



Republic of the Philippines
House of Representatives
Quezon City, Metro Manila



Nineteenth Congress
Second Regular Session
HOUSE BILL NO. **9575**

Introduced by **Representative Anna York Cristina P. Bondoc**

EXPLANATORY NOTE

Article II Section 15 of the 1987 Philippine Constitution provides that:

The State shall protect and promote the right to health of the people and instill health consciousness among them.

Moreover, Section 16 thereof provides that:

The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature.

The World Health Organization states that climate change is the single biggest health threat facing humanity, and health professionals worldwide are already responding to the health harms caused by this unfolding crisis. It has been causing extreme natural phenomena such as droughts, rapid wind flows, and wide temperature ranges. These lead to indirect effects such as increases in air pollutants and expressions of pollen and fungal allergens.

Climate changes result in changing of blooming seasons for flowers and erratic dispersal of pollen and fungal spores. This is extremely alarming because air pollutants, pollen, and fungal spores are established usual causes of allergic airway diseases. In recent years, the prevalence of respiratory allergies is continuously increasing worldwide. In the Philippines alone, the prevalence of asthma among adults and children is 8.7% and 9.2% respectively. There is an even higher prevalence of allergic rhinitis at 20.0%.

Pollen grains, the microscopic structures that carry the male reproductive cell of plants, are significant causes of respiratory allergies. Grass pollen is the major cause of pollinosis in many parts of the world.¹ Wind-borne pollen grains (anemophilous pollen grains) are smaller, lighter, and are the clinically significant pollen allergens. These commonly come from the flowers of grasses and weeds. The antigens of grass pollen, like those of the other allergenic pollen grains, are rapidly released when allergen-carrying pollen comes into contact with the oral, nasal, or eye mucosa, thereby inducing the appearance of hay-fever symptoms in exposed patient. A local study likewise showed that the distribution of the average monthly asthma consults follows the pattern of the monthly total pollen counts.

In more developed countries, forecasts of pollen and fungal spores are available to guide people suffering from pollen allergy. In making a pollen forecast, wind directions, temperature, and precipitation play important roles. Under wet conditions or during thunderstorms, pollen grains may become fragmented into small particles that can be inhaled into the lungs and trigger respiratory diseases.

Moreover, studies have shown that urbanization, high levels of vehicle emissions, and westernized lifestyle are correlated with the increasing frequency of pollen-induced respiratory allergy. Thus, people who live in urban areas tend to be more affected by pollen-induced respiratory allergy than people living in rural areas. The pollen of areas of higher air pollution was found to contain more allergenic proteins as compared to areas of lesser air pollution. As climate change persists, pollen production is expected to intensify with increased temperature and carbon dioxide levels.

Here in the Philippines, a study showed that the atmospheric pollen pollution in Quezon City is heavy in November, December and January; in Los Baños during January, February, March, April, June and November; and in Baguio City during February, March, April and May. A decade later, another study reported that pollination in the Philippines is perennial and continuous throughout the year for many of the grass species. In many areas, particularly Metro Manila, there are two peak pollinations: from March to April and from November to December, the latter having the higher peak. However, the last pollen calendar was done in the late 1990s.

A pollen calendar reveals the peak pollen times for different types of plant pollen, which causes allergic reactions in certain people. A pollen calendar will be of benefit both to the patients and physicians as this can predict probable pollen concentrations in the atmosphere. This can aid the physician in giving instructions for avoidance measures or in starting controller medications to

avoid the “priming effect”. Pollen counts are different from pollen forecasts. Pollen counts are reported for specific plants, such as trees, grasses, and weeds as well as for mold spores. Pollen forecasts are predicted based on the previous year’s counts and current weather conditions.

Currently, the Philippines has no updated pollen calendar and no pollen forecast. There is a project proposal with DENR entitled “**Association of Environmental Pollutants, Pollen Grains, Fungal Spores and Respiratory Allergic Diseases in Metro Manila**”. This collaborative project is the first in the country to evaluate the relationships between biotic and abiotic pollutants with incidences of allergic airway diseases. This research will also assist in creating policies for sustaining good environmental quality and in providing proper public advisories to prevent, if not lessen, the prevalence of allergic respiratory problems.

The project specifically aims to address the following objectives:

1. To measure monthly major traffic airway-related pollutants at key selected sites in Metro Manila;
2. To identify the aerial pollen grains and fungal spores at these sites;
3. To determine and monitor the number of visits and hospital admissions with allergic airway diseases;
4. To assess the relationships among air pollutants, pollen grains, and fungal spores with the prevalence of allergic airway diseases; and
5. To determine the percentage of mix molds, pollen grains, and air pollutants on the atmosphere.

There is a great need for daily pollen forecast so that Filipinos can keep themselves healthy. By monitoring the pollens in the environment, pollen-stimulated respiratory disease can be avoided.

