

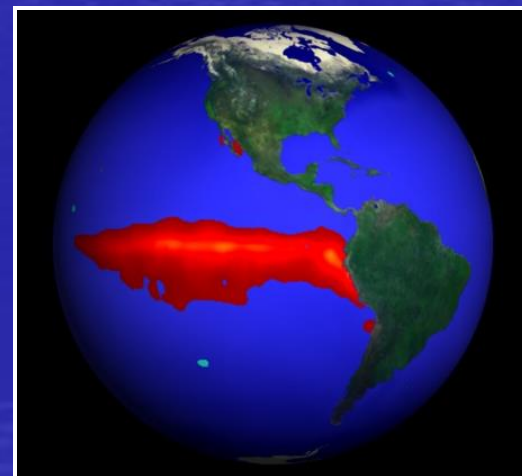


# Preparing PNG 'NOW'

## For Climate Change & El Niño

**John Bailey**

***National Agricultural Research Institute***



**1. Climate Change**

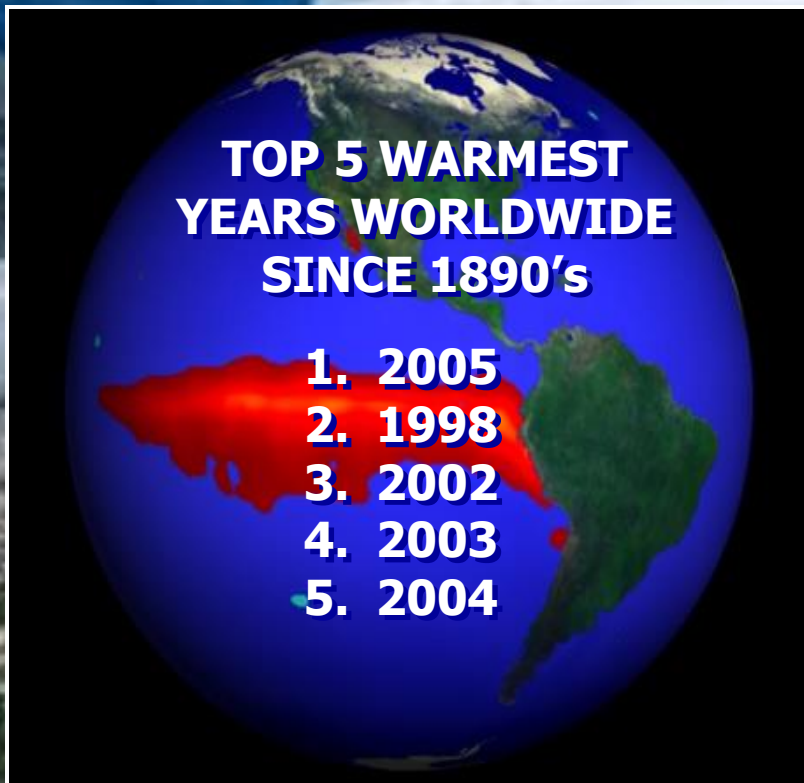
**2. El Niño**

**3. Preparing PNG for Drought**

# Climate Change

## *Global Warming*

*“Now Unequivocal” - IPCC 2007*



# Climate Change Floods



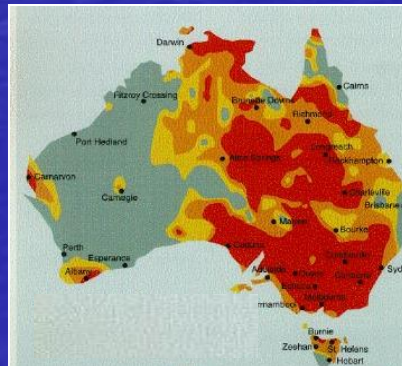
*Worst Floods in  
Centuries across  
Europe*

