

THE PANTABANGAN PROJECT

A development model that shall flow downstream from the headstart of Pampanga River in the Central Luzon Region, Philippines



Global Green Technologies Corporation

<https://globalgreentechcorp.com>

https://en.wikipedia.org/wiki/Pantabangan%E2%80%93Carranglan_Watershed_Forest_Reserve#/media/File:Pantabangan,Nueva4Ecijajf.jpg

The Pantabangan town center settled along the headstart of the Upper Pampanga River, was submerged in 1977 after more than 300 years since the settlement was established. The Pantabangan Dam was built, which generates 112 megawatts of electricity and irrigates around 77,000 hectares of rice farms downstream.



<https://www.youtube.com/watch?v=R5SSmlkVvfo>

The World Bank Financed the Project

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

PHILIPPINES
UPPER PAMPANGA RIVER IRRIGATION PROJECT

Public Disclosure Authorized

July 30, 1969

<http://documents.worldbank.org/curated/en/486381468143688890/pdf/multi-page.pdf>

This massive Upper Pampanga River irrigation system has provided irrigation services to rice farmers in its service area. It has been providing electricity to thousands of households through the Luzon electric grid.

The sacrifice of the people of Pantabangan has been their modest contribution to the regional development of the Central Luzon Region for over four decades.

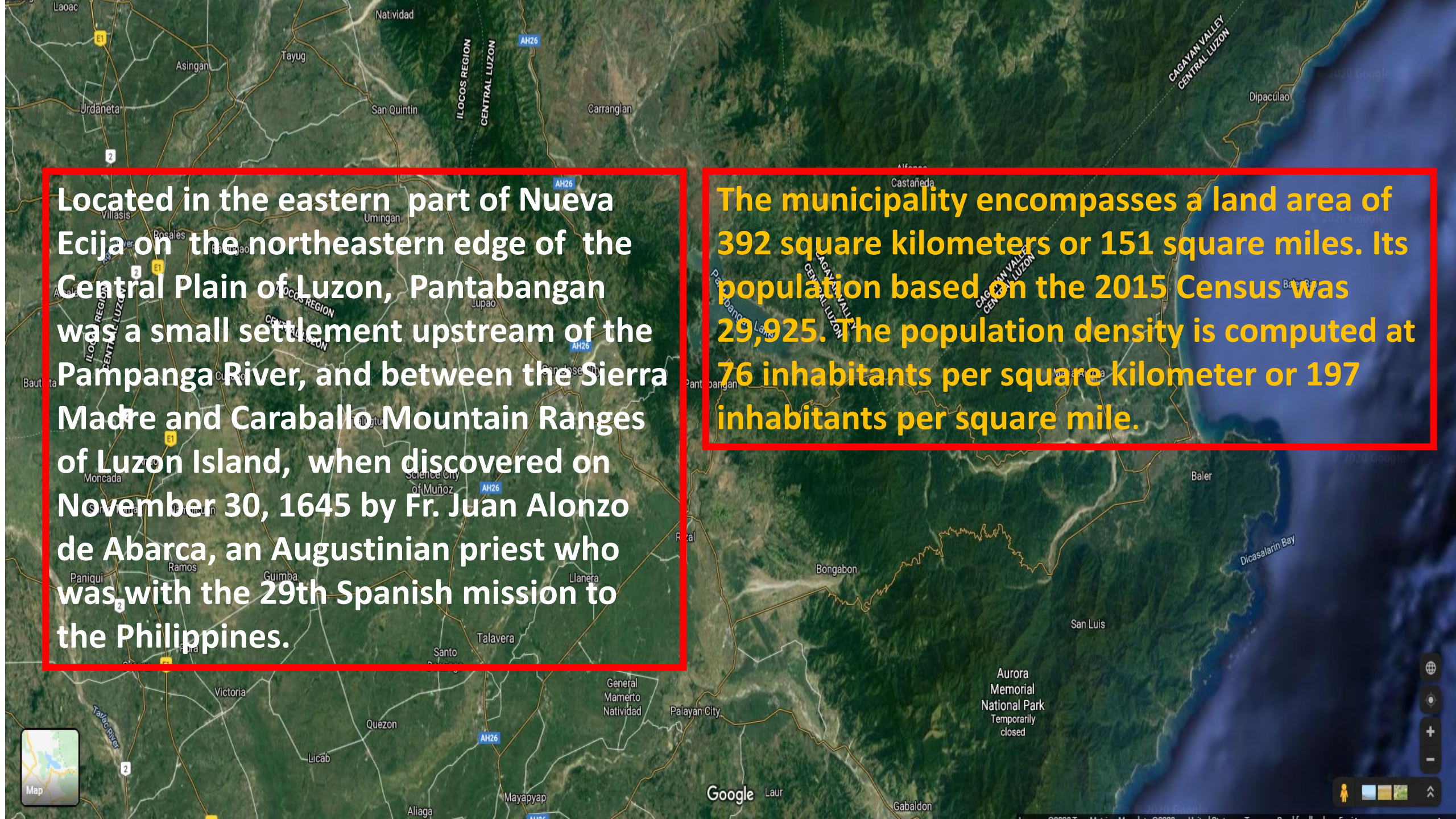
While Pantabangan benefited also from the lake ecosystem formed, the town's community resettlement experience is worthy of recognition today. After four decades, the people of Pantabagan desire to chart their new destiny together for their own progressive way of life, as well as for the benefit of their neighboring communities and even distant partners

The Pantabangan Lake that is formed by the dam has created an ecosystem of natural beauty and economic and environmental significance for multi-sectoral development opportunities. These areas of endeavor straddle agroforestry, fishing and aquaculture, rural industries, tourism, cultural and artistic works, water sports, clean energy, training and convention center, traditional medicine, sustainable and modern agriculture, and environmental conservation.

Until today, development initiatives in Pantabangan are mostly in patches.

The natural lake ecosystem that interacts with the local population and visitors compels inclusive development understanding and appreciation for a balanced and sustainable economic growth, environmental stewardship, and social harmony.





Located in the eastern part of Nueva Ecija on the northeastern edge of the Central Plain of Luzon, Pantabangan was a small settlement upstream of the Pampanga River, and between the Sierra Madre and Caraballo Mountain Ranges of Luzon Island, when discovered on November 30, 1645 by Fr. Juan Alonzo de Abarca, an Augustinian priest who was with the 29th Spanish mission to the Philippines.

The municipality encompasses a land area of 392 square kilometers or 151 square miles. Its population based on the 2015 Census was 29,925. The population density is computed at 76 inhabitants per square kilometer or 197 inhabitants per square mile.

As a part of the vast Central Plain of Luzon Region and with a virtual connection to Cagayan Valley, and a short distance to the Pacific Ocean, it is about time to look at Pantabangan's unique position for agriculture, fisheries and forestry; trade; tourism; and investment. Certainly, the town is going to have good access to highway and railway infrastructures that are under construction or in the pipeline.

