InangLupa Movement

Vision: An inclusive, science-based, resilient and market-oriented Philippine agriculture

ADAPTING AND COPING WITH EL NIÑO PHENOMENON FOR THE AGRICULTURE SECTOR

I. BACKGROUNDER OF EL NIÑO

El Niño, as a climate cycle in the Pacific Ocean, has a global impact on weather patterns and can cause negative, oftentimes, devastating socio-economic impact on affected countries, which include the Philippines.

It is the lack of water that adversely affects the growth of plants specially grain crops which is the basic livelihood of **2/3 of the population or about 17 million grain farmers and 3 million coconut farmers and their families.**

Recent development emphasizes how important it is to come up with response strategies to mitigate the effects of El Niño.

"This episode of El Niño is expected to be weaker compared to the El Niño in 1997, known as the worst occurrence in the 20th century. However, it might still have significant effects because of the increased size of the population, according to some experts." – Rappler.com

Address: InangLupa Office, DA-BSWM,
Visayas Ave, Cor. Elliptical Road,
Diliman, Quezon City, Philippines

Website: http://inanglupa.org/
Facebook: https://www.facebook.com/inanglupa
Mobile: +63 906 4104 023, +63 917 6512 711

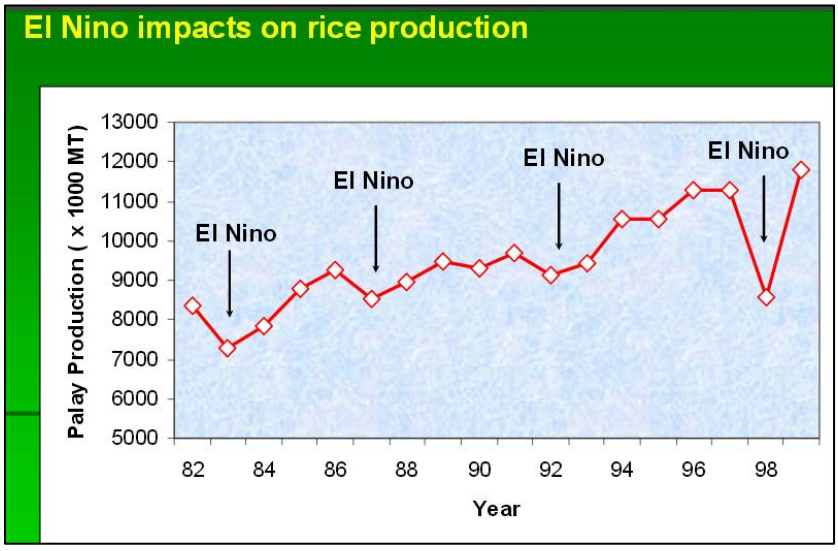
SCENARIO: El Niño will likely reach its peak in December, 2015 through February, 2016. Extreme temperature rise shall trigger intense super-storms. Brad Plumer, August 17, 2015, stated that "when El Niño is combined with global warming, it can lead to record hot years, as in 1998.

Strong El Niño events can temporarily disrupt weather patterns around the world, making certain regions wetter (Peru or California) and others drier (Southeast Asia). During an El Niño event, sea level rises by as much as 20 centimeters in the eastern Pacific while the temperature increases by around 7°C. Warm water starts to evaporate causing already low pressure in the region to deepen triggering intense storms.

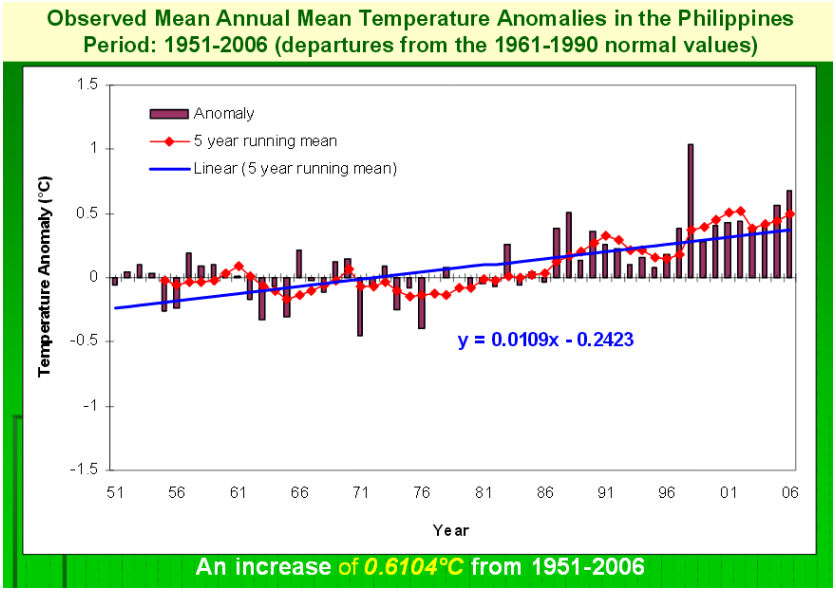
II. Recall of Recent Negative Impacts of El Niño in the Philippines

