

What should the
Philippines
do about
climate change ?



food
water ?

peace



progress



security



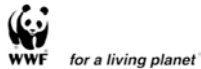
How many **planets** do
we

need



Human Ecological Footprint 2005

1.3



Planet Earths

Human Ecological Footprint 2050

2



Planet Earths

CLIMATE CHANGE FACTORS

- ☉ WARMER TEMPERATURES
- ☉ WETTER WET DAYS, DRYER DRY DAYS
- ☉ ERRATIC RAINFALL PATTERNS
- ☉ EXTREME WEATHER EVENTS (Typhoons, Dry Spells)
- ☉ ELEVATED CO2 LEVELS
- ☉ SEA LEVEL RISE/ SALT WATER INTRUSION
- ☉ STORM SURGE

Rainfall

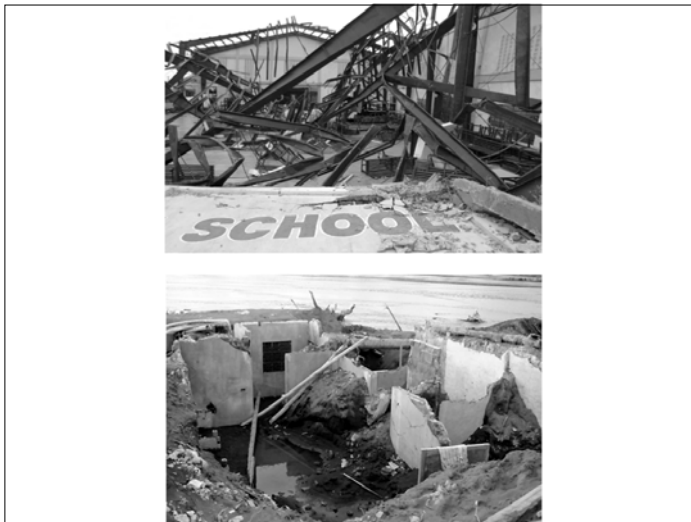
Drought and deluge - fewer wet days but on these wet days the rains will be heavier than usual.

A strong positive increase of wet days in the Visayas appears to be a trend,

Coupled with a reduced number of wet days in the entire country. This will be most pronounced over eastern Luzon.

Water

1 out of every 5 Filipinos has no direct access to clean water (WB). Climate change will make things worse.



Health

Observed mutations of vector-borne diseases are expected to continue, into more virulent forms.

Energy

A pronounced decrease in rainfall over Luzon and Mindanao will be bad news for hydropower generation. Visayas, which will have increased rains, has virtually no major dams.



Salt-water intrusion

Virtually all of Pampanga's rice fields and fish ponds will be contaminated with salt water.

Agriculture

From 1970 to 1990, 82.4% of total rice losses in the Philippines were attributed to typhoons, floods, and droughts (Lansigan, 2000).



Temperature

A 0.5 degree Celsius increase has already been confirmed over the 1961-1990 mean temperature.

A study by MJ Manton in 2001 established a trend of warmer days and warmer nights.