New regional road infrastructures in Central Luzon and the Pacific Coast of Luzon have redefined the strategic location of Pantabangan, originally settled as a "junction of water streams" located between the Sierra Madre and Caraballo Mountains

Physical and Socio-economic Profile of Pantabangan

- The municipality is situated in the northeastern part of Nueva Ecija, 59 kilometers away from the seat of the provincial government in Palayan City; 176 kilometers from Manila, and 48 kilometers from the nearby city of San Jose
- Boundaries:
 - East - Alfonso, Castaneda, Nueva Vizcaya
 - West - San Jose City, Nueva Ecija
 - North - Carranglan, Nueva Ecija
 - South - Rizal, Nueva Ecija
- Land Area: 42,784 has
- Population: 27,353
- Density: 1.08/hectare
- Annual Growth Rate: 1.46% per year

- No. of Households: 5,465
- Annual Income: Php 182,528,722.00
- Income Classification: First Class
- No. of Barangays: 14
- Major Dialects Spoken: Tagalog, Ilocano
- Land Use (has.):
 - Agriculture, 5,646.0617
 - Forest, 28,147
 - Reservoir, 7,082
 - Built-Up Areas, 859
 - Residential. 752
 - Institutional. 78
 - Industrial, 8
 - open space, 20

Physical and Socio-economic Profile of Pantabangan

- Major Industries: farming, fishing, employment
- Crop Area and Production

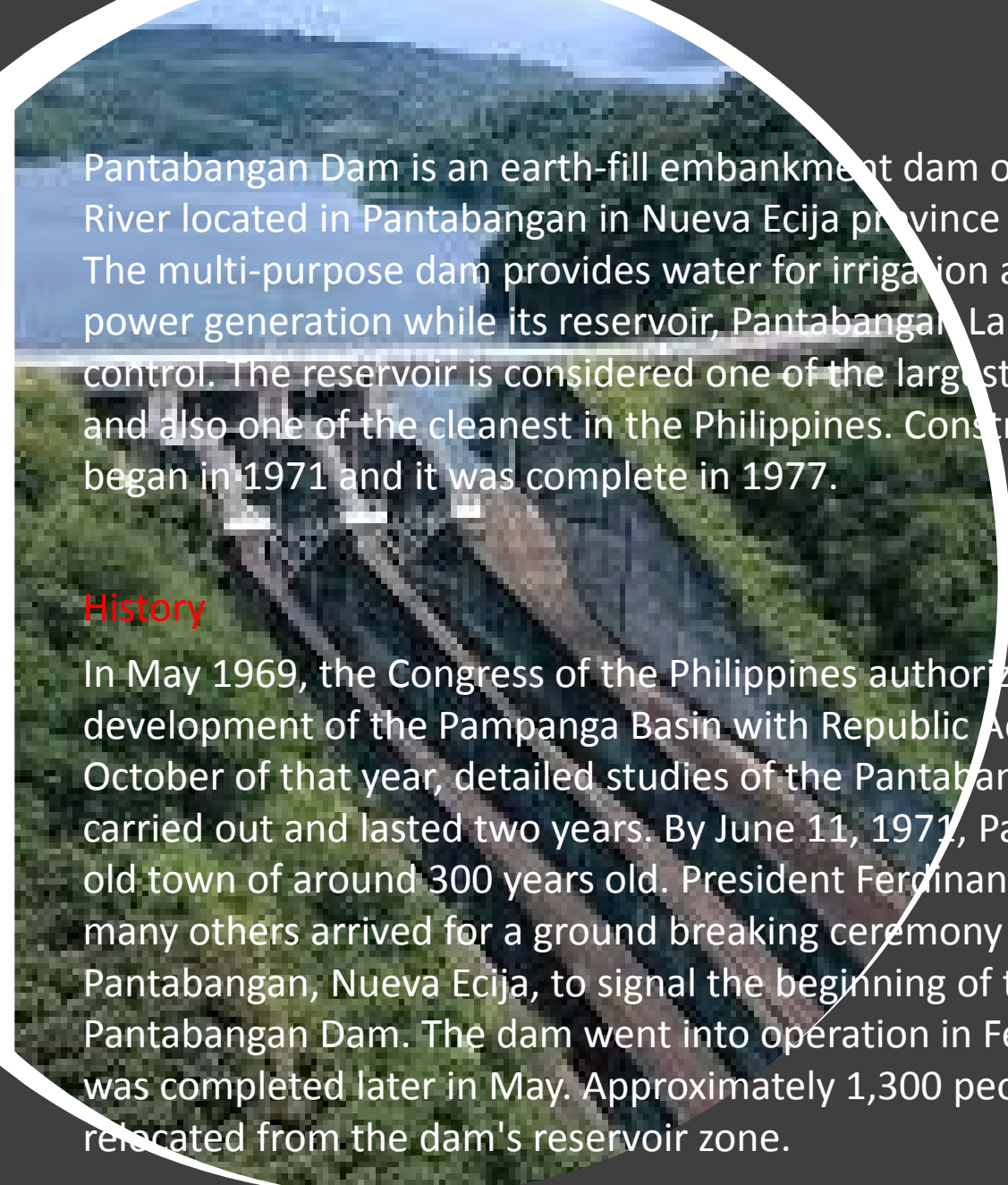
<u>Area (Has.)</u>	<u>Production (kilos)</u>
Rice : 1,772	6mtons/ha
- No. of Fishers: 502 (BFAR-registered)
- No. of Fishing Bancas: 248
 - Motorized: 151
 - Non-Motorized: 97
- Financial Institution: Producers Rural Bank
- Energy & Power : Pantabangan Municipal Electric System (PAMES) operated by LGU, NEECO II
- Water Supply: Pantabangan Municipal Water System (PMWS) operated by LGU, NIA Water Works System, water spring development, deep wells

- Education

<u>No. of Schools</u>	<u>Public</u>	<u>Private</u>
Pre-Elementary	: 13	1
Elementary	: 17	1
Secondary	: 4	1

- Health

Barangay Health Stations: 16



Pantabangan Dam is an earth-fill embankment dam on the Pampanga River located in Pantabangan in Nueva Ecija province of the Philippines. The multi-purpose dam provides water for irrigation and hydroelectric power generation while its reservoir, Pantabangan Lake, affords flood control. The reservoir is considered one of the largest in Southeast Asia and also one of the cleanest in the Philippines. Construction on the dam began in 1971 and it was complete in 1977.