*Worst Floods in  
Decades across  
Asia*





**AUSTRALIA**  
**Suffers Worst**  
**Drought in**  
**Centuries**



# Climate Change



INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



**Climate Change 2007: The Physical Science Basis**

**Summary for Policy Makers – February 2007**

**“For the next two decades a warming of 0.2°C per decade is projected”**

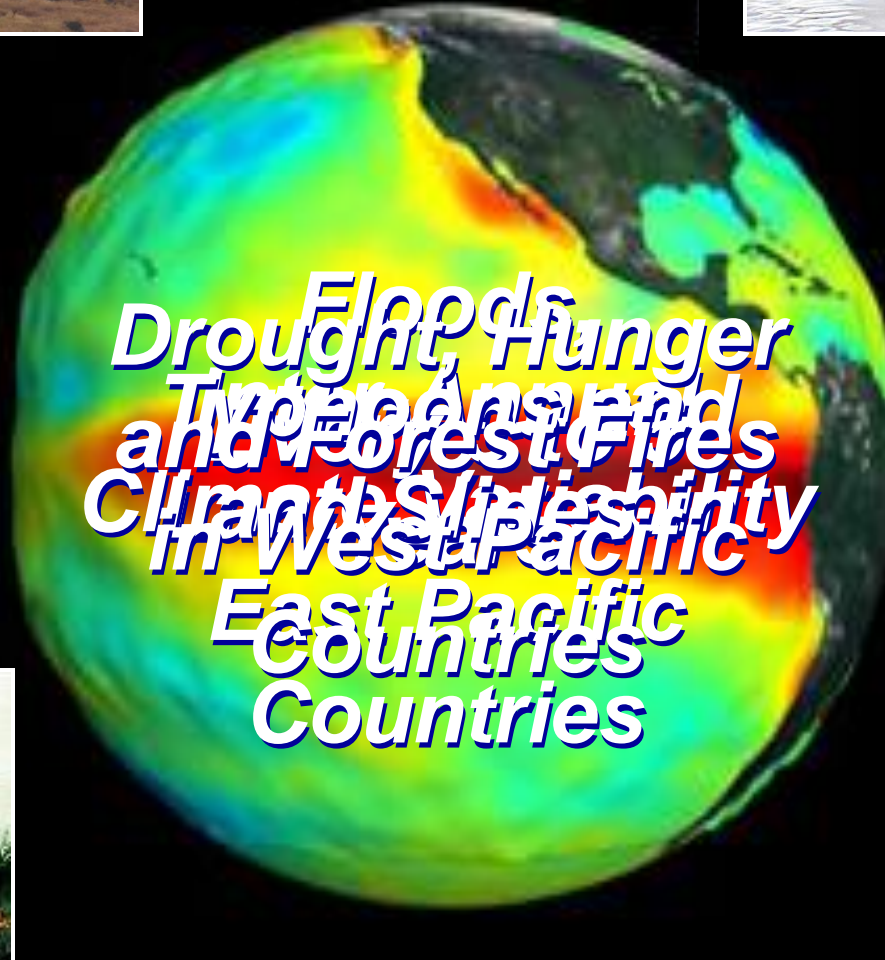
**“Anthropogenic warming will continue for centuries --- even if greenhouse gas concentrations are stabilized”**

**“It is very likely that hot extremes, heat waves and heavy precipitation events will continue to become more frequent”**

