

PAGASA's ROLE IN PROVIDING CLIMATE INFORMATION

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CHIEF, CLIMATE DATA SECTION
PAGASA



"tracking the sky...helping the country"

OUTLINE PRESENTATION



PAGASA's MANDATE & ORGANIZATIONAL STRUCTURE



CURRENT DEVELOPMENTS



PAGASA's INITIATIVES IN CLIMATE CHANGE

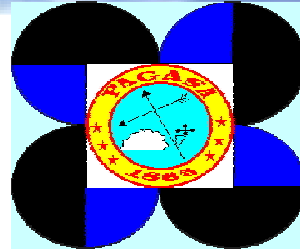


PAGASA and RCCCDF

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NMHS OF PHILIPPINES

Philippine
Atmospheric
Geophysical
Astronomical
Services
Administration



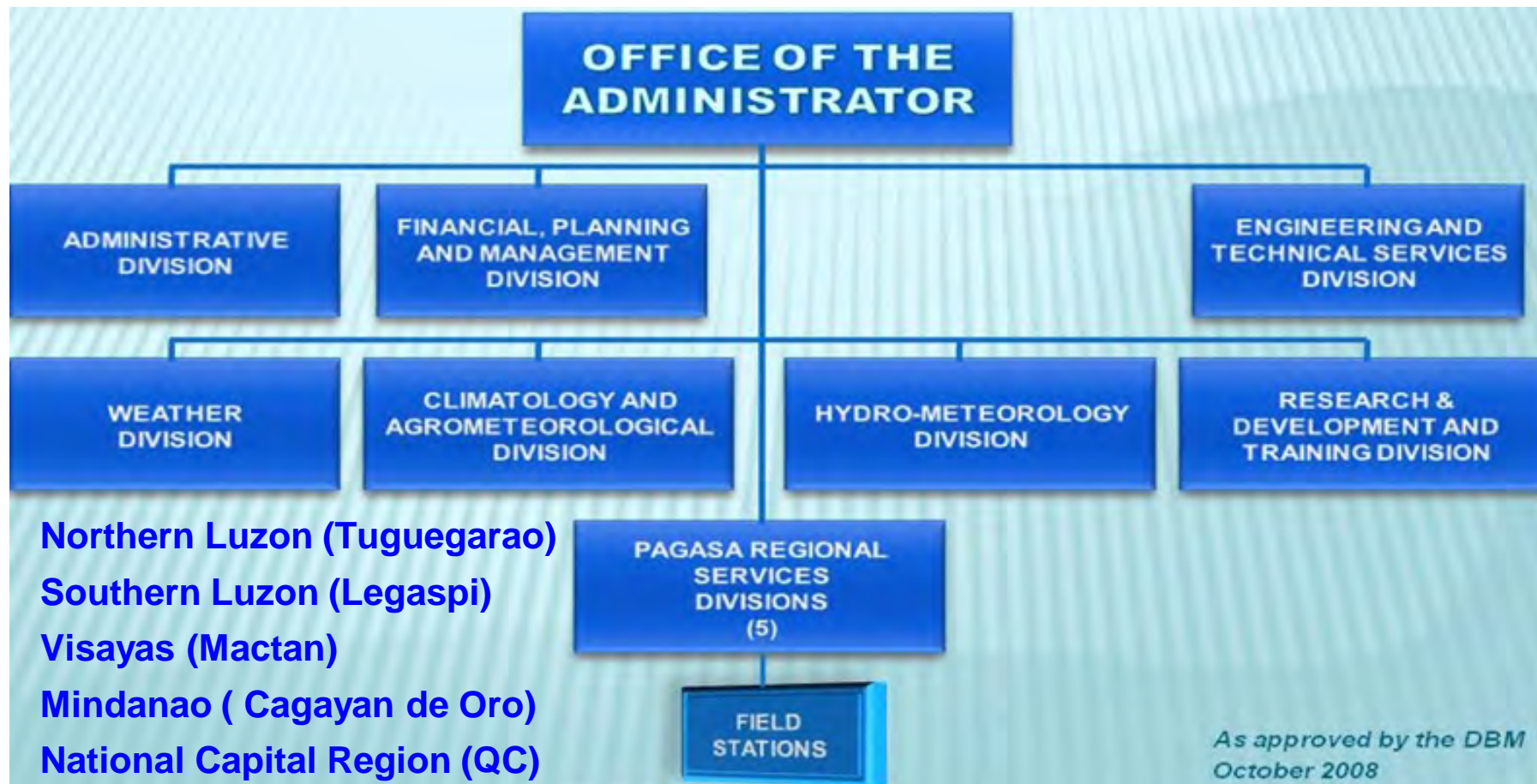
**The nation's
meteorological and
hydrometeorological
service and public
weather service provider**



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MISSION

To provide weather, flood, climate and astronomical products & services to promote the people's safety and well-being, and contribute to national development.

