Completed Program:

**Program Title:** Bamboo Industry Development Program: Mainstreaming Engineered-Bamboo Products in the Philippine Raw Materials Market for Construction and Furniture

**Program Coordinator:** Dr. Ramon A. Razal

**Project Components/Implementing Agencies:**


2. Project 2 - Improving technology use in harvesting, post harvest and material preparation to increase productivity and assure the quality of engineered bamboo products/Dr. Ramon A. Razal, UPLB-CFNR/February 2009 - January 2011

3. Project 3 - Generation of technical basis for the development of standards for engineered bamboo products/Dr. Rico J. Cabangon, FPRDI/February 2009 - July 2010


5. Project 5 - Strengthening S&T interventions for the promotion and commercialization of engineered kawayan: Academe-LGU Partnership Model (E-Kawayan)/Dr. Stanley C. Malab, MMSU/LGU Alaminos City/October 2008 - September 2011.

**Duration:** 3 years (2008-2011)

**Funding Agency (ies):** PCARRD-GIA (Projects 1, 4, & 5)

DOST-GIA (Projects 2, & 3)
General Objective:

To revitalize the bamboo industry through sustainable bamboo production, management, utilization and marketing to benefit the bamboo growers, processors and the users of quality bamboo finished products.

The general objective for Phase I which is the focus of this program is to mainstream engineered bamboo products through appropriate S&T interventions in processing, machine engineering and design, capacity building and marketing.

Specifically, the phase 1 program aims to: (a) To promote the use of engineered bamboo products as substitutes for wood in construction, housing, furniture, and handicraft; (b) to optimize manufacturing processes, and labor and material utilization in the factory production of engineered bamboo; (c) to ensure supply of quality raw materials needed by engineered bamboo manufacturers; (d) to assess market niches for engineered bamboo products and assist engineered bamboo product manufacturers to devise strategies to meet customers' product requirements in terms of quality, reliability, and price; and (e) to produce high quality, globally competitive engineered bamboo products through the application of best practices and adoption of state-of-the-art process machinery for engineered bamboo production.

Specific Objectives:

The Phase I program aims to:

1. to promote the use of engineered bamboo products as substitutes for wood in construction, housing, furniture, and handicraft;
2. to optimize manufacturing processes, and labor and material utilization in the factory production of engineered bamboo;
3. to ensure supply of quality raw materials needed by engineered bamboo manufacturers;
4. to assess market niches for engineered bamboo products and assist engineered bamboo product manufacturers to devise strategies to meet customers' product requirements in
terms of quality, reliability, and price; and
5. to produce high quality, globally competitive engineered bamboo products through the application of best practices and adoption of state-of-the-art process machinery for engineered bamboo production.

Total Approved Budget: PhP 15,043,560.20
6,309,268.00 (PCARRD-GIA)
5,142,915.90 (DOST-GIA)
2,841,376.30 (Agency Contribution)
750,000.00 (LGU Contribution)

Total Budget Released: PhP 6,491,514.90

Project Description

The challenge for the bamboo industry is two-fold: One, how to mainstream the products derived from bamboo in order that they will become a leading commercial product in the domestic market; and two, how to globalize the bamboo industry so as to access the more lucrative international market. Enabling the bamboo sector to respond to these two challenges would magnify the contributions of bamboo to the national economy in terms of generating livelihood and export revenues, reducing poverty, and minimizing forest exploitation for timber.

This proposal is anchored on the assertion that the above challenges for the local bamboo industry can best be met if attention is paid towards identifying flagship products that can be further developed, promoted and marketed. These products will serve as the industry's champions around which the efforts of the various stakeholders in the various industry components will be focused. For the purpose of the program, the focus products identified are engineered bamboo (Phase 1) and the various downstream products that it can give rise to, bamboo charcoal and distillates (Phase 2), and bamboo shoots (Phase 3). Zeroing in on these products would provide the bamboo industry with the much needed direction that will streamline activities in production, distribution, processing and marketing. This strategy will drive the project and its realization will hopefully provide the impetus for the uplift of the Philippine bamboo industry.
Six provinces have been initially targeted for piloting/expansion of commercial opportunities of selected steps in the supply chain as deemed appropriate, depending upon the actual state of development of the bamboo industry in the area. The provinces selected were Ilocos Norte in Region 1, Pampanga in Region 3, Laguna in Region 4, Camarines Sur in Region 5, Iloilo in Region 6, Cebu in Region 7, and Bukidnon in Region 10. Where logistics permits, other provinces may also be involved subject to the availability of cooperators (growers and processors in the other areas not chosen as priority sites for this program.

Kawayan tinik \([Bambusa blumeana\) Schultes \(f.\)] is the bamboo species chosen for this program, being the species found to possess physical and mechanical properties such as density and strength that are suitable for engineered bamboo products. Currently, kawayan tinik is the dominant species used for the various bamboo derived products.

Phase 1 of the Program consists of individual projects that are interrelated and involve various aspects of engineered-bamboo production, from nursery establishment, to distribution mechanisms and marketing, engineering and processing, standards setting and quality control, model enterprise testing and the development of IEC materials. Hence, the outputs of the various studies are necessary inputs that will help improve the conduct of the other topics.