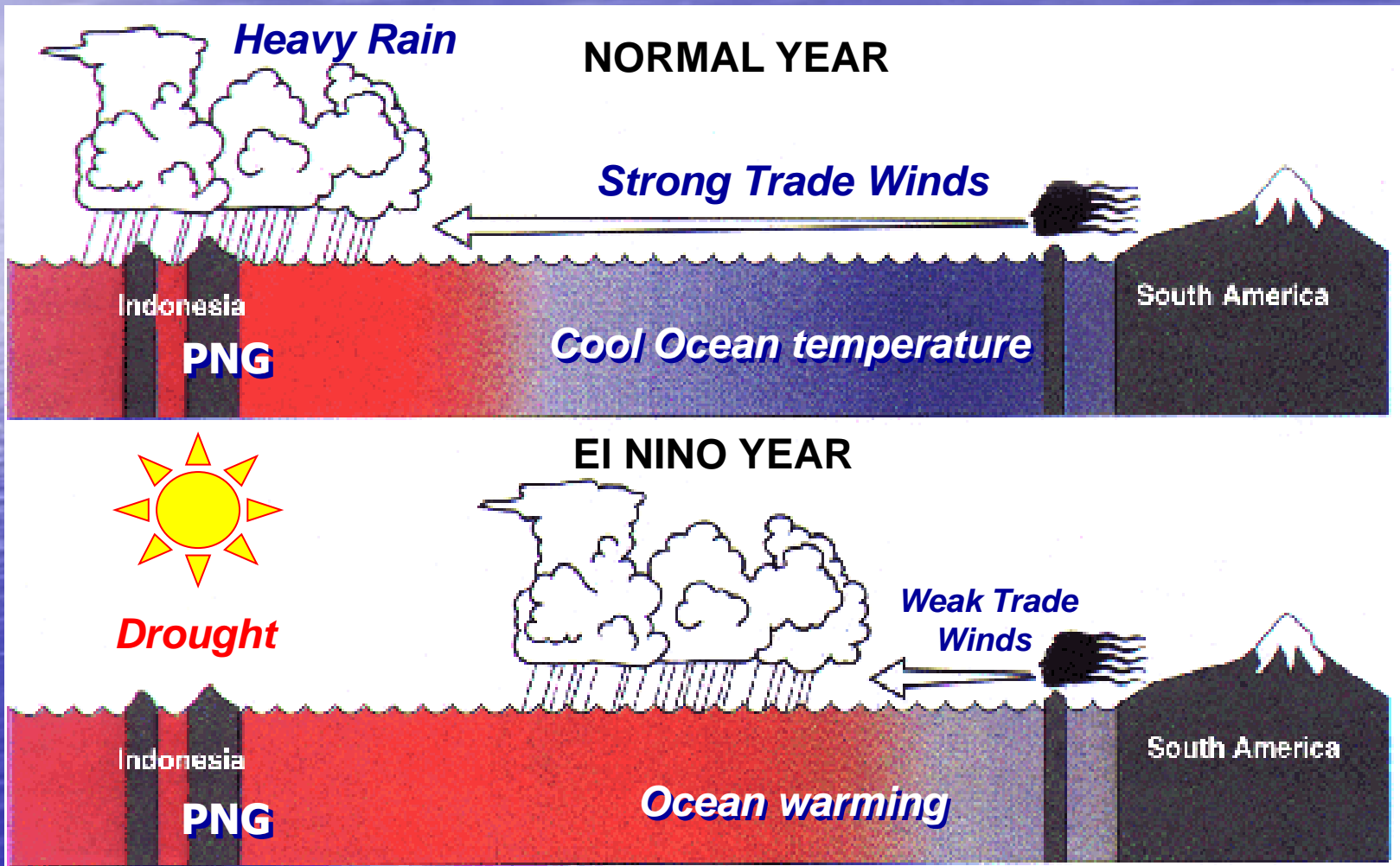
**“It is likely that the area affected by drought will increase”**



