

MAURITIUS RESEARCH AND INNOVATION COUNCIL (MRIC)

POLE OF INNOVATION GRANT SCHEME (PoIGS)

Project Summary

Title of Project: UoM/MRC Pole of Innovation: Agriculture- Sustainable Materials for Composite Applications
Hosting Institution: Mechanical & Production Engineering Department, University of Mauritius (UoM)
Collaborating Institutions/Companies: Nabridas Ltd - Collaborating company Nelson Mandela University, South Africa - Collaborating overseas institution Food & Agricultural Research Extension Institute (FAREI) - Collaborating institution Entreprendre au Feminin Ocean Indien (EFOI) - Collaborating institution
Innovation Leader: H. Ramasawmy (UoM)
Collaborators: 1. J. Chummun - Innovation Partner (UoM) 2. V. B. Florens - Innovation Partner (UoM) 3. D. Puchooa - Innovation Partner (UoM) 4. G. Gardene - Innovation Partner (Nabridas Ltd.) 5. R. Anandjiwala – Collaborator (Nelson Mandela University, South Africa) 6. D. Surroop - Research Collaborator (UoM) 7. S. Ramsamy-Iranah - Research Collaborator (UoM) 8. M. Gooroochurn - Research Collaborator (UoM) 9. B. Dussoruth - Research Collaborator (FAREI) 10. V. Oogarah - Research Collaborator (FAREI) 11. N. Pierre – Collaborator (EFOI) 12. Y. Goburdhun – Collaborator (UoM)
Technical Abstract <p>There is a need to develop research work in order to support farmers principally from the non-sugar sector to achieve economic growth. One main avenue is to promote a value chain approach of the by-products, and particularly of agro-wastes resulting from the current farming practices. One example of such an approach is to extract, treat and process natural fibres from agro-wastes and other local/endemic plants in order to develop a new range of sustainable materials. These materials can be used for a spectrum of applications, ranging from reinforcing materials in bio based composites, as geotextiles and other textile engineering materials, as a base material for packaging, and as raw materials for high value added handicraft and artisanal products.</p> <p>Thus the aim of this Pole is to setup a facility at the University of Mauritius (UoM) for the research and development of a new range of sustainable materials based on the non-woven technology by using natural fibres (and/or blend of natural fibres) as raw materials. This UoM facility could potentially become a spin-off organisation, providing new materials (base on specific technical and cost requirements) to the local companies and entrepreneurs as well as for export.</p>

Key Words: natural fibres, blends, agro-waste, extraction, sustainable materials, composite applications