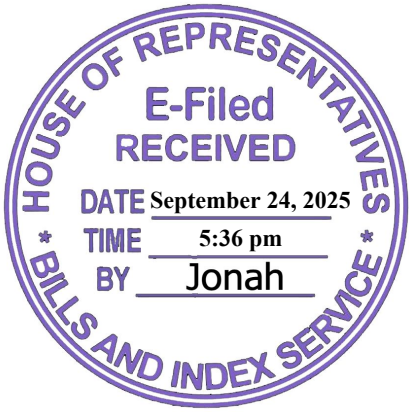
Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City, Manila

TWENTIETH CONGRESS
First Regular Session

HOUSE BILL NO. **4888**




Introduced by Representative Jose Manuel F. Alba

**AN ACT**
**INSTITUTIONALIZING GREEN INFRASTRUCTURE AND NATURE-BASED SOLUTIONS FOR SUSTAINABLE AND RESILIENT NATIONAL DEVELOPMENT, PROVIDING MECHANISMS FOR IMPLEMENTATION AND FINANCING, AND FOR OTHER PURPOSES**

**EXPLANATORY NOTE**

The Republic of the Philippines stands at a critical juncture, confronting an escalating climate crisis that poses an existential threat to its national security, economic stability, and the well-being of its citizens. Consistently ranked among the world's most vulnerable nations to climate impacts, our archipelago faces compounding threats from increasingly intense typhoons, a rate of sea-level rise three times the global average, and chronic urban inundation. This challenge is magnified by the immense infrastructure needs of the region, with the Asian Development Bank estimating that Southeast Asia requires $210 billion annually for climate-resilient infrastructure (Asian Development Bank, 2022).

The conventional 20th-century infrastructure paradigm—a rigid system of 'gray' concrete pipes, seawalls, and channels built to resist nature—is proving catastrophically inadequate and financially unsustainable against this backdrop. This approach, focused on rapidly conveying water, has failed to protect our communities, leading to debilitating floods in Metro Manila and other key cities and widespread damage in our coastal zones. To continue investing in this outdated model is to build assets that are pre-destined to fail in the face of our new climate reality.

This bill proposes a fundamental paradigm shift. It seeks to institutionalize Green Infrastructure (GI) and Nature-based Solutions (NbS)—

a strategic approach that works with nature to build resilience. GI is not merely an environmental amenity but a high-performing, economically superior class of public asset. Unlike gray infrastructure, which is a depreciating liability, GI—such as restored mangrove forests, urban parks designed for flood retention, and permeable streetscapes—is often an appreciating asset that delivers a rich "value stack" of co-benefits, including water purification, carbon sequestration, improved public health, and enhanced biodiversity.

The global evidence is unequivocal and compelling. Philadelphia's "Green City, Clean Waters" plan is projected to save $4.5 billion in capital costs over gray alternatives (Sustainable Business Network of Greater Philadelphia, 2016). Copenhagen's cloudburst management plan is approximately $1 billion cheaper than a conventional sewer expansion (City of Copenhagen, 2012), and Wuhan's "Sponge City" pilot was over $600 million cheaper than traditional drainage upgrades (Urban Transitions Alliance, 2020). The effectiveness of these solutions is scientifically proven: just 100 meters of healthy mangrove forest can reduce wave height by up to 66% (McIvor et al., 2012), and healthy coral reefs can dissipate up to 97% of a wave's energy before it reaches the shore (Ferrario et al., 2014). For wastewater, a constructed wetland for an industrial facility saved $38.5 million in upfront costs compared to a traditional treatment plant (The Nature Conservancy, n.d.).

Despite this evidence, a critical policy gap exists. Our current legal framework treats ecosystems as objects of protection rather than as functional infrastructure. The agencies responsible for national infrastructure planning and delivery, such as the Department of Public Works and Highways (DPWH) and the Department of Economics and Development Planning (DEDP), lack a clear mandate to consider, evaluate, and implement nature-based alternatives.