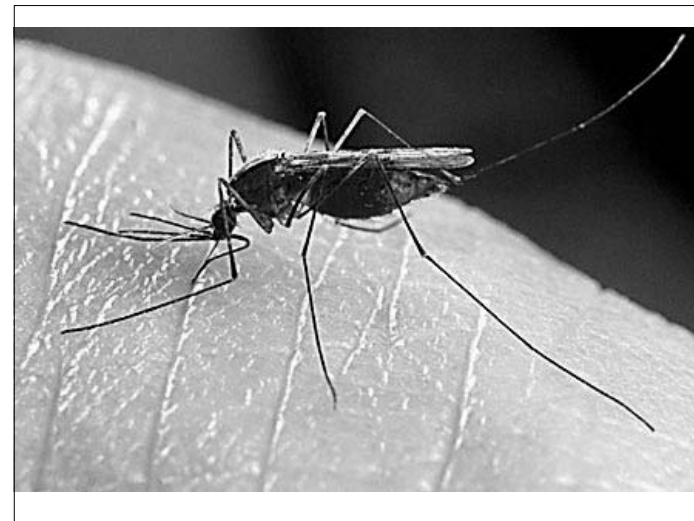
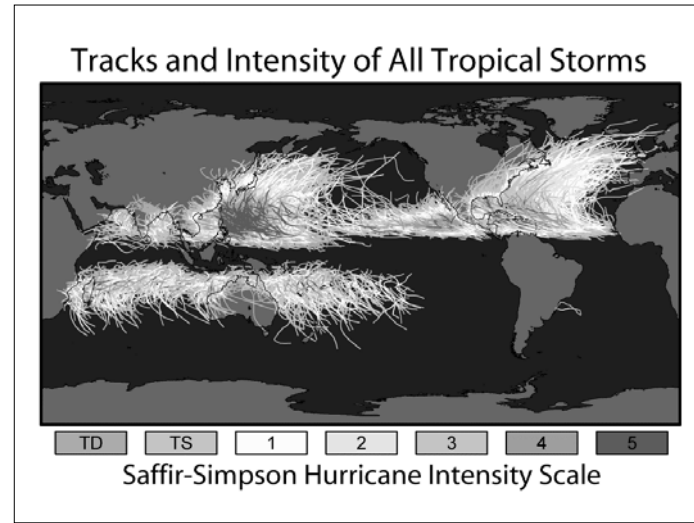
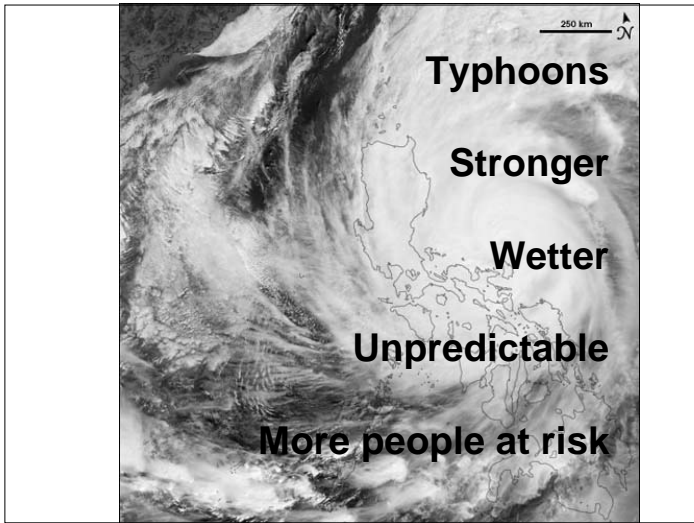
It defined 4 indices of extreme temperature and found all 4 consistently pointed to warmer days and nights in **ALL WEATHER STATIONS IN THE PHILIPPINES.**



Tropical Cyclones

Tropical Cyclones do not form where SSTs are below 27 degrees Celsius. However, warmer days and nights are expected.

A small, but steady increase, in typhoon strength, with a pronounced increase over the Visayas.





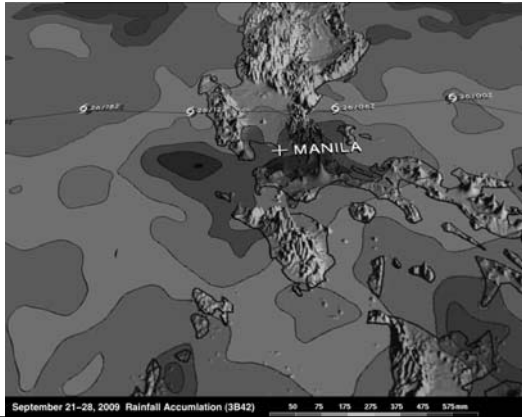
Courtesy of Newsbreak Magazine



Courtesy of Newsbreak Magazine

Ang Climate Change ay
nangyayari na
sa buong MUNDO,
at **DITO** sa atin
NGAYON, HINDI BUKAS

ONDOY - 585 mm / 24 inches



Thursday, February 16, 2010 • 5 sections / Vol. 25 / No. 72 P18

El Niño to worsen Mindanao power crisis BUSINESS / B1

Taliban using human shields WORLD / A23

Key Maguindanao massacre suspect bolts Sultan Kudarat jail ACROSS / A16

Toxic fumes kill 3 in Batangas NEWS / A2

Draw dashes So AeroIot title bid SPORTS / A19

PHILIPPINE DAILY INQUIRER
BALANCED NEWS. FEARLESS VIEWS.

WASTELAND The hot, dry season is turning this rice farm in Batangas' Upper, General, into a wasteland. The Department of Agriculture in Capiz Valley has projected losses in crops of at least P1.7 million in the region if the drought continues.

El Niño drying up farms

Goma: Latest LP bet to be axed by Comelec
By Lela S. Salaverria

From north to south, farmers try to survive
By the Inquirer Bureau

INTENSE HEAT IS DRYING UP farmlands, reservoirs and waterways all

Even 'lumad'

Monday, September 28, 2009 • 5 sections / Vol. 24 / No. 292 P18

José-Fly Reporter Chapter 4 The Mystery in the Corner LEARNING / F4

Education: The way of the future for Baguio BUSINESS / B2-4

Chinese newspapers don't fear extinction ANALYSIS / A2

PDI relief drive THE PHILIPPINE DAILY INQUIRER IS LAUNCHING a relief drive for the victims of Tropical Storm "Ondoy" in partnership with the Philippine Red Cross.