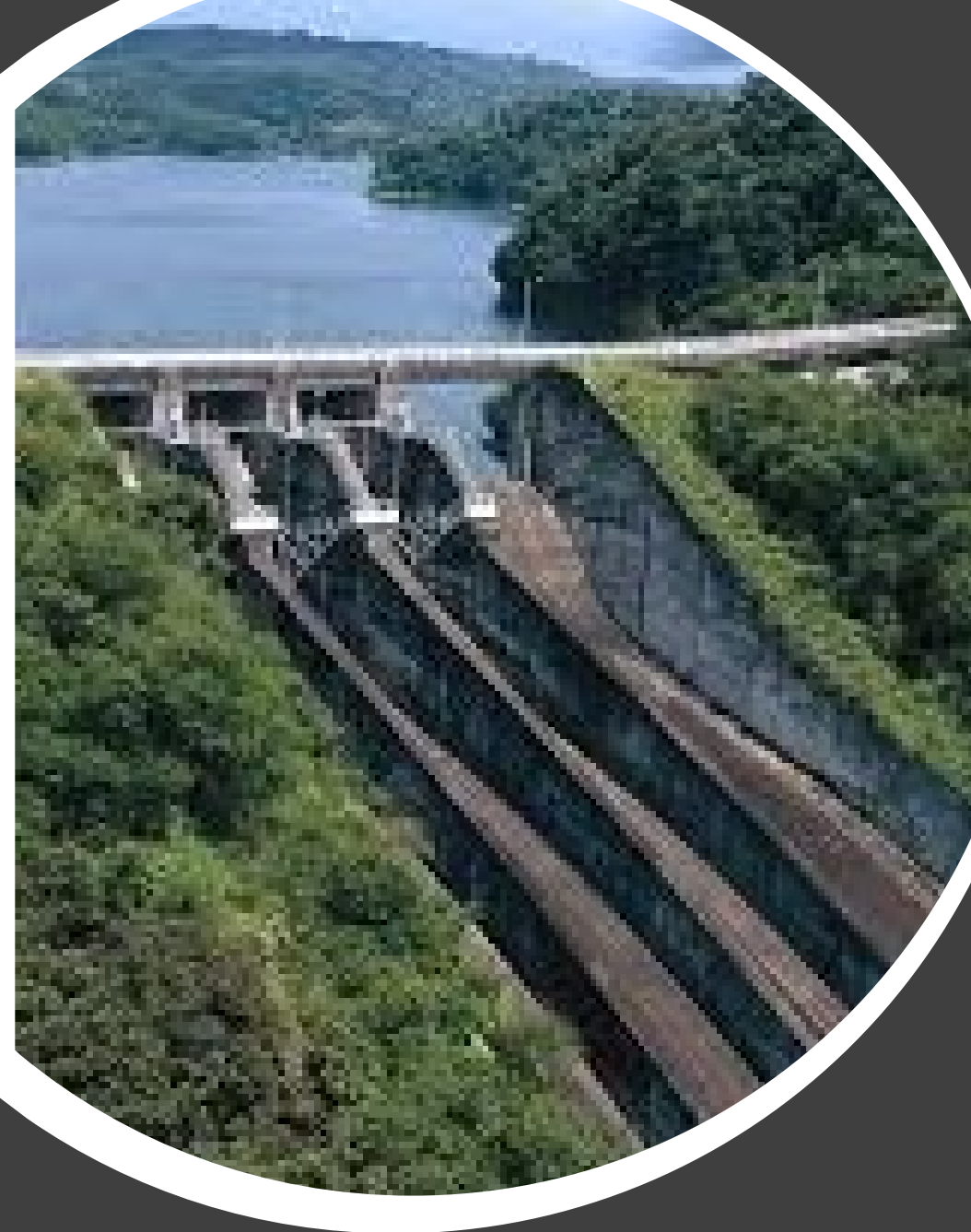
History

In May 1969, the Congress of the Philippines authorized the development of the Pampanga Basin with Republic Act No. 5499. In October of that year, detailed studies of the Pantabangan site were carried out and lasted two years. By June 11, 1971, Pantabangan was an old town of around 300 years old. President Ferdinand Marcos and many others arrived for a ground breaking ceremony in Palayupay, Pantabangan, Nueva Ecija, to signal the beginning of the construction of Pantabangan Dam. The dam went into operation in February 1977 and was completed later in May. Approximately 1,300 people were relocated from the dam's reservoir zone.

Pantabangan Dam History and Technical Description

Source:

<http://bob.nia.gov.ph/Viewer/Pantabangan>



Design

The dam is a 107 m (351 ft) tall and 1,615 m (5,299 ft) long embankment-type with 12,000,000 cu yd (9,174,658 m³) of homogeneous earth-fill and an impervious core. The crest of the dam is 12 m (39 ft) wide while the widest part of its base is 535 m (1,755 ft). The dam's crest sits at an elevation of 232 m (761 ft) and is composed of three sections: the main dam, a saddle dam, and an auxiliary dam located with the spillway. The spillway is a chute-type controlled by three radial gates but equipped with an overflow section as well. The design discharge of the spillway is 4,200 m³/s (148,322 cu ft/s). The dam's reservoir has a gross capacity of 2,996,000,000 m³ (2,428,897 acre·ft) and 2,083,000,000 m³ (1,688,716 acre·ft) of that volume is active (or useful) for irrigation and power. The dam sits at the head of a 853 km² (329 sq mi) catchment area and its reservoir has a surface area of 69.62 km² (27 sq mi) and elevation of 230 m (755 ft) when at its maximum level. The reservoir's life is estimated at 107 years due to silt from denudation. The dam was design to withstand an intensity 10 earthquake. The power house is located at the base of the main dam and contains two 50 MW Francis turbine-generators for an installed capacity of 100 MW. Each turbine receives water via a 6 m (20 ft) diameter penstock. When the water is discharged, it is released into a 250 m (820 ft) long tailrace channel where it re-enters the river.

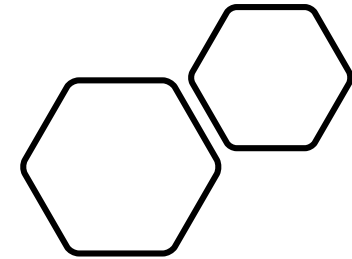
THE PANTABANGAN PROJECT

Vision

INCLUSIVE DEVELOPMENT MODEL THAT BUILDS A BALANCED SOCIO-ECONOMIC GROWTH, ENVIRONMENTAL SUSTAINABILITY, AND SOCIAL HARMONY FOR THE PEOPLE OF PANTABANGAN AND ITS ADJACENT COMMUNITIES

Goal

The goal of the Pantabangan Project is to build interconnected enterprises in Pantabangan and its adjacent communities that are economically, environmentally, and socially sustainable for the benefit of the local communities.