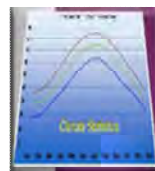


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CLIMATOLOGY AND AGROMETEOROLOGY DIVISION

CLIMATE
AND
AGROMET
DATA
SECTION
CADS

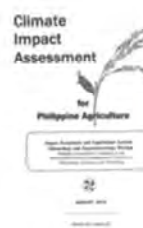
Data bank/CDBMS
Statistics
Weather certifications



CLIMATE
MONITORING
AND
PREDICTION
SECTION
CLIMPS

CLIMATE
IMPACT
ASSESS-
MENT
SECTION
CIAAS

IA for agriculture and
other sectors
generates climate
scenarios, SPI



FARM
WEATHER
SERVICES
SECTION
FWSS

Farm weather forecasts
& advisories
Regional agri-weather
TC warnings for
Agriculture



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CURRENT DEVELOPMENTS

Where we are

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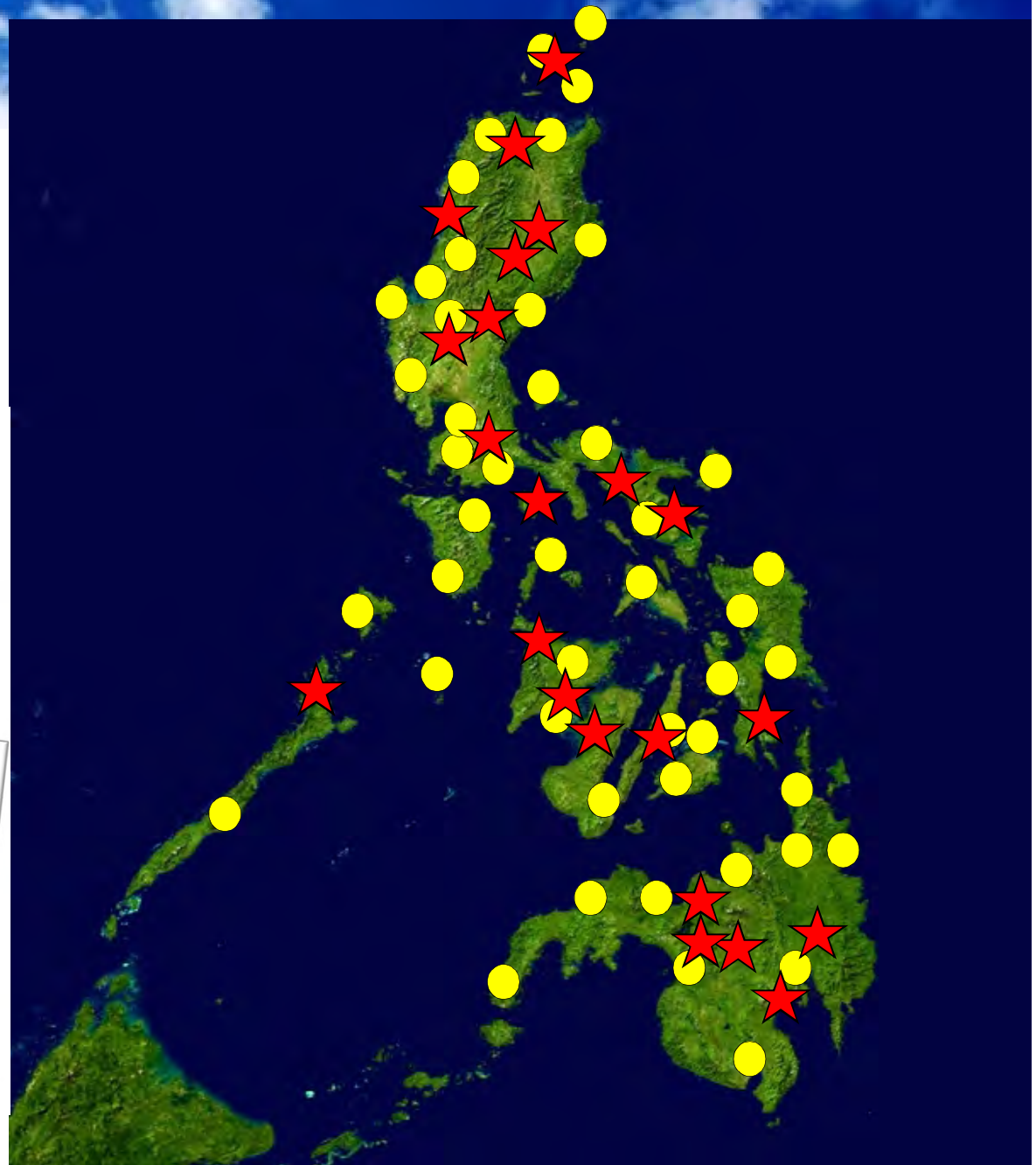
OBSERVATION NETWORK