PHILIPPINE DAILY INQUIRER
BALANCED NEWS. FEARLESS VIEWS.

Metro mired in mud

'Ondoy' death toll now 73; classes in Metro, Rizal suspended

By the Inquirer Staff

AS MANY AREAS OF METRO MANILA REMAINED without power yesterday, rescuers plucked bodies from muddy floodwaters and scrambled to save the mired survivors on rooftops after Storm "Ondoy" left 73 people dead in a strike across the region.

Some 300,000 people were affected by the storm, including about 47,000 who were trapped in floodwaters, officials said. "We are still assessing the damage to agriculture as of yesterday, with estimated crop losses in Metro Manila and

Rizal pending," Manila Electric Co. said that it will continue to work on restoring power to areas that were affected by the storm. "We are still assessing the damage to agriculture as of yesterday, with estimated crop losses in Metro Manila and

PDI relief drive. The Philippine Daily Inquirer is launching a relief drive for the victims of Tropical Storm "Ondoy" in partnership with the Philippine Red Cross.

PHILIPPINE DAILY INQUIRER

PHILIPPINE DAILY INQUIRER

RP pleads for int'l aid

Super typhoon coming

in a state of calamity

Crop damage hits P6B

Lake swallows villages

Stocks are adequate, assures Yap

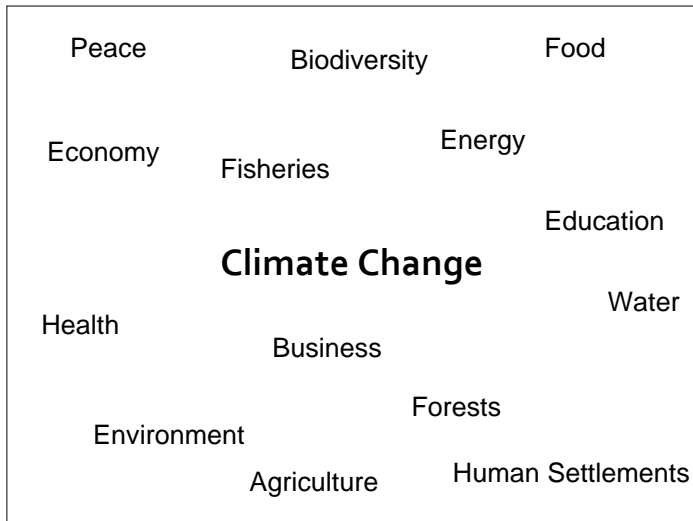
No longer habitable for 100,000 residents

Who helped? Gov. helps ask GMA on aid

is wonder Filipinos still smiling

side towns warned: Laguna lake rising

Weather forecasters caught in the eye of a storm



CLIMATE CHANGE WILL EXACERBATE THE IMPACTS OF EXISTING NON-CLIMATE STRESSORS AND INSTITUTIONAL CHALLENGES on ALL SECTORS

home » news » arroyosigns

Arroyo signs climate change law

By TJ Burgonio
 Philippine Daily Inquirer
 First Posted 12:17:00 10/23/2009
 Filed Under: Philippines - Regions, Philippines - Metro, Environmental Issues, Government, Laws

MANILA, Philippines – (UPDATE) President Gloria Macapagal-Arroyo has signed into law the Philippine Climate Change Act of 2009 in Malacañang that would enable the country to better respond to disasters spawned by climate change.

Republic Act 9729 seeks to mainstream climate change into the formulation of government policy by setting up a National Framework Strategy and Program on Climate Change.

It also creates the Climate Change Commission that will coordinate, monitor and evaluate the government's programs and actions to mitigate and adapt to the effects of climate change.

HP Pavilion Notebook PCs
 Sleek Liquid-Metal Inspired Design. The Ultimate Entertainment Notebook
www.hp.com/ph/Notebooks

Ads by Google

Loading "http://globation.inquirer.net/news/breakingnews/view/20091023-231825/Arroyo-signs-climate-change-law"

REPUBLIC ACT 9729

AN ACT MAINSTREAMING CLIMATE CHANGE INTO GOVERNMENT POLICY FORMULATIONS, ESTABLISHING THE FRAMEWORK STRATEGY AND PROGRAM ON CLIMATE CHANGE, CREATING FOR THIS PURPOSE THE CLIMATE CHANGE COMMISSION, AND FOR OTHER PURPOSES

Priority National Adaptation Actions

- Reducing vulnerability in key climate-sensitive sectors
- Enhancing cooperation and partnership to mobilize new and additional financing and investments for CCA
- Promoting Capacity Building at all levels, especially in vulnerable communities and areas
- Mainstreaming CCA in government policies and development plans