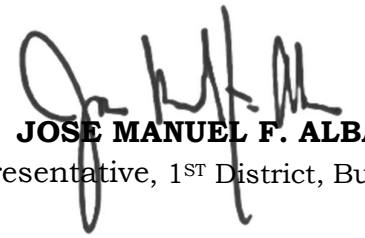
This Act seeks to bridge that gap. It will:

1) Establish GI and NbS as the preferred and primary approach for climate resilience and disaster risk reduction infrastructure.
2) Mandate a "Green-First Options Analysis" for all relevant public projects, ensuring that nature-based alternatives are fairly evaluated based on their full lifecycle costs and benefits.
3) Create a whole-of-government coordination council to break down institutional silos and ensure policy coherence.
4) Establish sustainable financing mechanisms, including a dedicated National Green Infrastructure Fund and innovative market-based instruments, to make the protection and restoration of our natural assets economically viable.

5) Provide powerful fiscal and non-fiscal incentives to catalyze private sector investment in building a green and resilient Philippines.
6) Promote Transparency and Combat Corruption by shifting public funds towards highly visible, community-based Green Infrastructure projects and implementing a robust, technology-driven MRV system using GIS and other tools, thereby creating a systemic deterrent to the proliferation of "ghost projects" in flood control and other public works.

By harnessing the power of our natural capital, we can forge a development pathway that is not only more resilient and sustainable but also more prosperous and equitable for all Filipinos. The passage of this landmark legislation is therefore a matter of urgent national priority.

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



**JOSE MANUEL F. ALBA**
Representative, 1ST District, Bukidnon


***References***

Asian Development Bank (2022). *Green Infrastructure Across Sectors Yields Multiple Benefits for Asia and the Pacific*. Available at: https://www.adb.org/news/features/green-infrastructure-across-sectors-yields-multiple-benefits-asia-pacific

City of Copenhagen (2012). *Cloudburst Management Plan 2012*. Available at: https://en.klimatilpasning.dk/media/665654/cph_cloudburst_management_plan.pdf

Ferrario, F., Beck, M.W., Storlazzi, C.D., Micheli, F., Shepard, C.C. and Airoldi, L. (2014). 'The effectiveness of coral reefs for coastal protection'. *Nature Communications*, 5(1). Available at: https://www.nature.com/articles/ncomms4794

McIvor, A.L., Möller, I., Spencer, T. and Spalding, M. (2012). *Reduction of wind and swell waves by mangroves*. Natural Coastal Protection Series: Report 1. Cambridge Coastal Research Unit Working Paper 40. The Nature Conservancy and Wetlands International. Available at: https://www.naturalcapitalproject.stanford.edu/sites/g/files/sbiybj9321/f/work-paper-wave-attenuation-mangroves_0.pdf

Sustainable Business Network of Greater Philadelphia (2016). *Economic Impact of Green City, Clean Waters: The First Five Years*. Available at: https://www.sbnphiladelphia.org/wp-content/uploads/2019/09/SBN_FINAL-REPORT.pdf

The Nature Conservancy (n.d.). *The Case for Green Infrastructure*. Available at: https://www.nature.org/content/dam/tnc/nature/en/documents/the-case-for-green-infrastructure.pdf

Urban Transitions Alliance (2020). *Building climate resilience and water security in cities: lessons from the Sponge City of Wuhan, China*. Available at: https://urbantransitions.global/wp-content/uploads/2020/03/Building-climate-resilience-and-water-security-in-cities-lessons-from-the-Sponge-City-of-Wuhan-China-final.pdf

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City, Manila

TWENTIETH CONGRESS
First Regular Session

HOUSE BILL NO. **4888**

---

Introduced by Representative Jose Manuel F. Alba

---

**AN ACT**
**INSTITUTIONALIZING GREEN INFRASTRUCTURE AND NATURE-BASED SOLUTIONS FOR SUSTAINABLE AND RESILIENT NATIONAL DEVELOPMENT, PROVIDING MECHANISMS FOR IMPLEMENTATION AND FINANCING, AND FOR OTHER PURPOSES**

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

**Section 1. *Title.* –** This Act shall be known as the *"Philippine Green Infrastructure Act of 2025"*.

**Section 2. *Declaration of Policy.* –** In fulfillment of the constitutional mandate of the State to protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature, it is hereby declared the policy of the State to adopt a fundamental paradigm shift towards Green Infrastructure and Nature-Based Solutions. This approach is intended to more effectively manage the nation's natural resources, reduce overall public infrastructure costs, improve the effectiveness and climate resilience of national and local investments, and ensure long-term environmental sustainability.

