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**SENATE**

S. No. 3004

RECORDED BY: 

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Introduced by Senator Manuel "Lito" M. Lapid

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**EXPLANATORY NOTE**

Seaweed is an important component of the marine ecosystem along with the mangrove and coral reefs. Seaweed is harvested throughout the world as a food source as well as an export commodity for the production of agar and carageenan products. Seaweed has been cultured traditionally for decades and probably for centuries in several Asian nations such as China, Korea and Japan.

The country has an estimated 8,300 hectares of marine areas that have potential for seaweeds farming. About 96% of these areas are located in Mindanao. Zamboanga Peninsula and Sulu have been found to have the widest seaweeds farming area with farming expansion of more than 7,000 hectares of potential sites. Sulu, Tawi-Tawi and Western Mindanao have a strategic advantage over other potential areas. Seaweed production contribute about 27% to the country's annual total fisheries production, with Regions IV, IX and ARMM as major producers. The Philippines seaweed is highly diversified among the flora in Asia-Pacific regions. More than 800 species of seaweeds have been recorded in the Philippines.

From 1969 to 1973, an extensive research and development on the Eucheuma seaweed culture was successfully undertaken. By 1980, several firms in the Philippines had been manufacturing a new grade of carageenan from seaweeds of the Eucheuma variety. Seaweed processing in the Philippines was recognized as an industry in 1996 when the unprecedented commercial exploitation of then widely-growing seaweed Eucheuma boosted the country's exports to a record of 800 metric tons (MT). To date, seaweed farming is now an important and major livelihood source in the coastal areas, specifically in the Southern Philippines.

The Philippines offers a wide product range, from raw materials (raw dried seaweed), to semi-refined or Philippine Natural Grade (PNG) carageenan, to highly-refined carrageenan, otherwise known as conventionally purified (CP) carrageenan. The principal use of seaweed in general is directly for human foods. The other main use is as raw material for the manufacturing industry. Carrageenan is used largely in the industry as stabilizer, binder and emulsifier. More specifically, the various end-uses of carageenan maybe classified in two main headings - food and non-food, wherein the former accounts for more than 70 percent of the world demand for the product.

At present, the Philippines is one of the top producers of seaweeds in the world, specifically the red seaweeds - next to China and Japan. Seaweeds are exported either in raw forms (fresh or dried seaweeds) or processed forms (semi-refined chips/carageenan and refined carageenan). The major importing countries of seaweeds and its natural products are France, Korea, China, USA and Hong Kong. About 41,267 metric tons valued at 3.54 billion pesos is being exported to France, Korea, China, USA and Hong Kong annually.

The Philippines is considered as the world's leading supplier of Eucheuma comprising about 80% of the world's supply. The seaweed industry manifest a remarkable performance in the international market. Annually, the Philippines exports a total of US\$ 95.653 million worth of seaweeds in all forms. Zamboanga City contributes an average rate of 21% to the total Philippine seaweeds export over the last 4 years.

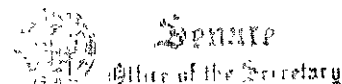
Mindanao accounts for 71% of the seaweeds production of the entire Philippines. It is estimated that some 100,000 families are engaged in seaweeds farming and about 72% of these families are located in Mindanao, particularly in the ARMM provinces and the Zamboanga Peninsula. Moreover, Zamboanga City has more than 2,000 hectares devoted to the seaweeds farming providing livelihood to more than 3,000 families. At present, there are three processing plants in Zamboanga City producing semi-refine carrageenan and alkali treated chips.

Despite the continuous increase in seaweed production and share in the world market, the industry is beseeched with existing problems and constraints. To address these problems and constraints, this proposed measure seeks to provide strategic interventions such as the establishment of additional seaweed nurseries, promotion of seaweed health management, provision of post-harvest facilities and establishment of a pilot semi-processing plant in order to promote the seaweed industry in the country.

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

  
**MANUEL "LITO" M. LAPID**  
Senator 

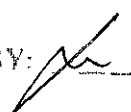
FIFTEENTH CONGRESS OF THE REPUBLIC )  
OF THE PHILIPPINES )  
Second Regular Session )



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**AN ACT**

**AN ACT TO PROACTIVELY PROMOTE THE SEAWEED INDUSTRY IN THE COUNTRY BY ESTABLISHING SEAWEED PROCESSING PLANTS, NURSERIES AND POST-HARVEST FACILITIES IN STRATEGIC SITES IN THE COUNTRY, APPROPRIATING 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. Short Title.** - This Act shall be known as the "**Seaweed Comprehensive Promotion and Development Act of 2011**".