THE CLIMATE CHANGE ACT of 2009

Declaration of Policy

- Afford full protection and advancement of **right of the people** to healthful ecology
- Adoption of the **Philippine Agenda 21** framework
- fulfill human needs while maintaining quality of natural environment for **current and future generations**

Declaration of Policy

- Principle of common but differentiated responsibility
- Precautionary Principle
- UNFCCC objectives
 - Stabilization of GHG
 - Adaptation, food security, economic sustainability
- Hyogo Framework for Action
 - Adoption of strategic goals to build national and local resilience to climate change-related disasters

Declaration of Policy

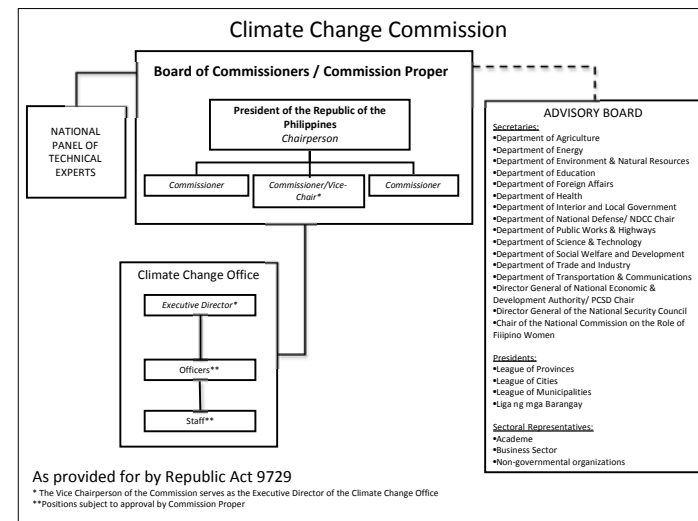
- Recognition of **vulnerability** of local communities
- Recognition of most vulnerable sectors: the poor, women, children

Declaration of Policy

- Participation of national gov't, LGUs, business, NGOs, local communities in responding to adverse impacts
- Gender-sensitive, pro-children and pro-poor perspective

Climate Change Commission

- Independent and autonomous body
- Sole policy-making body of the government tasked to coordinate, monitor and evaluate CC programs and action plans



Advisory Board

DA, DoE, DENR, DepEd, DFA, DOH, DILG, DND/NDCC, DPWH, DOST, DSWD, DTI, DOTC, NEDA/PCSD, NSC, NCRFW, League of Provinces, League of Cities, League of Municipalities, Liga ng mga Barangay,

Academe, Business sector, NGO



MANDATES

of the Climate Change Commission

- Mainstreaming of CC, in synergy with DRR
- Framework Strategy on CC à National Program/ Action Plan
- Recommendations on legislation, policies, strategies, programs
- Key development investments in climate-sensitive sectors
- Enabling environment for broader multi-stakeholder participation

MANDATES

of the Climate Change Commission

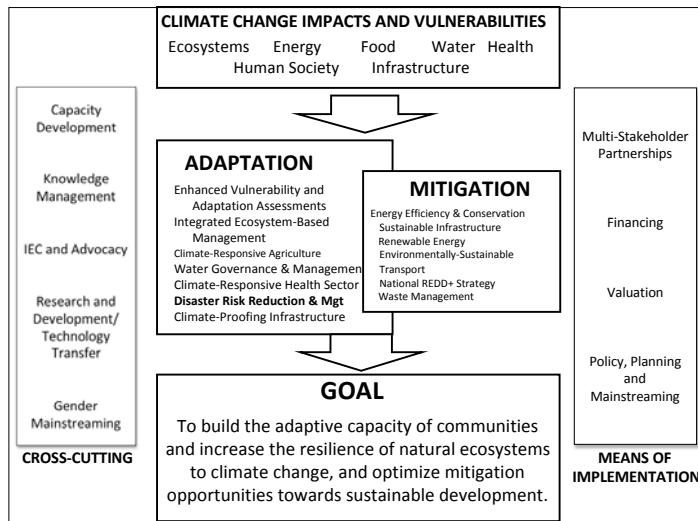
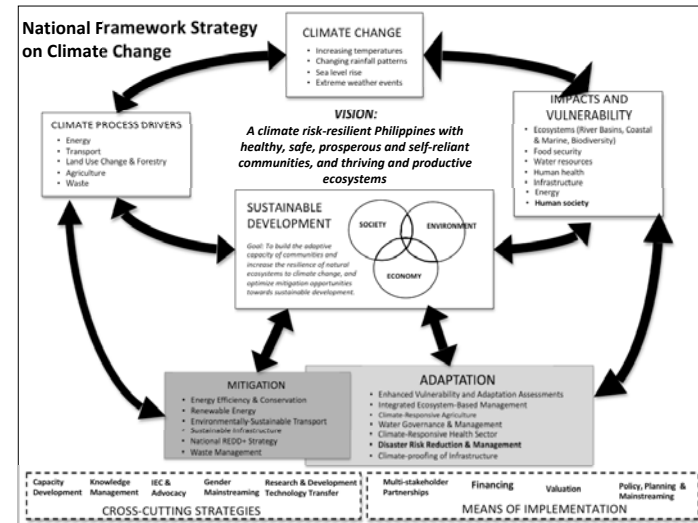
- Coordinate and establish a close partnership with the National Disaster Coordinating Council in order to increase efficiency and effectiveness in reducing the people's vulnerability to climate-related disasters
- Guidelines for determining vulnerability to CC impacts and adaptation assessments
- Coordination with LGUs and private entities to address vulnerability to CC impacts