This Act shall institutionalize Green Infrastructure and Nature-Based Solutions as the preferred and primary approach for national development, climate change adaptation, and disaster risk reduction, and shall be implemented in synergy with the Philippine Development Plan (PDP), the National Adaptation Plan (NAP), the Nationally Determined Contributions (NDC), the national strategy for a Blue Economy, and the long-term vision articulated in AmBisyon Natin 2040.

The State shall:

a) Recognize natural ecosystems such as forests, wetlands, mangrove forests, and riverine floodplains as a vital class of public infrastructure that provides essential ecosystem services critical for public welfare and national development;
b) Mainstream the valuation of these ecosystem services into national and local development planning, policy formulation, and public investment decisions, ensuring that the full lifecycle costs and benefits of all infrastructure options are properly accounted for;
c) Establish clear mandates, foster inter-agency coordination, and build the capacity of national and local government institutions to plan, implement, and manage Green Infrastructure effectively;
d) Create innovative, market-based financial mechanisms and incentives that make the protection, restoration, and establishment of Green Infrastructure economically competitive and financially sustainable; and
e) Ensure a whole-of-government and whole-of-society approach, fostering collaboration among government agencies, local government units (LGUs), the private sector, civil society, and local communities to build a climate-resilient and sustainable Philippines.

**Section 3.** ***Definition of Terms.*** – As used in this Act, the following terms shall mean:

a) *Ecosystem Services* – The direct and indirect contributions of ecosystems to human well-being. These include provisioning services (e.g., food, water), regulating services (e.g., flood control, climate regulation), supporting services (e.g., nutrient cycling), and cultural services (e.g., recreation, spiritual enrichment).

b) *Gray Infrastructure* – Engineered infrastructure that uses manufactured materials such as concrete and steel to manage natural systems, characterized by single-purpose design and hard, impervious surfaces. Examples include concrete seawalls, drainage canals, piped sewer systems, and dams.

c) *Green Infrastructure (GI)* – A strategically planned network of natural and semi-natural areas with other environmental features, designed and managed to deliver a wide range of ecosystem services. It includes natural ecosystems, restored habitats, and engineered systems that mimic natural processes. Examples range from large-scale assets like

national parks and coastal greenbelts to urban-scale features like green roofs, permeable pavements, constructed wetlands for wastewater treatment, phytoremediation sites for solid waste management, and urban parks designed for flood retention.

d) *Hybrid Infrastructure* – A planned system that strategically combines Green and Gray Infrastructure elements to leverage the benefits of both approaches, enhancing overall performance, resilience, and cost-effectiveness.

e) *Lifecycle Cost Analysis (LCCA)* – A method of project evaluation that considers all costs associated with an asset over its entire lifespan, from planning and construction to operation, maintenance, and end-of-life disposal or decommissioning. For the purposes of this Act, LCCA shall include the monetization of all quantifiable ecosystem service co-benefits generated by an infrastructure option.

f) *Nature-Based Solutions (NbS)* – Actions to protect, sustainably manage, and restore natural or modified ecosystems, which address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits, consistent with internationally recognized standards such as the IUCN Global Standard for NbS.

g) *Payment for Ecosystem Services (PES)* – A voluntary transaction where a well-defined ecosystem service, or a land use likely to secure that service, is bought by at least one buyer from at least one provider on the condition that the provider secures the provision of that service.