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


REP. ANNA YORK CRISTINA P. BONDOC
First District, Pampanga



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AN ACT
PROVIDING A POLLEN DETECTION AND MANAGEMENT
PROGRAM, CREATING FOR THE PURPOSE THE POLLEN AND
MIXMOLD MONITORING SERVICE, AND APPROPRIATING
FUNDS THEREFOR

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

SEC. 1. **Short Title.** – This Act shall be known as the “*Pollen Detection and Management Act.*”

SEC. 2. **Declaration of Policy.** – It is the declared policy of the State to protect and promote the right to health of the people and instill health consciousness among them. The State shall also protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature. Towards this end, the state shall endeavor to protect its citizens from threats to public health by formulating a pollen detection and management program to prevent allergic reactions, respiratory conditions, and

other pollen-related respiratory diseases and other health issues among the population.

SEC. 3. ***Ad-Hoc Committee.*** – There shall be created an Ad-Hoc Pollen Grains and Mix Mold Services Committee composed of the following: (1) the Undersecretary for Scientific and Technical Services of the DOST; (2) the Administrator of PAG-ASA; (3) the Undersecretary for Finance, Information Systems and Climate Change of the Department of Energy and Natural Resources; and (4) the President of Philippine Society of Allergy, Asthma and Immunology (PSAAI), or any of their respective permanent representatives. The Committee shall be administratively attached to the DOST and chaired by the DOST Secretary or her permanent representative. The Committee shall conduct public hearings and consult concerned stakeholders from the proper private and non-governmental sectors.

The Committee shall convene within thirty (30) days from the effectivity of this Act and shall have one (1) year to design the National Pollen and Mix Mold Services. Thereafter, the Committee shall be *functus officio* and the PAG-ASA shall ensure the full and continuing implementation of this Act.

SEC. 4. ***Pollen and Mix Mold Monitoring Service.*** – There is hereby created a division to be known as the Pollen and Mix Mold Monitoring Service, hereinafter referred to as the “Service,” under the Philippine Atmospheric Geophysical and Astronomical Services (PAGASA).

The Service shall be the technical authority on forecasting, analysis, collection, and standards development for preventing pollen-related respiratory diseases.

SEC. 5. ***Functions.*** – The Service shall have the following functions:

(a) Conduct comprehensive tracking, monitoring, and prediction of pollen Grains, mix mold levels, and air pollutants in the atmosphere across the Philippines;

(b) Provide accurate and timely information to the public, healthcare, professionals, and other relevant stakeholders, enabling them to make informed decisions regarding allergies and respiratory illnesses;

(c) Collect, analyze, and interpret data on pollen grains, mix mold levels, and air pollutants, including their sources, distribution patterns, and health impacts;

(d) Collaborate with national government agencies, academic institutions, healthcare professionals, and other stakeholders to enhance the understanding of pollen, mix mold, and air quality issues in the Philippines; and

(c) Provide regular updates, forecasts, and alerts on pollen grains, mix mold levels, and air quality conditions to the public through various communication channels, including online platforms, social media, and traditional media.

SEC. 6. ***Coordination and Reporting.*** – The Service shall coordinate with other relevant national government agencies, including the Department of Health, Department of Environment and Natural Resources, and Department of

Education, to ensure the integration of pollen, mix mold, and air quality information into relevant policies, programs, and guidelines.

The Service shall submit regular reports to the Department of Science and Technology detailing its activities, finding, and recommendations. These reports shall be made available to the public and relevant stakeholders.

SEC. 7. ***Capacity Building.*** – The Service shall formulate and implement training programs for its staff and provide technical assistance and capacity-building initiatives to other agencies, healthcare professionals, and stakeholders involved in pollen, mix mold, and air quality management.

SEC. 8. ***Public Participation.*** – The Service shall develop mechanisms for public participation, including the establishment of an advisory board composed of representatives from relevant sectors, such as academe, healthcare provider, environmental organizations, and patient advocacy groups. The advisory board shall provide input, feedback, and recommendations to the Service to ensure that the monitoring and forecasting efforts align with the needs and concerns of the public.

SEC. 9. ***Appropriation.*** – The amount necessary for the implementation of this Act shall be charged against the current appropriation of the Department of Science and Technology. Thereafter, such amount as may be necessary for the continued operation of the program shall be included in the annual General Appropriations Act.

SEC. 10. ***Implementing Rules and Regulations.*** – Within sixty (60) days from the effectivity of this Act, the Secretary of Science and Technology and the

Administrator of PAGASA shall, in coordination with the Secretaries of Health, Environment and Natural Resources, and Education, promulgate the necessary rules and regulations for the effective implementation of this Act.

SEC. 11. ***Separability Clause.*** – If any provision of this Act is declared unconstitutional, or invalid, the remaining parts or provisions not affected shall remain in full force and effect.

SEC. 12. ***Repealing Clause.*** – All laws, decrees, orders, and issuances or parts thereof inconsistent with or contrary to the provisions of this Act are amended, modified or repealed accordingly.

SEC. 13. ***Effectivity.*** – This Act shall take effect fifteen (15) days after its publication in the *Official Gazette* or in a newspaper of general circulation.

Approved,