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SENATE

S. No. 3490

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Introduced by Senator Manuel "Lito" M. Lapid

EXPLANATORY NOTE

Article 13, Section 12 of the 1987 Constitution provides that the State shall establish undertake appropriate health manpower development and research, responsive to the country's health needs and problems.

The Philippines is an agricultural country, almost half of the country's middle and low income earners derived their source of living from the crops they plant, which take at least three (3) months of cultivation before they finally enjoy the fruits of their labor. The success of this kind of livelihood is dependent on the weather prevailing at the time of cultivation up to the time of harvest. It is undeniable that being a tropical country, the recurrence of natural calamities in the country is something to be expected. Every year, the country is confronted with numerous typhoons and floods that trigger hundreds of millions of pesos of property damage and even claim many lives.

As such, realizing the need for monitoring and predicting changes to the ocean and coastal resources and the global climate system, the State shall implement a comprehensive observation system and coordinated research programs which would provide vital information to safeguard our national security, improve weather and climate forecasts, strengthen management and sustainable use of the country's waters and coastal and marine resources, improve the safety and efficiency of maritime operations, and mitigate the impacts of marine hazards.

This measure recognizes the continuing and potentially devastating threat posed by tsunami, flood and other marine hazards. As such, this problem requires the immediate implementation of strengthened observation and communications, and data management systems to protect the welfare of the general public.

In view of the foregoing, approval of this bill is earnestly requested.


MANUEL "LITO" M. LAPID
Senator

SENATE

S. No. 3490

REGISTERED



Introduced by Senator Manuel "Lito" M. Lapid

AN ACT
ESTABLISHING THE NATIONAL OCEANIC AND COASTAL
OBSERVATION SYSTEM FOR THE COUNTRY'S SEAS, OCEANS,
COASTS AND OTHER HYDROGRAPHICAL FEATURES TO ENHANCE
WARNINGS OF TSUNAMI FLOOD, EL NIÑO PHENOMENA AND IMPROVE
THE MANAGEMENT OF COASTAL AND MARINE RESOURCES,
APPROPRIATING FUNDS THEREFOR AND FOR OTHER PURPOSE

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

SECTION. 1. Short Title. - This Act shall be known as the "**National Oceanic and Coastal Observation System Act.**"

SEC. 2. Declaration of Policy. - It is hereby declared the policy of the State to establish an integrated system of Philippine waters observations for the country's seas, oceans, coasts, and other hydrographical features to enhance warnings of tsunami, flood, El Niño phenomena and other natural hazards in order to protect the welfare of the general public and improve the management of coastal and marine resources to ensure national progress.

The State, realizing the need for understanding, monitoring, and predicting changes to the ocean and coastal resources and the global climate system, shall implement a sustained and integrated observing system and coordinated research programs which would provide vital information to safeguarding national security, improving weather and climate forecasts, responding to natural and manmade coastal hazards, strengthening management and sustainable use of the country's waters and coastal and marine resources, improving the safety and efficiency of maritime operations, and mitigating the impacts of marine hazards.

SEC. 3. Policy Objectives. – It is the goal of this measure to establish an integrated system of Philippine waters observations to address provincial, regional and national needs for marine information and to provide for:

(1) the planning, development, implementation, and maintenance of an integrated coastal and ocean observing system that provides data and information to sustain and restore healthy hydrographical ecosystems and manage the resources they support, aid marine navigation safety and national security, support economic development, enable advances in scientific understanding of the oceans and other bodies of water, and strengthen science education and communication;

(2) implementation of research, development, education, and outreach programs to improve understanding of the marine environment and achieve the full national benefits of an integrated coastal and ocean observing system;

(3) implementation of a data, information management, and modeling system required by all components of an integrated coastal and ocean observing system and related research to develop early warning systems to more effectively predict and mitigate impacts of natural hazards, improve weather and climate forecasts, conserve healthy and restore degraded coastal ecosystems, and ensure usefulness of data and information for users; and

(4) establishment of a network of regional or provincial associations to operate and maintain regional coastal and ocean observing systems to ensure fulfillment of national objectives at regional scales and to address local needs for hydrographic information and data products.

