

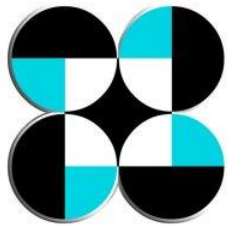
CONVERGENCE CONSORTIUM CVAARRDEC

RESEARCH, TECHNOLOGY TRANSFER, COMPETENCY-BASED TRAINING, MODULAR, PEER-LEARNING METHODOLOGIES, CLIMATE CHANGE, DISASTER PREPAREDNESS RISKS, HEALTH AND WELLNESS, NATURAL FARMING, ORGANIC AGRICULTURE SYSTEMS, DOST, DA, CTU-CEBU, NorSU, BISU, SSC-SIQUIJORM BFAR, TESDA, , GAD DOLE, ENTREPRENUERSHIP



ACTION FOR SKILLS KNOWLEDGE EDUCATION AND WELLNESS CENTER

SFC REG NO. CN201326762 June 6, 2013



APPLICATION OF SCIENCE AND TECHNOLOGY TO NATURAL FARMING AND ORGANIC AGRICULTURE SYSTEMS: A Component of Drought Resistant Natural Farming Project

BASED ON COPYRIGHT NUMBER 0-2016-0492 DATED JUNE 7, 2016

Focus of the Presentation

1. the basic concepts

2. implementations

3. outputs/outcomes

4. issues and concerns

APPLICATION OF SCIENCE AND TECHNOLOGY TO NATURAL FARMING AND ORGANIC AGRICULTURE SYSTEM

IT IS A NO-WASTE FARM MANAGEMENT AND DROUGHT RESISTANT.

THE TRAINING SYSTEM IS COMPETENCY-BASED AND MORE ON EXPERIENTIAL LEARNING AND EXPERIMENTATION. IT IS ALSO BASED ON ADULT-LEARNING CONCEPTS AND PRACTICES WITH APPLICATION ON PEER-LEARNING METHODS.

KNOWLEDGE AND APPLICATIONS IN COMPETENCIES

1. BASIC

- A. COMMUNICATIONS AND WORKING IN A TEAM**
- B. PERSONAL GROWTH AND DEVELOPMENT**

2. COMMON

- A. ECOSYSTEMS AND THE ENVIRONMENT**
- B. WASTE MANAGEMENT**

3. CORE

- A. PLANT ORGANIC VEGETABLES**
- B. PROPAGATE DROUGHT RESISTANT PLANTS**
- C. SET-UP AN ABOVE GROUND FISH POND**
- D. BUILD AN ORGANIC HOG , CHICKEN PEN, AVIARY**
- C. USE ELECTRICAL , ELECTRONIC MECHANICAL GADGETS IN THE FARM**

PLEDGE OF A CLIMATE SMART NATURAL FARMER

I shall endeavor to understand that micro-organisms play a major role in the farm, human life and communities.

I shall assimilate the principle of inter-relationship of plant and human life

I shall make use of waste of one as an input to the other using science and technology to reduce farm cost

Organic Agriculture - Republic Act
10068.