## ARTICLE I
## INSTITUTIONAL FRAMEWORK AND MANDATES

**Section 4. *Creation of the National Green Infrastructure Council.*** – To ensure a whole-of-government approach, there is hereby created a National Green Infrastructure Council, hereinafter referred to as the NGIC, which shall function as the primary body for inter-agency coordination, policy integration, and monitoring for the implementation of this Act. The NGIC shall be composed of the following:

| | |
|---|---|
| *Chairperson* | Secretary of the Department of Economy, Planning, and Development (DEPDev) |

| | |
|---|---|
| *Co-Chairpersons* | Secretary of the Department of Environment and Natural Resources(DENR)<br>Secretary of the Department of Public Works and Highways (DPWH) |
| *Members* | Secretary of the Department of National Defense (DND), in his capacity as Chairperson of the NDRRMC |
| | Secretary of the Department of the Interior and Local Government (DILG) |
| | Secretary of the Department of Agriculture (DA) |
| | Secretary of the Department of Human Settlements and Urban Development (DHSUD) |
| | Secretary of the Department of Finance (DOF) |
| | Chairperson of the Climate Change Commission (CCC) |
| | Three (3) representatives from the private sector, academe, and civil society, to be appointed by the President |

**Section 5.** ***Functions of the NGIC.*** – The NGIC shall have the following coordinating and oversight functions:

a) Facilitate the convergence of programs and projects of its member agencies to ensure a harmonized and effective implementation of this Act;
b) Review and endorse the National Green Infrastructure Master Plan formulated by the DEPDev for approval by the President;
c) Serve as a forum to resolve conflicts and address implementation bottlenecks among agencies and between national and local government;
d) Recommend national policies, standards, and guidelines for Green Infrastructure to the appropriate lead agencies for their development and promulgation;
e) Monitor and evaluate the progress and impact of the national GI strategy and submit a consolidated annual report to the President and to Congress.

**Section 6.** ***The NGIC Secretariat.*** – The NGIC shall be supported by a permanent Secretariat which shall be housed in the Department of Economy, Planning, and Development (DEPDev). The DEPDev shall establish the necessary organizational structure and provide the technical and administrative support for the effective functioning of the Council.

**Section 7.** ***Mandates of Key National Government Agencies.*** – To operationalize the policies of this Act, the following agencies are hereby mandated to perform the following functions:

a) DEPDev shall lead the formulation and periodic updating of the National Green Infrastructure Master Plan, in coordination with NGIC member agencies. It shall issue the national guidelines for the conduct of the Lifecycle Cost Analysis (LCCA) for all infrastructure projects and shall mainstream GI and NbS into the Philippine Development Plan, regional development plans, and all public investment programming.

b) DPWH shall develop and promulgate the reformed national engineering and design standards to integrate GI as a default and preferred practice in all public works projects, particularly in transport, flood management, and water and sanitation infrastructure, including standards for retrofitting existing gray infrastructure.

c) DENR shall serve as the primary scientific and technical lead for Green Infrastructure. It shall lead the national mapping, inventory, and valuation of GI assets; establish and manage a national PES framework; develop technical guidelines for ecological soundness; and serve as the lead technical agency for watershed-based and coastal NbS projects. It shall also recommend areas for declaration as Designated Green Infrastructure.

d) DILG shall oversee the integration of GI into local planning documents and lead the design and rollout of a national LGU capacity-building program on GI.

e) DA shall promote and provide support for the adoption of agro-ecological approaches, climate-resilient agricultural practices, and the integration of GI within agricultural landscapes to enhance food security, manage water resources, and build rural resilience.

f) DHSUD shall integrate GI standards and requirements into national housing and urban development policies, plans, and zoning guidelines,

and shall issue guidance to LGUs on the implementation of non-fiscal incentives.

g) DOF shall lead the development of a national financing strategy for GI, create the enabling policy environment for innovative finance mechanisms, and act as the manager and secretariat of the National Green Infrastructure Fund.

h) CCC shall ensure the alignment of the National Green Infrastructure Master Plan with the National Adaptation Plan and the Nationally Determined Contributions of the Philippines.

**Section 8.** ***Role of Local Government Units (LGUs).*** – Consistent with the general welfare clause of Republic Act No. 7160, or the Local Government Code of 1991, LGUs shall be the frontline actors in the implementation of this Act. They shall be responsible for integrating GI into their Comprehensive Land Use Plans (CLUPs), Provincial Development and Physical Framework Plans (PDPFPs), and Local Climate Change Action Plans (LCCAPs).

