

A stylized, light brown illustration of a plant with a central stem, several large leaves, and a cluster of small, round fruits or seed pods at the bottom left, set against a dark brown background.

# **AGRO-ECOLOGY for SUSTAINABLE AGRICULTURE and ENVIRONMENT towards FOOD SECURITY**

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# Agroecology contributes to the Three Main Goals of FAO

- Eradicating hunger, food insecurity and malnutrition;
- Eliminating poverty and the driving forward of economic and social progress for all; and the
- Sustainable management and utilization of natural resources, including land, water, air, and climate for the benefit of present and future generations.



# What is Agroecology?

- Agro-ecology uses ecological concepts and principles to design and manage sustainable agro-ecosystems, offering benefits for productivity, food security, environmental sustainability, and important ecosystem services such as climate change mitigation.



# Role of Small Farmers

- According to FAO, 70% of food we consume globally comes from small farmers.
- Based on official statistics, 1.5 billion of people globally are estimated to be involved in family farming in over 500 million small farms worldwide.





# 2014 International Year of Family Farming





"We must increase the availability of land and food, get more of the food we grow to the dinner table by reducing food waste, and invest in the most important food producers in the world: small-scale and family farmers

-Timothy A. Wise



# Agroecology

- Agroecology is by definition an innovative, creative process of interactions among small-scale producers and their natural environments. Indigenous knowledge systems are invaluable resources for agroecological farming systems that emulate and coexist with natural ecosystem processes.



# Agroecology

- Agroecology is also seen to also slow the trend towards increasing urbanization, which is placing stress on public services in urban areas where increasing concentration of population is observed (like here in Metro Manila). It would contribute to rural development, the resulting higher incomes in the rural areas would contribute to the growth of other sectors of the economy in the countryside.



# Agroecology will help in solving Malnutrition

- In the Philippines, “Iron deficiency disorder or anemia is the most alarming of the micronutrient deficiencies affecting a considerable proportion of infants (56.6%), pregnant women (50.7%), lactating women (45.7%) and older male persons (49.1%)”.
- The vitamin A status of the country is considered severe subclinical deficiency. To quote FAO.



# Malnutrition

- According to FAO, about Four million or 31.8% of the preschool population were found to be underweight-for-age.
- Three million (19.8%) adolescents;
- Five million (13.2%) adults, including older persons were found to be underweight and chronically energy deficient.



# Underweight, Wasting, Stunting and Obesity

- Closely linked to malnutrition is underweight, wasting, stunting and obesity, they are the root causes diseases, increases health risks and, reduces life expectancy. Potentially fatal conditions associated with obesity include Type 2 diabetes, coronary heart disease, cancers, and gall bladder disease.







- Obesity is a leading risk factor, were estimated to be about \$1.4 trillion in 2010.



# Malnutrition

- FAO pegged at \$3.5 trillion per year globally the economic costs of malnutrition due to lost productivity and direct health care costs.
- Hunger statistics are still rising worldwide, it is not about feeding or getting fed, but to have the means to grow sufficient nutritionally and culturally acceptable food.



# Vegetable Gardening in both Urban and Rural Areas

- Ecological Agriculture supports biodiversity in farms and follows a holistic approach to easing malnutrition and nutrients deficiencies especially among pregnant women and children. It has been providing Filipinos with diverse, safe and healthy sources of food.







Vegetable Garden in Urban Setting





World Food Day 2014

During the World Food Day, I pledged my support to the initiatives to promote Ecological Agriculture because it empowers us to plant, grow and harvest our own food that is clean, grown naturally and free from synthetic pesticides and fertilizers. I have been an active advocate of urban gardening using composts from household wastes as fertilizers.



Organic Fertilizer-making Enterprise  
from kitchen waste by using Rotary  
Composters and Ecoboys in **Las Piñas City**







Organic Fertilizer-making from Vermicompost in **Las Piñas City**



# Vegetable Consumption

- The 2008 food consumption survey of the Food and Nutrition Research Institute or FNRI, says that fewer Filipinos eat vegetables daily during the last three decades. From 145 grams of vegetable a day, in 1978 the vegetable consumption went down to 110 grams in 2008.



# Vegetable Gardening by DOH

- The Department of Health promotes vegetable gardening among Filipinos in their backyards for steady supply of vegetables and added income.





# Policy support to help small-scale producers improve soil and water conditions to increase farm outputs, achieve local food security and long term ecosystem sustainability

- Agricultural policies that incentivize recycling of biomass within the agro-ecosystem
- Agricultural investments and extension targeted specifically to help small-scale producers improve soil and water conditions through agro-ecological practices



## Policy support to help small-scale producers improve soil and water conditions to increase farm outputs, achieve local food security and long term ecosystem sustainability

- Agricultural policies that incentivize in-situ water conservation, soil (biota, organic matter and nutrient) enhancement, organic tillage regimes and microclimate management
- Water policies that incentivize reduction of grey/blue water footprint of agricultural and food systems, not only in crop selection and farming methods but also in food processing and packaging, etc.



## Policy support to help small-scale producers improve soil and water conditions to increase farm outputs, achieve local food security and long term ecosystem sustainability

- Trade, investment and intellectual property rights policies that protect indigenous and peasants' rights to select, domesticate, breed, exchange and use native species of crops and livestock varieties
- Environmental and food safety policies based on the precautionary principle that avoid reckless introduction of GMOs or other emerging technologies



# Policy support to help small-scale producers improve soil and water conditions to increase farm outputs, achieve local food security and long term ecosystem sustainability

- Coordinated environmental and agricultural policies on biodiversity that ensure heterogeneity and diversity at the landscape and farm level.
- Agricultural, water and energy policies that prioritize the use of natural resources such as land and water for food production, local energy security and local water security



# Policy support to help small-scale producers improve soil and water conditions to increase farm outputs, achieve local food security and long term ecosystem sustainability

- Pro-democratization policies that recognize women's central roles in agricultural and food systems, revitalize rural economies, minority cultures as well as marginalized livelihood practices.



# Vision of Agroecology

- “Agro-ecology combines the sciences of ecology and agronomy with the political economy of food production and consumption (expressed as food sovereignty).
- This approach goes beyond improving the availability of food to also ensuring access and the achievement of the right to food;



# Vision of Agroecology

- it should be the standard by which national agricultural strategies, food security plans and foreign assistance programs are evaluated by their respective publics.”





**Preserve  
Biodiversity**



**Feed Local  
Communities**



**Fight Climate  
Change**



**Support  
Economy**



**Thank You**