



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



**EIGHTEENTH CONGRESS**  
First Regular Session

HOUSE BILL NO. 3593

**Introduced by Representative Sharon S. Garin**

### EXPLANATORY NOTE

The Philippines has an average annual rainfall of about 2,400 mm which is enough to meet the annual water demand for crop production. However, this amount of rainfall is not evenly distributed throughout the year in most parts of the country. In some areas, there is too much rainfall, resulting to excessive surface run-off, severe erosion, siltation of rivers, and flooding during the rainy season. And in other parts of the country, there may be too little to provide a sustained base flow to support crop production especially during the dry season, particularly in the upland areas.

This situation is further aggravated by the continuous degradation of our watersheds. Watersheds have been subjected to various forms of degradation such as indiscriminate logging and slash-and-burn practices ("kaingin"), with the resulting loss of forest cover from 17 million hectares in 1934 to only about 5.33 million hectares and most recent estimates (LGSP, 2003). But if properly managed, watersheds can provide a continuing flow of water to a particular water body (e.g. river, creeks and streams) and to man-made "water use outlets" such as dams, irrigation systems, or water supply take-off points.

Moreover, about 45% of the arable lands in the Philippines have been moderately to severely eroded, triggering the movement of subsistence farmers to marginal lands with the hope of meeting their day-to-day food requirement. Approximately 5.2 M hectares are severely eroded and 8.5 M hectares are moderately eroded resulting to 30 - 50% reduction and soil productivity and water retention capacity. This situation will predispose the degraded lands to drought and other water availability problems.

A related challenge is the country's perennial problem of food insufficiency and in light of our growing population. This calls for the development of new areas for food production.

The development and management of the country's water resources are critical interventions because the availability of water (or lack of water) impacts on the country's ability to increase agricultural productivity, which is fundamental to food security. Protection and efficient management of the watersheds ensure the

continuous water base flow and contribute to environmental sustainability. There is a need, therefore, to ensure water availability for sustainable agricultural development while parallel interventions should be pursued to arrest rapid environmental degradation.


This bill, thus, aims to promote soil and water conservation technologies and practices through the National Soil and Water Conservation Program. The targeted sector of the program consists of local government units and marginalized farmers in the rain-fed uplands.

Under the water conservation efforts in the Program, environment-friendly rain water harvesting structures will be constructed in the middle to upper reaches of the uplands and watersheds with predominantly rolling to hilly topography. The depressions and small inland valleys in these areas can be harnessed for small water reservoir development which could then be utilized by poor upland farming communities for agricultural production. The envisaged program will also include watershed protection, development and management as major components.

Likewise, sustainable upland development is also one of the priority thrusts of the government under Executive Order 606 (*Pursuing Sustainable Upland Development Anchoring on Food, Wood, and Non-Wood Security and Economic Productivity*). Rainwater harvesting can contribute to the attainment of sustainable upland development through the involvement of local communities who will manage and maintain both the rainwater harvesting systems and the local watersheds, which are important in recharging ground and surface water that will feed into the water impounding dams.

Concomitant to water conservation activities are soil conservation activities. There are various soil conservation measures that could be implemented in the uplands to protect the environment while attaining agricultural productivity. These will reduce the risks of natural disasters and enhance the adoption mechanism of farmers and communities to climate change. Moreover, it will also enhance food security, improve farm household income, protect resource base and/or environment and prepare the community against the threats of upcoming natural calamity.

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



**SHARON S. GARIN**  
AAMBIS-OWA Party-list





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**AN ACT PROMOTING SOIL AND WATER CONSERVATION TECHNOLOGIES  
AND APPROACHES FOR SUSTAINABLE LAND MANAGEMENT**

**Section 1. Short Title.** This Act shall be known as the "*Soil and Water Conservation Act of 2019.*"

**Section 2. Declaration of Policy.** It is hereby declared the policy of the state to promote and support soil and water conservation technologies and approaches through the development, promotion, and implementation of soil and water conservation measures and practices including rainwater harvesting to enhance decision-making, planning, and potential up-scaling of good practices. Towards this end, the state shall support Sustainable Land Management (SLM) programs for the prevention of land degradation and protection of the environment and natural resource base, and to protect the livelihood of farmers, particularly of upland farmers and indigenous people.

**Section 3. Definition of Terms.** As used in this Act:

- a) **Land Degradation** refers to the reduction or loss of the biological or economic productivity and complexity of rain-fed cropland, irrigated cropland, range, pasture, forest, and woodlands resulting from land use or from processes or combination of processes arising from human activities and habitation pattern such as a) soil erosion caused by wind and/or water; b) deterioration of the physical, chemical, or biological or economic properties of soil; c) long term loss of natural vegetation.

