

In line with the corporate priorities and in pursuit of the sustainable development of a globally competitive coconut and other oil palm industry, PCA shall vigorously implement the following programs and projects in support of PCA's Coconut Industry Development Roadmap.

KEY AREA : POVERTY REDUCTION AND EMPOWERMENT OF THE POOR AND VULNERABLE

KAANIB ENTERPRISE DEVELOPMENT PROJECT (KEDP)

The project is designed to promote institutionalize coconut-based enterprise through an integrated resource service convergence approach to increase farm productivity and incomes of the small coconut farming communities.

The project shall showcase coconut-based enterprise in organized clusters of coconut farms in selected areas owned and or operated by the coconut farmers. It also cater the economic development of Micro, Small and Medium Enterprise (MSMEs). The project involves the establishments of coco-based enterprises which may be coconut farmer's organization (CFO's) or cooperative and establishing start-ups or expanding mature community-based enterprise engaged in coconut processing, inter cropping and livestock raising. It builds on the capacities of the CFO's/COOPs to engaged in the agri-business.

Four (4) components of KEDP:

1. **COCONUT- COFFEE BASED ENTERPRISE DEVELOPMENT PROJECT (COCOBED)** involves the provision of high quality coffee seedlings such as **Robusta, Arabica, Excelsa** and **Liberica** and fertilizer (both organic and inorganic) to support the growth and development of the newly transplanted coffee seedling. It is implemented in coconut areas highly suitable for coffee production and in clustered coconut farms of at least 50 hectares in identified KANIB Sites.
2. **COCONUT INTERCROPPING PROJECT (CIP)** involves intercropping of annual biennial and perennial crops such as corn, banana, pineapple, and fruit bearing trees depending on the geographical location, land suitability, agro-climatic conditions, market demands and farmer's preference. This shall likewise include livestock raising under coconut such as cattle, carabao, and goat.

3. **COCONUT-CACAO ENTERPRISE DEVELOPMENT PROJECT (CCEDP)** involves the provision of high quality cacao seedlings and fertilizer support both organic and inorganic to ensure maximum growth and yield. Like COCOBED, it shall be implemented in clustered coconut farms of at least 50 hectares in identified KAANIB Sites. The project aims to showcase coconut-cacao farming systems as a viable business enterprise.
4. **COMMUNITY/ HOUSEHOLD-LEVEL COCONUT PROCESSING (CHLP)** aims to promote coconut-based enterprises in the different KAANIB sites for increased productivity and income/job generation. It also aims to foster the entrepreneurial skills of the community or household members of the community. Priority livelihood activities include coir-based processing including coir-based organic fertilizer production, coco sap sugar production and virgin coconut oil (VCO) production. This involved the establishment of processing facility and the provision of machineries and equipment such as decorticating machine, bailing, twining and looming machines for coir processing; expeller or pressing machine for VCO production and various equipment for coco sap sugar production.

KEY AREA : RAPID, INCLUSIVE AND SUSTAINED ECONOMIC GROWTH

COCONUT FERTILIZATION PROJECT (CFP)

This is a quick turn-around approach to increase coconut production by using *Agricultural Grade Salt (AGS) at 2 kilograms per tree*, and *combination of AGS at 2 kilograms per tree and Coir-Based Organic Fertilizer (CBOF) at 4 kilograms*. It is widely acceptable by the coconut farmers as it is cost effective and environment friendly fertilizer. The project likewise aims to promote wider utilization of the available coco peat in the area to provide coir-based processor and producers with alternative market for such by product.

KAANIB COCO AGRO-INDUSTRIAL HUB (KCAHP)

Recognizing the importance, constraints and opportunities of the coconut industry, the KCAHP emerges as a way forward for the coconut farmers to improve their lives. The project is an attempt to pursue agri-industrial strategy with the end in view of addressing problems and challenges faced by the coconut farming sector such as lack of infrastructure, inadequacy of capital, lack of entrepreneurial environment and the absence of proper policy framework that led to low productivity and income and therefore high poverty incidence in coconut farming communities. This is as envisioned and articulated by the PCA in its own strategic plans.

The project intends to establish KANIB Coconut Agro-Industrial Hub or simply "coco hub" in different coconut provinces of the country. It is defined as a strategic partnership and productive alliances between PCA and coconut farmer's organization or cooperatives, local government units (LGUs), and social business enterprises among others.