Objectives

- To formulate a long term investment agenda for Pantabangan following a continuous development planning approach with community development focus
- To promote Pantabangan for domestic and international investment by the establishment of an open-source investment fund anchored to a public-private-partnership model
- To promote multi-sectoral collaboration for collective enterprise undertakings among the local communities, government agencies, educational and research institutions, international development agencies, and the private sector

- To propose the zoning of the town into various theme parks for sustainable and modern agriculture and watershed resources management, renewable energy, tourism, arts and culture, water sports and entertainment, retirement living and medical tourism, and research and convention
- To improve basic social services particularly public education, training, housing, health care, and other socio-economic services,
- To experiment with the Universal Basic Income model that is attached to local level development in cooperation with the Department of Social Work and Development
- To harness the potential of Pantabangan as a national convention center with common facilities for research and training to be used by a consortium of universities, research institutions, and international partners

Development Approach

1) Planning Approach

2) Building Multiple Levels of Connection

3) Establishment of the Pantabangan Investment Fund

4) The Pantabangan Project: As a Personal Computer Model

Development Policy
Experiment Approach

Planning As a Continuous
Process

Community Development
Focus of The Agenda

Hardware

Orgware (Operating
System)

Software

Development Approach

1) Planning Approach

Development Policy
Experiment Approach

- Understanding that the blueprint resettlement plan implemented in the past was unsuccessful
- Business model adaptation for practical application and local suitability through basic experimental approach

Planning As a Continuous
Process

- Participatory planning
- Building collaborative linkage continuously
- Correcting errors through continuous planning

Community Development
Focus of The Agenda

- Community accountability and business ownership
- Tourism in the context of community development
- Public service such as housing, health care, and training as community development undertakings
- Equal concern for the development of neighboring communities

2) Building Multiple Levels of Connection

Levels	Parties Concerned	Development Opportunities
Within the Community	<ul style="list-style-type: none"> • Cooperatives • Farmers group • Fisherfolks • Local Business 	<ul style="list-style-type: none"> • Community based tourism • Sustainable fishing and agriculture • Fishers and fish farmers • Local Business
Provincial Level	<ul style="list-style-type: none"> • Provincial Government • CLSU, PhilRice, PCC, PhilMech, NFRTC, NEUST, • Port Magsaysay 	<ul style="list-style-type: none"> • International hotel and convention center • Common service facility for research and entrepreneurship
Regional Level	<ul style="list-style-type: none"> • Aurora Province • Adjacent towns of Nueva Vizcaya and nearby Quirino • Costal towns of Isabela • Clark and Subic 	<ul style="list-style-type: none"> • Food park and trading center • Investment linkage with Clark and Subic • Open Book Tourism
National Level	<ul style="list-style-type: none"> • DA, DENR, Energy • Government Banks 	<ul style="list-style-type: none"> • Investment • Tourism promotion
International Level	<ul style="list-style-type: none"> • Foreign universities • International development agencies (ADB, EU, USAID, World Ban, JICA) 	<ul style="list-style-type: none"> • Pantabangan Investment Fund • International linkage • Environmental research

3) Establishment of the Pantabangan Investment Fund

Purposes of the Fund



To establish a financial and management structure that provides the needed financial and technical assistance to the various stakeholders in the Pantabangan Project, which include farmers groups, businessmen, constructors and developers, research and development organizations, artists, writers, and other professionals and nongovernment organizations.

To transform the fund as a sustainable autonomous business infrastructure that earns its own income for its operations and expansion for the principal purpose of serving wider stakeholders in line with the inclusive development of the town.

To use the fund as a catalyst and vehicle in functionally integrating the various stakeholders in the local agro-industrial development process but with far-reaching intra-regional benefits.

Pantabangan Investment Fund Structure

PANTABANGAN INVESTMENT FUND

Investors, Loan, Grants, Bank

The Fund (The Holding Structure)

Anchor Investor (Provides Initial Fund)

The Fund Manager (Manages Fund, Recruits Investor)

Beneficiaries of the Fund

Anchor Beneficiary Company

Small Business Owners and farmers/fishers

NGO'S, Cooperatives

Constructors and Developers

Universities and Research Institutions

Municipal Government of Pantabangan

Other Partners

Funding Instruments

1) Project financing

- Without collateral to secure highly viable projects but risk hedging mechanism to be employed
- The loan can also be part of a syndicated loan agreement
- A construction company or a developer can also be a recipient of project financing service based on track records and expertise

2) Financial guarantee

- The financial guarantee can be used to leverage existing private and public equity funds or international aid
- Aid from international development agencies such as the USAID and the European Union can be possibly explored but it requires a start-up fund or guarantee to fully avail of the grant
- The recipients of these services are government institutions, universities and colleges, farmers cooperatives, and nongovernment organizations

3) Sovereign guarantee

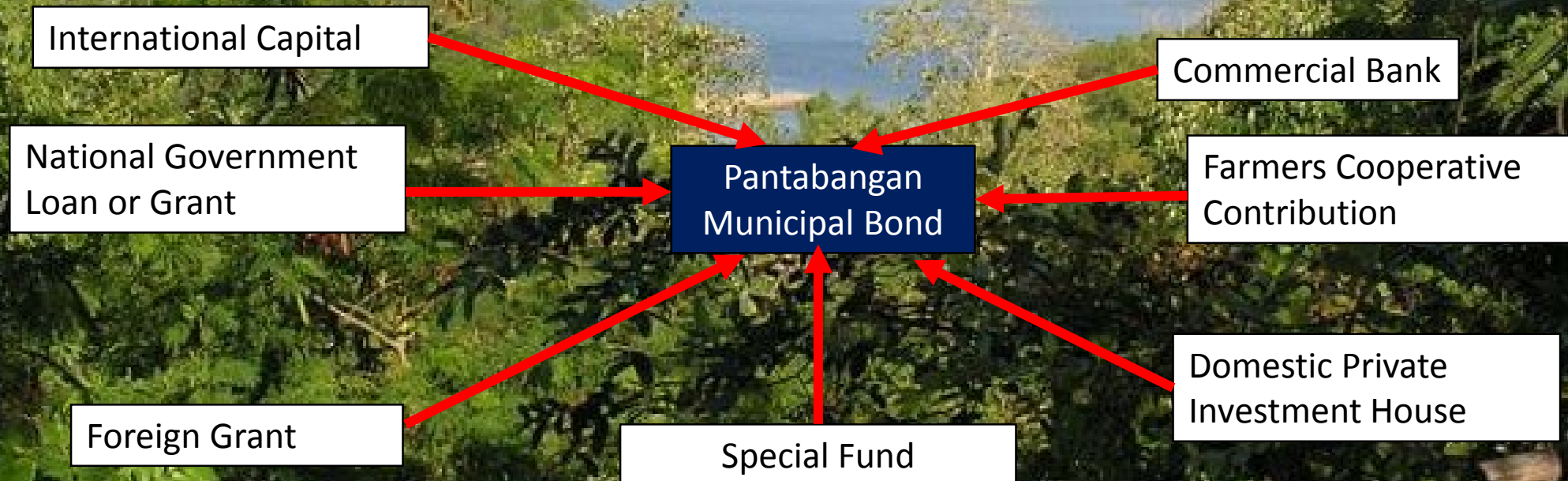
- The prudent use of Sovereign Guarantee is to provide collateral for direct investment and the loan is a direct accountability of the government authority the sovereign guarantee is issued for
- If the loan is off the book of the national government, this financing model eventually places the government in a better financial position

4) Research grant fund

- Research focuses on addressing problems and issues in line with the implementation of innovative business ideas
- Priorities include technological research with foreseen high commercial value, market research, investment modeling, evaluation research, and other financial service-related research
- Furthermore, researchers and inventors are given fair access to research fund to support technological advancement for the inclusive Pantabangan Project

5) Pooled Financing

- Pooled financing entities usually operate without state guarantees. As such, they mobilize private financing for local governments without adding to sovereign/state debt or contingent liabilities.
- Many of these institutions, however, do involve some commitment of state government funds in the form of grants to enhance the pooled financing. In these cases, government funds are designed to leverage private investments.
- The creation of the Pantabangan Municipal Bond, which is a promissory note instead of collateral, is an option for pooled financing. The earning capacity of the projects becomes the collateral.
- The projects pay for itself, not the way bonds are issued by the national government without earmarked projects.