58 Synoptic Stations









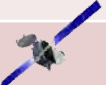


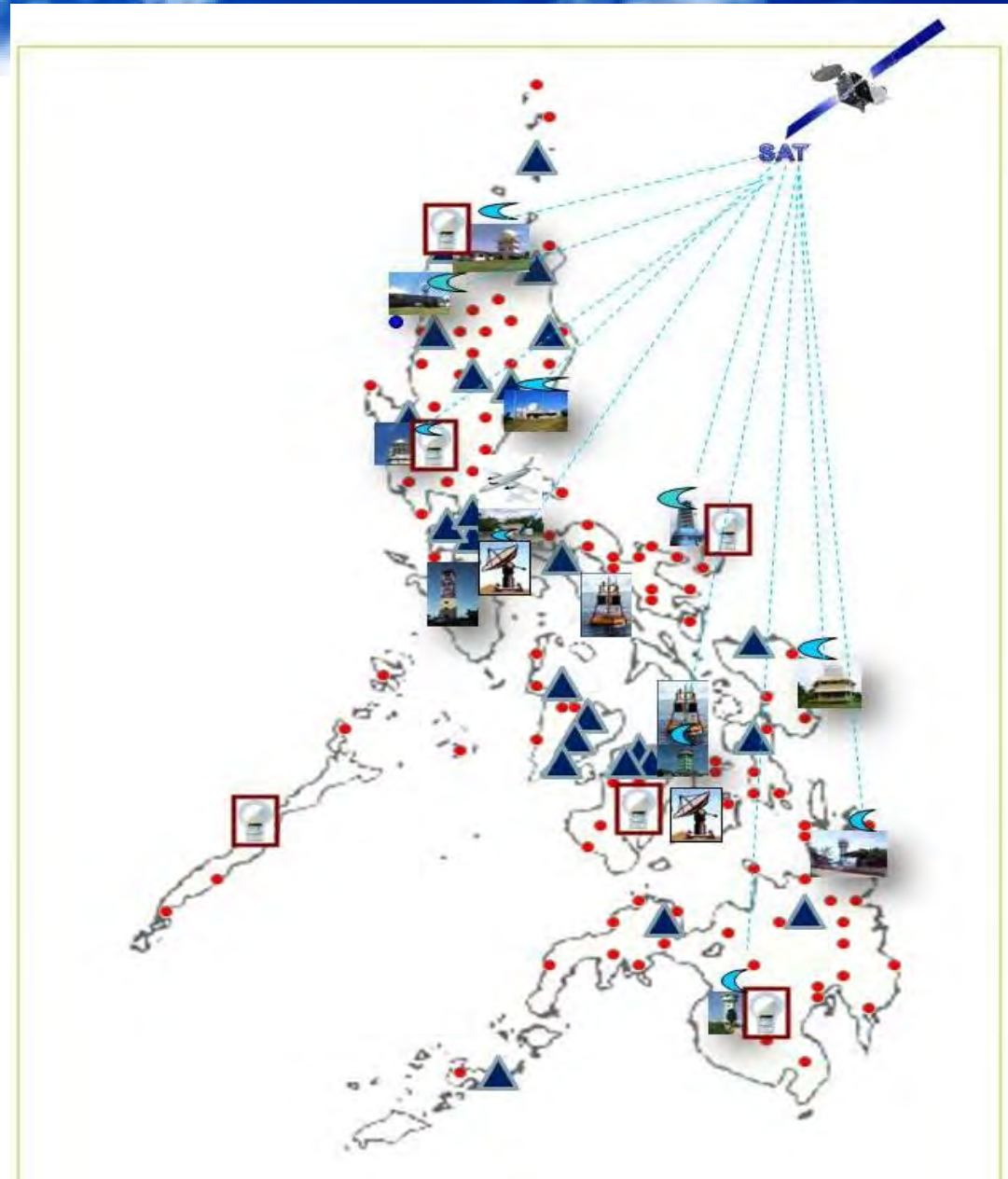
24 Agromet Stations



ACQUIRED TECHNOLOGIES

LEGEND:

	AWS (155)
	ARG (187)
	Radar (11)
	Upper Air Stations (6)
	Marine Buoy (2)
	MTSAT/WAFS/COMS/ FY2E
	AWOS (1)
	Wind Profiler (1)
	VSAT



PAGASA OPERATIONS

**24/7 WEATHER
OBSERVATION &
TRANSMISSION**

**PROCESSING AND
ANALYSES**

**FORECAST AND
WARNING
PREPARATION**

**DISSEMINATION
TO END-USERS**



**Field
Stations**



**Upper-air
Stations**



**Doppler
Radars**



**Wind
Profiler**



**Automatic
Stations**



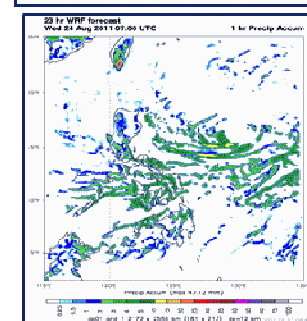
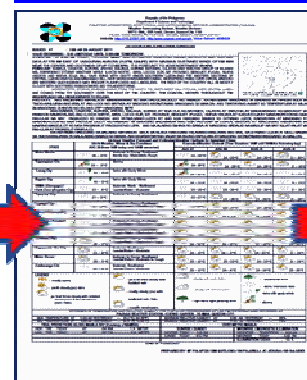
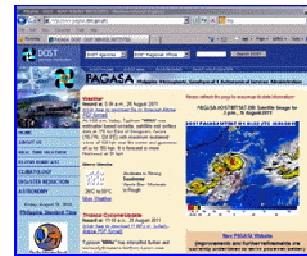
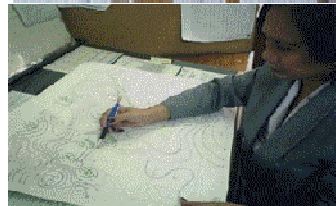
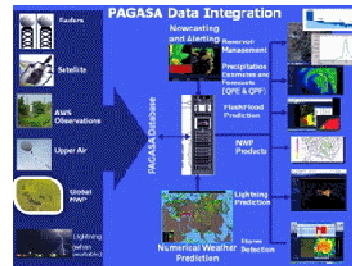
**Met.
Buoys**