# El Niño



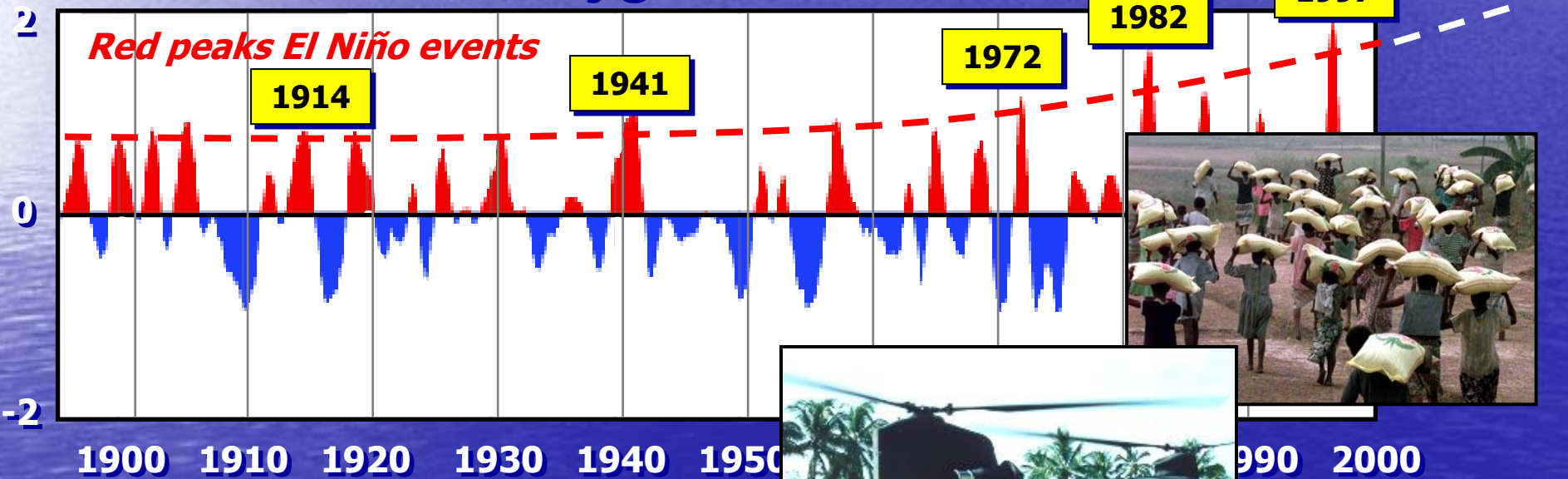
# El Niño





# El Niño

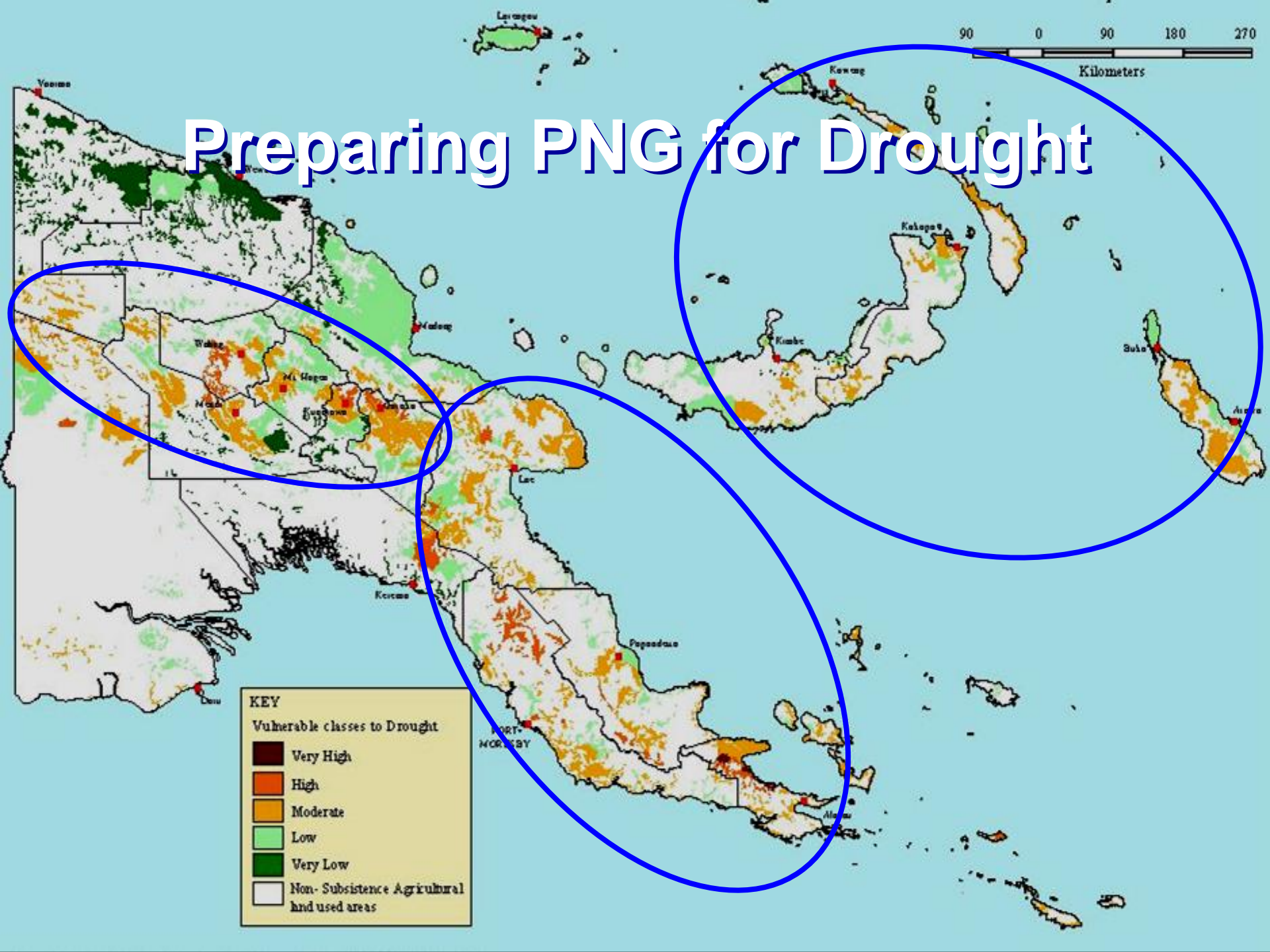
*El Niño se ve resurgir en lo que se esperaba de un año de 5  
droyeats timeNG*