MANDATES

of the Climate Change Commission

- Facilitation of capacity building for local adaptation planning, implementation and monitoring of CC initiatives in vulnerable communities and areas
- Technical and financial support to local research and development programs and projects in vulnerable communities and areas
- Dissemination of information on
 - o Climate change
 - o Local vulnerabilities and risks
 - o Relevant laws and protocols
 - o Adaptation and mitigation measures

THE NATIONAL FRAMEWORK STRATEGY



THE NATIONAL CLIMATE CHANGE ACTION PLAN

National CC Action Plan

- Assessment of CC national impacts
- **Identification of most vulnerable communities/areas**
- Identification of **differential impacts** of CC on men, women, children
- **Assessment and management of risk and vulnerability**
- Mitigation potentials
- Identification of options, prioritization of appropriate **adaptation measures**

Local CC Action Plan

- LGUs as frontline agencies
- Barangays to be directly involved with LGUs in prioritizing CC issues
- Climate change adaptation to become a regular function of municipal and city LGUs
- Inter-LGU collaboration

Local CC Action Plan

- LGUs to regularly update CC Action Plans
- Reflect social, economic, and environmental conditions and emerging issues
- LGUs to mobilize and allocate resources to implement action plans
- LGUs expressly authorized to use IRA to implement local CC Action Plan

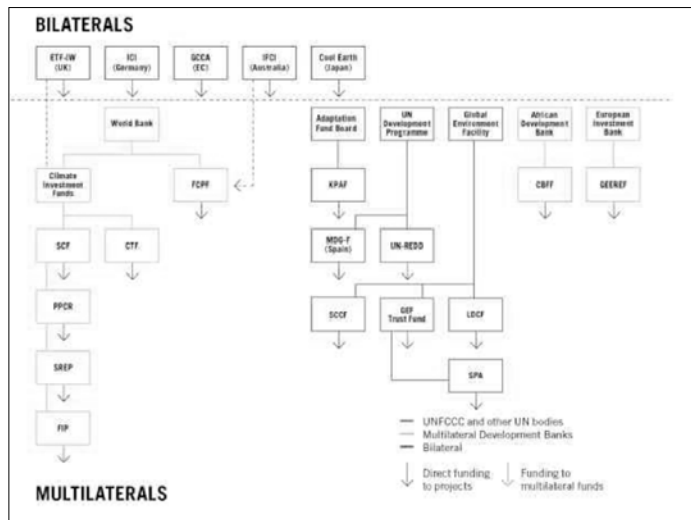
Multi-sectoral participation

- In the development of the National CC Action Plan, Local CC Action Plans
- The Commission shall coordinate with NGOs, civic organizations, academe, POs, private and corporate sectors and other concerned stakeholder groups

