

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City, Metro Manila

FIFTEENTH CONGRESS
Third Regular Session



COMMITTEE REPORT NO. 2389

Submitted by the Committee on Science and Technology and the Committee on Appropriations
on 06 SEP 2012;

Re: House Bill No. 5545

Recommending its approval in substitution of House Bill Nos. 517, 1575, 1877, 2558 and House
Resolution Nos. 143, 206 and 590

Sponsors: Representatives Julio A. Ledesma IV and Joseph Emilio Aguinaldo Abaya

Mr. Speaker:

The Committee on Science and Technology and the Committee on Appropriations to which were
referred House Bill No. 517 introduced by Rep. Teodoro, entitled:

**"AN ACT PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE
ATMOSPHERIC, GEOPHYSICAL AND ASTRONOMICAL SERVICE
ADMINISTRATION, PROVIDING FUNDS THEREFOR AND FOR OTHER
PURPOSES"**

House Bill No. 1575 introduced by Reps. Macapagal-Arroyo D., and Macapagal-Arroyo G.,
entitled:

**"AN ACT PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE
ATMOSPHERIC, GEOPHYSICAL AND ASTRONOMICAL SERVICES
ADMINISTRATION (PAGASA), PROVIDING FUNDS THEREFOR AND FOR OTHER
PURPOSES"**

House Bill 1877 introduced by Rep. Palmones, entitled:

**"AN ACT PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE
ATMOSPHERIC, GEOPHYSICAL, AND ASTRONOMICAL SERVICES
ADMINISTRATION (PAGASA) PROVIDING FUNDS THEREFOR AND FOR OTHER
PURPOSES"**

House Bill No. 2558 introduced by Rep. Ejercito, entitled:

"AN ACT PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE ATMOSPHERIC, GEOPHYSICAL AND ASTRONOMICAL SERVICES ADMINISTRATION, PROVIDING FUNDS THEREFOR AND FOR OTHER PURPOSES"

House Resolution No. 143 introduced by Reps. Rodriguez R. and Rodriguez M. entitled:

"A RESOLUTION URGING THE COMMITTEE ON SCIENCE AND TECHNOLOGY TO CONDUCT AN INQUIRY, IN AID OF LEGISLATION ON THE CURRET STATUS OF THE EQUIPMENT OF PHILIPPINE ATMOSPHERIC GEOPHYSICAL AND ASTRONOMICAL SERVICES (PAGASA) AND THE PERSONNEL CAPACITY AND WORKING CONDITIONS THERE"

House Resolution No 206 introduced by Rep. Villar entitled:

"RESOLUTION DIRECTING THE APPROPRIATE COMMITTEES TO CONDUCT AN INQUIRY, IN AID OF LEGISLATION, ON THE APPARENT "BRAIN DRAIN" PHENOMENON BESETTING THE PHILIPPINE ATMOSPHERIC GEOPHYSICAL AND ASTRONOMICAL SERVICES ADMINISTRATION (PAGASA) AND ON ITS OUTDATED EQUIPMENT, IN ORDER TO HAVE A MORE UPDATED AND ACCURATE WEATHER FORECASTING"

House Resolution No. 590 introduced by Rep. Suarez entitled:

"RESOLUTION CALLING FOR AN INVESTIGATION IN AID OF LEGISLATION BY THE APPROPRIATE HOUSE COMMITTEE REQUIRING THE DEPARTMENT OF SCIENCE AND TECHNOLOGY (DOST) AND THE DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS (DOTC) TO DEVELOP A TECHNOLOGY-BASED AND FINANCIALLY SELF-SUFFICIENT DATA INFORMATION STATION FOR THE PHILIPPINES' TYPHOON PREPAREDNESS PLANS"

have considered the same and recommends that the attached House Bill No. 3546, entitled:

"AN ACT PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE ATMOSPHERIC, GEOPHYSICAL AND ASTRONOMICAL SERVICES ADMINISTRATION (PAGASA), PROVIDING FUNDS THEREFOR AND FOR OTHER PURPOSES"

be approved in substitution of House Bill Nos. 517, 1575, 1877 and 2558 and House Resolution Nos. 143, 206 and 590 with Reps. Teodoro, Macapagal-Arroyo, D., Macapagal Arroyo, G., Palmones, Ejercito, Rodriguez, R., Rodriguez, M., Villar, Suarez, Ledesma, Piamonte, Jr., Cajayon, Yap, Sarmiento, C., Cojuangco, K., Catamco, Angara, Calimbas-Villarosa, Bagasina, Aumentado, Cabaluna, Climaco, Lopus, Herrera-Dy, Guanlao, Yap S., Syjuco, Kho, Lacson-Noel, Villafuerte, Sarmiento, M., Del Mar, Lagman and Gonzales, N., Eriguel, Tinga, Sambar, Celeste, Padilla, Arnaiz, Palatino and Golez as authors thereof.

Respectfully submitted:



JULIO A. LEDESMA IV
Chairman
Committee on Science & Technology



JOSEPH EMILIO AGUINALDO ABAYA
Chairman
Committee on Appropriations

THE HONORABLE CHAIRMAN
HOUSE OF REPRESENTATIVES
QUEZON CITY

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City

FIFTEENTH CONGRESS
Third Regular Session

House Bill No. 3546

(Substitute Bill to HB Nos. 517, 1575, 1877, 2558 & HR Nos. 143, 206 & 590)

Introduced by Reps. Marcelino R. Teodoro, Diosdado Macapagal Arroyo, Gloria Macapagal Arroyo, Angelo B. Palmones, Joseph Victor Gomez Ejercito, Rufus B. Rodriguez, Maximo B. Rodriguez, Jr., Mark A. Villar, Danilo E. Suarez, Julio A. Ledesma IV, Mariano U. Piamonte, Jr., Mary Mitzi "Mitch" Cajayon, Arthur C. Yap, Cesar V. Sarmiento, Kimi S. Cojuangco, Nancy A. Catamco, Juan Edgardo M. Angara, Ma. Amelita Calimbas-Villarosa, Catalina C. Bagasina, Erico B. Aumentado, Salvador P. Cabaluna, III, Maria Isabelle "Beng" G. Climaco, Jeci A. Lapus, Bernadette R. Herrera-Dy, Agapito H. Guanlao, Susan A. Yap, Augusto "Boboy" Syjuco, Antonio T. Kho, Josephine Veronique R. Lacson-Noel, Luis R. Villafuerte, Mel Senen S. Sarmiento, Rachel Marguerite B. Del Mar, Edcel C. Lagman, Neptali M. Gonzales, II, Eufranio C. Eriguel, Sigfrido R. Tinga, Mark Aeron H. Sambar, Jesus F. "Boying" Celeste, Carlos M. Padilla, George P. Amaiz, Raymond V. Palatino and Roilo S. Golez

AN ACT

PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE
ATMOSPHERIC, GEOPHYSICAL AND ASTRONOMICAL
SERVICES ADMINISTRATION (PAGASA), PROVIDING FUNDS
THEREFOR AND FOR OTHER PURPOSES

*Be it enacted by the Senate and the House of Representatives of the
Philippines in Congress assembled:*

1
2 **SECTION 1. Title.** – This Act shall be known as the "The PAGASA
3 **Modernization Act of 2012.**"

4
5 **SEC. 2. Declaration of Policy.** – It is hereby declared to be the policy of
6 the State to utilize scientific knowledge and information as an effective instrument
7 to ensure the safety, well being and economic security of the people; to promote
8 national progress and to contribute to regional socioeconomic development
9 through various applications of meteorology, geophysics and space sciences.
10 Towards this end, the State shall undertake the modernization of the Philippine

1 Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
2 to elevate its technological and operational capacity to effectively and efficiently
3 perform its mandate.
4

5 **SEC. 3. Objectives.** – Pursuant to the foregoing policy, the PAGASA
6 modernization program shall be implemented in accordance with the following
7 objectives:

8 A. To upgrade physical resources and operational
9 techniques through acquisition of state-of-the-art instruments,
10 equipment and facilities to enhance current capabilities in providing
11 timely and reliable forecasting, warning services for the general
12 public, and information for agriculture, transportation, and other
13 industries across the country;.