It is composed of Central Business Unit (CBU) that will act as primary or secondary processor of coconut products into value added products, integrator, consolidator, market, as well as source of technology and information; and the "spokes" which shall form the base for entrepreneurial business operations of the CBU. Initially, they shall act as primary processor of coconut products or medium-large scale supplier of raw materials.

MARKET DEVELOPMENT SERVICES

INVESTMENT AND TRADE PROMOTION. This involves the participation in trade fairs/exhibits and conduct of missions, market match, industry dialogues to promote coconut products, both in local and foreign markets.

RESEARCH AND DEVELOPMENT

The **Research and Development Branch (RDB)** is the agricultural research and development arm of the Philippine Coconut Authority that manages the research and development functions of the Authority with the institutionalized support of the three major strategic research centers located in Albay, Davao and Zamboanga. It is involved on the enhancement of the major concerns of the industry such as: food security, environmental protection, sustainable agriculture and environmental management of natural resources, income enhancement and profitability of farmers; global competitiveness through world class R&D products and technologies; and stable production and supply.

Seven (7) disciplines:

1. **VARIETAL IMPROVEMENT (VIP)** . The program focuses on the improvement of the yield of coconut varieties through the utilization of heterosis among populations of distant origins; improvement of the precocity and dwarfness of local populations; screening and breeding varieties for pest and disease resistance; and widely adaptable genotypes. Selection and development of improved varieties for high value products are given priority to increase farm productivity and profitability. Genomics-based breeding and biotechnology tools are being utilized for coconut improvement, and genetic conservation and use.

Several Publications: *Manual on Controlled Hand Pollination and Assisted Pollination Techniques, Manual on Standardized Breeding and Research Techniques on Coconut, Coconut Seed Garden and Field Gene Bank Establishment and Management*

2. **CROP AGRONOMY, NUTRITION AND FARMING SYSTEMS (CANFARMS)** . The program focuses on the generation of the generation of technologies and information of coconut and other producing palms to raise farm productivity and income mainly on Mineral

Nutrition Management, Integrated Soil Fertility Management, Sustainable Cropping Systems, Livestock Integration Management, Environmental Services, Biomass Utilization and Oil Palm Management.

3. **BIOTECHNOLOGY (BP)** . The program focuses on the application of biotechnology in accelerating coconut production and utilization through ***tissue culture, genomics (gene expression) and DNA Marker technology-assisted crop improvement, crop protection and biofuels production.***
4. **FOOD PRODUCT DEVELOPMENT (FPD)** . The program focuses on the development of new food uses, improve existing products, processes and packaging systems geared towards enhancing the health and nutritional properties of coconut, establish product quality standards for coco-based products, establish pilot/processing plant to improve/optimize efficiencies, formulate, develop and evaluate coconut processing technologies and recommend for piloting and commercialization and provide technical assistance, by way of, training on coconut processing technologies and technical services and advisories to different sectors of the coconut food industry.
5. **NON FOOD PRODUCT DEVELOPMENT (NFPD)** . The program focuses on the development and utilization of new and high value non-food products from various parts of coconut palm like ***Coconut-based Solid and Liquid Biofuels/Bioenergy, Coconut Husk and Coir Processing and Machinery Development, Coconut Wood Furniture and handcrafts.***
6. **INTEGRATED CROP PROTECTION** . The program focuses on the identification of pests and diseases problems affecting coconut industry and formulation of practical, sustainable, environment-friendly and socio-economically acceptable control measures. Integrated Pest Management (IPM) was institutionalized in coconut based farming system and is now being practiced and advocated in the control of ***Rhinoceros Beetle, Coconut Leaf Beetle, Coconut Scale Insect, Mealybug, Asiatic Palm Weevil, Slug Caterpillar, Phytophthora Bud, Nut Rots, Cadang Cadang, Socorro Wilt, Stem Bleeding, Leaf Blight and Spots, Rodents and Hagonoy.***
7. **LABORATORY SERVICES** . This units provides laboratory services and technical advisories mainly on Plant and Soil Analysis, Heavy Metal and Toxic Non Metals Analysis, Chemical Analysis, Microbiological Analysis and Aflatoxin and Polycyclic Aromatic Hydrocarbon (PAH) Analysis.