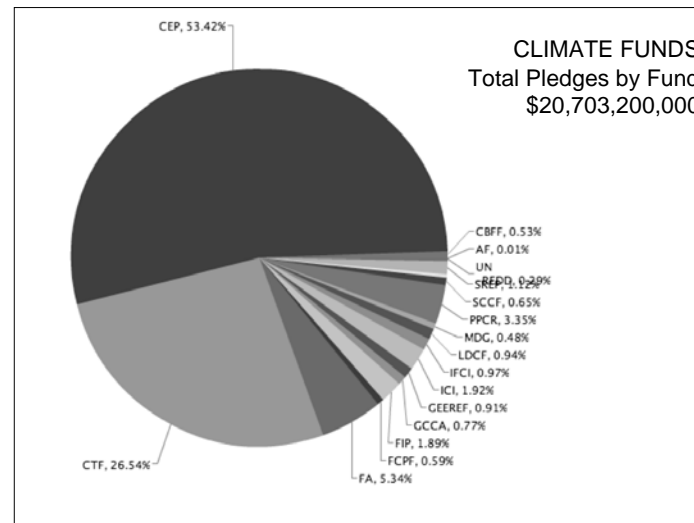
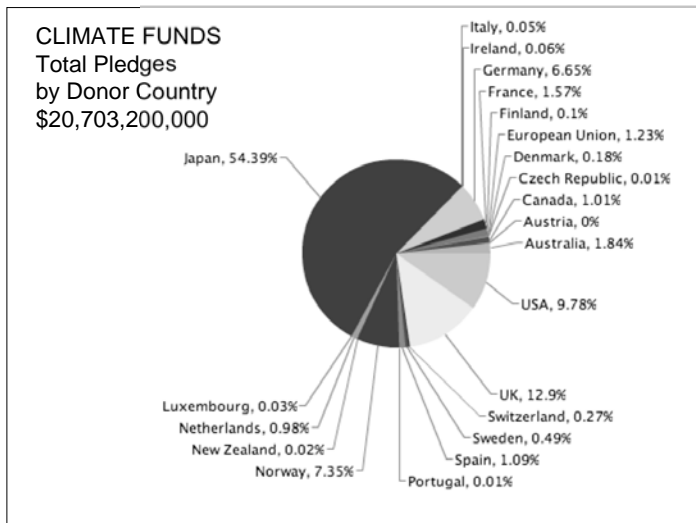
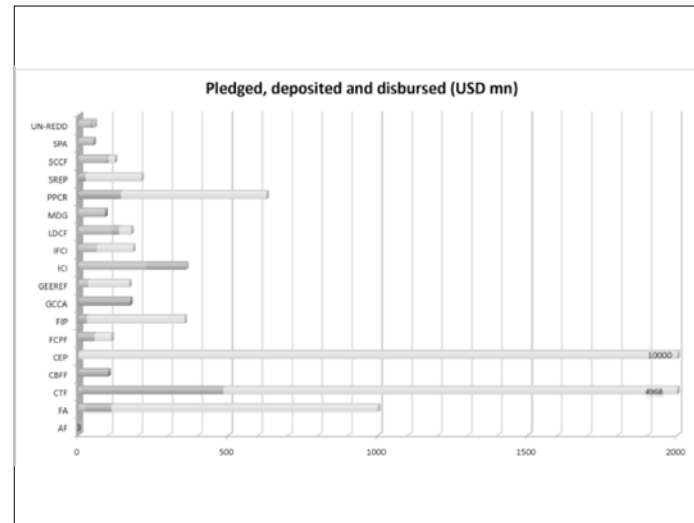
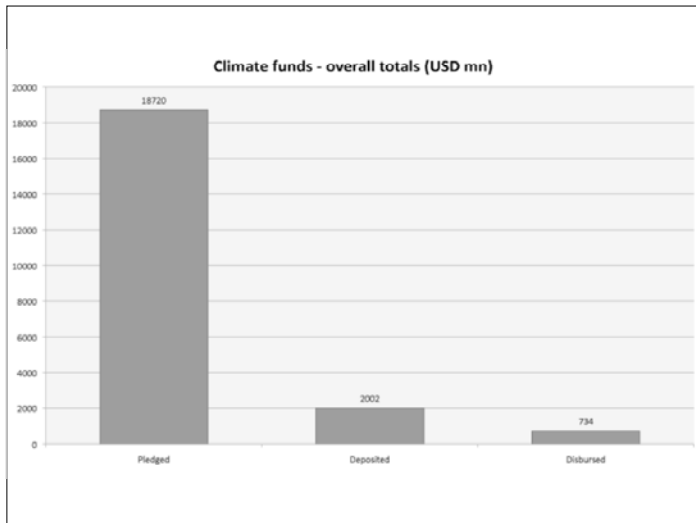
Funding allocation for Climate Change

- All relevant gov't agencies, LGUs shall allocate funds for formulation, dev't and implementation (including training, capacity building and direct intervention) of CC programs and plans, public awareness campaigns and mitigation solutions
- Special mention of educational and training programs and micro-credit schemes for women in rural areas