4) The Pantabangan Project: As a Personal Computer Model

THE PANTABANGAN PROJECT COMPONENTS

Hardware

- Zoning into theme parks
- Food park infrastructure
- Clean energy infrastructure
- Model farms, aquaculture, and agroforestry
- Hotels and convention center
- Technology, research and training village
- Sports and entertainment park
- Community and visitors housing
- Health care and medical tourism
- International retirement living
- Center for Arts and Music

Orgware (Operating System)

- Business planning
- Consortium building
- Investment fund creation and management
- Stakeholder network
- External relations
- Development policy
- Procedures and protocols
- Licenses and permit
- Park management
- Risk management

Software

- Knowledge management
- Team development
- Management of collective wisdom
- Communication
- Marketing
- Quality management
- Human Resource Management
- Education and capacity building
- Events
- Universal Basic Income Experiment
- Disaster preparedness

Pandawan Festival Image source: Michael Mecado of pandawanfestival.wordpress.com

The Pantabangan Computer Model

Model based on Wageningen University and Research International Food Park model

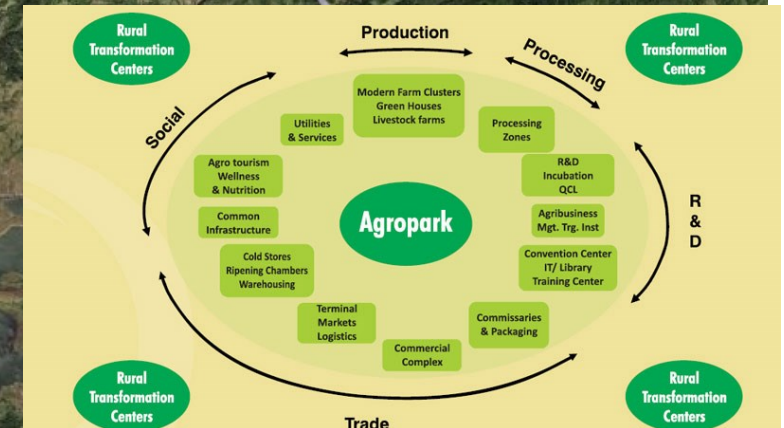
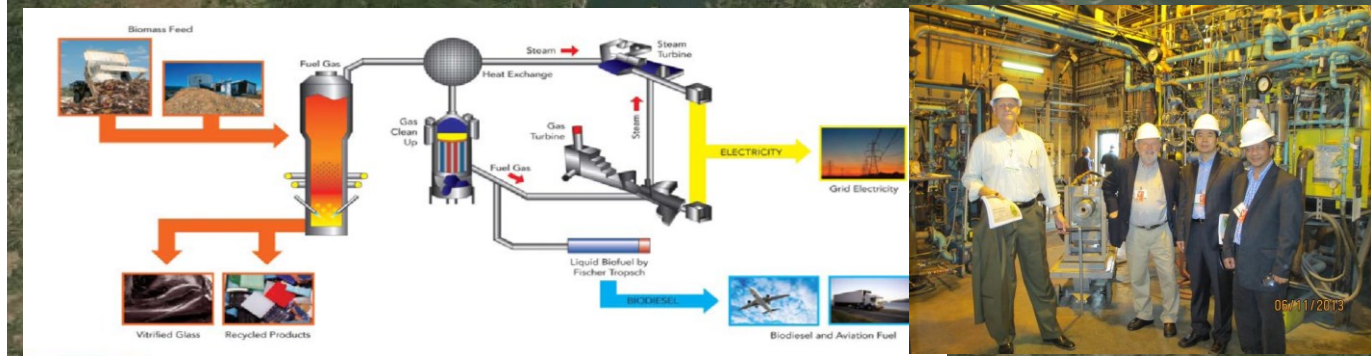
The Model Hardware Projects

Zoning into theme parks



Food park infrastructure serving Eastern Nueva Ecija, the neighboring towns of Nueva Vizcaya, Aurora Province and the coastal towns of Isabela for trading, agricultural and fisheries products storage and processing purposes

Renewable Energy with wood biomass and agricultural wastes as feedstock employing co-generation technology using the excess heat to generate steam for cold storage operations



International retirement living for seniors with hotel facilities for visitors, which requires a nearby hospital



Source: Dr. Erie Agustin, Queens, New York, USA

Health care facilities for the local community, the international retirement living facilities, and for medical tourism



Entertainment and sports park with facilities for lakeshore tourism, wedding receptions, water sports, golf, rodeo, film making, and other educational and social events

Technology, research and training village showcasing the application of technologies that use products in the area

Ylang ylang and other essential oil



<https://www.facebook.com/photo.php?fbid=10158284910174106&set=pcb.1084958735202844&type=3&theater&ifg=1>

Bamboo and other forest products



<https://www.philstar.com/nation/2018/04/17/1806640/den-15000-hectares-be-planted-bamboo>

Planned community for local population and visitors in different sites

What Is a Planned Community? A Place With Perks, From Zip Lines to Velodromes

By Adriana Velez | Aug 17, 2017



What is a planned community? It's a housing development where the... <https://www.earth.com/buy/what-is-a-planned-community/>

Hotels and convention center offering regular training courses in partnership with universities in Nueva Ecija, nongovernment organizations and the private sector



Sierra Madre and Caraballo Center for Arts and Music holding regular workshops and meetings for artists, writers, and academicians



Pantabangan History (1970-1999) Phase II, Blood Mural Painting 4x4ft of Elito "Amangpintor" Circa

Special villages established for livelihood specialization such as aquaculture, agroforestry, greenhouse farming of vegetables, mushroom culture, and other food production with primary processing enterprises