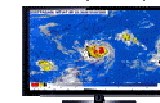
**Airport
Stations**



**Met.
Satellites**

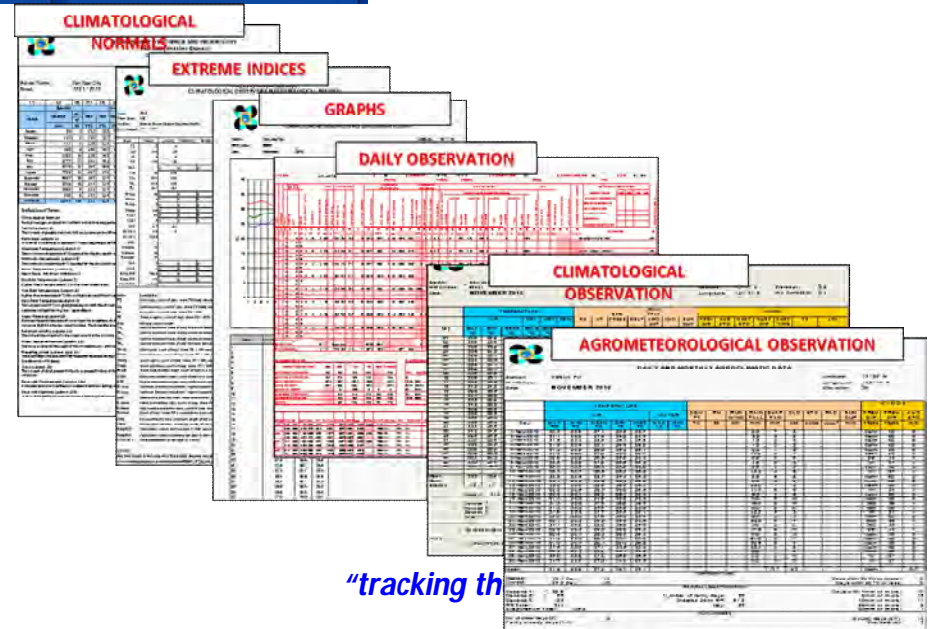
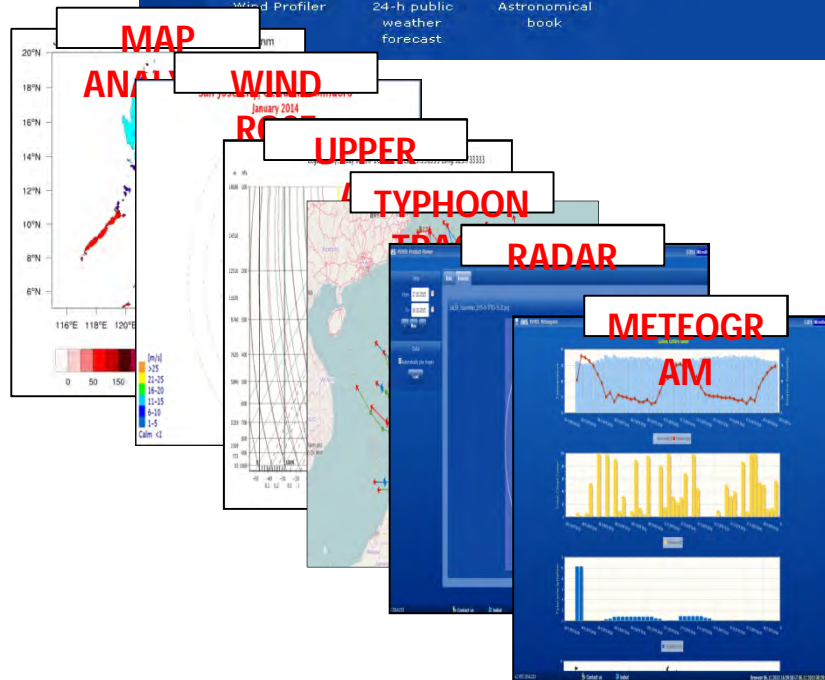


**NDRRMC
Media
Internet
SMS
AUTO FAX
DIAL-A-
WEATHER**



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PAGASA UNIFIED METEOROLOGICAL INFORMATION SYSTEM (PUMIS)