14
15 B. To raise the research and development capability and
16 human resource development, adopting a rationalized and
17 integrated approach, with focus on improvement of operations for
18 specialized services and cost recovery;

19
20 C. To develop mechanisms for integrating disaster
21 management and socioeconomic development planning at the
22 national and local levels;

23
24 D. To establish regional weather service centers in
25 strategic areas in the country to broaden the agency's bases for
26 delivery of service to the countryside;

27
28 E. To cultivate greater awareness by the public of
29 weather systems, the progress of typhoons, climatic changes, and
30 other related information through the educational projects and
31 programs; and

32
33 F. To develop a technology-based and financially self-sufficient
34 data center which will serve as the central information station for real time
35 weather updates available to every individual and for the Philippines'
36 typhoon preparedness plan.

37
38 **SEC. 4. Manpower Training.** – The three (3) year modernization plan
39 shall include a manpower training component that shall include undergraduate
40 and post-graduate degree training sub-components. Scholarships shall be
41 provided for undergraduate and graduate degree trainings. The University of the
42 Philippines Los Banos is mandated, along with the Bicol University, the Central
43 Luzon State University, the Mariano Marcos State University, the Pamantasan ng
44 Maynila, and the Visayas State University to offer an undergraduate degree
45 program in Meteorology within three (3) years from the enactment of this Act.

1 Other state and private universities and colleges may likewise offer a Bachelor of
2 Science in Meteorology.

3
4 **SEC. 5. Period of Implementation.** – The modernization program under
5 this Act shall be implemented over a period of three (3) years: *Provided,*
6 *however,* that payments for amortization of outstanding multi-year contract
7 obligations incurred under this Act may extend beyond this period.

8
9 **SEC. 6. Formulation and Submission of PAGASA Modernization**
10 **Program.** – The Secretary of the Department of Science and Technology
11 (DOST) and the Director of PAGASA, in coordination with the Secretary of the
12 Department of Budget and Management (DBM) and the Director-General of the
13 National Economic and Development Authority (NEDA), shall be responsible for
14 formulating the PAGASA Modernization Program based on the policy objectives
15 provided in this Act.

16
17 Within ninety (90) days from the effectivity of this Act, the Secretary of the
18 DOST shall submit to the President the PAGASA Modernization Program for final
19 approval.

20
21 **SEC. 7. Appropriations.** The amount necessary to carry out the
22 implementation of this Act shall be charged against the current fiscal year
23 appropriations of the Department of Science and Technology-Philippine
24 Atmospheric, Geophysical and Astronomical Services Administration. Thereafter,
25 the amount needed for the continued implementation of the modernization
26 program shall be included in the Annual General Appropriations Act.

27
28 The abovestated amount maybe augmented by grants, bequests,
29 contributions and donations whether from local or foreign sources: *Provided,*
30 *That* acceptance of grants, bequests, contributions and donations from foreign
31 governments shall be subject to the approval of the President upon the
32 recommendations of the Secretaries of the Department of Science and
33 Technology and Department of Foreign Affairs.

34
35 **SEC. 8. Progress Report.** –The Director of PAGASA shall prepare an
36 annual report on the status of the implementation of the PAGASA Modernization
37 Program. The annual report shall be submitted, through the Secretary of the
38 DOST, to the President and to the Chairpersons of the Committees on Science
39 and Technology of the Senate and the House of Representatives.

40
41 **SEC. 9. Cost Recovery Measures.** – The PAGASA, with the approval of
42 the DOST Secretary, shall implement a sustainable cost recovery program that
43 will allow it to earn revenue from its issuance of specialized weather information,
44 certifications, and scientific and technical publications for which the necessary
45 fees can be charged: *Provided,* That, the fees collected shall be deposited as
46 income of the General Fund; *Provided, Further,* that no fees shall be charged on

1 the issuance of regular and special reports to the general public that affect
2 national safety, weather, and economy, and such other relevant data.

3
4 **SEC. 10. Separability Clause.** – If any provision or part of this Act is
5 declared invalid or unconstitutional, other provisions hereof which are not
6 affected thereby shall continue to be in full force and effect.

7
8 **SEC. 11. Repealing Clause.** – All laws, orders, proclamations, rules and
9 regulations, or part thereof, which are inconsistent with any provision of this Act
10 are hereby repealed or modified accordingly.

11
12 **SEC. 12. Effectivity Clause.** –This Act shall take effect fifteen (15) days
13 after its publication in the Official Gazette or in at least two (2) newspapers of
14 general circulation.

15
16 *Approved,*

FACT SHEET

House Bill Nos. 517, 1575, 1877, 2558 & HR Nos. 143, 206 & 590

AN ACT PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE ATMOSPHERIC, GEOPHYSICAL AND ASTRONOMICAL SERVICES ADMINISTRATION (PAGASA)

Introduced by Reps. Marcelino R. Teodoro, Diosdado Macapagal Arroyo, Gloria Macapagal Arroyo, Angelo B. Palmones, Joseph Victor Gomez Ejercito, Rufus B. Rodriguez, Maximo B. Rodriguez Jr., Mark A. Villar, and Danilo E. Suarez

Committee Referral:	Committee on Science & Technology Committee on Appropriations
Committee Chairpersons:	Rep. Julio A. Ledesma IV Rep. Joseph Emilio Aguinaldo Abaya

OBJECTIVES:

- To upgrade physical resources and operational techniques through the acquisition of state-of-the art instruments, equipment and facilities in providing timely and reliable forecasting and warning service.
- To raise the research and development capability of human resources development by adopting a rationalized and integrated approach, with focus on improving the operations for cost recovery on specialized services.
- To serve as a technology-based financially stable data center thus, becoming the central information station made available to every Filipino regarding weather updates.

KEY PROVISIONS:

- Appropriates funds to support the implementation of the modernization program chargeable against the current fiscal year appropriations of the Department of Science and Technology-Philippine Atmospheric, Geophysical and Astronomical Services Administration. Thereafter, the amount needed for the continued implementation of the modernization program shall be included in the Annual General Appropriations Act.
- The amount maybe augmented by grants, bequests, contributions and donations whether from local or foreign sources: *Provided, That* acceptance of grants, bequests, contributions and donations from foreign governments shall be subject to the approval of the President upon the recommendations of the Secretaries of the Department of Science and Technology and Department of Foreign Affairs.

- Mandates the University of the Philippines Los Baños, Bicol University, Central Luzon State University, Mariano Marcos State University, Pamantasan ng Maynila, and the Visayas State University to offer undergraduate degree in Meteorology as well as other state, private universities and colleges within three (3) years from enactment of this Act.
- Implements a sustainable cost recovery program allowing PAGASA to earn revenue from fees to be collected from the issuance of specialized weather information, certifications, scientific and technical publications.

RELATED LAW:

General Appropriations Act (GAA)

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City, Metro Manila

FIFTEENTH CONGRESS
First Regular Session

House Bill No. 517

INTRODUCED BY HON. MARCELINO "MARCY" R. TEODORO

EXPLANATORY NOTE

The Philippines is located in the western rim of the Pacific Ocean, an active portion of the earth characterized by an encircling belt of active volcanoes and fault lines. As such, it has always been subjected to constant disasters and calamities like earthquakes and typhoons.

Specifically, an average of twenty (20) typhoons devastate the Philippines annually affecting millions of Filipinos and leaving behind injuries and deaths, as well as damage to properties amounting to billions of pesos.

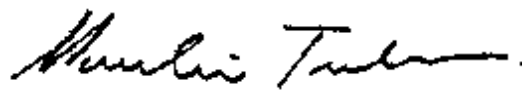
Said condition prevailing in the Philippines requires a dependable national weather service to ensure utmost public safety and well-being of the country. Further, it must be stressed that ours is an agricultural country. It is extremely necessary that we consider farmers' welfare by giving them precise weather information to protect themselves and their crops.

Lately, however, there have been incidences of apparently imprecise information given to the public by Philippine Atmospheric, Geophysical and Astronomical Services Administration that places in great danger the safety and lives of our citizens and cause considerable damage to property.