**SEC. 2. Declaration of Policy.** - It is hereby declared the policy of the State to promote and protect products of our country's marine ecosystem and provide the enabling mechanisms to make our seaweed products globally competitive with the international market.

Towards this end, the State shall establish the enabling mechanisms to increase the seaweed production and propagation in the country, improve the seaweeds quality produced in the country and provide the necessary post-harvest facilities to improve our seaweed production efficiency.

**SEC. 3. Definition of Terms.** - For purposes of this Act, the term "seaweed" shall refer to a mass of growth of marine algae from natural shock or form pond culture. These algae are widely distributed in the ocean, occurring from the tide level to considerable depths, floating free or attached to substrates such as sand, mud, rocks, shells, coral and others. Generally, there are four (4) main groups of marine seaweeds, namely: (1) red algae (*Rhodophyceae*); (2) brown algae (*Phaeophyceae*); (3) green algae (*Chlorophyceae*) and (4) blue green algae (*Cyanophyceae*).

**SEC. 4. Promoting Research and Development (R&D) on Seaweeds (Euchuema).** - The Department of Agriculture (DA) is mandated to conduct an

extensive research and development (R&D) on the various modes of farming, producing and propagating seaweeds in the country in order to help seaweed farmers improve their production efficiency and improve the quality of the seaweed products that will comply with internationally accepted standards.

The DA shall facilitate and support interdisciplinary, multidisciplinary and international research activities to advance the knowledge and understanding on the various modes of propagating seaweeds in the country and shall disseminate their findings to various stakeholders involved in the production and propagation of seaweeds in the country.

**SEC. 5. *Establishment of a National Seaweed Development Master Plan.*** - Within six (6) months from the date of effectivity of this Act, the Department of Agriculture (DA), in close consultation with the stakeholders in the seaweed industry, shall formulate a National Seaweed Development Master Plan which will outline the national strategies, programs, projects and time-bound activities to promote and further develop the seaweeds industry in the country.

The DA shall hold various dialogues and consultations to get the proactive participation of the public and private sector in the formulation of the National Seaweed Development Master Plan.

**SEC. 6. *Establishment of Seaweed Nurseries, Seaweed Semi-Processing Plants, and Seaweed Post-Harvest Facilities.*** – Consistent with the provisions of the National Seaweed Development Master Plan, as provided under Section 5 of this Act, the DA, in joint partnership with the local government unit, shall establish seaweed nurseries, seaweed semi-processing plants and seaweed post-harvest facilities in strategic sites all over the country based on economic and financial viability, market efficiency and product accessibility.

The DA is also hereby mandated to provide technical assistance to the various local government units venturing into the farming, propagation and production of seaweeds.

The funds needed to implement the provisions of this Act shall be incorporated in the annual General Appropriations of the Department of Agriculture.

**SEC. 7. *Seaweed Credit Facility and Loan Package.*** – The Land Bank of the Philippines (LBP) is hereby mandated to formulate a Seaweed Credit Facility and Loan Package Window which shall provide low interest loans for small and medium

enterprises (SMEs) seeking to purchase or establish seaweed nurseries, seaweeds post-harvest facilities and processing plants.

Among the project covered under this loan facility are the following:

1. Establishment of additional seaweed nurseries nationwide;
2. Improvements of seaweed plants for seaweed quality management and production efficiency;
3. Provision of post-harvest facilities for seaweeds, such as, but not limited to stilt dryers; and
4. Establishment of a pilot semi-processing plant in various part of the country to produce seaweeds chips.

Within six (6) months from the date of effectivity of this Act, the Land Bank of the Philippines is mandated to formulate the necessary guidelines, procedures and requirements for the various stakeholders to avail of the Seaweed Credit Facility and Loan Package, as provided under this Section.

**SEC. 8. *Annual Appropriation.*** - The Secretary of Agriculture shall include in the Department's programs the establishment of such seaweed processing plants, seaweed nurseries, and seaweed post-harvest facilities, the funding of which shall be included in the annual General Appropriations Act.

The local government concerned shall set aside funds from any available local revenues in an amount deemed appropriate for its operationalization and management.

**SEC. 9. *Implementing Rules and Regulations (IRR).*** - Within six (6) months from the date of effectivity of this Act, the Department of Agriculture, in coordination with the Department of Science and Technology (DOST), shall promulgate the necessary implementing rules and regulations to implement the provisions of this Act.

**SEC. 10. *Repealing Clause.*** - All laws, decrees, executive orders, rules and regulations or parts thereof not consistent with the provisions of this Act are hereby repealed or modified accordingly.

**SEC. 11. Separability Clause.** - If any provision or part of this Act, or the application thereof to any person or circumstance, is held unconstitutional or invalid, the remainder of this Act shall not be affected thereby.

**SEC. 12. 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,***