"tracking th

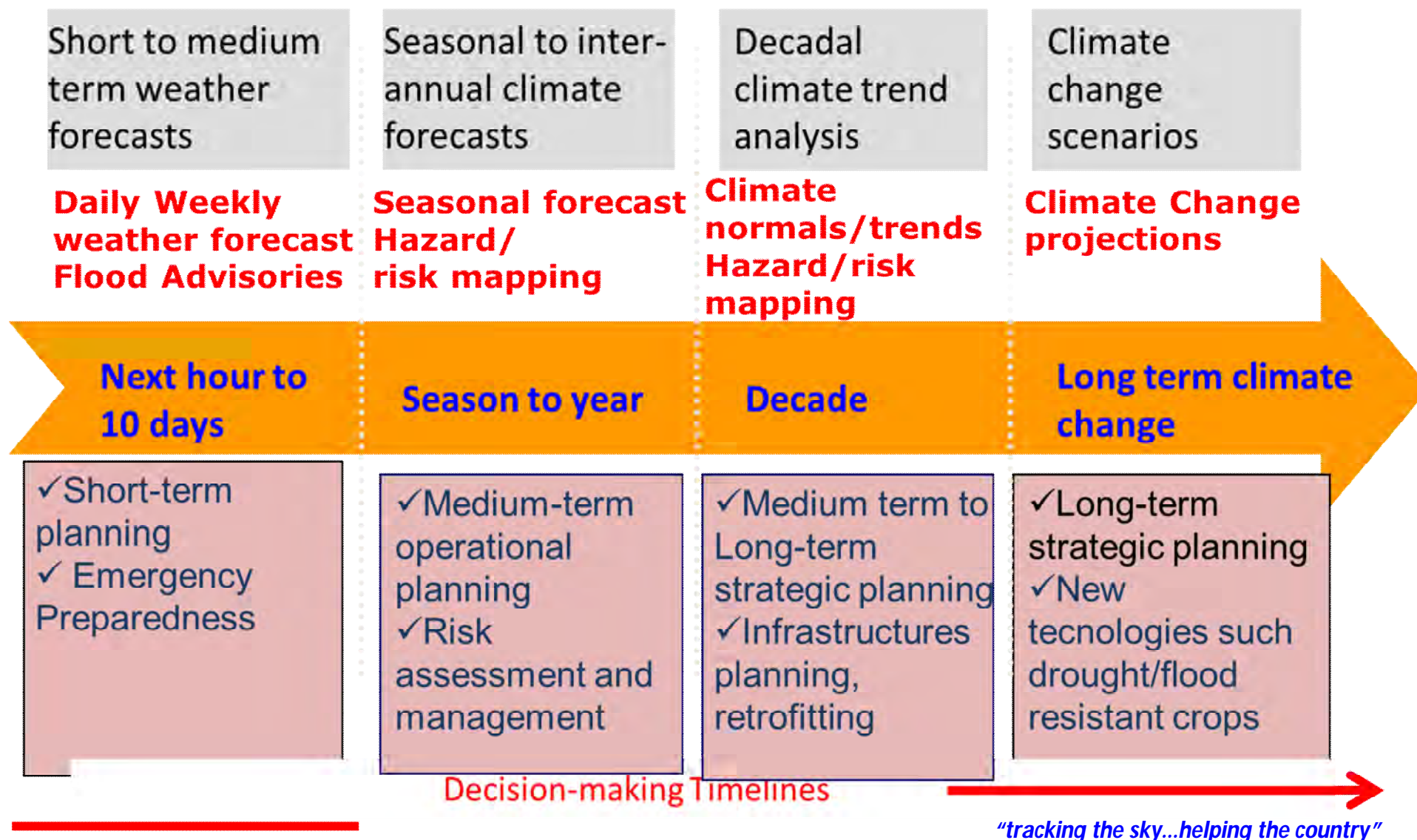


WHAT WE HAVE

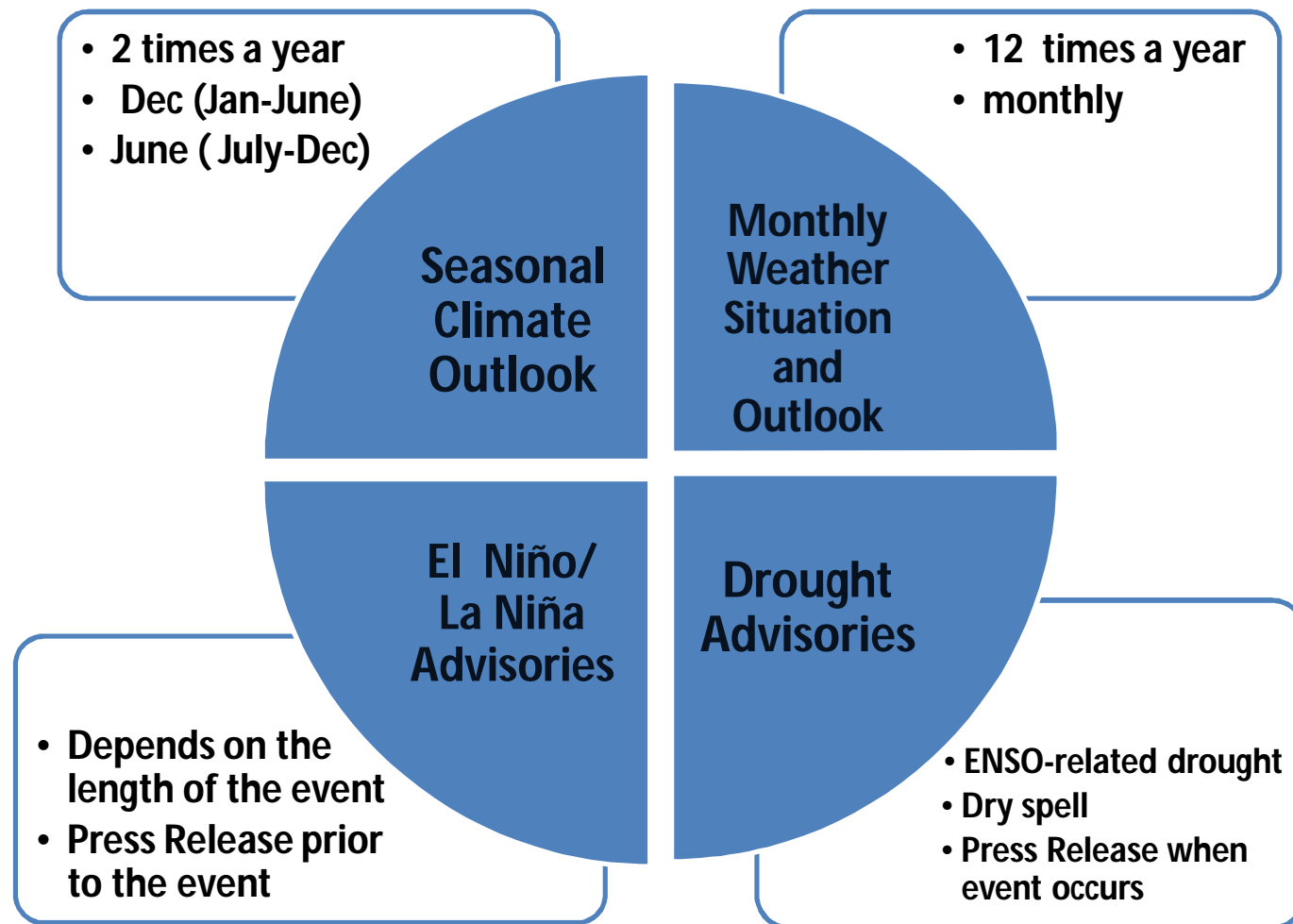
*CLIMATE INFORMATION
AND SERVICES*

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CLIMATE PRODUCTS FOR RISK MANAGEMENT AND ADAPTATION PLANNING



OUTLOOK AND ADVISORIES



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CLIMATE FORUM



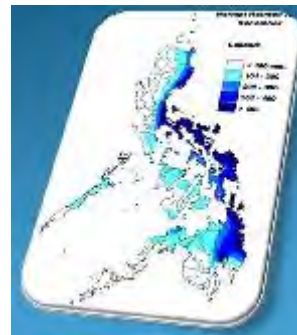
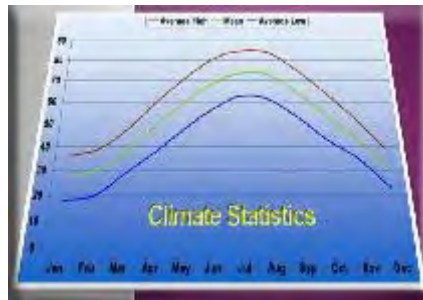
COMMUNICATING Climate Information FOR USER GROUPS

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STRENGTHENING SUPPORT TO CLIMATE CHANGE ADAPTATION MEASURES

➡ Rolling-out of Climate Change Projection Scenarios Information

➡ Seasonal Climate Forecast



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PAGASA's INITIATIVES ON CLIMATE CHANGE

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On-going Projects related to Climate Change

Project Name	Partners	Objective
<p>Philippine Climate Change Adaptation Project (PhilCCAP) Component 3: Enhanced Provision of Scientific Information for Climate Risk Management Funding Source: World Bank Timeline: 2011-2015 Extension: 2016-2017</p>	<p>DA DENR</p>	<p>Improve the access of end users, especially in the agriculture and natural resources sectors, to more reliable scientific information that would enable more rapid and accurate decision-making for climate risk management Enhance technical capacity of PAGASA in generation and dissemination of CI</p>
<p>Building Resilience to Climate Extremes following Typhoon Haiyan in the Philippines</p> <p>Funding Source: Department for International Development (DFID) United Kingdom Timeline: Jan 2015- June 2016</p>	<p>UK-Met Office</p>	<p>Provide decision-relevant information and tools about future Tropical Cyclone risks and Climate Extremes, and the associated impacts, to inform resilience building in the Philippines.</p> <p>Enhancing the capacity of PAGASA / key stakeholders to use new climate and weather information and tools.</p>