While, forecasting may be viewed an inexact science despite advances in technology, still, there is a need to modernize the country's weather forecasting system to, at least, minimize damages caused by typhoons and other weather disturbances.

This measure seeks, among others, to establish a modern weather and flood forecasting, and climate prediction, monitoring and warning system; to upgrade the disaster management and emergency preparedness capability of our country; and to improve physical resources and operational techniques through the acquisition of state-of-the-art instruments, equipment and facilities in providing timely and reliable forecasting and warning service.

Hence, in view of the foregoing, immediate passage of this bill is earnestly sought.


MARCELINO "MARCY" R. TEODORO
Representative, 1st District
Marikina City

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City, Metro Manila

FIFTEENTH CONGRESS
First Regular Session

House Bill No. 517

INTRODUCED BY HON. MARCELINO "MARCY" R. TEODORO

AN ACT
PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE
ATMOSPHERIC GEOPHYSICAL AND ASTRONOMICAL SERVICE
ADMINISTRATION, PROVIDING FUNDS THEREFOR AND FOR OTHER
PURPOSES

Be it enacted by the Senate and the House of Representatives of the Philippines in Congress assembled:

SECTION 1. Title - this Act shall be known as the "PAGASA Modernization Act."

SEC. 2. Declaration of Policy. It is hereby declared the policy of the State to improve weather forecasting in the country and to ensure its accuracy and timely dissemination to the public. Towards this end, the State shall undertake the modernization of the national weather service to ensure the safety and well-being of the people and to ensure national progress. In the implementation of the foregoing, the State shall, in accordance with the provision of this Act:

- a. Undertake measure to improve on the current state of weather forecasting and warning system in the country;
- b. Cultivate greater awareness by the public of weather through the educational project and programs in storm signals, the development of typhoons, climatic changes, and other related information;
- c. Upgrade, modernize and procure state-of-the-art weather and geophysical equipment, instruments and facilities, and the application of new technologies to improve our capabilities in providing timely and reliable forecasting, warning services, and information for agriculture, transportation and other industries across the country.

SEC. 3. Components of Modernization. To realize improved and enhanced weather and flood forecasting, climate monitoring/prediction and astronomical and associated service, the Philippine Atmospheric Geophysical and Astronomical Service Administration (PAGASA) shall undertake a six (6) year modernization program. Towards this end, the PAGASA shall adopt the following four pronged principal approach, in the order of priority:

- a. Establishment of regional weather service centers strategic areas in the country to broaden the agency's bases for delivery of service to the countryside;

b. Modernization of physical resources and operational techniques through acquisition of state-of-the-art instruments, equipment and facilities, with emphasis on weather and flood monitoring and warning system and agro-meteorological observation system to strengthen services for agriculture;

c. Intensification of human resources development to keep at pace with rapid scientific and technological advances.

d. Upgrading of research and development capability through a more rationalized and totally integrated approach and identified activities, with focus on improvement of operations, as well as the development of specialized services for cost recovery.

SEC. 4. Program Description. The modernization program under this Act shall principally be a re-tooling of the PAGASA with modern equipment and facilities, including but not limited to advance observational and surveillance system for meteorological and hydrological elements, whenever possible satellite-based communications networks, supercomputers for data processing analysis and forecasting, and computer based workstations for generating increased volume for detailed information. It shall also establish an efficient human resources development program that emphasizes on professional education, training and research.

SEC. 5. PAGASA Modernization Oversight Committee. There is hereby created a Modernization Oversight Committee composed of the Secretary of Science and Technology, the Director of the PAGASA, the Chairperson of the Congressional Committee on Science and Technology, and a representatives from the Office of the President, through the Project Monitoring Staff of the National Economic and Development Authority (NEDA), who shall oversee the implementation of the modernization program provided under this Act. The Committee shall be chaired by the Secretary of the Department of Science and Technology (DOST).

SEC. 6. PAGASA Modernization Fund. There is hereby created the PAGASA modernization Fund which shall be used exclusively to fund the modernization program which shall include whatever funds may be made available from, but not limited to, the following sources:

a. A portion of the net income of the Philippine Amusement and Gaming Corporation (PAGCOR) to be taken from the fifty percent (50%) share of the National Government.

b. Loans, grants, bequests, and donations whether from local or foreign sources. The Secretary of the DOST with the approval of the National Economic and Development Authority (NEDA) and subsequently the Department of Finance is hereby granted the authority to enter into loan agreements with foreign financial institutions.

SEC. 7. Cost Recovery Measures. The PAGASA, with the approval of the DOST Secretary, shall implement a sustainable cost recovery program that will allow it to earn revenue from its issuance of specialized weather information, certification, and scientific and technical publications for which the necessary fees can be charged; Provided that one hundred percent (100%) of the collected shall be retained by PAGASA for the next twenty (20) years starting six (6) years after the effectivity of this Act, for the operation and maintenance of the equipment acquired during the modernization program; Provided, however, that no fees shall be charge on the issuance of regular and special reports to the

general public that affect national safety , weather, and economy, and such other relevant data:

SEC. 8. Progress Report. The Secretary of the DOST and the Director of the PAGASA Committees on Science and Technology a quarterly reports on the progress of the modernization program for the duration of its implementation.

SEC.9. Repealing Clause. All laws, orders, proclamations, rules and regulations, or part thereof, which are inconsistent with any provision of this Act are hereby repealed or modified accordingly.

SEC.10 Effectivity. This Act shall take effect fifteen (15) days following its publication in the Official gazette or in at least two (2) newspapers of general circulation,

Approved.

**Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City**

**FIFTEENTH CONGRESS
First Regular Session**

House Bill No. 1575

**Introduced by Representatives
DIOSDADO MACAPAGAL ARROYO and GLORIA MACAPAGAL ARROYO**

**AN ACT
PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE
ATMOSPHERIC, GEOPHYSICAL AND ASTRONOMICAL
SERVICES ADMINISTRATION (PAGASA), PROVIDING FUNDS
THEREFOR AND FOR OTHER PURPOSES**

EXPLANATORY NOTE

The onslaught of several natural disasters in recent years has strengthened the calls to modernize the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) in order to enhance its capability in providing services to protect the people and the environment from perennial natural hazards. Last year alone, typhoons *Ondoy* and *Pepeng* devastated the Philippines leaving most parts of the country submerged for months. Some quarters blamed PAGASA's lack of foresight and outmoded equipment and facilities as the culprit. But just this recently, the second typhoon which reached Philippine shores, typhoon *Basyang*, made another mockery of PAGASA's capabilities when it directly hit Metro Manila, a far cry from the weather station's bold forecast that it will not, in any way, affect NCR. All of these show that no matter how bright and intellectual personnel we put in PAGASA, as long as they do not have advanced and cutting-edge equipment to get the job done, our people and their properties will continue to suffer from natural disasters.

Several significant advances in the technologies used in monitoring meteorological and geological developments however have proven useful tools in

mitigating the perils associated with natural disasters. Accordingly, it would be in everyone's best interest to equip PAGASA with these modern day breakthroughs so that we can all become better prepared in dealing with natural calamities.

In view of the foregoing, the immediate passage of this bill is earnestly sought.


DIOSDADO MACAPAGAL ARROYO
Second District, Camarines Sur


GLORIA MACAPAGAL ARROYO
Second District, Pampanga

**Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City**

**FIFTEENTH CONGRESS
First Regular Session**

House Bill No. 1575

**Introduced by Representatives
DIOSDADO MACAPAGAL ARROYO and GLORIA MACAPAGAL ARROYO**

**AN ACT
PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE
ATMOSPHERIC, GEOPHYSICAL AND ASTRONOMICAL
SERVICES ADMINISTRATION (PAGASA), PROVIDING FUNDS
THEREFOR AND FOR OTHER PURPOSES**

*Be it enacted by the Senate and the House of Representatives of the
Philippines in Congress assembled:*

SECTION 1. Title. – This Act shall be known as the "The PAGASA
Modernization Act of 2010."

SECTION 2. Declaration of Policy. – It is hereby declared to be the policy of
the State to utilize scientific knowledge and information as an effective instrument
to ensure the safety, well being and economic security of the people; to promote
national progress and to contribute to regional socioeconomic development
through various applications of meteorology, geophysics and space sciences.
Towards this end, the State shall undertake the modernization of the Philippine
Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
to elevate its technological and operational capacity to effectively and efficiently
perform its mandate.