## ARTICLE II
## MAINSTREAMING GREEN INFRASTRUCTURE IN PLANNING AND DEVELOPMENT

**Section 9.** ***Mandatory Green-First Infrastructure Options Analysis.*** – All proposals for public infrastructure projects intended to manage climate and disaster risks, including but not limited to flood control, drainage systems, coastal protection, and wastewater treatment facilities, shall be subject to a Green-First Options Analysis. This analysis must include a rigorous and comparative evaluation of technically feasible gray, green, and hybrid infrastructure alternatives. The selection of the final project design shall be based on a full Lifecycle Cost Analysis (LCCA) as defined in this Act. The DENR shall be consulted in the evaluation of the green and hybrid options to ensure ecological soundness. This analysis shall form part of the requirements for project approval by the DEPDev and for the issuance of an Environmental Compliance Certificate (ECC).

**Section 10.** ***National Green Infrastructure Inventory and Valuation.*** – The DENR, in coordination with the Philippine Statistics Authority (PSA) and other relevant agencies, shall establish and maintain a National Green Infrastructure Inventory. This shall be a nationwide database and map of existing and potential GI assets. The inventory shall include an economic valuation of the ecosystem services provided by these assets, which

shall be undertaken in accordance with the framework and methodologies established under Republic Act No. 11995, otherwise known as the Philippine Ecosystem and Natural Capital Accounting System (PENCAS) Act.

**Section 11.** ***Declaration and Protection of Designated Green Infrastructure.*** – An ecosystem or a network of ecosystems serving a specific, critical public purpose may be formally declared as "Designated Green Infrastructure" by the President of the Philippines, upon the recommendation of the NGIC through the DENR. Such a declaration shall confer upon the area legal protection against conversion or any activity that would compromise its primary infrastructure function. The primary infrastructure function of Designated Green Infrastructure, such as flood retention or coastal storm surge protection, shall be recognized as the principal and priority land use for that area.

**Section 12.** ***Monitoring, Reporting, and Verification (MRV) System.*** – The DENR shall design, establish, and operate a national Monitoring, Reporting, and Verification (MRV) system for all Green Infrastructure assets included in the National Inventory. This system shall track the physical condition, ecological health, and performance in delivering ecosystem services of GI assets over time. The MRV system shall utilize a combination of on-the-ground assessment and appropriate modern technologies, including but not limited to, Geographic Information Systems (GIS), remote sensing, and satellite imagery, to ensure accurate and timely reporting. Data from the MRV system shall be used to inform adaptive management, verify compliance for PES and other incentive mechanisms, and ensure the long-term integrity and effectiveness of the nation's Green Infrastructure.

## ARTICLE III
## ECONOMIC INSTRUMENTS AND SUSTAINABLE FINANCING

**Section 13.** ***Authority to Implement Stormwater Management Fees.*** – LGUs are hereby authorized to create, through local ordinance, a system of stormwater management fees. Such fees shall be structured as a user fee based on a property's contribution to stormwater runoff, which may be measured by its area of impervious surface. The revenue generated shall be placed in a local special account to be used exclusively for the planning, construction, and management of local Green Infrastructure for stormwater management.

**Section 14.** ***Establishment of Payment for Ecosystem Services (PES) Mechanisms.*** – Pursuant to its mandate under Section 7(c) of this Act, the DENR is hereby authorized to establish, facilitate, and regulate PES mechanisms for Designated Green Infrastructure assets. Commercial, industrial, and other entities who are direct and measurable beneficiaries of the ecosystem services provided by such assets, including but not limited to, water purification and supply, shall be required to enter into PES agreements. The fees collected shall be deposited into a dedicated trust fund for each Designated Green Infrastructure, to be managed by a multi-stakeholder governing body. The revenue shall be used for the conservation, maintenance, and enhancement of the asset and to provide a sustainable source of revenue and livelihood for its recognized stewards, including local communities and indigenous peoples.

**Section 15.** ***The National Green Infrastructure Fund.*** – There is hereby established a special fund to be known as the National Green Infrastructure Fund, hereinafter referred to as the Fund. The Fund shall be capitalized through an initial appropriation in the General Appropriations Act and shall be supplemented by annual appropriations thereafter. It may also be augmented by grants, donations, and other contributions from local and foreign sources.