- b) **Organic Agriculture** refers to a production system that sustains the health of soils, ecosystems and people. It relies on Ecological processes rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation, and science to benefit the shared environment and to promote fair relationship and good quality of life for all involved.
- c) **Rain-fed Area** refers to an area not served by any irrigation facility and mainly relies on rainfall for crop and animal production.
- d) **Rainwater Harvesting System** refers to a system that collects rainwater, accumulates, and stores rainwater and surface run-off for purposes of supplemental irrigation, inland fish production, and other agricultural purposes.
- e) **Small - Scale Rainwater Harvesting System** refers to reservoir storage facilities with a height of not more than 5 m and surface area of not more than 2500 m<sup>2</sup>.
- f) **Sloping Agricultural Land Technology (SALT)** refers to a simple, applicable, low - cost method of upland farming which consists of alley farming and in which field and perennial crops are grown in bands 4-5 m wide between contoured rows of leguminous trees and shrubs.
- g) **Soil and Water Conservation Technologies** refers to measures that control soil and water degradation and enhance productivity in the field.
- h) **Soil and Water Conservation Approaches** refer to ways and means of support that helped to introduce, implement, adapt, and apply soil and water conservation technologies in the field.
- i) **Soil and Water Conservation Guided Farm (SWCGF)** refers to a farm established to showcase appropriate soil and water conservation technologies for possible replication and up-scaling. It is also an approach that facilitates the proper implementation of soil and water conservation technologies through the provision of technical assistance in the field survey, soil and water conservation farm planning and implementation of the plan.
- j) **Soil and Water Conservation Farm Plan** refers to a plan that considers the right mix of farm enterprises and appropriate soil and water conservation technologies, which is formulated with reference to existing bio - physical and socio-economic conditions of the farm and in consultation with farmer-cooperators.



- k) **Soil Conservation** refers to the management of soil to prevent or reduce soil erosion and depletion by wind and water.
- l) **Sustainable Land Management (SLM)** refers to the use of land resources, including soils, water, animals and plants, for the production of goods to meet changing human needs, while simultaneously ensuring the long - term productive potential of these resources and the maintenance of their environmental functions.
- m) **Upland** refers to the extensive portion of land located within one hundred to five hundred (100-500) meters above sea level with slopes of less than eighteen percent (18%).
- n) **Water Conservation** refers to the protection, development, and efficient management of water resources for beneficial purposes.
- o) **Watershed** refers to a land area drained by a stream or fixed body of water and its tributaries having common outlet for surface run off. This include small watershed with area of ten thousand (10,000) hectares and below; medium scale watershed with area of more than ten thousand (10,000) hectares to fifty thousand (50,000) hectares; and a large-scale watershed with an area of fifty thousand (50,000) hectares.
- p) **Watershed Management** refers to the process of guiding and organizing land and other resources in a watershed to provide desired goods and services without adversely affecting soil, water and other natural resources.
- q) **Watershed Protection** refers to a management strategy to control soil erosion and prevent the illegal cutting of the vegetations and other land degrading activities in the watershed.

**Section 4. The National Soil and Water Conservation Program.** In order to address the problem of land degradation which affects the state and management of our natural resources, with a National Soil and Water Conservation Program, here in after referred to as the Program, is hereby established. The program shall foment synergies between agricultural of productivity improvement and sustainable land management of through the promotion and implementation of soil and water conservation technologies and approaches.

The Bureau of Soils and Water Management (BSWM), in consultation with concerned agencies and other stakeholders, shall prepare the National Soil and Water Conservation Program subject to the approval of the secretary of the Department of Agriculture DA. Upon implementation of this Act, the (BSWM) shall submit annual report and progress report as may be required, within 5 years to the secretary of the Department of Agriculture for review and assessment.

**Section 5. Goals and Objectives.** The program shall support the implementation of sustainable land management SLM projects for livelihood improvement and prevention of land degradation in the uplands. As such, it shall pursue the following specific objectives:

- To establish one thousand (1,000) soil and water conservation and guided farms within 5 years from the effectivity Of this Act in order to showcase sustainable land management best practices such as but not limited to sloping agricultural land technology, organic - based agriculture ,farm waste and residue Management, waste water recycling and re - use, rain water harvesting or combination of 2 or more of these Practices including approaches to implement these practices
- To establish ten thousand (10,000) units of small - scale rainwater harvesting systems consisting of rainwater reservoir development, watershed management, and service area development in strategic upland areas throughout the country, within five (5) years from the effectivity of this Act; and
- To capacitate and empower local government units LGUs and farmers associations in the implementation and operationalization and maintenance of soil and water conservation model farms and rainwater harvesting systems.