SEC. 4. Establishment of a National Oceanic and Coastal Observation System (NOCOS). - There is hereby established an integrated system of coastal and ocean observations, data communication and management, analysis, modeling, research, education and outreach system to be known as the National Oceanic and Coastal Observation System (NOCOS). The National Oceanic and Coastal Observation System shall be under the supervision and management of the Philippine Atmospheric Geophysical and Astronomical Services Administration (PAG-ASA).

The system is designed to understand current conditions and provide data and information for the timely detection and prediction of changes occurring in the ocean, coastal environments that impact the country's social, economic, and ecological systems.

The NOCOS shall provide for long-term, continuous and quality-controlled observations of the country's coasts and oceans in order to:

- (1) understand the effects of human activities and natural variability on and improve the health of the country's coasts, oceans and large bodies of water;
- (2) monitor key variables including temperature, salinity, sea level, surface currents, ocean color, nutrients, and variables, such as acidity, that may indicate the occurrence and impacts of ocean acidification;
- (3) measure, track, explain, and predict climatic and environmental changes and protect human lives and livelihoods from hazards such as tsunami, hurricanes, storm surges, coastal erosion, levy breaches, and fluctuating water levels;
- (4) supply critical information to marine-related businesses such as marine transportation, aquaculture, fisheries, and offshore energy production and aid marine navigation and safety;
- (5) support the sustainable use, conservation, management, and enjoyment of healthy ocean and coastal resources, better understand the interactions of ocean processes within the coastal zone, and support implementation and refinement of ecosystem-based management and restoration;
- (6) support the protection of critical coastal habitats, such as coral reefs and wetlands, and unique ecosystems and resources;
- (7) educate the public about the role and importance of the oceans, coasts, and large bodies of water in our daily life; and
- (8) support research and development to ensure improvement to ocean and observation measurements and to enhance understanding of the Nation's ocean, coastal, and water resources.

SEC. 5. *NOCOS Program Elements.* - In order to fulfill the purposes of this Act, the NOCOS shall consist of the following program elements:

- (1) A national program to fulfill national and international observation priorities;
- (2) A network of regional associations to manage the regional coastal and ocean observing and information programs that collect, measure, and disseminate data and information products;
- (3) Data management, communication, and modeling systems for the timely integration and dissemination of data and information products from the national and regional systems;
- (4) A research and development program consisting of the following:
 - (a) Basic research to advance knowledge of coastal and ocean systems and ensure improvement of operational products, including

- related infrastructure, observing technology, and information technology,
- (b) Focused research and technology development projects to improve understanding of the relationship between the coasts and oceans and human activities,
 - (c) Large scale computing resources and research to advance modeling of coastal and ocean processes.
- (5) A coordinated outreach, education, and training program that integrates and augments existing programs to ensure the use of data and information for improving public education and awareness of the country's coastal and ocean environment and building the technical expertise required to operate and improve the observing system.

In carrying out its responsibilities under this section, the National Oceanic and Coastal Observation System shall promote the development of technology and methods for improving the observing system and support the development of institutional mechanisms to implement the provisions of this Act.

SEC. 6. Appropriations. - To carry out the provisions of this Act, there is hereby appropriated the initial amount of Php50,000,000 to institutionalize and establish the National Oceanic and Coastal Observation System (NOCOS). Thereafter, the funds necessary to implement the provisions of this Act shall be incorporated in the annual general appropriations of the Philippine Atmospheric Geophysical and Astronomical Services Administration (PAG-ASA).

SEC. 7. Progress Report. - The Administrator of the PAGASA shall submit to the Office of the President and the Congressional Committees on Science and Technology an annual report on the progress of the implementation of the provisions of this Act.

SEC. 8. Separability Clause - If any provision or part hereof is held invalid or unconstitutional, the remainder of the law or the provision not otherwise affected shall remain valid and subsisting.

SEC. 9 Repealing Clause - Any law, presidential decree or issuance, executive order, letter of instruction, administrative order, rule or regulation contrary to or inconsistent with the provision of this act is hereby repealed, modified or amended accordingly.

SEC. 10. *Effectivity Clause.* - This Act shall take effect fifteen (15) days from the date of its complete publication in the Official Gazette or in at least two (2) newspapers of general circulation.

Approved,