SECTION 3. Objectives. – Pursuant to the foregoing policy, the PAGASA
modernization program shall be implemented in accordance with the following
objectives:

A. To upgrade physical resources and operational techniques through acquisition of state-of-the-art instruments, equipment and facilities to enhance current capabilities in providing timely and reliable forecasting, warning services, and information for agriculture, transportation, and other industries across the country;

B. To raise the research and development capability and human resource development, adopting a rationalized and integrated approach, with focus on improvement of operations for specialized services and cost recovery;

C. To develop mechanisms for integrating disaster management and socioeconomic development planning at the national and local levels;

D. To establish regional weather service centers in strategic areas in the country to broaden the agency's bases for delivery of service to the countryside; and

E. To cultivate greater awareness by the public of weather systems, the progress of typhoons, climatic changes, and other related information through the educational projects and programs.

SECTION 4. *Period of Implementation.* – The modernization program under this Act shall be implemented over a period of six (6) years: *Provided, however,* that payments for amortization of outstanding multi-year contract obligations incurred under this Act may extend beyond this period.

SECTION 5. *Formulation and Submission of PAGASA Modernization Program.* – The Secretary of the Department of Science and Technology (DOST) and the Director of PAGASA, in coordination with the Secretary of the Department of Budget and Management (DBM) and the Director-General of the National Economic and Development Authority (NEDA), shall be responsible for formulating the PAGASA Modernization Program based on the policy objectives provided in this Act.

Within ninety (90) days from the effectivity of this Act, the Secretary of the DOST shall submit to the President the PAGASA Modernization Program for final approval.

SECTION 6. *PAGASA Modernization Fund.* – There is hereby created the PAGASA Modernization Fund which shall be used exclusively to finance the implementation of the modernization program which shall not include salaries

and allowances. The PAGASA Modernization Fund shall be funded out of the following sources:

A. Appropriation for the PAGASA Modernization Program amounting to Five Billion Pesos (P5,000,000,000.00);

B. A portion of the net income of the Philippine Amusement and Gaming Corporation (PAGCOR) to be taken from the fifty percent (50%) share of the National Government;

C. Grants, bequests, and donations whether from local or foreign sources;

D. Funds from budgetary surplus, if any, as may be authorized by Congress;

E. All interest income from the fund created hereunder

The fund shall be administered by the Secretary of the DOST in accordance with existing government auditing rules and regulations.

SECTION 7. *PAGASA Modernization Program Oversight Committee.* – There is hereby created the PAGASA Modernization Program Oversight Committee composed of the Secretaries of the DOST and the DBM, the Director of PAGASA, the Chairpersons of the Committee on Science and Technology of the Senate and the House of Representatives, one (1) representative each from the Commission on Audit (COA), the Office of the President, and the Director-General of the NEDA. The committee shall receive progress reports, evaluate the implementation of the program and provide recommendations for the effective attainment of the program's objectives as provided for in this Act. The Committee shall be Chaired by the Secretary of the DOST.

SECTION 8. *Progress Report.* – The Director of PAGASA shall prepare an annual report on the status of the implementation of the PAGASA Modernization Program. The annual report shall be submitted, through the Secretary of the DOST, to the President and all the members of the PAGASA Modernization Program Oversight Committee.

SECTION 9. *Cost Recovery Measures.* – The PAGASA, with the approval of the DOST Secretary, shall implement a sustainable cost recovery program that will allow it to earn revenue from its issuance of specialized weather information, certifications, and scientific and technical publications for which the necessary fees can be charged; *Provided that* one hundred percent (100%) of the fees collected shall be retained by PAGASA for the next twenty (20) years starting six (6) years after the effectivity of this Act, for the operation and maintenance of the equipment acquired during the modernization program; *Provided, however, that*

no fees shall be charged on the issuance of regular and special reports to the general public that affect national safety, weather, and economy, and such other relevant data.

SECTION 10. *Separability Clause.* – If any provision or part of this Act is declared invalid or unconstitutional, other provisions hereof which are not affected thereby shall continue to be in full force and effect.

SECTION 11. *Repealing Clause.* – All laws, orders, proclamations, rules and regulations, or part thereof, which are inconsistent with any provision of this Act are hereby repealed or modified accordingly.

SECTION 12. *Effectivity.* –This Act shall take effect fifteen (15) days following its publication in the Official Gazette or in at least two (2) newspapers of general circulation.

Approved,

FIFTEENTH CONGRESS OF THE REPUBLIC OF THE PHILIPPINES
HOUSE OF REPRESENTATIVES
H.B. No. 1877

INTRODUCED BY THE HONORABLE ANGELO PALMONES

**AN ACT PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE
ATMOSPHERIC, GEOPHYSICAL, AND ASTRONOMICAL SERVICES
ADMINISTRATION (PAGASA) PROVIDING FUNDS THEREFOR AND FOR
OTHER PURPOSES**

EXPLANATORY NOTE

The Philippines is constantly at risk from high-impact weather related events, such as typhoons, storm surge, floods, drought, as well as extreme climatic events like the El Niño/La Niña phenomenon. These phenomena pose serious threats to life and property. Hundreds of lives and billions of pesos worth of property are lost every year from the ravages of these disaster-causing natural hazards. There is therefore a need for a reliable national hydro-meteorological data collection, analysis and forecasting, and finally a sophisticated and faultless warning and dissemination system.

The Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) is mandated to:

- Provide forecasts on weather, flood, and other climatological conditions affecting national safety, welfare and economy and for this purpose maintain a nationwide network of monitoring stations;
- Observe, collect, assess and process atmospheric and allied data for the benefit of agriculture, commerce and industry;
- Engage in studies of atmospheric, geophysical and astronomical phenomena essential to the safety and welfare of the people as well as undertake researches on the structure, development and motion of typhoons and formulate measures for their mitigation.
- Maintain effective linkages with scientific organization here and abroad and promote exchange of scientific information and cooperation among personnel engaged in atmospheric, geophysical, astronomical and space studies.
- Undertake activities to provide an adequate manpower pool of well-trained

specialists and personnel.

Try as it has, PAGASA has yet to provide warning of severe weather and flash floods that are satisfactory to the general public. At times, the PAGASA had been able to react to events providing warnings of severe weather or flash floods after detecting these events, or after reports of actual occurrences. It has been difficult for PAGASA forecasters to predict small-scale violent weather, resulting in short lead times for warnings. The existing facilities for weather observations, information processing and communication in PAGASA are outmoded albeit functional. Most of them, by virtue of age, suffer long down-time which makes them costly to maintain. At the moment PAGASA has only four working radars and they are of the old models. The improvement of Weather Surveillance Radar System capable of monitoring wind fields and cloud formation in three dimensions, for instance, will enable the PAGASA to advance its operational activity to "nowcasting" and mesoscale meteorology at localized community areas. Currently PAGASA can forecast the occurrence of rain but could not specify the intensity of rain nor the amount of rain that will fall. In addition, PAGASA forecasters have only rudimentary computer systems to assimilate, analyze and communicate complex weather information in near real-time.

New observation and information processing systems can improve the services of PAGASA as proven in countries with modern and sophisticated weather data processing equipment and forecasting and disseminating systems. The improvement of existing weather forecasting system include the replacement of outdated equipment and facilities, acquisition of new and state-of-the-art data gathering and observation platforms such as the Doppler radar, improvement of synoptic weather stations that are scattered all over the country that gather data on temperature, rainfall, humidity, wind velocity and wind direction that are needed inputs in formulating weather forecasts and severe weather warnings.

Development of the national weather system to meet national needs efficiently depends on the application of findings of basic and applied meteorological research. Modern technology has produced numerous research tools whose coordinated-use contribute importantly to improved understanding of the meteorological processes associated with severe storm development, to more accurate weather analysis and forecasting, and to eventual beneficial modification or control of weather including severe storms. The data gathering, assessment and analysis require the specialized knowledge of well-trained weather personnel.

