to assess for a range of forestry harvest and wood production residues:

- Key feedstock related factors such as availability, quality and their suitability for biorefinery processes;
- Feedstock use for different biorefinery production options and product markets and;
- Biorefinery value chain opportunities and profitable models of biorefinery innovation in the forest and wood product industries.

The project will be conducted in three phases aligned with these three objectives.

**Phase 1** will develop a detailed understanding of the availability and characteristics of biomass feedstocks from forestry and wood product industries.

**Phase 2** will involve a comprehensive assessment of the technology and product opportunities that can add value to the Australian forest products sector.

**Phase 3** will build on the outputs from Phase 1 and 2 to deliver an assessment of biorefinery value chain opportunities and profitable models of biorefinery innovation in the forest and wood product industries.

Outcomes for industry

- New revenue streams and increased competitiveness from the conversion of forestry and wood processing derived residues to high value products
- Improved economic resilience resulting from a broader product base
- Further enhancement of the environmental credentials of the forestry industry as a producer of renewable energy and other commodity products
- An expansion of forestry and wood production industries in Australia

Contact

**Dr Phil Hobson**
Principal Research Fellow
Queensland University of Technology

Phone: 07 3138 1240
Email: p.hobson@qut.edu.au
Web: research.qut.edu.au/biorefining/

Principal partners

This project is supported by Sugar Research Australia through funding from the Australian Government Department of Agriculture and Water Resources as part of its Rural R&D for Profit program.

Program partners