The Fund shall be used to provide grants and concessional financing to Local Government Units, civil society organizations, and community enterprises for the development, restoration, and management of a wide range of Green Infrastructure and Nature-Based Solutions projects. It shall also provide funding for technical assistance and project preparation to develop a robust pipeline of bankable projects. The National Green Infrastructure Council shall serve as the Governing Board of the Fund, while the Department of Finance shall act as its manager and secretariat.

**Section 16.** ***Fiscal and Non-Fiscal Incentives for Private Sector Adoption.*** – To encourage private sector investment in Green Infrastructure, the following incentives are hereby established:

a) Fiscal Incentives under the CREATE Act. – The Board of Investments (BOI), upon the recommendation of the NGIC, shall include the establishment, restoration, and management of Green Infrastructure as a priority activity in the Strategic Investment Priority Plan (SIPP). Pursuant to Republic Act No. 11534, otherwise known as the Corporate Recovery and Tax Incentives for Enterprises (CREATE) Act, and its subsequent amendments, investments by registered business enterprises in NGIC-certified Green Infrastructure projects shall be

eligible for fiscal incentives, including but not limited to, Enhanced Deductions on capital investment and labor expense, as administered by the BOI and other Investment Promotion Agencies.

b) Non-Fiscal Incentives. – Pursuant to their powers under Republic Act No. 7160, and guided by standards issued by the DHSUD, relevant LGUs are hereby mandated to establish a system of non-fiscal incentives for private developers. Such incentives may include, but are not limited to, density bonuses, increased floor area ratios, and expedited permitting for projects that incorporate significant and high-quality GI features that exceed minimum national and local standards.

## ARTICLE IV
## CAPACITY BUILDING, RESEARCH, AND PUBLIC AWARENESS

**Section 17.** ***National Capacity Building Program.*** – The DILG, in partnership with the DENR, DPWH, State Universities and Colleges, and qualified technical institutions, shall design and implement a continuous national capacity-building program for LGU officials, planners, and engineers on the principles, design, implementation, and maintenance of Green Infrastructure.

**Section 18.** ***Research and Development.*** – The Department of Science and Technology (DOST), in coordination with the DENR and the Commission on Higher Education (CHED), shall develop and fund a National Green Infrastructure Research and Development Program. This program shall focus on developing locally appropriate technologies, materials, and best practices for GI and NbS tailored to the diverse ecosystems and climatic conditions of the Philippines.

**Section 19.** ***Public Awareness and Education.*** – The NGIC, through the Philippine Information Agency (PIA) and in coordination with the Department of Education (DepEd) and the Commission on Higher Education (CHED), shall develop and implement a sustained national public information, education, and communication campaign to build broad-based support and understanding of the value and benefits of Green Infrastructure and Nature-Based Solutions.

## ARTICLE V
## FINAL PROVISIONS

**Section 20.** ***Implementing Rules and Regulations (IRR).*** – Within ninety (90) days from the effectivity of this Act, the DEPDev, as Chairperson of the NGIC, shall convene the Council to develop and promulgate the necessary rules and regulations for the effective implementation of this Act.

**Section 21.** ***Appropriations.*** – The amount necessary for the initial implementation of this Act, including the operational budget for the NGIC Secretariat and the initial capitalization of the National Green Infrastructure Fund, shall be included in the General Appropriations Act following the enactment of this law. Thereafter, each member agency of the NGIC shall include in their respective annual budget proposals the necessary funding to carry out their mandated functions under this Act.

**Section 22.** ***Separability Clause.*** – If any provision of this Act is declared unconstitutional or invalid, the other provisions not affected thereby shall remain in full force and effect.

**Section 23.** ***Repealing Clause.*** – All laws, presidential decrees, executive orders, rules and regulations, and other issuances contrary to or inconsistent with the provisions of this Act are hereby repealed, amended, or modified accordingly.

**Section 24.** ***Effectivity.*** – This Act shall take effect fifteen (15) days after its publication in the Official Gazette or in a newspaper of general circulation.

*Approved,*