**a) The term "organic" is based on the
Philippine National Standards for
organic agriculture.**

**b) INTERNATIONAL FEDERATION OF
ORGANIC AGRICULTURAL
MOVEMENT (IFOAM):**



DROUGHT IN 2016



**FRESH WATER
POND DRIED UP
AND TO SAVE THE
FISH AN INSTANT
FISH POND WAS
SET-UP**

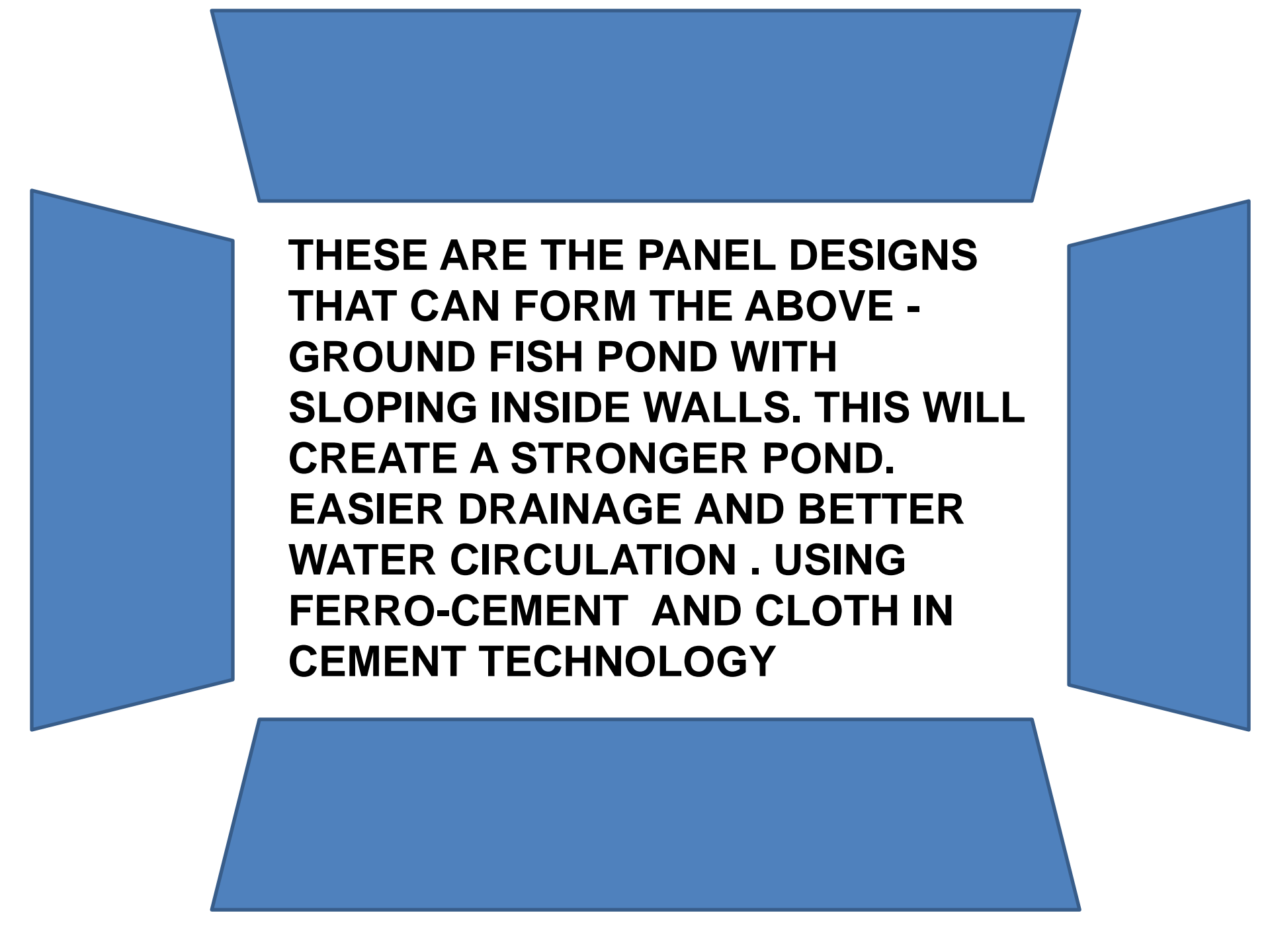


FISH POND IN CANVASS WITH FLOATING WATER CABBAGE FOR TILAPIA AND SILAGE MATERIAL FOR ANIMALS