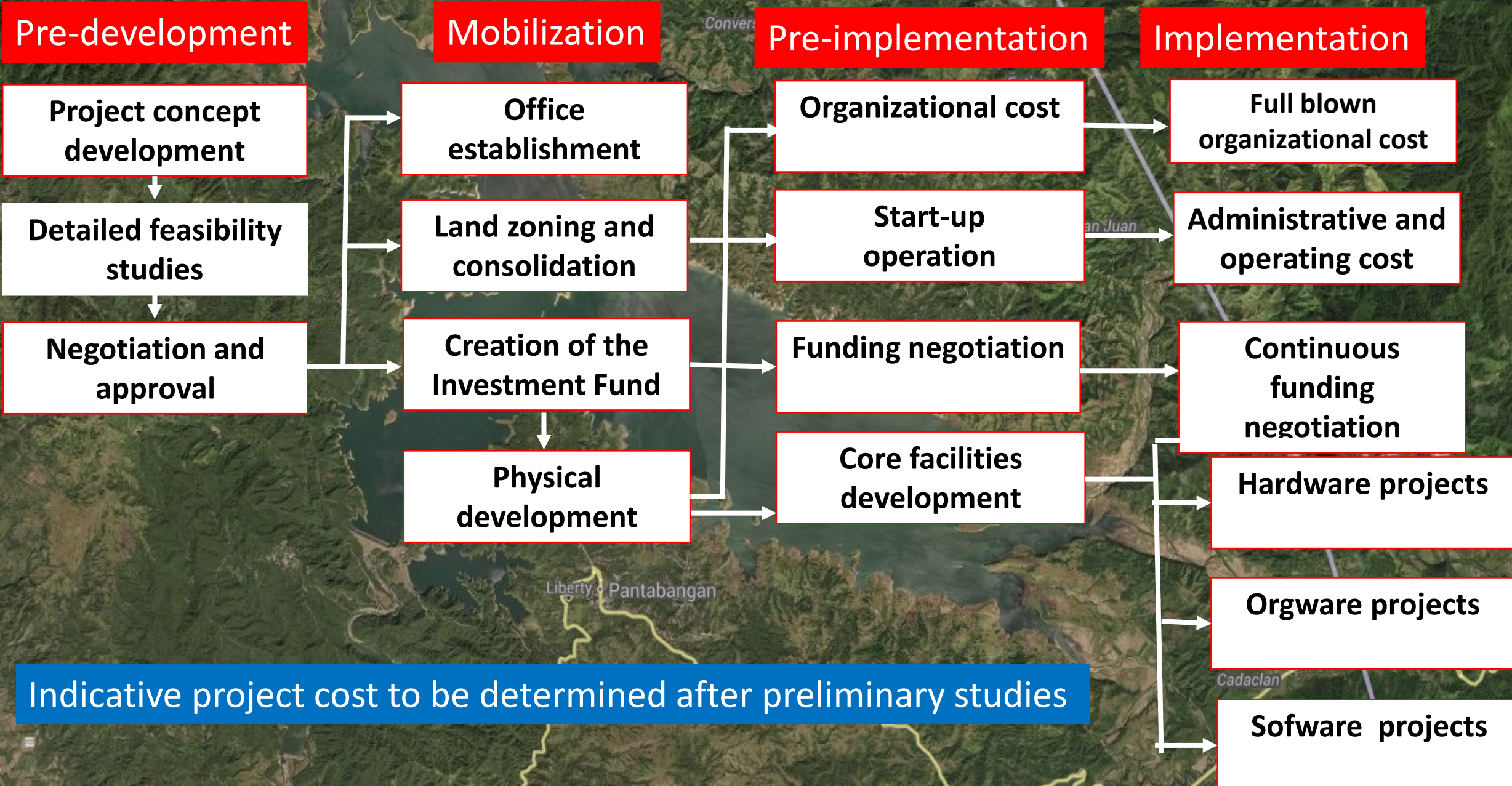


Red Nile tilapia under experimentation in [CLSU, Philippines](#)

SCHEDULE OF IMPLEMENTATION

Activity	Year 1	Year 2	Year 3	Year 4	Year 5
Preparation of Conceptual Design	■				
Presentation to the Municipal Council	■				
Initial Approval to prepare the master plan	■				
Feasibility studies		■			
Investment Campaign					
• Video Production		■			
• Mainstream and Digital Media Management		■	■	■	■
Establishment of the Investment Fund			■		
Funding Negotiation		■	■	■	■
Building partnership and linkages		■	■	■	■
Business Model Planning and Implementation		■	■	■	■

Project Cost Flow Schedule



Indicative project cost to be determined after preliminary studies

Local Community

Direct employment
Benefit

Corporate share
earning and
cooperative rebate

Earned income

Non cash social and
economic benefits

Universal Basic
Income

Earned income from
business and self
employment

**Municipal
Government**

Business tax

Permits and
licenses

Incremental
indirect sales tax

Income tax

Investment fund
revenue share

Investors

Earned income

**Private Sector
Partner**

Earned income

**Banks and Funding
Facilities**

Interest earning

Banking transaction
earning

**Institutional
Partners**

Intellectual
property earning

Professional
services earning

**Pantabangan
Project
Economic
Benefits Matrix**

Hardware Component and Stakeholder's Economic Benefit Matrix

Hardware Projects	Stakeholder					
	Local Community (Farmers, fishers, non agricultural workers, professionals, cooperatives)	Municipal Government	Private Investor	Private Sector Partner (domestic and foreign business groups)	Banks and funding institutions (commercial banks and funding institutions)	Institutional Partners (Government Agencies (universities, international organizations))
Food park infrastructure	<ul style="list-style-type: none"> • Farm income • Non farm job • Patronage rebate 	<ul style="list-style-type: none"> • Business tax • Permits and licenses • Grant 	<ul style="list-style-type: none"> • Corporate income 	<ul style="list-style-type: none"> • Corporate income • Government and international grant 	<ul style="list-style-type: none"> • Interest earning 	<ul style="list-style-type: none"> • Grant • Professional fee • Income share
Clean energy infrastructure	<ul style="list-style-type: none"> • Cheap electricity • Increase income of farmers due to cold storage facility • Income of farmers in producing wood biomass and waste • Patronage benefits 	<ul style="list-style-type: none"> • Business tax • Electricity generation tax • Reduction in waste management cost • Revenue share in the plant operation • Clean environment • Grant 	<ul style="list-style-type: none"> • Corporate income • Tax incentive 	<ul style="list-style-type: none"> • Corporate income • Tax incentive 	<ul style="list-style-type: none"> • Interest earning • Banking transaction earning 	<ul style="list-style-type: none"> • Professional fee • Practical training • Research exposure • Income share
Model farms and aquaculture	<ul style="list-style-type: none"> • Farm income • Patronage rebate • Paid employment as workers 	<ul style="list-style-type: none"> • Income tax • Permits and licenses 	<ul style="list-style-type: none"> • Corporate income 	<ul style="list-style-type: none"> • Corporate income • Government and international grant 	<ul style="list-style-type: none"> • Interest earning • Banking transaction earning 	<ul style="list-style-type: none"> • Professional fee • Practical training • Research exposure
Hotels and convention center	<ul style="list-style-type: none"> • Employment • Other income opportunities created by visitors 	<ul style="list-style-type: none"> • Business tax • Permits and licenses • Room sales tax • Revenue share 	<ul style="list-style-type: none"> • Corporate income 	<ul style="list-style-type: none"> • Corporate income • Government and international grant 	<ul style="list-style-type: none"> • Interest earning • Banking transaction earning 	<ul style="list-style-type: none"> • Professional fee • Practical training • Research exposure
Technology, research and training village	<ul style="list-style-type: none"> • Employment 	<ul style="list-style-type: none"> • Business tax • Permits and licenses • Revenue share 	<ul style="list-style-type: none"> • Corporate income 	<ul style="list-style-type: none"> • Corporate income • Government and international grant 	<ul style="list-style-type: none"> • Interest earning • Banking transaction earning 	<ul style="list-style-type: none"> • Professional fee • Practical training • Research exposure

