

Green Economy and Environmental Sustainability of Casuarina Plantations

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<https://www.iufro.org/science/divisions/division-2/20000/20800/20802/>

Casuarinas are nitrogen-fixing trees of significant importance in many tropical and subtropical countries of the world. International *Casuarina* workshops are organized by IUFRO Working Party 2.08.02 at regular intervals. Five workshops have been conducted so far in Australia (1981), Egypt (1989), Vietnam (1996), China (2010) and India (2014). These workshops have fostered a strong network of researchers from many countries. The Sixth International *Casuarina* Workshop took place on 21-25 October 2019 in Krabi, Thailand with 70 participants from Australia, Bangladesh, China, Fiji, India, Indonesia, Kenya, Thailand, Vietnam and USA.
Meeting website: <http://www.casuarina2019.kapi.ku.ac.th/>

In line with the theme of the Workshop, “*Casuarinas* for green economy and environmental sustainability”, the discussions during the meeting were focused on assessing the impact of *Casuarina* planting in meeting the industrial biomass raw material demand and improving edaphic and climatic conditions. In particular, the additional benefits derived thanks to the research and development work carried out so far, and increasing the accessibility of such new findings to all those involved in *Casuarina* planting were reviewed.

Regional and international collaborations were proposed to share the expertise and germplasm from countries that have already made substantial genetic and economic gains through long-term research programs with those that are beginning or in the early stages of improving the species. Strategies for conservation of available genetic resources in the natural range as well as broadening of the genetic base and overcoming the biotic and climate change induced threats in the cultivated stands were proposed for long term securing of *Casuarina* utilization.

Participants of the workshop strongly suggested to quantify the overall socio-economic and environmental benefits of *Casuarina* planting to provide the industry leaders and policy makers with the information required for increased prioritization and investments to advance research and development efforts.

The ongoing programmes on genetic improvement, biological nitrogen fixation through *Frankia* symbiosis and evolving appropriate silvicultural techniques especially to the emerging species will be strengthened and extended to new areas of planting.

Issues of decline of *Casuarina* in natural and planted environments will be tackled through an interdisciplinary approach by drawing inputs from genetics, pathology and silviculture. Exploration and trialing of new species, particularly those from the Pacific islands, will be initiated to expand the genetic and utilization base of *Casuarina* cultivation.



Group photo (top) and participants visiting Tsunami rehabilitation plantations of *Casuarina* in Krabi, Thailand (bottom). Photos provided by the Secretariat of the Sixth International Casuarina Workshop

Forty-three abstracts were submitted prior to the workshop which were compiled, printed and provided to all participants of the workshop. The full papers of those papers presented in the workshop will be peer-reviewed, edited and published as proceedings of the workshop by September 2020. Meeting participants and members of the Working Party were encouraged to hold regular meetings in their respective countries to further implementation of the workshop recommendations.

Read the full report here: <https://www.iufro.org/science/divisions/division-2/20000/20800/20802/activities/>