Below is the effect of El Niño on:

A. Rice production, crop failure and reduced irrigated areas, and;



B. Temperature anomalies in the Philippines from year 1951 – 2006.



Reference: Impact of Droughts in the Philippines, R.G. De Guzman

III. MANAGING THE IMPACTS OF EL NIÑO

Scenario: Impacts of El Niño will be felt during the months November, 2015 to March, 2016

Temporal impacts of El Niño have THREE LEVELS:

I. First Order: Rise in temperature happening daily,
II. Second order: Decline in rainfall, and;
III. Third order: Super-typhoons and prolonged rainfall (Siyam-siyam)

The strategies to combat and mitigate the El Niño have two approaches, COPING (short term, temporary solution to tide over families from impacts of El Nino) and ADAPTATION (long term multi-level and multiple stakeholders approach).

These measures have three possible outcomes:

- REDUCTION of risks and disasters
- PREVENTION of risks and disasters
- AVOIDANCE of risks and disasters

IV. Response Strategies to Mitigate Impacts of El Niño

BEFORE the Event

Coping Strategies (Most appropriate at the level of PROVINCIAL, MUNICIPAL, & FARMER LEVELS) are short term quick response to mitigate the impacts of El Nino:

- Training vulnerable able bodied youth on various technical and other alternative livelihood skills
- Shift from farm to non-farm livelihood system (kasam-bahay)
- Temporary relocation to relatives
- Survival food systems in small farm plots, generally incorporated with the house and backyard
  - Vegetables and herbs, with small livestock (pigs, goats, chicken, ducks, etc)
  - Fruit trees along farm boundaries (papaya, mango, jackfruit, etc)

Adaptation Strategies

"Efforts by society or ecosystems to prepare for or adjust to future climate change. These adjustments can be protective (i.e., guarding against negative impacts of climate change), or opportunistic (i.e., taking advantage of any beneficial effects of climate change)."
(Source: United States Environmental Protection Agency)

a. Establish the benchmark year: 1990-91

Spatial benchmark: Compare vulnerability maps in different years supported by listing and comparison of provinces and municipalities affected and extent of damage to the crop, livestock and fishery subsectors. Cost of interventions and impacts on risk reduction.

b. Establish Think Tank for:

   Developing emergency and contingency plans for scenario with super typhoons amidst and after El Niño and restoration plan for El Niño affected areas that may be hit again by super-typhoons.

   Monitoring events in countries that we depend importation of farm and food security products. Develop risk and opportunity analysis for the Philippine Agric-sector;

c. Identify Key Food Production Areas, their needs, potential for increase production and diversification and rank them into priority for assistance and market evaluation opportunities for high value products.
d. Policy Review of interventions and corresponding outcomes that were adopted in earlier comparable El Niño episode (1997-1998). Review on the water allocation policy in water allocation for power, irrigation and drinking water in Angat Dam, Pantabangan Dam and other multiple use dams.
e. Multi-Media campaign messages and materials for distribution.
f. Inventory of location and standing crops and areas that may stay in the field and exposed to the hazards of increased temperature and dryness from December 2015 to March 2016.
g. Inventory of location and available drought tolerant seeds to be pre-positioned in known vulnerable key food production areas.
h. Inventory of irrigation system for repair and restoration.
i. Immediate construction of small farm reservoir and small water impounding system Mobilization of Local Government Units for agreements on the roles of farm technicians in El Niño adaptation and mitigation programs

j. Develop new/early crop calendar for vulnerable areas and establish training and awareness for farm technicians and farmer leaders/trainer for vulnerable farming communities. If new crops will be needed, make sure well selected planting materials are available and accessible to affected farmers.
k. Developing skills of knowledge providers for building resilience capacity and attitudes of vulnerable farming communities on extreme events.
l. Partnership Approach in Research and Development with training and extension and learning centers

DURING the Event

Adaptation Strategies

a. Mobilize all resources to support El Niño vulnerable areas including cloud seeding.
b. Establish comprehensive communication plan for immediate feedback and monitoring.
c. Establish network of partnership with PAGASA, media, NGO and other organizations concerned on food security.
d. Monitor day to day development of El Niño and its potential threat to food security crops and products.
e. Encourage and promote organic farming where applicable, water efficient rice farming technology, use and availability of drought tolerant crops (this has to be carefully studied for their acceptability by the farmer and by the market).
f. Expansion of the ATI Farmer Learning Center which provided the farmer's owned showcase of market-defined organic farming system that promotes health safe farming technology.

AFTER the Event

a. Inventory of affected areas.
b. Review of actual impacts of interventions; Identification of indicators: Measuring & identifying outcomes.
c. Inventory of restoration requirements for affected farming communities
d. Mainstreaming of all adaption strategies at all levels of the sector
e. National, Regional, Provincial, Municipal Levels & to include the Farmers' Organization level

Prepared by:

Dr. William D. Dar

President, InangLupa Movement and Strategic Adviser, Prasad Seeds, Inc.

"In an agricultural country like the Philippines,
the effects of El Niño are mostly felt by small-scale farmers."
- Rappler.com