Hardware Component and Stakeholder's Economic Benefit Matrix

Hardware Projects	Stakeholder					
	Local Community (Farmers, fishers, non agricultural workers, professionals)	Municipal Government	Private Investor	Private Sector Partner (domestic and foreign business groups)	Banks and funding institutions (commercial banks and funding institutions)	Institutional Partners (Government Agencies (universities, international organizations))
Community and visitors housing	<ul style="list-style-type: none"> Housing benefit Rental income paid by visitors and tourists 	<ul style="list-style-type: none"> Sales tax 	<ul style="list-style-type: none"> Corporate income 	<ul style="list-style-type: none"> Corporate income 	<ul style="list-style-type: none"> Interest earning Banking transaction earning 	<ul style="list-style-type: none"> Professional fee Research grant Agency credit
International retirement living	<ul style="list-style-type: none"> Employment Farm income 	<ul style="list-style-type: none"> Sales Tax Business permit and licenses 	<ul style="list-style-type: none"> Corporate income 	<ul style="list-style-type: none"> Corporate income 	<ul style="list-style-type: none"> Interest earning Banking transaction earning 	<ul style="list-style-type: none"> Professional fee Research grant
Health care and medical tourism	<ul style="list-style-type: none"> Employment Farm income through medicinal plant production 	<ul style="list-style-type: none"> Sales Tax Business permit and licenses 	<ul style="list-style-type: none"> Corporate income 	<ul style="list-style-type: none"> Corporate income 	<ul style="list-style-type: none"> Interest earning Banking transaction earning 	<ul style="list-style-type: none"> Professional fee Research exposure Research grant
Sports and entertainment park	<ul style="list-style-type: none"> Employment 	<ul style="list-style-type: none"> Sales Tax Business permit and licenses 	<ul style="list-style-type: none"> Corporate income 	<ul style="list-style-type: none"> Corporate income 	<ul style="list-style-type: none"> Interest earning Banking transaction earning 	<ul style="list-style-type: none"> Professional fee Research grant
Sierra Madre and Caraballo Center for Arts and Music	<ul style="list-style-type: none"> Employment Arts sale Book publication sale 	<ul style="list-style-type: none"> Sales Tax Business permit and licenses 	<ul style="list-style-type: none"> Corporate income 	<ul style="list-style-type: none"> Corporate income 	<ul style="list-style-type: none"> Interest earning Banking transaction earning 	<ul style="list-style-type: none"> Book publication Art works exposure

A satellite map of the Pantabangan area in Luzon, Philippines. The map shows a river valley with a dam site marked by a yellow line. Labels for 'Malbang', 'Po', 'Pantabangan', 'Cadaclan', and 'Lublub' are visible. Three blue text boxes with white text are overlaid on the map. A white box with the word 'CONCLUSION' is centered at the top.

CONCLUSION

The effectiveness of any development model is not a function of its technical merit alone, it is largely based on its appropriateness for the time. Now is the time to craft a new investment agenda for Pantabangan.

Today, new technologies on information and communications, geographic information systems, plasma gasification, agroforestry, fish breeding, food processing, and health care management are going to provide a new outlook consistent with the original purpose of building the Pantabangan Dam. Virtual access to information through the internet opens opportunities for Pantabangan as a domestic and international tourist destination.

The strategic importance of Pantabangan with the building of new road infrastructures in Central Luzon and the coastal towns of the Pacific in Luzon redefines the geographic location of Pantabangan for trade and industry.

The Pantabangan Project is therefore a development model like water that shall flow downstream. Like water that is capable of seeking its own level, the project is going to show the direction in other areas in the region for inclusive and collective development undertaking purposes.

Global Green Technologies Corporation

Global Green Technologies Corporation is a corporation registered in State of New York. Not afraid to start an international development consulting business at the height of the most recent global recession in history, GGTC embraced the 2009 recession as an inspiration to carry out research and eventually engaged in promoting alternative development thinking in line with addressing the most pressing problems in the world particularly in the areas of environment, energy, food production, and employment creation.

What sets us apart from other consulting firms and investment facilitators is the availability of investment models that we have because we believe that it should be done, not because clients such as government agencies and international organizations are asking us to do. Surprisingly, the approach attracts the interest of clients who are also willing to undertake innovations. Using only the website as our marketing tool with some personal referrals, our exposure to very diversified projects has slowly grown through the years. Despite a slow pace of development, we have persevered. Finally, we decided to consolidate our works and published in August 2018 the book *Business Models for Collective Governance*.

While looking for the right time to write the book, our attention has been directed to use the current trend in communicating our ideas and do it ourselves. Finally, we have now the *Collective Enterprise* as our digital magazine for international development.



BUSINESS MODELS
FOR
COLLECTIVE
GOVERNANCE



PRINCIPAL AND PARTNERS

Eduardo Bacolod, Principal Owner and Editor of Collective Enterprise Digital Magazine

