

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



Senate  
Office of the Secretary

'11 MAR 15 P 6:50

SENATE  
No. 2744

INTRODUCED BY:

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Introduced by Senator Manuel "Lito" M. Lapid

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### EXPLANATORY NOTE

With the raging conflicts in oil-producing nations in the Middle East and North Africa creating a ripple effect in the world economy, several countries are showing concern regarding their respective populace's food security in the future.

Food security refers to the availability of food and one's access to it. All over the world, more and more people are dying of hunger because of poverty and the Philippines is no exemption. Although seventy five percent of impoverished Filipinos are found in the countryside, the continuous exodus of rural settlers to the metropolis has inflated the ranks of the urban indigents. In the latter part of the present decade, export restrictions, increased farming for use in biofuels, increasing oil prices in the world market, global population growth, climate change, and loss of agricultural land to residential and industrial development, are claimed to be some of the factors that are considered risks to food security.

Article 14, Section 10 of the 1987 constitution provides that "science and technology are essential for national development and progress" and as such the State shall prioritize research and development to uplift the lives and welfare of the general public and to ensure food security. The use of modern methods of farming and animal husbandry such as urban agriculture and vertical farming to improve agricultural production is important to address the basic right of everyone to adequate food and freedom from hunger.

Urban agriculture is the production, processing and marketing of food in response to the demand of consumers within a town, city, or metropolis, with the application of intensive production methods, such as the using and reusing urban resources and wastes, to yield a diversity of crops and livestock.



Vertical farming is the construction of skyscrapers or the use of abandoned buildings for the sole purpose of cultivating and farming produce and livestock with the use of various farming methods and technologies such as hydroponics, aeroponics, aquaponics, grow light and phytoremediation.

By the year 2050, about 80% of the world's population will reside in urban areas and the total population of the world will increase by 3 billion people. If traditional farming practices continue as they are practiced today, an estimated  $10^9$  hectares of new land will be needed to grow enough food to feed people. With urban agriculture and vertical farms cities are allowed to expand while remaining largely self sufficient food wise without destroying considerably larger areas of forest to provide food for people. It also help create a cleaner environment by allowing between 10 and 20

outdoor acres of farmland to return to its natural state and reduce the energy costs needed to transport and refrigerate farm produce to consumers, significantly alleviating climate change produced by excess atmospheric carbon.

This proposed measure seeks to promote the use of urban agriculture and vertical farming in the country's metropolitan areas to address food security concerns and regenerate ecosystem functions.

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

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

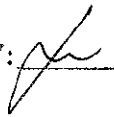
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**AN ACT**  
**PROMOTING THE USE OF URBAN AGRICULTURE AND VERTICAL FARMING IN**  
**THE COUNTRY'S METROPOLITAN AREAS TO ADDRESS FOOD SECURITY**  
**CONCERNS AND REGENERATE ECOSYSTEM FUNCTIONS APPROPRIATING**  
**FUNDS THEREFOR AND FOR OTHER PURPOSE.**

***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 "*Urban Agriculture and Vertical Farming Act of 2011*".

**SEC. 2. *Declaration of Policy.*** - It is hereby declared the policy of the State to reaffirm the fundamental right of every person to adequate food and to be free from hunger. The achievement of self-sufficiency in food production is therefore adopted as a primary state policy. Towards this end, key reforms for the development of modern, appropriate, cost-effective and environmentally safe agricultural technologies are hereby encouraged in order to ensure the food security of the country.

**SEC. 3. *Definition of Terms.*** - For purposes of this Act, the term:

**"Urban agriculture"** shall refer to the practice of cultivating, processing and distributing of food in, or around a village, town or city. Urban agriculture also involves animal husbandry, aquaculture, agro-forestry and horticulture.

**"Vertical Farming"** shall refer to the method of farming that is brought to the urban space by employing the concepts of indoor agriculture in skyscrapers and other modern buildings.

**SEC. 4. *Comprehensive Research on Urban Agriculture and Vertical Farming.*** -

For purposes of this Act, the respective Secretaries of the Department of Agriculture (DA) and the Department of Science and Technology (DOST) are hereby mandated to promote the use of urban agriculture and vertical farming in the country's metropolitan areas as an instrument to address food security concerns and regenerate ecosystem functions in the Philippines.

Idle and/or abandoned government lots and buildings owned by either national or local governments or available land resources in state universities and colleges shall be considered for growing crops, raising livestock and producing food using the said methods.

The mentioned Departments shall support research activities to expand the knowledge and understanding of urban agriculture and vertical farming to be used in food production, including a renewed investment into advanced technology research in order to adopt state-of-the-art technologies to promote agricultural production in our high value-added crops and vegetables.

**SEC. 5. *Inclusion of Urban Agriculture and Vertical Farming in Agricultural Training.* -**

Urban agriculture and vertical farming as used in agricultural production shall be integrated in the academic curriculum for secondary and tertiary level students of both public and private academic institutions studying courses on Agriculture, Practical Arts, Home Economics and/or other subjects related to agriculture.

The Department of Education (DepEd), in coordination with the Commission on Higher Education (CHED), shall promulgate the necessary rules and regulations for the implementation of this Section within six (6) months from the date of effectivity hereof.

**SEC. 6. *Appropriation.*** - The amount necessary to carry out the provisions of this Act shall be included and incorporated in the annual general appropriations of the Department of Agriculture (DA), Department of Science and Technology (DOST), Department of Education (DepEd) and Commission on Higher Education (CHED).

**SEC. 7. *Implementing Rules and Regulations (IRR).*** - Within six (6) months from the date of effectivity of this Act, the DA and the DOST, shall promulgate the necessary implementing rules and regulations to implement 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,***