**Section 6. Implementing Agency.** The Department of Agriculture (DA), through the Bureau of Soils and Water Management (BSWM) and the DA - Regional Field Units (DA-RFUs), shall provide the technical and administrative support in the implementation of the program and all other policies and objectives of this Act.

**Section 7. Farmers Associations.** Farmer-cooperators and program recipients shall be organized into associations and/or cooperatives and shall be capacitated on soil



and water conservation. The BSWN and DA-RFUs, in coordination with concerned local government units (LGUs), shall train them on soil and water conservation and shall assist them in accessing available credit windows sustain the operation and maintenance of the soil and water conservation facilities to be established.

The BSWM and Bureau of Soils and Water Management, in coordination with concerned LGUs, shall assist and facilitate the registration of such associations and/or cooperatives for purposes of participation in the National Soil and Water Conservation Program: *Provided*, that the farmers shall select the leaders of their respective aggrupations in accordance with the Constitution and by-laws that they shall formulate and firm up.

**Section 8. Soil and Water Conservation Guided Farms.** Soil and Water Conservation Guided Farms (SWCGF) shall serve as model farms that will showcase soil and water conservation approaches and technologies and the uplands. These will provide a multiplier effect by encouraging other farmers to engaged in soil and water conservation. For this purpose, SWCGF shall be established in clusters within high impact areas such as watersheds.

Potential sites shall be identified and selected, using approved site selection criteria, in coordination with concern LGUs and farmers associations. Selected sites shall be subjected to various field surveys, bio-physical characterization, and socio-economic profiling, the results of which shall serve as inputs in the preparation of Soil and Water Conservation Farm Plan: *Provided*, that the said plan shall be prepared in consultation with farmers based on the sites bio-physical characteristics, market potential of crops to be produced, and capability and resources a farmer - cooperators to manage the farm. The Soil and Water Conservation Guided Farms shall be established in accordance with the Soil and Water Conservation Farm Plan, farmers' capabilities and preferences, and available resources.

**Section 9. Small Scale Rainwater Harvesting Structures.** A small - scale rainwater harvesting structures shall be designed and established in cluster to store rain water and surface run-off within a watershed. Potential sites shall be identified and selected using approved site selection criteria in coordination with concerned LGUs and

farmers associations. Selected sites shall be subjected to various field surveys, bio-physical characterization and socio-economic profiling. The small-scale rainwater harvesting structures shall be implemented in accordance with the approved engineering plans and design, and field distribution which shall be prepared by concerned LGU with technical assistance from BSWM and DA-RFUs.

The BSWM shall turn over the small - scale rainwater harvesting structures to the concern LGU wherein said structures are located. Subject to the requirements to be set by BSWM, the LGU shall accordingly trust and delegate the operation and maintenance of structures to duly organized farmers associations as recipients.

Farmers shall be required to formulate to prepare the appropriate cropping pattern and calendar that will optimize the use of stored rainwater with the technical assistance from the LGUs through the Office of the Municipal Agriculturist.

**Section 10. Research, Development and Extension Services.** Research and development and extension on soil and water conservation shall be an important component of the program to provide a dynamic technology development, information dissemination and extension support in the implementation of the program. Research and development shall cover but shall not be limited to the following areas: rainwater harvesting design methods, runoff management technologies, soil moisture conservation impacts, and groundwater recharge enhancement.

The BSWM, the Bureau of Agricultural Research (BAR) and the Agricultural Training Institute (ATI) of the DA, the Ecosystem Research And Development Bureau (ERDB) of the Department of Environment and Natural Resources (DENR), and concerned State Universities and Colleges (SUCs), through proper and appropriate institutional arrangements, shall provide technical support and assistance in the conduct of research and development and in the provision of extension services on soil and water conservation to LGUs and farmers associations adding cooperative.

The BSWM and ATI shall also assist the LGU in the conduct of trainings for beneficiaries and/or cooperators of soil and water guided farms and small - scale rainwater harvesting systems prior to operation and/or turn - over of said facilities.



**Section 11. Implementing Rules and Regulations** – The Department of Agriculture and Bureau of Soils and Water Management, in consultation with other concerned agencies and stakeholders, shall promulgate the necessary rules and regulation to implement this Act.

**Section 12. Appropriations** – The amount necessary for the initial implementation of this Act shall be charged to the budget of the Department of Agriculture under the current General Appropriations Act. Thereafter, such sums as may be necessary for its continued implementation shall be included in the annual General Appropriations Act.

**Section 13. Separability Clause** – If any provision of this Act is subsequently declared invalid or unconstitutional, other provisions hereof which are not affected thereby shall remain in full force and effect.

**Section 14. Repealing Clause.** All laws or parts thereof, decrees, orders, rules and regulations inconsistent with the provisions of this Act are here by repealed or modified accordingly.

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

Approved.