On-going Projects related to Climate Change

Project Name	Partners	Objective
<p>UN-FAO AMICAF</p> <p>Timeline: October 2011 to March 2015</p> <p>Funding Source: FAO</p>	<p>PAGASA, NEDA, PhilRice</p>	<p>The main objectives of the AMICAF project are to assist developing countries to address climate change impacts on agriculture and adaptation to improve food security through a comprehensive framework, and to bridge climate change impact assessment, food insecurity vulnerability analysis, and livelihood adaptation approaches.</p>
<p>Regional Climate Projections Consortium and Data Facility Data Facility in Asia and the Pacific</p> <p>Funding Source: Asian Development Bank (ADB)</p> <p>Timeline: 2015-2016</p>	<p>CSIRO IA: BMKG PAGASA Thai Met Dept</p>	<p>Develop a regional climate projections consortium for the provision of robust climate information and supporting services, develop and deliver decision-oriented climate data and projections, and enhance technical capacity of the implementing agencies.</p>

GENERATION OF CLIMATE PROJECTIONS

DYNAMICAL DOWNSCALING

SCENARIO	Regional Models(RCMs)	Number of Model	Resolution	Time slice	
AIB (Medium)	PRECIS From MDGF and results from SEACAM	6 Models HadCM3Q0 HadCM3Q3 HadCM3Q10 HadCM3Q11 HadCM3Q13 ECHAM5	25 km	2031-2059 (2050)	2070- 2099 (2100)
RCP 4.5 Low	PRECIS	1. Hadgem2-ES	25km	2036-2065 (2050)	2070- 2099 (2100)
	CCAM from the Vietnam study	6 Models CNRM-CM5 NorESM1-M ACCESS1.0 MPI-ESM-LR NorESM1-M GFDL-CM3	25 Km	2036-2065 (2050)	2070- 2099 (2100)
RCP 8.5 High	PRECIS	1. Hadgem2-ES	25 km	2036-2065 (2050)]	2070- 2099 (2100)
	RegCM4	1. Hadgem2-ES	25km	2036-2065 (2050)	2070- 2099 (2100)
	HadGEM3-RA	1. Hadgem2-ES 2. MRI 3. CNRN	12KM	2036-2065 (2050)	2070- 2099 (2100)
	CCAM	6 Models CNRM-CM5 NorESM1-M ACCESS1.0 MPI-ESM-LR NorESM1-M GFDL-CM3	25 Km	2036-2065 (2050)	2036-2065 (2050)

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GENERATION OF CLIMATE PROJECTIONS