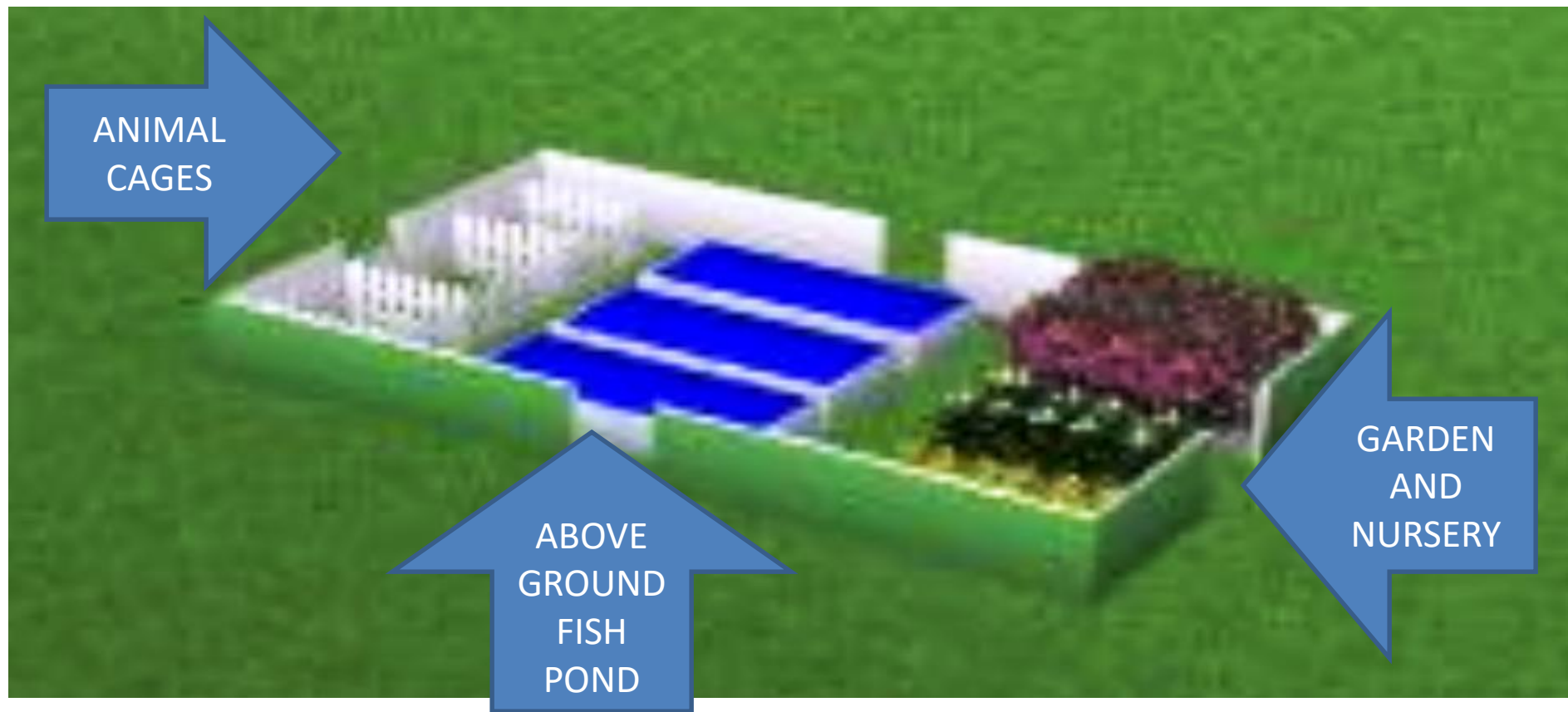


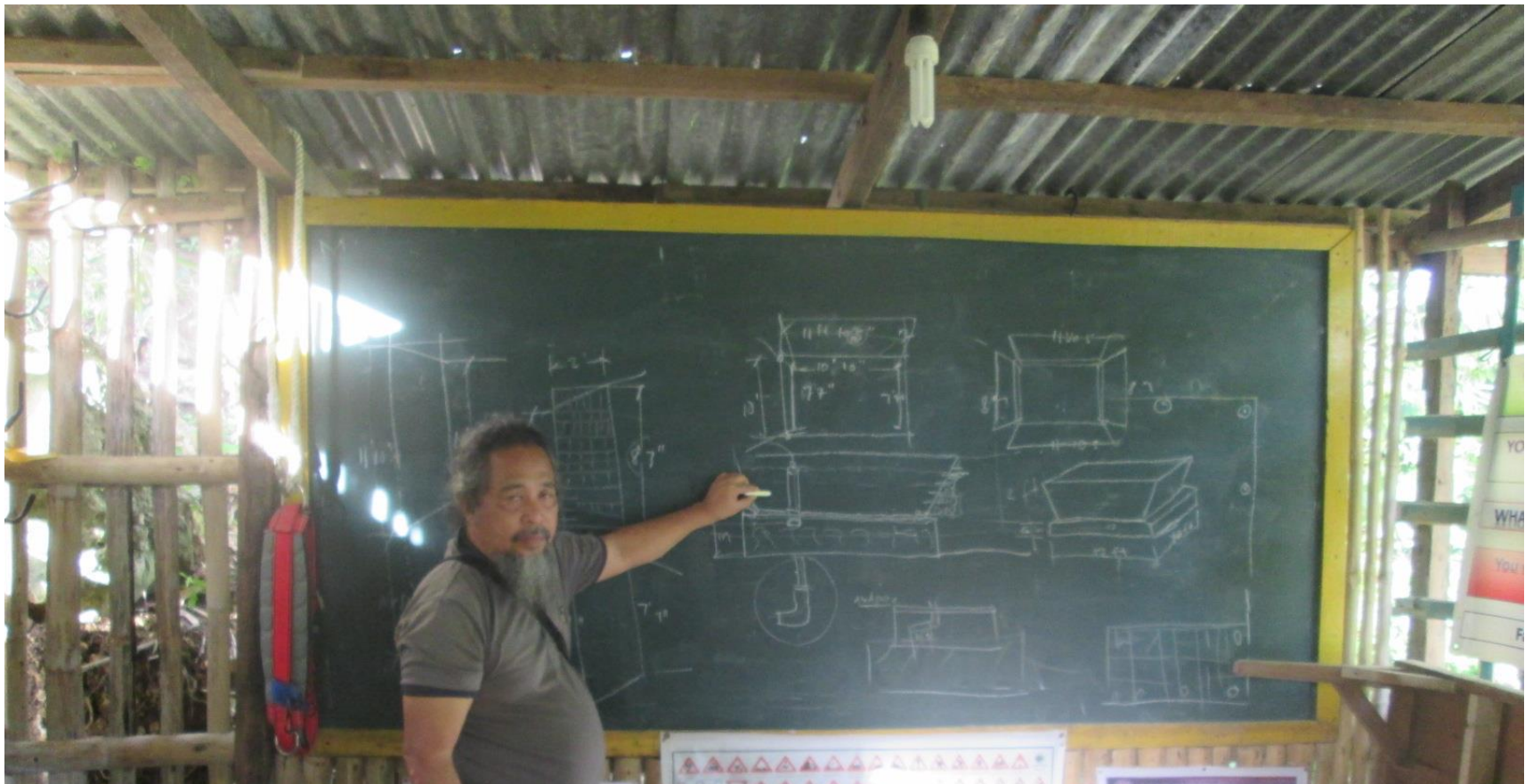
**AFRICAN CATFISH IN
CANVASS POND**

A blue trapezoidal frame surrounds the text, with a top and bottom horizontal bar and two side vertical bars that are wider at the top and bottom.

**THESE ARE THE PANEL DESIGNS
THAT CAN FORM THE ABOVE -
GROUND FISH POND WITH
SLOPING INSIDE WALLS. THIS WILL
CREATE A STRONGER POND.
EASIER DRAINAGE AND BETTER
WATER CIRCULATION . USING
FERRO-CEMENT AND CLOTH IN
CEMENT TECHNOLOGY**

THE FARM PLAN BELOW IS A SIMPLE FARM SET-UP FOR EXPERIENTIAL LEARNING AND EXPERIMENTATION BY LEARNERS IN THEIR OWN BACKYARD FARMS, IN A PROJECT ENTITLED “HOUSE IN A GARDEN”





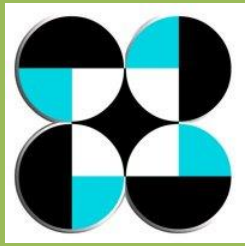
DR SILVANO B. MARANGA DISCUSSED THE PRINCIPLES UTILIZED IN THE CONSTRUCTION OF THE FERRO-CEMENT SLABS FOR THE ABOVE GROUND FISH POND WITH SLOPING WALLS.