Financing Opportunities for Climate Change Adaptation



Fund	Type	Administered by	Areas of focus
Adaptation Fund	Multilateral	Adaptation Fund Board	Adaptation
Clean Technology Fund	Multilateral	The World Bank	Mitigation
Cool Earth Partnership	Bilateral	Government of Japan	Mitigation
Environmental Transformation Fund - International Window	Bilateral	Government of the United Kingdom	Adaptation, Mitigation
Forest Carbon Partnership Facility	Multilateral	The World Bank	Mitigation - REDD
Forest Investment Program	Multilateral	The World Bank	Mitigation - REDD
GEF Trust Fund - Climate Change focal area	Multilateral	The Global Environment Facility (GEF)	Adaptation, Mitigation
Global Climate Change Alliance	Bilateral	The European Commission	Adaptation, Mitigation
Global Energy Efficiency and Renewable Energy Fund	Multilateral	European Commission	Mitigation
International Climate Initiative	Bilateral	Government of Germany	Mitigation
International Forest Carbon Initiative	Bilateral	Government of Australia	Mitigation - REDD
Least Developed Countries Fund	Multilateral	The Global Environment Facility (GEF)	Adaptation
MDG Achievement Fund – Environment and Climate Change thematic window	Multilateral	UNDP	Adaptation, Mitigation
Pilot Program for Climate Resilience	Multilateral	The World Bank	Adaptation
Scaling-Up Renewable Energy Program for Low Income Countries	Multilateral	The World Bank	Mitigation
Special Climate Change Fund	Multilateral	The Global Environment Facility (GEF)	Adaptation
Strategic Climate Fund	Multilateral	The World Bank	Adaptation, Mitigation
Strategic Priority on Adaptation	Multilateral	The Global Environment Facility (GEF)	Adaptation
UN-REDD Programme	Multilateral	UNDP	Mitigation - REDD

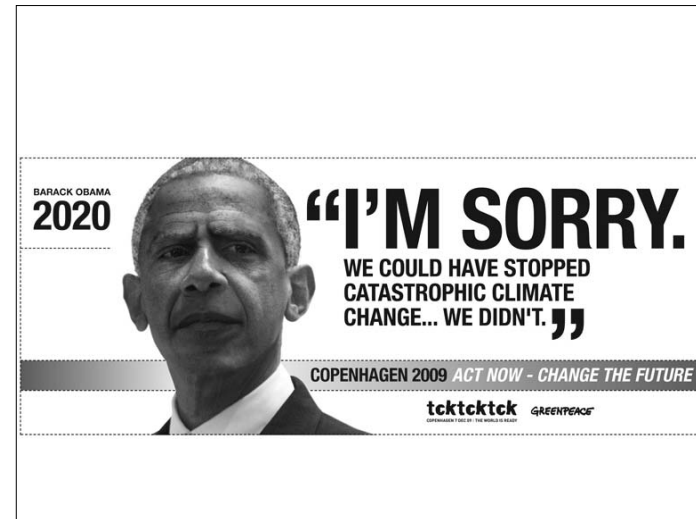


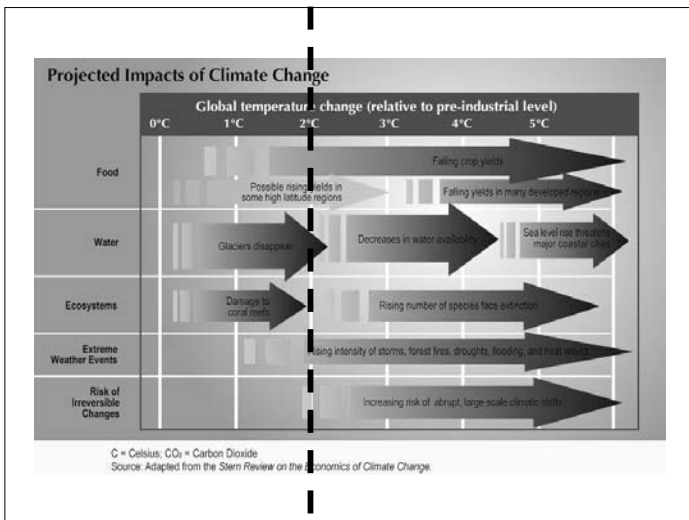
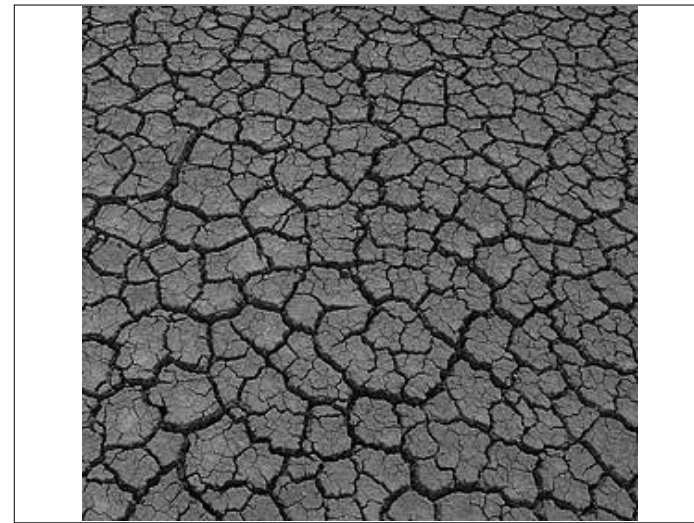
The Adaptation Fund



- Established by the Parties to the UN Framework Convention on Climate Change (UNFCCC)
- Mandated to finance concrete adaptation projects and programmes in developing countries that are Parties to the Kyoto Protocol
- Direct access to the Fund by Parties.
- AF's main source of revenue: market-based monetization of Certified Emission Reductions (CERs)
- Available resources: between USD 250-350 million by 2012.