*Average SST anomalies in the Eastern Pacific 1900-2000*

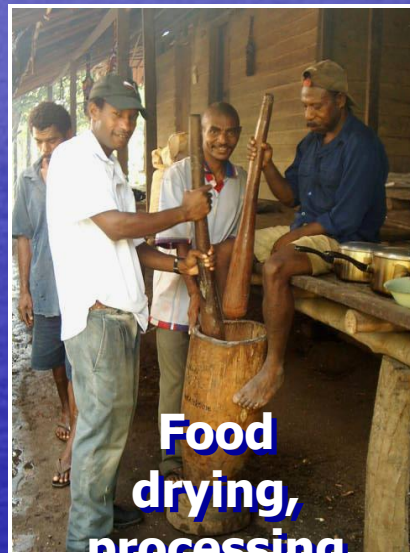


# Preparing PNG for Drought



# Drought-Coping Strategies

Resource stations should be set up or equipped with the following necessary information and resources in each drought vulnerable district across the country



***Water is the limiting resource!***

***Without accessible water supplies, human beings, farm animals, crops and future planting materials will all perish alike during a severe drought***

# ***Water Storage/Supply Systems***

***Five-Year Plan***

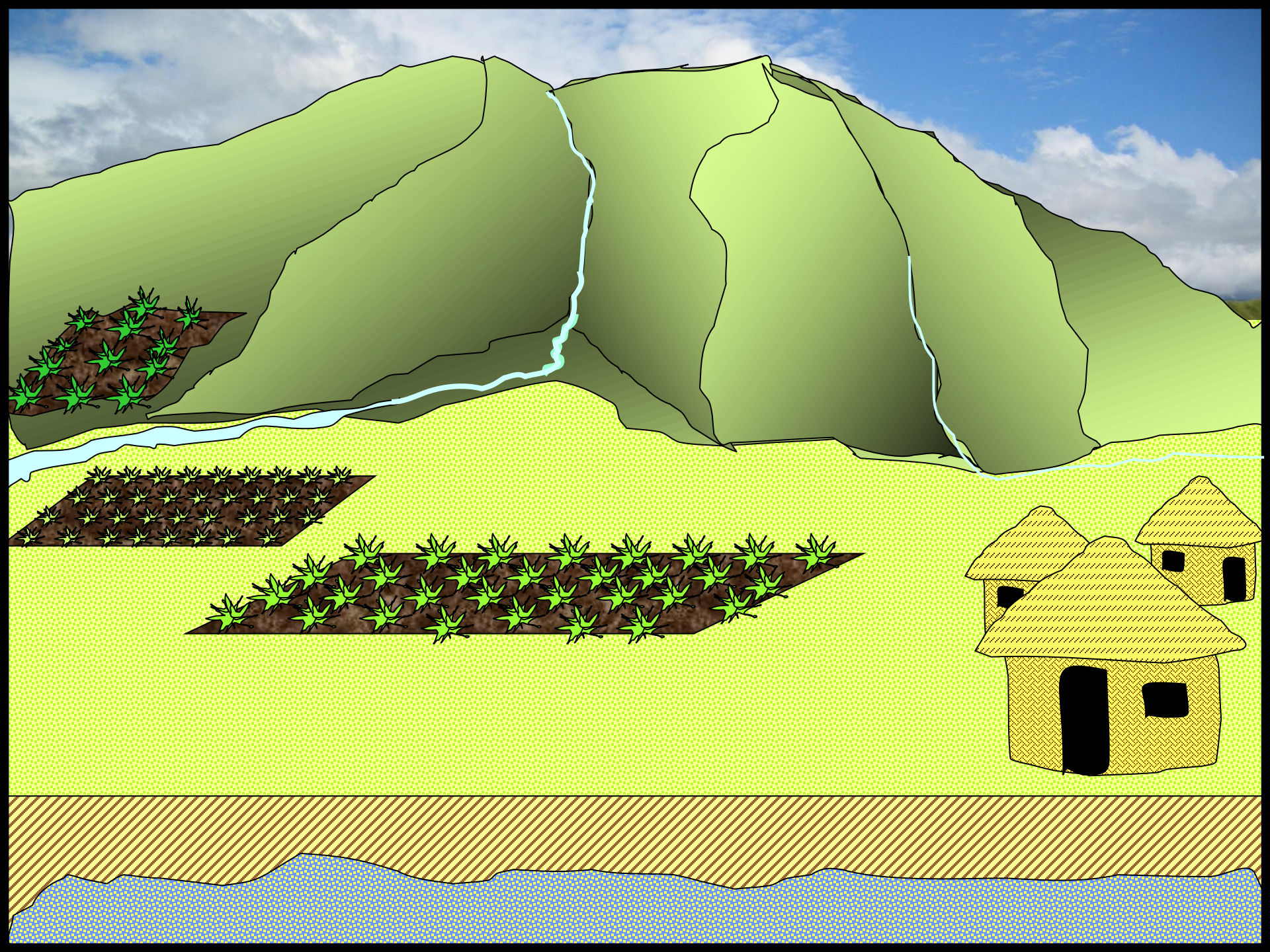
# ***Water Storage/Supply Systems***

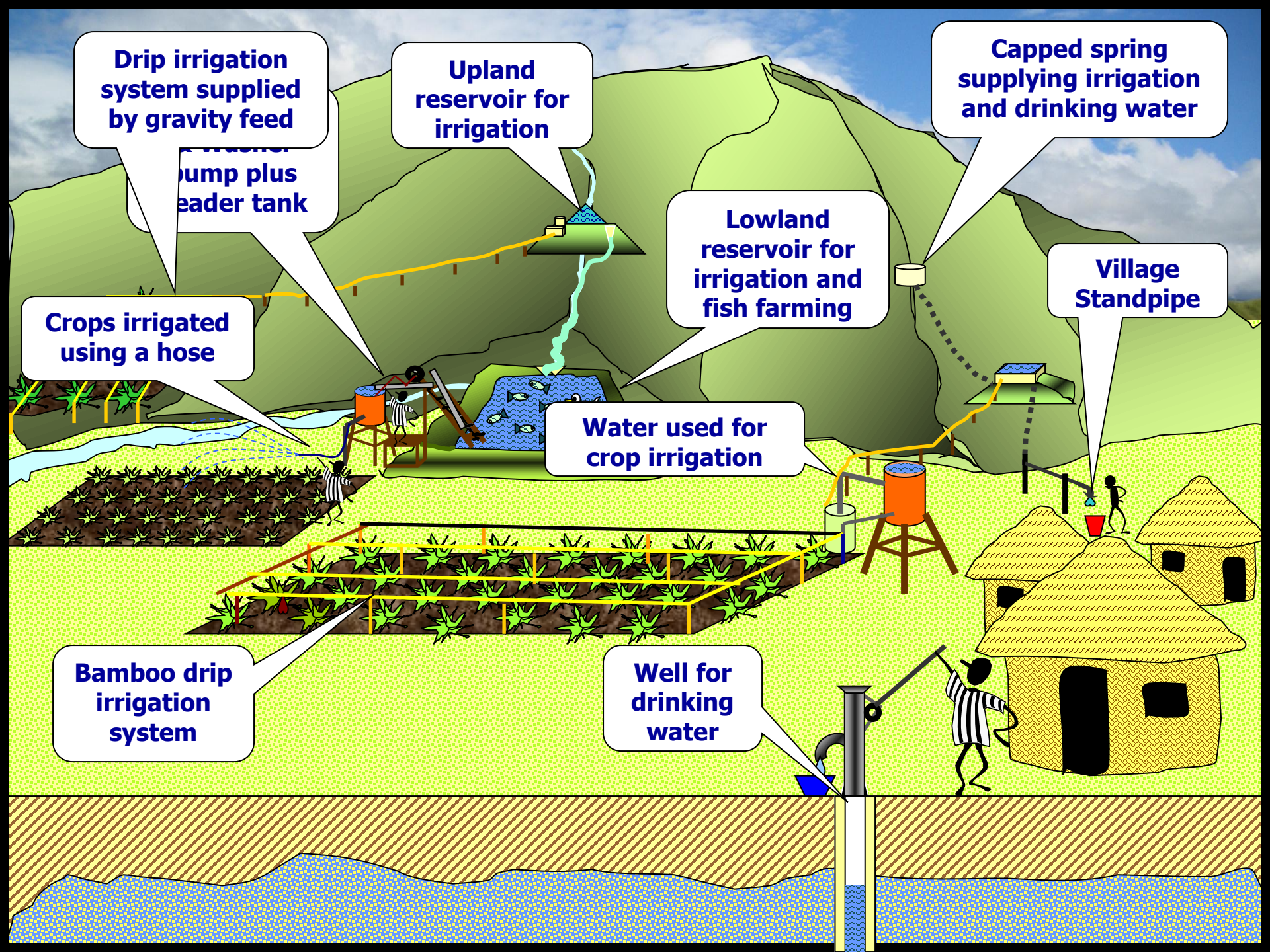
## ***Five-Year Plan***

### **Years 1-2**

#### **Pilot Project**

- **Investigate the potential for mini-reservoirs, subterranean wells, storage tanks and different irrigation technologies to supply potable and irrigation water to Highlands, Lowlands and Island communities in a series of case studies**