TRAINEES PERFORM THE STEPS AS DESCRIBED IN THE CONSTRUCTION PROCESS



ABOVE GROUND FISH POND AT MR RICARDO S. UROTS
LEARNING STATION AND DIR TRISTAN L. ABANDO DOST -CEBU



BREADFRUIT

Withstand climate changes from drought to typhoon, fruits are good substitute for staple food , animals and fish

AFRICAN CATFISH

hibernate under the dry pond

TILAPIA

Multiplies fast and can live in a pond with planktons and azolla



DOST 7 Reg. Dir. Ed Paradela , Prov Dir. Tristan Abando, Bry Capt. Abdias Retuerto and council, Councilor Ike Sepulveda, CWL officials, Volunteer Vocational Instruction Supervisors during the blessing of the model farm on January 4, 2017



DOST SECRETARY FORTUNATO T. DE LA PEÑA WITH DOST DIR. EDILBERTO L. PARADELA AND PARTY LAUNCHED THE BREADFRUIT NURSERY PROGRAM ON SEPTEMBER 1, 2017 AT SAGAY, BORBON, CEBU



BREADFRUIT BEARS FRUIT DURING DROUGHT AND THE FRUIT CAN BE EATEN BY ANIMALS AND MAN. IT IS IMPORTANT TO PROPAGATE THIS TREE AS PART OF THE PREPARATION FOR THE LACK OF FOOD IN A COMMUNITY OR AS SAID BY SCIENTISTS BY 2050. WITH 9 BILLION PEOPLE ON EARTH THERE WILL BE A CRISIS ON THE AVAILABILITY OF FOOD. BREADFRUIT IS ONE OF THE MAJOR ANSWERS.

DOST 7 DIR. EDILBERTO L. PARADELA ENCOURAGED THE PRESENTOR TO UTILIZE THE COPYRIGHT LAWS FOR FUTURE NEEDS OF THE INTEGRATED FARMING SYSTEM



**DEVELOP BREADFRUIT
AS SUBSTITUTE
STAPLE FOOD
A.K.A. KOLO, DIMAS,
RIMAS AS CALLED IN
VARIOUS PLACES IN
THE COUNTRY**



ISSUES AND CONCERNS

- 1. CLIMATE CHANGE IS INCREASING**
- 2. LARGER WASTE IN THE UTILIZATION OF RESOURCES**
- 3. HUMAN LIFE IS THREATENED WITH THE SCARCITY OF FOOD**
- 4. THIS GENERATION TENDS TO CONSUME RESOURCES INTENDED FOR THE NEXT GENERATION**
- 5. THE MEAT EATING HABITS OF HUMANS FUEL THE NEED TO USE MORE RESOURCES FOR FOOD THAN WHAT IS NECESSARY FOR HUMAN SURVIVAL AND BEING HEALTHY**

**WILL HUMANS
SURVIVE THE
NEXT 500
YEARS?**

REPUBLIC OF THE PHILIPPINES
THE NATIONAL LIBRARY OF THE PHILIPPINES AND THE INTELLECTUAL PROPERTY OFFICE OF THE PHILIPPINES

Certificate of Copyright Registration and Deposit

Registration No. 0-2016-0492

Be it known that on June 29, 2016, Silvano B. Maranga of Cebu City caused the registration and deposit with the National Library of the Philippines (NLP), through the Intellectual Property Office of the Philippines (IPOPHL), of the work with the following specifications

Title	: Application Of Science And Technology To Natural Farming And Organic Agriculture System
Author (s)	: Silvano B. Maranga
Class	: Class O (Other literary, scholarly, scientific and artistic works, including reports, studies, research, theses, and other academic papers, examinations, online courses, presentations)
Creation Date	: June 7, 2016
Period of Protection	: Life of the author and for fifty (50) years after his death.

Registration and deposit is made for the purpose of completing the records of the National Library in accordance with Section 191 of Republic Act No. 8293, The Intellectual Property Code of the Philippines.

Issued on August 18, 2016 in the City of Taguig, Philippines.


