

# The Effects of El Niño in Asia

By:

Time

Dino (El Niño)

Tam

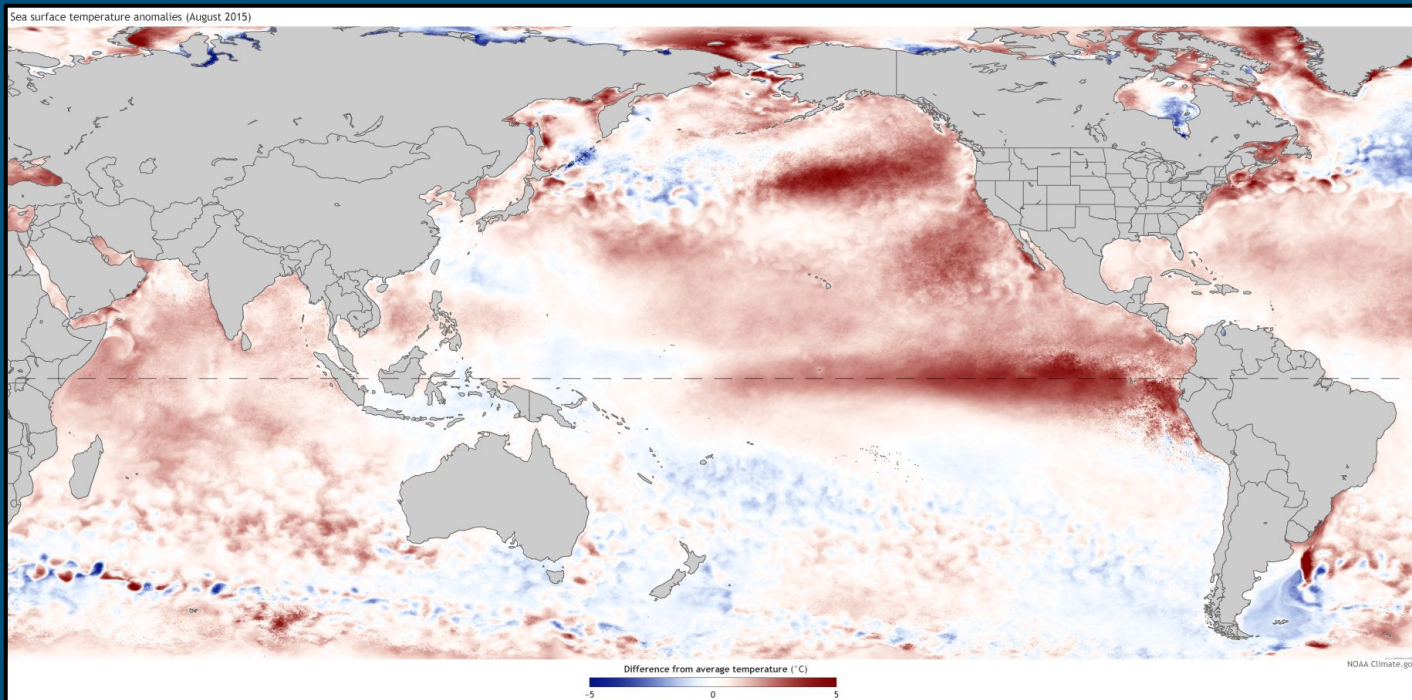
Ploy

Nina (La Niña)

Ping

# El Niño in Asia (2014-2016)

- Environmental Effects
- Effects on Human Activities
- Effects in Thailand
- Effects in SE Asia
- La Nina is coming



Sea Surface Temperature Difference from Average, Aug. 2015 (NOAA)

# Effects of El Niño in Asia

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Drought

Desertification

Loss in crops affected farmers

China formed an organization to restore the rainforests

Countries in SE Asia are affected differently



# Environmental Effects

## Coral Bleaching

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### Causes

- Warm ocean temperature
- Low tides
- Pollution in the ocean

### Effects

- Killed roughly 18% of coral reefs worldwide
- Lives that depend on corals will be harmed
- Ruins underwater ecosystems
- Reduces biodiversity
- Significant decrease in tourism eg. Racha Ampat Island
- Decrease in medicine source eg. heart and cancer disease meds



# How does El Niño affect human activities?

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## Droughts

- Restriction on Water Uses
  - Leads to Health Problems
- Crops Lost
- Reduced Electrical Generation
- Forest Fires
- Economic Losses



## Floods

- Human Health
  - Waterborne Diseases
  - Death
- Damage to property
- Destruction of crops
- Loss of livestock





# Effects of El Niño in Thailand

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The most severe drought caused by El Niño happened in 2015-2016

The second worst drought was El Niño in 97-98

Results in less rainfall during the monsoon months (June-October)

Last year, 46 districts and 12 provinces had been declared drought affected by the government

Affected crops (mainly rice), and many farmers could not pay back loans.