The PAGASA modernization program requires a human resource development component that emphasizes professional education and training. Training on the new instruments and equipment is indispensable and considerable specialization in techniques of radar data display and processing, including synthesis of radar data with other kinds of information, is required.

The different parts of the country may experience contrasting weather systems. So much so that one part of the country would be under severe weather conditions such as

typhoons while another part of the country would be enjoying fair weather. There is therefore a need for localized weather forecasting. Anent to this it is necessary to establish regional weather forecasting centers. To implement this would require the changes in the organizational structure of PAGASA.

A handwritten signature in black ink, consisting of a stylized, cursive script that appears to be a name followed by a long, sweeping vertical stroke.

Republic of the Philippines
Congress of the Philippines
Metro Manila

Fifteenth Congress
First Regular Session
1877

By Representative Angelo B. Palmones

AN ACT PROVIDING FOR THE MODERNIZATION OF THE PHILIPPINE
ATMOSPHERIC, GEOPHYSICAL, AND ASTRONOMICAL SERVICES
ADMINISTRATION (PAGASA) PROVIDING FUNDS THEREFOR AND FOR
OTHER PURPOSES

Be it enacted by the Senate and House of Representatives of the Philippines in Congress assembled

ARTICLE I

Title, Declaration of Policy and Objectives

SECTION 1. *Title* - This Act shall be known as the PAGASA Modernization Act of 2010.

SECTION 2. *Statement of Policy and Objectives* – It is the policy of the State to promote and maintain peace and order, protect life, liberty and property and promote the general welfare of the people which are essential in the enjoyment of the blessing of democracy. It is the purpose of this Act to support the modernization of the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) in modernizing its facilities, improve and strengthen its manpower and modify its structure for a better delivery of its services to the nation.

ARTICLE II

Definition of Terms

SECTION 3. *Definition of Terms* – For the purpose of this Act the following terms will have these corresponding definitions:

- (a) Astronomy –the science that deals with the material universe beyond the earth's atmosphere.
- (b) Atmosphere – the gaseous envelope surrounding the earth

- (c) Climate - refers to the "average" weather conditions for an area over a long period of time (e.g., the average high temperature for today's date).
- (d) Doppler radar - is a radar tracking system that determines the velocity of a moving object by measuring the shift in frequency of a radar signal reflected by the object. The shift is to higher frequency when the object approaches and to lower frequencies when it recedes.
- (e) El Niño phenomenon - the periodic warming of central and eastern tropical Pacific waters that significantly influence global weather and cause below normal rainfall or drought in the Philippines. It occurs on average every two to five years and typically lasts about 12 months.
- (f) Flood - a temporary covering by water of land not normally covered by water
- (g) Forecast - an estimation of the state of the weather at some specified future date.
- (h) Geophysical - is the study of the whole Earth by the quantitative observation of its physical properties
- (i) La Niña phenomenon - this is the cold phase counterpart of El Niño which usually cause above normal rainfall in the Philippines
- (j) Mesoscale meteorology - is the study of weather systems smaller than synoptic scale systems but larger than microscale and storm-scale cumulus systems. Horizontal dimensions generally range from around 5 kilometers to several hundred kilometers.
- (k) Meteorology - deals with the study of the atmosphere.
- (l) Nowcasting - refers to the forecasting of the weather in the 0-6 hour timeframe.
- (m) Storm - also known as thunderstorm, is a form of weather characterized by the presence of lightning and its acoustic effect on the Earth's atmosphere known as thunder.
- (n) Synoptic station - A station at which meteorological observations are made for the purposes of synoptic analysis. The observations are made at the main synoptic times of 0000, 0600, 1200, 1800 UTC and normally at the intermediate synoptic hours of 0300, 0900, 1500, 2100 UTC and are entered into a coded format for dissemination.
- (o) Typhoon - an intense tropical cyclone with wind speeds greater than 117 kilometers per hour.
- (p) Weather - The state of the atmosphere with respect to wind, temperature, cloudiness, moisture, pressure, etc. Weather refers to these conditions at a given point in time (e.g., today's high temperature).

ARTICLE III

Modernization of Equipment and Systems

SECTION 4. Modernization Plan - PAGASA shall develop a 5-year modernization plan that includes the strengthening of the observation/acquisition of data and information, transfer of data and information to processing centers, appreciation, processing and analysis of data and information, forecasting and distribution of information to concerned offices and institutions and feedback mechanisms for such information. The Plan shall be

endorsed by the Secretary of the Department of Science and Technology to the National Economic and Development Authority (NEDA) and approved by the Office of the President.

SECTION 5. *Acquisition of modern equipment, machines, computers and other instruments* – PAGASA shall acquire the needed equipment, machines, tools, computers and other instruments necessary to implement the 5-year modernization plan. Any such equipment or machines or instruments or computers that have to be imported shall be without tax and its importation facilitated by concerned offices such as the Bureau of Customs.

SECTION 6. *Manpower training* – The 5-year modernization plan shall have a component on manpower training that include undergraduate and graduate degree training. Scholarships shall be provided for undergraduate and graduate degree training. The University of the Philippines Los Banos is mandated, along with the Bicol University, the Central Luzon State University, the Mariano Marcos State University, the Pamantasan ng Maynila, and the University of the Visayas to offer undergraduate degree in Meteorology within three (3) years from the enactment of this Act. Other state and private universities and college may likewise offer a Bachelor of Science in Meteorology.

SECTION 7. *Structural organization of PAGASA* – To provide more accurate weather forecasting that are specific to group of regions PAGASA is authorized to establish regional service centers (RSC) in Tuguegarao City for Northern Luzon, Legaspi City for Bicol Region, Mactan for Visayas, Cagayan de Oro City or Northern Mindanao, and Davao City for Southern Mindanao. The PAGASA Central Office will service Central Luzon and Southern Tagalog for the localize forecast in addition to the provision of general forecasts and warnings for the entire country. PAGASA is further authorized to create and fill-up the needed personnel requirements for the additional service centers following established Civil Service rules and regulations.

ARTICLE IV Miscellaneous Provisions

SECTION 8. *Funding Provisions* – To implement the provisions of this Act, the amount of SIX BILLION PESOS (P6,000,000,000.00) shall be provided from the emergency funds of the Office of the President. Thereafter, funds for maintenance of equipment and for other purposes initially funded from the Six Billion Pesos but are recurring expenses shall be included in the General Appropriations Act.

SECTION 9. *Implementing Rules and Regulations* – The Department of Science and Technology and the Civil Service Commission shall promulgate the implementing rules and regulations of this Act within a period of 180 days from its approval. It shall become effective after thirty (30) days following their publication in the Official Gazette or in two (2) major daily newspapers of general circulation.

SECTION 10. *Separability clause* – If any section or provision of this Act shall be declared invalid or unconstitutional, such shall not invalidate any other section or provision of this Act.

SECTION 11. *Repealing Clause* – All laws, decrees, executive orders, rules and regulations or parts thereof which are in conflict with the provisions of this Act are hereby repealed or modified accordingly.

SECTION 12. *Effectivity* – This Act shall take effect thirty (30) days following its full publication in the Official Gazette or two (2) major daily newspaper of general circulation.

Approved

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Batasang Pambansa, Quezon City

FIFTEENTH CONGRESS
First Regular Session

HOUSE BILL NO. 2558

Authored by **HON. JOSEPH VICTOR G. EJERCITO**

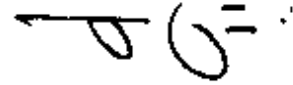
EXPLANATORY NOTE

The Philippines has been ravaged by numerous natural disasters ranging from floods and thunderstorms to typhoons, landslides, earthquakes and volcanic eruptions. These natural disasters harm the safety and lives of our citizens and cause considerable damage to property. Although we wish to avoid these natural disasters, their recurrence remains highly probable considering the geographical and climatic conditions of our country.

As an agricultural country, we are especially vulnerable to the destructive effects of natural disasters. Agriculture is the major source of livelihood for many of our country's middle and low income populations. By its very nature, agricultural cultivation requires a high degree of dependence on climate and weather conditions for its success and profitability. Our major food staple, rice, is a good example – its cultivation follows a cycle of planting and harvesting within specific seasons. When a typhoon comes and threatens to rip up a rice plantation, the farmer risks incurring huge financial losses. In some cases, it is a question of survival, when the success of this planting season's harvest determines the farmer's capacity to undertake the next.