UN-FAO AMICAF STATISTICAL DOWNSCALING

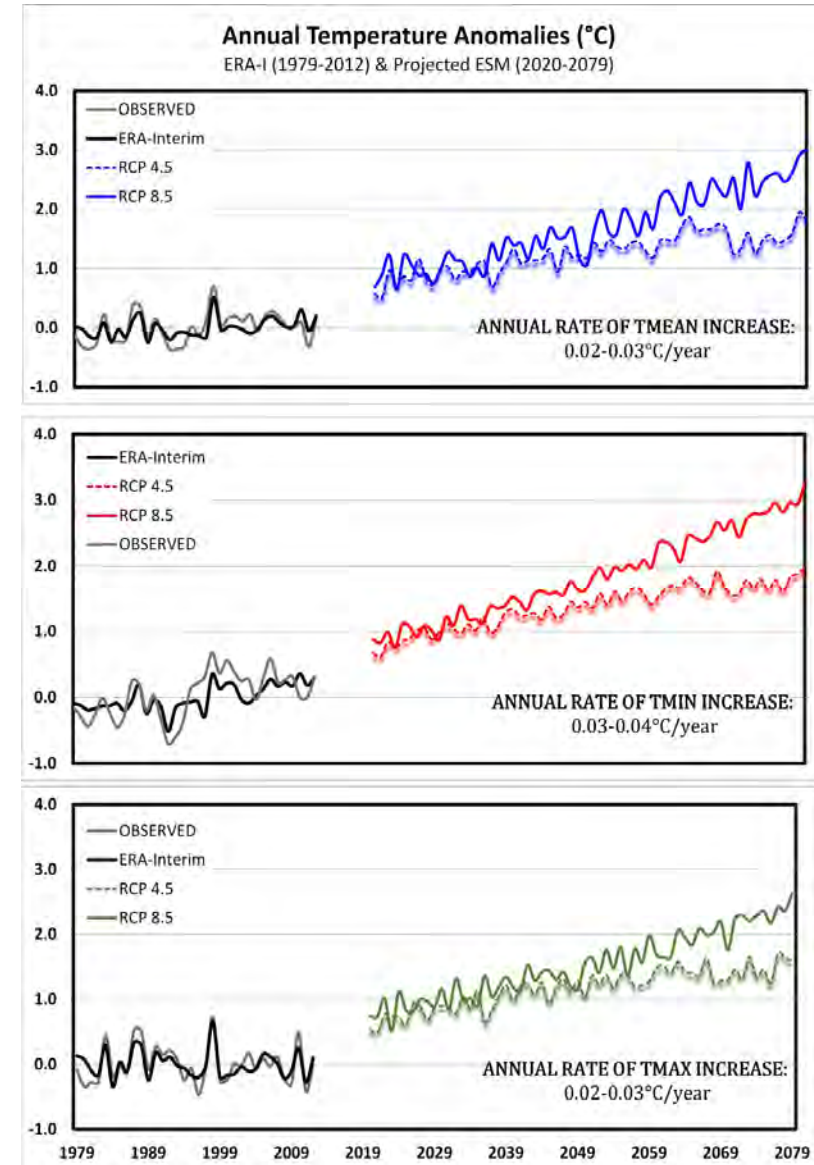
This project used six ESMs:

- | | |
|------------|--------------|
| a) CanESM2 | d. IPSL-CM5 |
| b) CNRM5 | e. GFDL-ESM2 |
| c) MPI-ESM | f. MIROC-ESM |

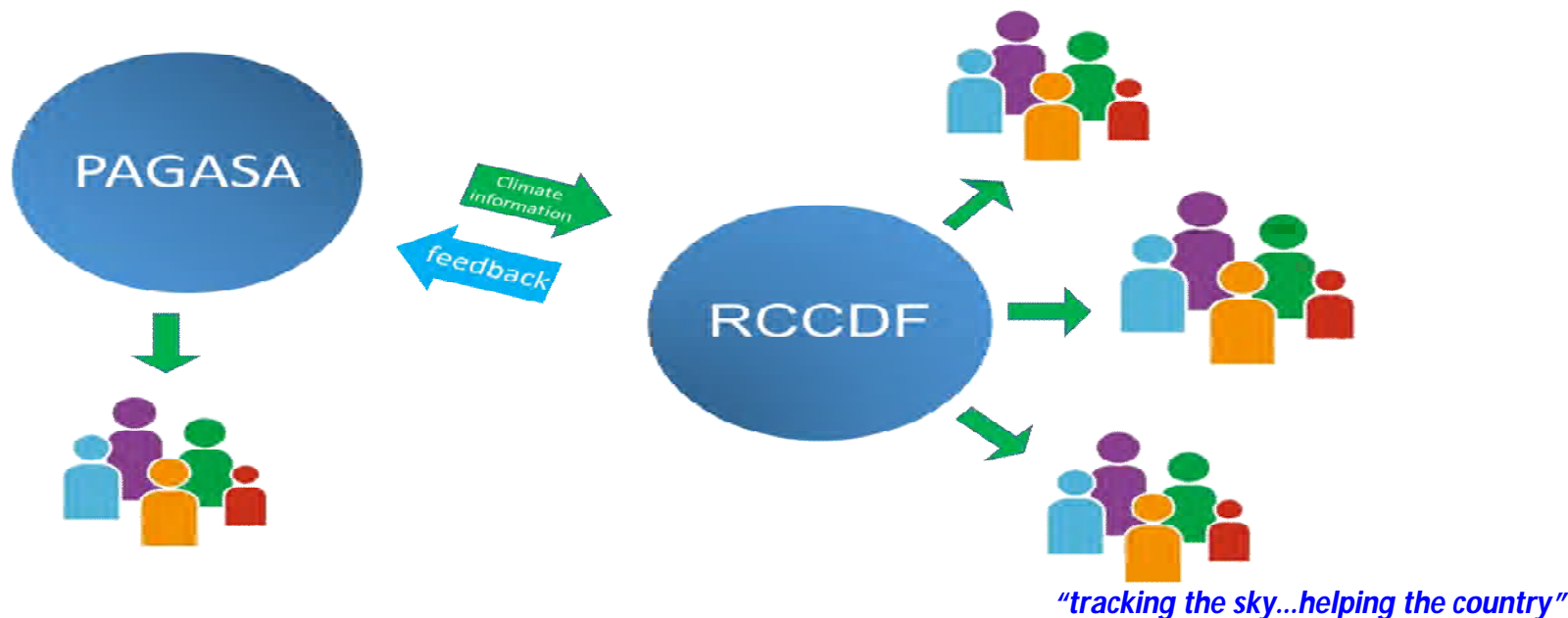
Two RCPs were used:

- RCP 4.5 – radiative forcing, 4.5 Wm^2 post 2100; stabilization without overshoot
- RCP 8.5 - radiative forcing, 8.5 Wm^2 in 2100; rising pathway

Projection Time Periods: (2020-2049, 2050-2079)



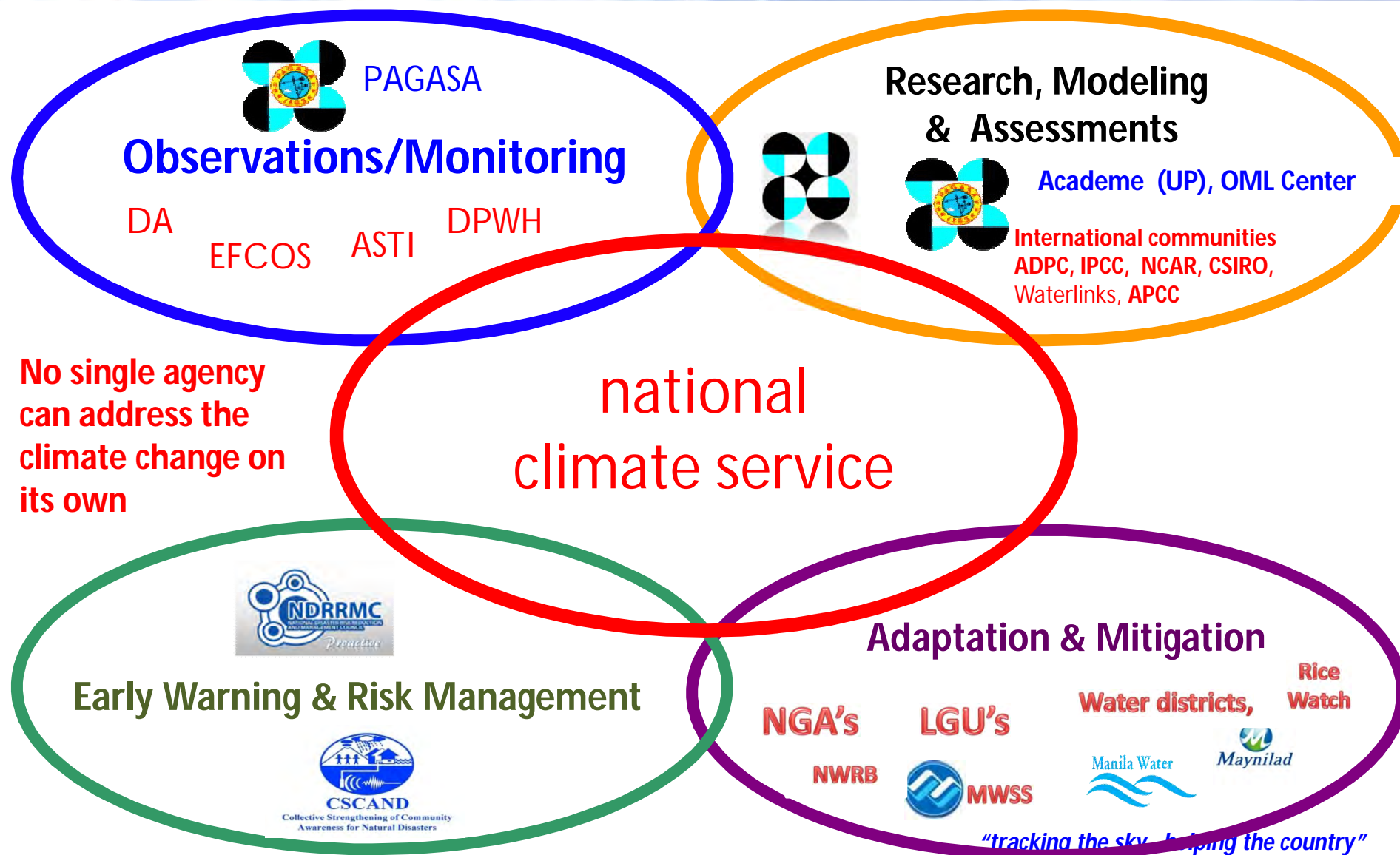
ROLE OF PAGASA TO THE RCCCDF



BENEFITS OF THE RCCDF TO PAGASA?

1. Build capacity to interpret climate information and help to mainstream in local planning processes.
2. Improve the availability of climate information and make them easier to find through the portal, with knowledge products disaggregated based on user needs.
3. Improve dissemination of information of future climate projection.
4. Develop guidance on how to translate climate projections into impacts (i.e. hazard maps, building/infra)

THE NATIONAL CLIMATE SERVICE PARTNERSHIP





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LIKE US ON FACEBOOK

THANK YOU VERY MUCH....

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