# Effects of El Niño in Thailand

- Some farmers committed suicide due to their inability to repay loans
- Theft increased since people had loss from farming and needed money
- Cattle and other farm animals died due to the lack of water
- Rice exports decreased by 15,200,200 Baht (US\$430,000)
- Rubber, palm and corn were affected as well
- Rubber farmers protested for government assistance





# Effects of El Niño in Thailand

## Farmer suicides

- Dozens of farmers have committed suicide in the past few years.
- The number caused by drought is unclear because many suicides were caused by lack of payment from the government for rice subsidies.
- Drought and the drop in agricultural prices will continue to put pressure on farmers' incomes.
- Almost 150,000 farmers have borrowed money from loan sharks, with a combined debt of Bt21.59 billion (US\$ 700,000)





# Effects of El Niño in Thailand

## Pawnshop Booms

- Due to drought in Thailand
- Causes decreased income
- Parents unable to pay for new academic year



# Effects of El Niño in Thailand

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## Songkran Festival Affected

- Bangkok Metropolitan Administration (BMA) reduced Songkran festivities to only three days, from four.
  - With Time Restriction of before 9 pm daily
- Encourage Water Conservation
- “Traditional Songkran, Valuing Conservation”
- Reduced Water in reservoirs





# Effects of El Niño in Southeast Asia

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## Vietnam

- 2 Million People at risk of water shortages
- 35% of provinces are affected (18 provinces)
- Over 4000 sq.km of crops damaged.





# Effects of El Niño in Southeast Asia

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## The Philippines

- 3.5 million people are directly affected by El Niño
- 42% of the population are indirectly affected by droughts
- Damages of crops over 2000 sq.km.
- Food related unrest
- Over \$100 million is allocated for use in affected communities for:
  - Food
  - Energy
  - Health
  - Safety



# Effects of El Niño in Southeast Asia

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## Indonesia

- 3 million more people are under poverty line due to El Niño
- Poverty is Increasing due to:
  - Harvest failures
  - Loss or reduction in income
  - Rising food prices
    - 80% higher than world market (for rice)
- NGOs are providing support:
  - Limited Food Assistance
  - Cash
  - Potable Water
  - Agricultural Inputs



# Effects of La Niña in Thailand

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## 2011 Flooding in Thailand

- Flood Water Depth Highest 16 years
- Lasted over 6 months
- Schools closed almost 2 months
- Lost 1,425 billion baht
  - Approx. US\$42 billion
- 13.6 million people affected
- 65 out of 77 provinces (85%)

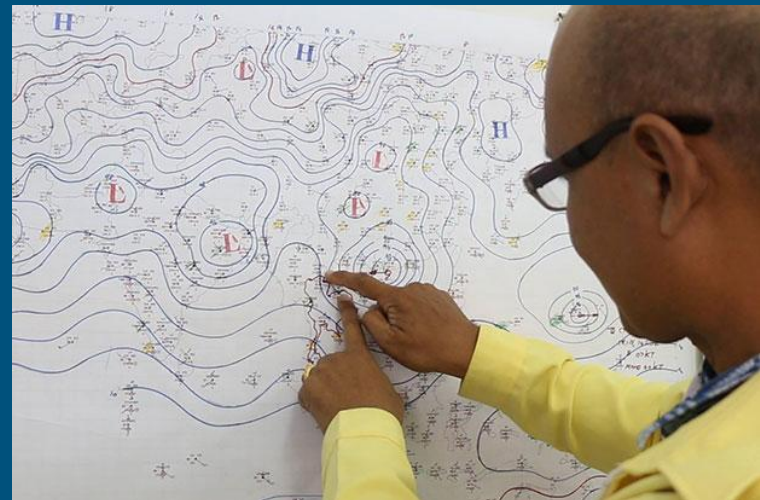




# Is La Niña Starting?

## August 2016 Heavy Rain and Flooding Warning

- Overflow of Rivers
- Warnings for 19 provinces
- “Heavy to very heavy rain”
- Reservoir filling
  - From 40%
- **Houses Destroyed**
- Northern & Central Thailand Area
- Over 1000 houses affected



# Conclusion



- What is El Niño
  - Unusual Activity
  - Weaken Trade Winds
- Effects of El Niño
  - In Asia
    - Air Masses
  - In Thailand
    - Lake Drought
    - Economic Effects
    - Cultural Effects
  - In Southeast Asia
    - Vietnam
    - The Philippines
    - Indonesia