Thus, the importance of the role of the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) as the main government agency tasked to monitor research and report weather conditions to the public cannot be overemphasized. However, our country has experienced the occurrence of several natural disasters, some of them deadly, on which PAGASA may have failed to give correct and timely information due to lack of modern and quality equipment. As a result, citizens were not completely warned of dangers to their health and safety and apprised of precautions they could take to alleviate, if not prevent, damage to their person or property.

The capacity of PAGASA to rapidly deliver accurate weather information is critical in determining our ability to properly prepare for and handle natural disasters. Such capacity is sought to be enhanced through the establishment of a modernization program for PAGASA, which this bill proposes. The passage of this bill is therefore earnestly sought.



JOSEPH VICTOR G. EJERCITO

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Batasang Pambansa, Quezon City

FIFTEENTH CONGRESS
First Regular Session

HOUSE BILL NO. 2558

Authored by **HON. JOSEPH VICTOR G. EJERCITO**

AN ACT
PROVIDING FOR THE MODERNIZATION OF THE
PHILIPPINE ATMOSPHERIC, GEOPHYSICAL AND
ASTRONOMICAL SERVICES ADMINISTRATION,
PROVIDING FUNDS THEREFOR AND FOR OTHER
PURPOSES

Be it enacted by the Senate and the House of Representatives of the Philippines in Congress assembled:

SECTION 1. Title. - This Act shall be known as the "**PAGASA Modernization Act of 2010.**"

Sec. 2. Declaration of Policy. - It is the policy of the State to improve the quality of weather forecasting in the country and to ensure its accuracy and timely dissemination to the people. Towards this end, the State shall undertake the modernization of the national weather service.

Sec. 3. Purposes of Modernization. - In the implementation of the foregoing policy, the State shall, in accordance with the provisions of this Act:

- a. Undertake measures to improve on the current state of weather forecasting and warning system in the country;
- b. Cultivate greater awareness by the public of weather systems through educational programs on storm signals, typhoons, climatic changes and other related information;
- c. Upgrade, modernize and procure state-of-the-art weather and geophysical equipment and facilities, and pursue the application of new technologies to improve our capabilities in providing timely

and reliable weather forecasting and warning services for agriculture, transportation and other industries across the country.

Sec. 4. Duration of the Modernization Program. - To enhance weather forecasting, climate monitoring and prediction, and astronomical and associated services, the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) shall undertake a six-year modernization program.

Sec. 5. Components of Modernization. - The modernization program shall adopt a four-pronged approach, as follows:

- a. Establishment of regional weather service centers in strategic areas in the country to broaden the PAGASAs bases for delivery of services to each region;
- b. Modernization of physical resources and operational techniques through acquisition of state-of-the-art equipment and facilities, with emphasis on weather and flood monitoring and warning system and agro-meteorological observational system to strengthen services for agriculture;
- c. Intensification of human resources development to keep pace with rapid international scientific and technological advances;
- d. Upgrade of research and development capability through a more rationalized and integrated approach, with focus on improvement of operations, as well as the development of specialized services for cost recovery.

Sec. 6. Program Description. - The modernization program under this Act shall principally be a re-tooling of the PAGASA with modern equipment and facilities, including but not limited to advanced observational and surveillance system for meteorological and hydrological elements, and whenever possible satellite-based communication network, supercomputers for data processing analysis and forecasting, and computer based workstations for generating increased volume of detailed information. It shall also establish an efficient human resources development program emphasizing on professional education, training and research.

Sec. 7. PAGASA Modernization Oversight Committee. - There is hereby created a Modernization Oversight Committee composed of the Chairperson and Members of the Congressional Committees on Science and Technology of the Senate and the House of Representatives that shall oversee the implementation of the modernization program provided under this Act. The Committee shall be chaired by the Secretary of the DOST.

Sec. 8. PAGASA Modernization Fund. - There is hereby created the PAGASA Modernization Fund which shall be used exclusively to fund its modernization program, The Fund shall include a portion of the net income of the Philippine Amusement and Gaming Corporation (PAGCOR) to be taken from the fifty percent (50%) share of the National Government for a period of six years from the effectivity of this Act.

Sec. 9. Loans, Grants, Bequests and Donations. - The PAGASA is hereby granted the authority to enter into loan agreements with, or accept grants, bequests and donations from, local or foreign financial institutions pursuant to this Act.

Sec. 10. Cost Recovery Measures. - The PAGASA shall implement a sustainable cost recovery program that will allow it to earn revenue from its issuance of specialized weather information, certifications, and scientific and technical publications from which fees can be charged; Provided, that one hundred percent (100%) of the fees collected shall be retained by PAGASA for the next twenty (20) years from the effectivity of this Act, for the operation and maintenance of the equipment acquired during the modernization program; Provided further, that no fees shall be charged on the issuance of regular and special reports to the general public that affect national safety, the weather and the economy, and such other relevant data.

Sec. 11. Progress Report. - The Secretary of the DOST and the Director of the PAGASA shall submit to the Office of the President and the Congressional Committees on Science and Technology a quarterly report on the progress of the modernization program for the duration of its implementation.

Sec. 12. Separability Clause. - If any provision of this Act or any part hereof be declared unconstitutional or invalid the remainder of this Act or any provision not affected thereby shall remain in force and effect.

Sec. 13. Repealing Clause. - All laws, orders, proclamations, rules and regulations, or part thereof, which are inconsistent with any provision of this Act are hereby repealed or modified accordingly.

Sec. 14. Effectivity. - This Act shall take effect fifteen (15) days following its publication in the Official Gazette or in at least two newspapers of general circulation.

Approved,

FIFTEENTH CONGRESS)
REPUBLIC OF THE PHILIPPINES)
FIRST REGULAR SESSION)

RECEIVED
93 AUG 2010
C. R. P. H.
[Signature]

HOUSE OF REPRESENTATIVES

Introduced by Representative Rufus B. Rodriguez and
Representative Maximo B. Rodriguez, Jr.

House Res No. 143

A RESOLUTION

URGING THE COMMITTEE ON SCIENCE AND TECHNOLOGY TO
CONDUCT AN INQUIRY, IN AID OF LEGISLATION ON THE CURRENT
STATUS OF THE EQUIPMENT OF PHILIPPINE ATMOSPHERIC
GEOPHYSICAL AND ASTRONOMICAL SERVICES (PAGASA) AND THE
PERSONNEL CAPACITY AND WORKING CONDITIONS THERE.

WHEREAS, last 2009 alone, the Philippines was hit by 21 major tropical
depressions and typhoons

WHEREAS, these typhoons bring about destruction of properties and
agriculture and even the loss of lives

WHEREAS, the effect of these typhoons were aggravated by the lack of
preparedness by the country and its citizens brought about by Philippine
Atmospheric Geophysical and Astronomical Services' (PAGASA) inaccurate
and erroneous weather forecasts

WHEREAS, these inaccurate weather forecasts were brought about because
of the inadequate and faulty equipments of PAGASA which are not up to par
and cannot handle the existing situation that the country is experiencing at
present

WHEREAS there have been numerous newspaper accounts on the exodus
of employees of PAGASA which leave it shorthanded. This makes it more
difficult to perform the functions of the agency properly

WHEREAS, there is a need to modernize, upgrade and increase the number

of the equipment and facilities of PAGASA, further increase their personnel and train their people to be able to properly use the new equipment that will be used and increase the pay and benefits of PAGASA's officials and personnel.

WHEREAS, there is a need to look into the budget of PAGASA and to determine if it is appropriate and whether it was properly spent or disbursed.

NOW THEREFORE BE IT RESOLVED by the House of Representatives to urge the Committee on Science and Technology to conduct an inquiry, in aid of legislation, on the above issue and thus serve notice to all concerned, including the PAGASA, Department of Science and Technology, and such other entities and corporations which may shed light and resolve the issue

Adopted,



RUFUS B. RODRIGUEZ



MAXIMO B. RODRIGUEZ, JR.