KEY AREA : INTEGRITY OF THE ENVIRONMENT AND CLIMATE CHANGE MITIGATION AND ADAPTION

ACCELERATED COCONUT PLANTING & REPLANTING (ACPRP)

The project promotes coconut planting in open and suitable areas and replanting of senile and unproductive coconut trees and those damaged by natural calamities using farmer's preferred variety such as tall and dwarf varieties sourced within the locality.

Three (3) components in ACPRCP:

1. **PARTICIPATORY COCONUT PLANTING PROJECT (PCPP)** involves giving of cash incentives to qualified farmer participants in the amount of Php 40.00 for every good seedlings produced, transplanted and stabilized on their own farms.
2. **COCONUT SEEDLINGS DISPERSAL PROJECT (CSDP)** involves the distribution of good quality coconut seedlings to coconut farmers or group of coconut farmers and partner implementers such as LGUs, IPs, NGOs, other GAs and other industry players.
3. **INDIGENOUS PEOPLE'S OUTREACH PROGRAM (IPOP)** is designed to encourage the indigenous (IPs) to participate in the coconut planting and replanting program either through PCPP or CSDP approaches and schemes depending on their capability and availability of sources of planting materials.

SMALL HOLDER OIL PALM DEVELOPMENT

The Smallholder Oil Palm Development Project (SOPDP) is designed to promote oil palm plantation development focusing on smallholders through organized growers or outgrowers scheme with marketing tie-ups with the oil millers.

MAINTENANCE OF COCONUT SEED FARM / SEED GARDEN

Maintenance of seed gardens are continuously being operated and undertaken in support of the long-term coconut planting and replanting program of the Philippine Coconut Authority.

REGULATORY SERVICES

1. **R. A. 8048 (COCONUT PRESERVATION ACT OF 1995).** It is the policy of the State to provide for the regulation of the cutting of coconut trees as well as to promote the growth of the industry by embarking on a sustainable and efficient replanting program.
 - **Permit To Cut.** No coconut tree or trees shall be cut unless a permit therefore, upon due application being made, has been issued by the PCA pursuant to Section 6 of this Act.
 - **Police Powers.** The PCA shall be vested with the authority to exercise duly delegated police powers for the proper performance of its functions and duties.
2. Quality standard for high-value coconut products and by-products for export and referential purposes.
3. Registration of coconut products/by products traders/dealers, manufacturers and processors.

YOLANDA REHABILITATION AND RECOVERY PROGRAM (YRRP)

As an immediate response to this crisis, Philippine Coconut Authority implemented YRRP in the provinces affected by Typhoon Yolanda in Region 6 (Western Visayas), Region 7 (Central Visayas) and Region 8 (Eastern Visayas) to recover the coconut farmer's livelihoods back fast.

Four (4) components:

COCONUT PLANTING/REPLANTING). This involves the replacement of all coconut trees rendered crown-less and fallen by the typhoon thru proactive funding and sourcing from research center and accredited suppliers. A new planting scheme- "tatluhan" or three (3) seedlings per hill scheme is introduced which is proven to be typhoon resilient and higher in productivity per unit area. Participant of this project were allocated a cash incentive of P30 per seedling planted. The allowable landholding area by individual participants is from 0.5 to 5 hectares only.

COCONUT INTERCROPPING. The activity involves the planting of short gestation and annual crops in unutilized spaces in between coconut trees. This aimed to ensure food security and hunger mitigation during the aftermath of typhoon Yolanda and provide livelihood and income generation for the coconut farmers.

COCONUT FERTILIZATION. This involves the rehabilitation of slightly, moderately and severely damaged coconut trees thru the application of Inorganic Multi-Nutrient Fertilizer to immediately regain vigor. Free fertilizer were distributed and applied and cash for work incentive of P25 for every tree fertilized were given to qualified participants.

DEBRIS MANAGEMENT AND INTEGRATED RHINO-BEETLE CONTROL. This involves cutting of coconut trees into lumber for housing/shelters purposes. It is a proper disposal to clear the land for replanting, fertilization and intercropping. This will also prevent pest infestation.

INTEGRATED PEST MANAGEMENT

It is the concern of Philippine Coconut Authority to control or at least contain damage to coconut brought about by insects pests in different regions of the country. As part of the treatment protocol against Coconut Scale Insects and other pests and diseases, activities like trunk injection, leaf pruning and massive production of biocontrol agents are being undertaken. Biocontrol laboratory are established to increase the production of both predators and parasitoids required to control and prevent CSI.