- **Determine the feasibility, costs and effectiveness of the different water supply measures and assess their likely uptake by rural communities**





**Drip irrigation system supplied by gravity feed**

**Upland reservoir for irrigation**

**Capped spring supplying irrigation and drinking water**

**Crops irrigated using a hose**

**Lowland reservoir for irrigation and fish farming**

**Village Standpipe**

**Water used for crop irrigation**

**Bamboo drip irrigation system**

**Well for drinking water**



# ***Water Storage/Supply Systems***

***Five-Year Plan***

# ***Water Storage/Supply Systems***

## ***Five-Year Plan***

### **Years 3-5**

#### **Regions-wide Programme**

- **A network of NGO's and government agencies should be established, coordinated and resourced (*financed*) to work with communities in drought-vulnerable regions to establish sustainable supplies of drinking and irrigation water by the year 2011**
- **To avert a humanitarian disaster should a severe drought occur again within the next 5 or 6 years**
- **To enable rural people to prosper and have better health, nutrition and living standards under 'normal' climatic conditions**

**"It is essential that we draw up an implementation plan to promote a supply of potable water which is available to every community in PNG. More cost-effective than feeding a community for 3 weeks is drinking – In most cases it was significantly more cost effective to implement a water supply program than to feed a community for 3 weeks"**

**(Royden Howie, 2000, Food Security for Papua New Guinea, p 252)**

# *The Opportunity!*

An opportunity exists **NOW** to invest in rural communities to make them (*virtually*) immune to the swings and see-saws of climate change and enable them to thrive and contribute even more to the wealth and prosperity of the Nation.

**THANK YOU**

**This opportunity should not be missed!**