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City

FIFTEENTH CONGRESS
First Regular Session

House Resolution No. 590

Introduced by **HON. DANILO E. SUAREZ**

**RESOLUTION CALLING FOR AN INVESTIGATION IN AID OF LEGISLATION
BY THE APPROPRIATE HOUSE COMMITTEE REQUIRING THE DEPARTMENT OF
SCIENCE AND TECHNOLOGY (DOST) AND THE DEPARTMENT OF
TRANSPORTATION AND COMMUNICATIONS (DOTC) TO DEVELOP A
TECHNOLOGY-BASED AND FINANCIALLY SELF-SUFFICIENT DATA
INFORMATION STATION FOR THE PHILIPPINES' TYPHOON PREPAREDNESS
PLANS**

WHEREAS, 19 to 20 tropical typhoons is the annual average occurring in the Philippine Area of Responsibility with the annual average intensity distribution of 4 tropical depressions, 5 to 6 tropical storms and 10 typhoons;

WHEREAS, it is estimated that over 500 lives and about Php4 billion are lost in the country every year due to tropical typhoons;

WHEREAS, an efficient early warning system will play a key role in disaster preparedness, which will result in significant reduction in the loss of lives caused by typhoons;

WHEREAS, the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), under the Department of Science and Technology (DOST), the agency tasked to utilize scientific knowledge and information to provide protection of life and property against natural hazards such as typhoons, must be equipped with new and state of the art equipments to give real time storm updates;

WHEREAS, Department of Transportation and Communications (DOTC) is the primary policy, planning, implementing, regulating, and administrative entity of the government in the promotion, development and regulation of dependable communication systems, as well as in the fast, safe, efficient and reliable communication services;

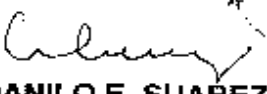
WHEREAS, the Department of Science and Technology (DOST), with PAGASA as its lead agency, in cooperation with the Department of Transportation and Communication, must develop a central information station which will give real time updates that industries susceptible to weather disturbances, such as shipping and airlines, can tap for information;

WHEREAS, this central information station should also be available to any individual through text messaging and the internet;

WHEREAS, to hit two birds with one stone: (1) to raise revenue for the modernization of the equipment of PAGASA and, (2) to provide an easy access to real time information regarding the progress of a typhoon, the DOST and DOTC must formulate a way that this central information station can be financially self-sufficient;

THEREFORE, BE IT RESOLVED AS IT IS HEREBY RESOLVED that the appropriate committee of the House of Representatives investigate in aid of legislation the Department of Science and Technology and Department of Transportation and Communication, requiring them to develop a technology-based and financially self-sufficient central information station for the Philippines' typhoon preparedness plans

Adopted,


DANILO E. SUAREZ
Representative
Third District, Province of Quezon

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City, Manila

FIFTEENTH CONGRESS
First Regular Session

House Resolution No. 206

Introduced by REP. MARK A. VILLAR

**RESOLUTION DIRECTING THE APPROPRIATE COMMITTEES TO
CONDUCT AN INQUIRY, IN AID OF LEGISLATION, ON THE APPARENT
"BRAIN DRAIN" PHENOMENON BESETTING THE PHILIPPINE
ATMOSPHERIC GEOPHYSICAL AND ASTRONOMICAL SERVICES
ADMINISTRATION (PAGASA) AND ON ITS OUTDATED EQUIPMENT, IN
ORDER TO HAVE A MORE UPDATED AND ACCURATE WEATHER
FORECASTING**

WHEREAS, in the recent years, we have seen how the wrath of nature could destroy millions of properties and take the lives of hundreds, if not thousands. This could have been prevented, or at the very least minimized, if the government and citizenry are prepared for such eventualities.

WHEREAS, PAGASA is the front-line agency for disaster preparedness. It is mandated to provide protection against natural calamities and utilize scientific knowledge to ensure the safety, well being and economic security of the people and for promotion of national progress.

WHEREAS, such enormous task, however, is now facing challenges that need to be addressed by a concrete action from the government.

WHEREAS, it has been reported that PAGASA lost twenty four (24) key personnel, most of them experienced weather forecasters, in the past 10 years for lucrative offers abroad. According to reports, most of the weather forecasters have accepted offers from the state weather agency abroad, which is strengthening its forecasting system in its bid to attract investors and tourists. Just recently, deputy administrator for operations Nathaniel "Ka Tani" Cruz left to

work in Australia's state weather bureau, making him the highest ranking PAGASA officer to leave the country.

WHEREAS, aside from the "brain drain" phenomenon besetting PAGASA. The problem of outdated equipment has battered it for years and has yet to be resolved.

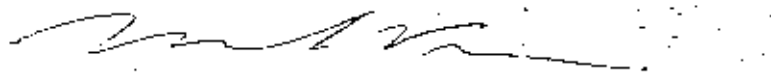
WHEREAS, just recently, PAGASA has once again gained center stage after it was criticized for allegedly failing to accurately track typhoon "Basiang" accurately.

WHEREAS, such perceived shortcomings of PAGASA on its mandated duties and the aforementioned predicaments that it is now facing may have corollary relationships. The ramifications of inadequate and limited skilled manpower and outdated equipment of PAGASA would inevitably spell disaster to the lives and properties of millions of Filipinos.

WEHEREAS, in view of the foregoing, there is now a need to permanently address the problems that PAGASA is currently facing by utilizing the power of the Congress to conduct a legislative inquiry as a first step towards a more concrete solution through legislation.

NOW, THEREFORE BE IT RESOLVED, AS IT IS HEREBY RESOLVED BY THE HOUSE OF REPRESENTATIVES, to direct the appropriate house committees to conduct an inquiry, in aid of legislation, on the apparent brain drain phenomenon besetting the Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA) and on the outdated equipment that had battered it for years for more accurate and updated weather forecasting.

Adopted.


MARK A. VILLAR
Representative, Lone District of Las Piñas City

**MINUTES OF THE MEETING OF THE COMMITTEE ON SCIENCE AND
TECHNOLOGY HELD ON FEBRUARY 15, 2011; 1:30 P.M. AT CONFERENCE
ROOMS 7 & 8, RAMON V. MITRA BUILDING, HOUSE OF
REPRESENTATIVES, QUEZON CITY**

Authors

Rep. Gloria Macapagal Arroyo	Author, HB No. 1575
Rep. Angelo B. Palmones	Author, HB No. 1877
Rep. Joseph Victor Ejercito	Author, HB No. 2558
Rep. Maximo B. Rodriguez	Author, HR No. 143
Rep. Rep. Mark A. Villar	Author, HR No. 206
Rep. Danilo E. Suarez	Author, HR No. 590

Resource Persons:

Dr. Graciano P. Yumul	USEC for R & D, DOST
Dr. Nathaniel T. Servando	Director, PAG-ASA
Ms. Josefina Vitug	COA
Ms. Flovitas Felipe	COA
Mr. Roland Jay Miguel	GSMetrix
Dr. Fay Lea Patria Lauraya	President, Bicol University
Dr. Miriam E. Pascua	President, Mariano Marcos State University
Dr. Ireneo Agulto	Associate Dean, College of Engineering (CLSU)
Ms. Elvira Florendo	CHED
Engr. Juan C. Tallara, Jr.	College of Engineering, Pamantasan ng Lungsod ng Maynila (PLM)
Prof. Jennifer Sy	College of Science, PLM
Engr. Augusto Pagkalinawan	NEDA

I. CALL TO ORDER/ROLL CALL

Rep. Mariano U. Piamonte, Jr., the Vice-Chair and Presiding Officer, called the meeting to order at 2:00p.m. Upon motion of Rep. Jesus "Boying" Celeste, duly seconded, the calling of the roll was dispensed with..

II. APPROVAL OF THE MINUTES OF THE PREVIOUS MEETING

Upon motion of Rep. George Amaiz, duly seconded, the Minutes of the previous meeting was approved.