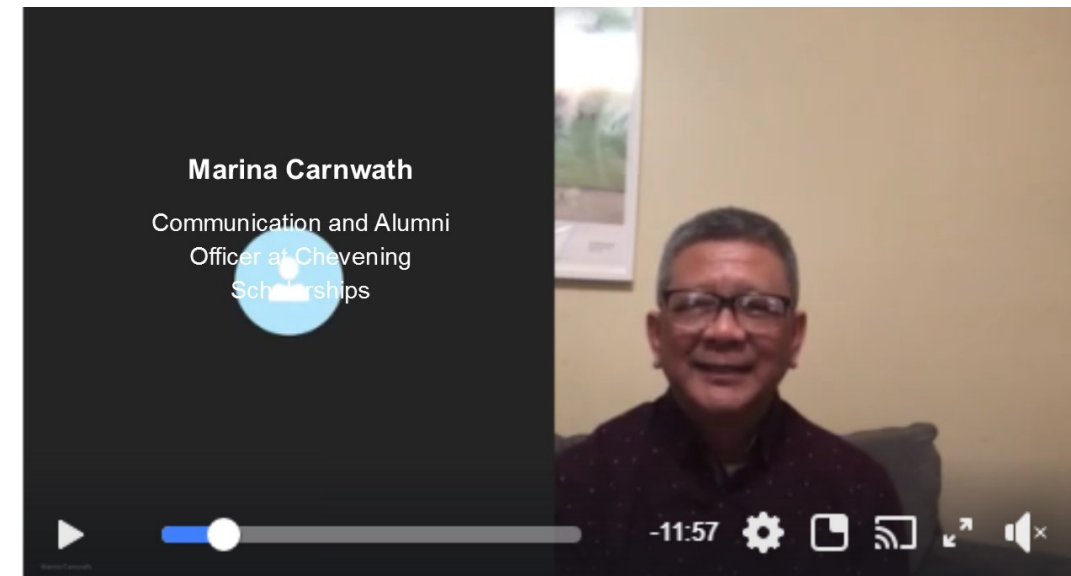
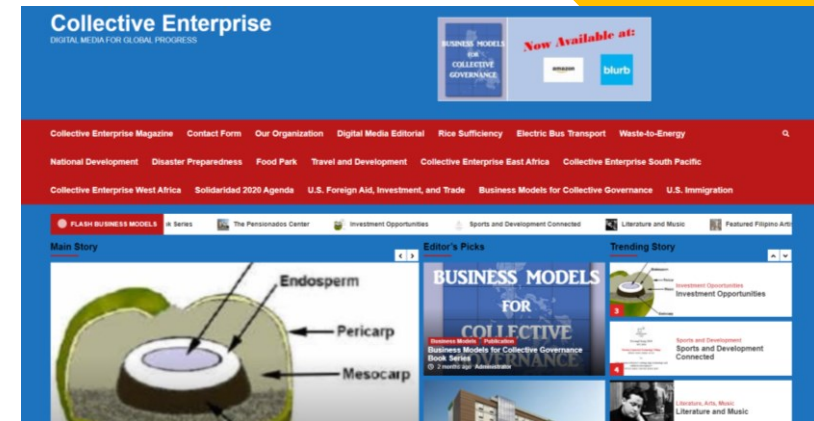
Eduardo D. Bacolod is an immigrant from the Philippines residing in New York City. He is a development planner by training and present professional practice. His current interests and engagements are focused on fund generation for international development and humanitarian projects. He has consolidated his works in the last 30 years into the book entitled Business Models for Collective Governance. The publication is the first of an international book writing series that crafts business models for national development planning in the developing countries of the world.

He received an assignment from the Food and Agriculture Organization of the UN and the Ministry of Agriculture of Fiji to prepare the national agriculture development policy of Fiji.

His educational qualifications include Bachelor of Science in Agricultural Economics from the University of the Philippines Los Baños and Master of Science in Social Development Planning and Management from the Centre for Development Studies of the University of Wales Swansea in the United Kingdom as a British Chevening Scholar. He attended a training course in Project Management and Programme Administration in the Netherlands.

Simplicio Endaya, Principal Partner

Simplicio L. Endaya has a Bachelor of Arts degree in Economics from the University of the Philippines Diliman. He is senior-level marketing, purchasing, and management professional with over 20 years of experience developing solutions, building relationships and promoting client interests among diverse audiences in domestic and international markets, particularly the US, the Philippines, and Southeast Asia. Specialty areas include economic and market research, contract negotiation, government relations and business development for government, NGO, and private sector firms. He served the Office of the President of the Philippines as Assistant Secretary for Flagship Projects



Jocelyn U. Bacolod, Finance and Administration Manager

Jocelyn Urriza Bacolod has a Bachelor of Science in Commerce degree from Eastern Laguna Colleges in the Philippines. She is a Licensed Certified Public Accountant in the country. She started her career in a World Bank-funded project in the Department of Agriculture of the Philippines, the Agricultural Support Services Project. While in the project, she attended a Financial Management Course at the National University of Singapore. She transferred to the Philippine Rice Research Institute (PhilRice) and served as Chief Budget Officer and Chief Accountant. In the US, she has gained experience in auditing and tax preparation and accounting while working for Christopher Keller, CPA, franchisee, Liberty Tax Service, Haverstraw, New York.

Yegor Cillik, U.S. Partner

Yegor Cillik has been involved in strategic business planning for the last 30 years during which time he obtains a keen understanding of the various cultures that influence the demographic characteristics where the various project concepts he is involved with are undertaken. His method of project initiation encompasses thorough research of all accessible information to help his team to create the most feasibly assessed conceptual plan while maintaining his creativity within the development team.

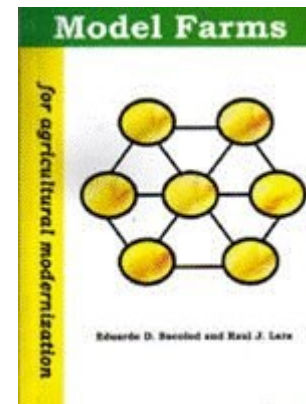
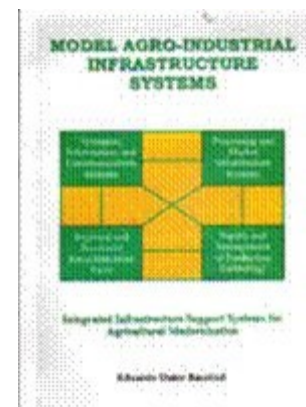
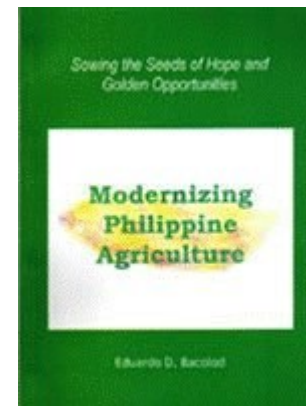
Nephtali De Jesus, Science and Animal Industry Development Adviser

Nephtali De Jesus gains extensive experience in the swine industry with Ciba Geigy and as a private consultant for large farms in the Philippines. His aggregate experience in farm management in North Carolina for Smithfield and in Kansas for Choice Genetics provides very vital managerial expertise and technical know-how for the modernization of the swine and livestock industries in the Philippines and other developing countries. He is going to provide his insight into the introduction of new animal husbandry and veterinary practices. He will pioneer the on-line training for animal husbandry, swine breeding, meat packing, and research using the Collective Enterprise digital media platform.

Nephtali de Jesus is a graduate of the University of the Philippines Los Banos with a Bachelor of Science in Agriculture degree, major in Animal Science.

Sotero Bumagat, International Development Adviser

Sotero Bumagat has more than 40 years of proven track record and experience that span broad areas in agribusiness, rural development, and agro-industrial development in the Philippines, North America, and Africa. His current interest is integrated agro-industrial development with fund generation of innovative but large scale projects. His experiences in teaching and research, project planning and development, and project management cover specialized fields in agriculture. These fields include animal reproductive management, artificial insemination, semen processing and embryo transfer in cattle, commercial indoor gourmet and specialty mushroom production, seed production technology management, advance corn breeding technologies using the doubled haploid and genomics and marker-assisted breeding, commercial beef, dairy, pig and poultry farming, agronomy, greenhouse management, and hydroponics/aerponics.





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