Josephine R. Santiago
Director General

Intellectual Property Office of the Philippines

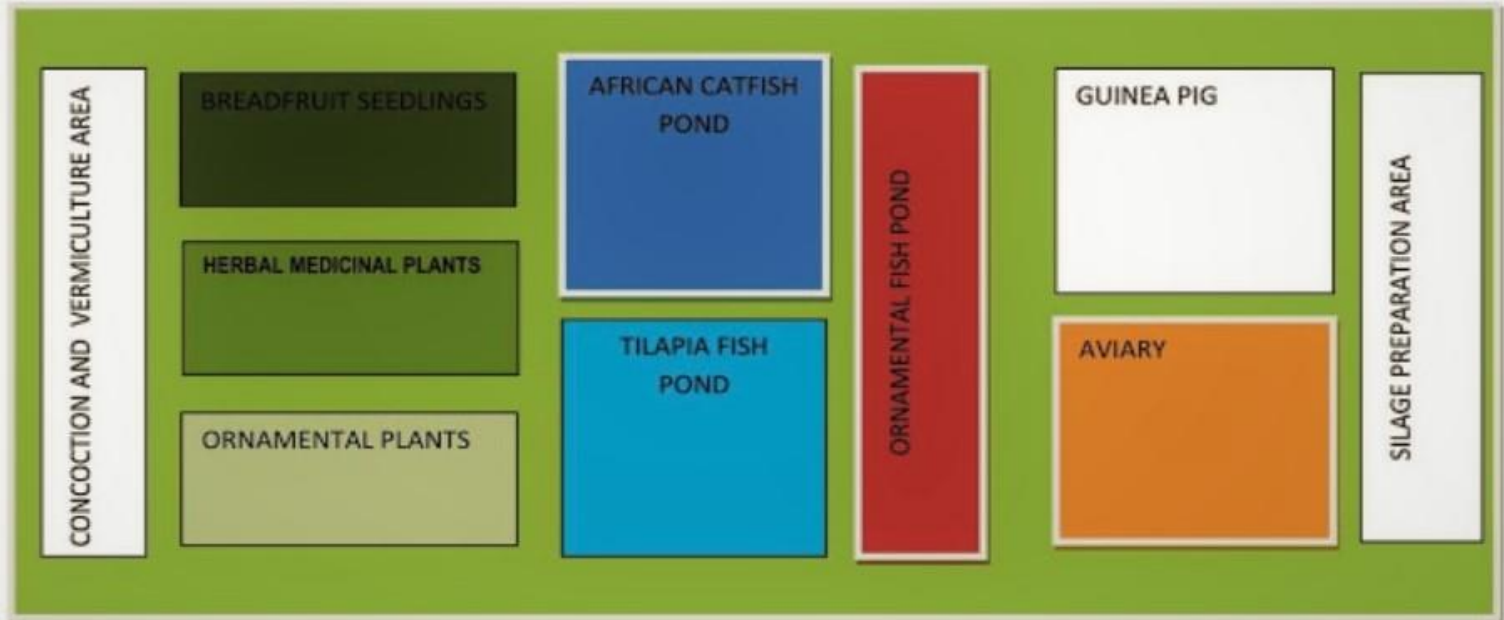
N.B. A certified true copy of the affidavit of ownership is found at the back of this certificate and forms an integral part of the certificate.