III. INITIAL DELIBERATION ON THE FOLLOWING HOUSE BILLS AND RESOLUTIONS ON THE MODERNIZATION OF THE PHILIPPINE ATMOSPHERIC, GEOPHYSICAL, ASTRONOMICAL SERVICES ADMINISTRATION (PAG-ASA)

House Bill No. 517 - Rep. Marcelino R. Teodoro
House Bill No. 1575 - Reps. Diosdado M. Arroyo and Gloria Macapagal Arroyo
House Bill No. 1877 - Rep. Angelo B. Palmones
House Bill No. 2558 - Rep. Joseph Victor Gomez Ejercito

HR No. 143- On the status of the equipment, personnel capacity and working condition of the PAG-ASA authored by Rep. Rufus B. Rodriguez
HR No. 206 - On the apparent "brain drain" phenomenon besetting the PAG-ASA and its outdated equipment authored by Rep. Mark A. Villar
HR No. 590 - On the development of a technology-based and financially self-sufficient data information station for the Philippines' typhoon preparedness plans* authored by Rep. Danilo E. Suarez

Rep. Gloria Macapagal -Arroyo, author of HB No. 1575 said that the bill seeks to modernize the PAG-ASA by providing its personnel with modern equipment and advance technologies to be used in monitoring meteorological and geological development. She added that for sustainability, the PAG-ASA will earn revenue by charging a certain amount for request of specialized weather information. The bill also proposes to retain the 100% collected fees in a PAG-ASA Trust Fund. She clarified that the giving of the basic weather forecast is free of charge.

Rep. Angelo B. Palmones, author of House Bill 1855, stated that his proposed bill is the same with the other house bills on Pag-asa Modernization except in the provision of manpower training. He said that they already have a project with the consortium of universities to offer a meteorology program in the undergraduate and graduate degrees starting SY 2011-2013. He added that the initial fund for the program will cost about 10 Million pesos. Rep. Palmones sought the assistance of the Committee and the COMSTE for the needed funding support. He said that Governor Joey Salceda of Albay has already committed to fund some of the scholars.

Dr. Graciano Yumul, Undersecretary for R&D, Department of Science and Technology, apprised the members of the Committee on the present initiatives of PAG-ASA. He stated that at present, the PAG-ASA has three (3) Doppler radars and another seven (7) Doppler radars at the end of the year. Japan will also donate three (3) more radars in the coming years. PAG-ASA is now practicing the "now-casting" forecast, which forecasts weather conditions within 1 to 3 hours provided by the Subic Doppler radar that can determine the exact time and location of rainfall.

Dr. Yumul confirmed the query of Rep. Suarez that in the previous administration there was an 85% coverage of the upgrading program nationwide and that the remaining 15% along the western seaboard will be completed within the year.

In addition, Dr. Nathaniel Servando, Deputy Director of PAG-ASA said that the weather forecast depends on the quality of observational data that are available. He added that the "nowcasting" provides a shorter period of time in which the Doppler radar will be useful in ensuring specific area and time the rain will occur. He said that at present, the PAG-ASA provides an hourly update using the meteorological satellite receiving facilities. PAG-ASA has also installed unmanned automated weather stations that can provide data coming from remote areas which are being transmitted automatically to the National Forecasting Centers.

Mr. Roland Jay Miguel, CEO, GS Metrix Technology Solutions, informed the Body that there are already existing technology in getting weather information. He mentioned the automated weather stations, websites, and Google Earth, among others. He supported the suggestion of Rep. Suarez to sell the data provided by PAG-ASA to the private sector.

Dr. Fay Lea M. Lauraya, president of Bicol University informed the Body that the University is part of the four universities in the Consortium. At present, the consortium has already submitted the proposed Curriculum for BS in Meteorology to the Commission on Higher Education (CHED). A Memorandum of Agreement (MOA) had already been signed among the universities, PAG-ASA, DOST and AGHAM Party-list.

Ms. Elvira G. Florendo, representing the CHED, supports the timely passage of the PAG-ASA modernization and suggested to include in the TWG other government agencies, like the CHED, DepEd and the DILG.

Dr. Ireneo Agulto, Associate Dean of the College of Engineering, Central Luzon State University (CLSU) also informed the Body that the CLSU is awaiting the approval of the CHED for the implementation of the proposed curriculum in the coming school year.

On the assurance that the scholars will serve PAG-ASA after graduation, the Presiding Officer stressed that this be stipulated in a Memorandum of Agreement (MOA). Rep. Palmones assured the Committee that the members of Project COMET and the consortium involved to study the said concern.

Rep. Maximo B. Rodriguez, author of HR 143 explained that the Resolution seeks to determine the needed personnel of PAG-ASA and whether the Agency is equipped with modern equipment and technologies in order to have an accurate forecasting system. He also inquired on the resignation of key officials which caused the demoralization of personnel at PAG-ASA. Dr. Servando replied that at present, PAG-ASA has skilled and trained meteorologists and hydrologists with Master's degree from the Ateneo de Manila University. He assured the Body that there are new and enough technical personnel to replace those who retired and went abroad.

At this point, Rep Rodriguez requested the PAG-ASA to submit a position paper on the 15% coverage deficiency and the required personnel to guide them in the next budget deliberation.

Rep. Mark A. Villar, author of HR 206 inquired on the human resource and outdated equipment problem of the PAG-ASA. Dr. Servando replied that the primary reason why their personnel go abroad is economic considering the high pay and attractive opportunities offered abroad. He added that salaries of meteorologist follow the salary standardization law and the agency likewise grant additional benefits to their employees. Dr. Yumul added that they have several employees who went abroad but later expressed their intention to go back to the agency, citing the nationalism of its former meteorologists. Nevertheless, Rep. Villar requested for a position paper proposing for an increase in the salaries and benefits of their personnel and also the needed modern equipment as guide in future legislation.

Rep. Danilo E. Suarez, author of the House Resolution No. 590, stated that the Resolution provides to equip the PAG-ASA with the state of the art equipment to give accurate and precise forecasting. He said that forecasting of weather information can be transmitted through cellular phones, laptop and computers that can be accessible by the people and very important to industries and agriculture, among others. He said that these telecommunication companies like Smart, Globe and Sun will be earning from the data provided by PAG-ASA, and stressed that the government must get a share from these companies. He added that since this will be an income generating scheme, the PAG-ASA will not be dependent on the GAA. He also suggested that these companies enter into a MOA with PAG-ASA as regards to access of information and the revenue.

Dr. Yumul agreed with the author that 85% of the country on the upgrading program was already covered during the last administration and that the remaining 15% blind sites in the western seaboard will be completed as soon as the installation of Doppler radars nationwide are in place.

Rep. Roilo Golez informed the Body that there are other sources of data available from various websites which give worldwide weather forecasts free of charge. He also inquired from the author if there are other countries that charge from these information.

Rep. Palatino aired his apprehension on the sharing of the government on revenues generated by the telecommunication companies for the modernization of PAG-ASA. He argued that forecasting is a public service and it should be free of charge.

Rep. Palmones inquired from the DOST on the flight charge from domestic and international flights being charged by the NAIA in utilizing weather forecast coming from PAG-ASA. Dr. Yumul replied that they will discuss the matter with the Civil Aviation Authority of the Philippines (CAAP) and the specific rate of charging.

COMMITTEE ACTION

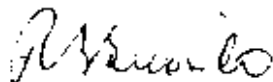
Rep. Angelo B. Palmones volunteered to file a resolution to compel the Civil Aeronautics Aviation Authority (CAAP) to pay fees for the weather information they get from PAGASA which will be deposited in a PAG-ASA Trust Fund.

Rep. Angelo B. Palmones will chair a technical working group to consolidate all the measures and prepare a substitute bill with Rep. Mariano Piamonte, Jr. and some of the resource persons present as members. Rep. Padilla suggested to the Body to include the CAAP in the TWG.

VII. ADJOURNMENT

There being no other matters to discuss, upon motion of Rep. Palmones, duly seconded by Rep. Gloria Macapagal-Arroyo, the meeting was adjourned at 3:18 p.m.

I certify to the correctness of the foregoing Minutes.



REMEDIOS B. BIRONDO
Committee Secretary

Approved by:

ORIGINAL SIGNER
MARIANO U. PIAMONTE, JR.
Vice Chair and Presiding Officer