<http://www.climatefundupdate.org>





#1

KNOW WHAT IS HAPPENING

LET'S FIND OUT. DON'T GUESS.

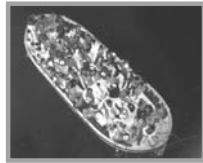
Defend your interests. Work with communities, businesses and scientists in your area to **determine what changes are already happening** for Sea levels, Storm surge, Saltwater Intrusion, Flooding, Land Subsidence, Rainfall Patterns, Disease. Faster? Slower? **IDENTIFY YOUR "LIFEBOATS". DON'T WAIT.**

Start with anecdotal reports. Build up time series data.

Courtesy of WWF-Philippines

“LIFEBOAT” ELEMENTS

- WATER
- FOOD
- HEALTH
- LAND / HOMES
- LIVELIHOOD
- BASIC SERVICES



Courtesy of WWF-Philippines

#2

FINALIZE YOUR LAND / WATER / COASTAL USE PLANS

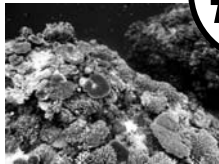
Pro-active Development must “**START FROM THE FUTURE**”

Build Climate Risk Elements into your new MTPDP w/ RDC and NEDA. **Integrated area development** should delineate suitable sites that will **maintain life sustaining ecosystem services, while allowing locally appropriate economic activity.**

DO THIS LOCALLY.

Courtesy of WWF-Philippines

#3



PROTECT YOUR NATURAL SYSTEMS.

Put the people and budgets in place.

We depend on nature for water, food, health. Are your watersheds viable and protected? Your coral reefs and fishing areas? Your rivers? Your mangrove forests? Time for resolute action to guard your natural savings account.

Courtesy of WWF-Philippines

#4



RATIONALIZE AGRICULTURE / AQUACULTURE

Food Security should be a key target.

Decide on **sustainable crops and technologies**, organize **local roundtables**, adopt common **standards of “NEXT PRACTICE”**, share new technical knowledge with community-focused grow out programs that can make a lasting difference in people’s lives.

Courtesy of WWF-Philippines

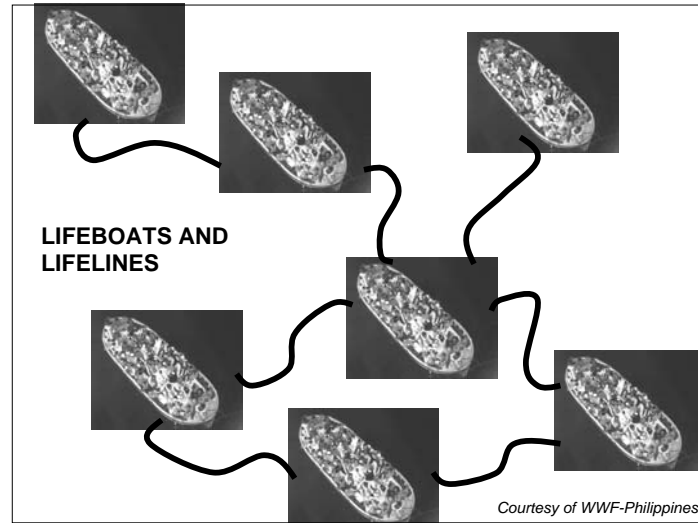


ADDITIONAL “LIFELINE” ELEMENTS

- Social / Commercial / Political Institutions
- Telecommunications
- Energy
- Banking & Finance
- Insurance & Risk Coverage
- Health Systems
- Disaster Preparation & Response

#5

Courtesy of WWF-Philippines



CLIMATE CHANGE ADAPTATION

Our national imperative.

“If you want to go quickly, go alone.
If you want to go far, go together.”

-African proverb

The solutions are ...

in our hands...

WE MUST PROTECT

**OUR PEOPLE
OUR ENVIRONMENT
OUR FUTURE**







R.S.I.

The QWERTY keyboard



The Dvorak keyboard



DO NOT BE AFRAID OF CHANGE.

**Can we survive
climate change?**

CLIMATE CHANGE

OUR OPPORTUNITY
TO MAKE THE
PHILIPPINES
A BETTER NATION



We are
at war.

Can we
win this
battle?



Salamat!