OFFER FOR PARTNERSHIP

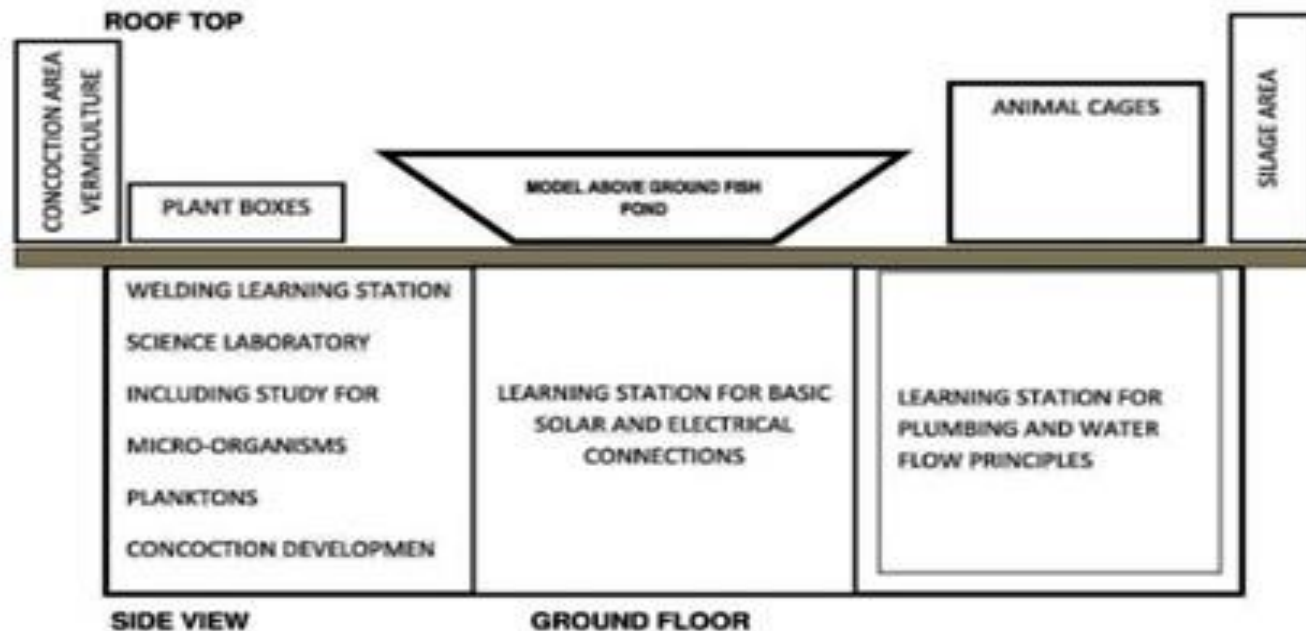
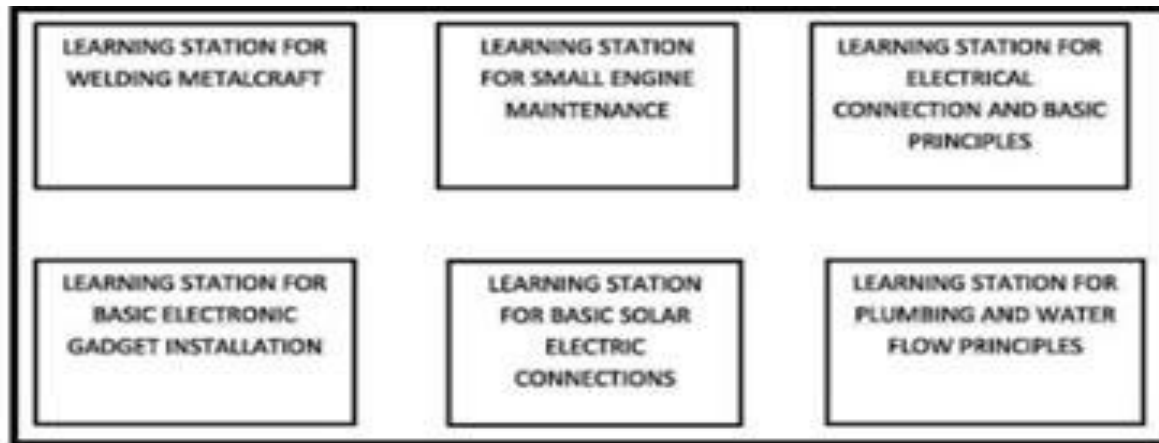
During the first phase of the technology transfer program, the community participants shall already start planting easy to grow vegetables with the intent of cooking or processing for daily or weekly consumption of the family. It is in this phase that the policy directions of the project will already be implemented in the homes of the participants.

SCHEMATIC DIAGRAM

ROOF TOP



In the second phase, the technology to reduce work using electrical mechanical , and electronic gadgets will be studied and formulated. It is also understood that the difficult to



This CENTER , however, need not be placed in a small area. So that the roof deck portion can be placed in an area near the industrial skills learning stations. In this situation, the learners