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**SENATE**

RECEIVED BY: \_\_\_\_\_

**S. No. 1914**

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**Introduced by SENATOR RAMON BONG REVILLA, JR.**

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**AN ACT  
INSTITUTIONALIZING THE PHILIPPINE ECOSYSTEM AND NATURAL  
CAPITAL ACCOUNTING SYSTEM (PENCAS), APPROPRIATING FUNDS  
THEREFOR AND FOR OTHER PURPOSES**

**EXPLANATORY NOTE**

The national income accounts (NIA) are important indicators that determine the country's development. Traditionally, NIA systems measure economic performance by determining the aggregate value of goods and services produced in a country to come up with indicators of economic development such as the Gross Domestic Product (GDP). However, this is an incomplete picture of a development without considering the natural capital.

The natural capital is a crucial component of our country's wealth. In addition to economic and social capital, natural capital accounts (NCA) for the stock of renewable and non-renewable resources which provide a flow of benefits to people. It includes the ecosystem services that are often "invisible" to most people such as, flood protection, carbon sequestration and habitats for wildlife, among others.

The efforts to institutionalize the Ecosystem and Natural Capital Accounting System started in the 1990s. Indicators and standards generated by the NIA system are considered vital to economic management and policy-making. They serve as the basis for socio-economic planning, formulation of development programs, and policy

analysis in aid of legislation, among others. Thus, it is important that the national income accounts reflect a more accurate state of development and economic performance of the country. It should incorporate both environmental and non-environmental economic inputs and outputs for policymakers to make responsive, relevant and effective laws, plans and programs necessary for national development.

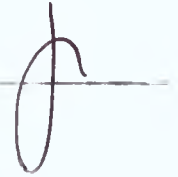
This bill seeks to institutionalize a Philippine Ecosystem and Natural Capital Accounting System (PENCAS) to reflect environmental inputs and outputs in the determination of national income accounts. It aims to develop ecosystem accounts and creation of NCA units within government agencies.

In view of the holistic appreciation of the country's development, the passage of this measure is highly recommended.

  
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**CAPITAL ACCOUNTING SYSTEM (PENCAS), APPROPRIATING FUNDS**  
**THEREFOR AND FOR OTHER PURPOSES**

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

- 1           Section 1. *Short Title.* - This Act shall be known as the "*Philippine Ecosystem*  
2 *and Natural Capital Accounting System (PENCAS) Law of 2023*".
- 3           Sec. 2. *Declaration of Policy.* – It is hereby declared the policy of the State to:
- 4           a. Promote the common good, conserve and develop our patrimony, as provided  
5           in the Preamble of the Constitution, natural capital being the bedrock of the  
6           national patrimony;
- 7           b. Develop a comprehensive information system and accounting framework that  
8           will take into consideration the role of our natural capital, consisting of both  
9           environmental and natural resources, and its impact on the country's economy;
- 10          c. Include and institutionalize natural capital accounting as part of the national  
11          income accounting system, strengthening and building on Republic Act No.  
12          10625, otherwise known as the "*Philippine Statistical Act of 2013*", on  
13          environmental accounts and statistics;
- 14          d. Provide indicators that will facilitate the integration of environmental and  
15          natural resource concerns in national development planning and policy making,

1 in allocation of budgets, and in designating statistics that will be produced  
2 regularly for an identified period of analysis;

3 e. Establish and improve inter-agency coordination for the purpose of linking  
4 economic with environmental and natural resource information and efficient  
5 data management among concerned government agencies and their partner  
6 institutions, and to establish an office to guide such coordination; and,

7 f. Include nature's pricelessness, its intrinsic value, and its interdependencies in  
8 the implementation of the foregoing policies to consider that nature and  
9 ecosystems have intrinsic rights to exist, with an end in view of recognizing  
10 legal rights that serve to protect endangered ecosystems and applying the  
11 precautionary principle, especially when economic values cannot be estimated.

12 *Sec. 3. Definition of Terms.* – For purposes of this Act, the following terms are  
13 hereby defined as follows:

14 a. "*Ecosystem*" is a complex community of living organisms, their physical  
15 environment, and all their interrelationships in a particular unit of space, and  
16 these biotic and abiotic components are linked together through nutrient cycles  
17 and energy flows;

18 b. "*Capital*" is a stock concept, which yields a periodic income, which is a flow  
19 concept;

20 c. "*Natural capital*" is the concept of nature as a stock that provides a flow of  
21 benefits to people and the economy. Natural capital consists of stocks of  
22 natural assets – both biotic and abiotic. It includes air, water, soil, minerals,  
23 forests, coral reefs, seagrass beds, and all living things. It is from this natural  
24 capital that humans derive a wide range of goods and services, which make  
25 human life possible. The goods and services that natural capital provides, such  
26 as food, water, energy or climate regulations, are called ecosystem services.  
27 These provide people everywhere with the means for healthy lives and  
28 underpin all economic activity;

29 d. "*Ecosystem services*" are the flows of benefits, which people gain from natural  
30 ecosystems, while natural capital consists of the stock of natural ecosystems or  
31 stock of renewable and non-renewable natural resources from which these  
32 benefits flow; and

1 e. "The United Nations System of Environmental-Economic Accounting (SEEA)" is  
2 a framework that integrates both economic and environmental data to provide  
3 a more comprehensive and multipurpose view of the interrelationships between  
4 the economy, the environment and ecosystems, and the stocks and changes in  
5 stocks of natural assets, as they bring benefits to humanity.

6 Sec. 4. *Philippine Environmental and Natural Capital Accounting System*  
7 *(PENCAS)*. – A system of Environmental-Economic Accounting is hereby  
8 institutionalized within the government bureaucracy. The Philippine Environmental  
9 and Natural Capital Accounting System (PENCAS) shall be based on the existing  
10 environmental accounting frameworks that are covered by the UN SEEA and are  
11 theoretically correct and accepted as evaluated based on international standards.  
12 Among others, the PENCAS framework shall include a list of the officially designated  
13 statistics on the depreciation of natural capital, environmental protection expenditures,  
14 pollution and quality of land, air and sea, environmental damages, and genuine  
15 savings. It shall conform to and expound, expand and localize the UN SEEA. A  
16 roadmap and manual for further development of these indicators for each of the  
17 terrestrial (land and freshwater) and blue (marine) economies shall be formulated.  
18 The draft roadmap and international manuals shall be customized to the ecosystems  
19 in the Philippine archipelago that support the terrestrial and blue economies. All these  
20 data shall constitute the Philippines' natural capital, the conservation of which shall be  
21 paramount.

22 Sec. 5. *Objectives of the PENCAS*. – The PENCAS shall supplement the current  
23 System of National Accounts and shall have the following major functions:

- 24 a. To support economic-environmental policy development and decision-making;  
25 b. To generate the Philippine version of the UN SEEA satellite accounts covering  
26 both the Central Framework and the Ecosystem Accounts;  
27 c. To serve as a comprehensive data framework in the generation of PENCAS  
28 statistics; and  
29 d. To ensure that ecosystems and habitats, especially the ones in critical danger  
30 of irreparable damage, are conserved and restored, in line with the objectives  
31 and timelines of key Multilateral Environmental Agreements, including the

1 United Nations Decade of Ecological Restoration and the 2030 Agenda for  
2 Sustainable Development.

3 *Sec. 6. National Economic and Development Authority (NEDA) as the Lead*  
4 *Agency.* - NEDA shall be the lead agency in fulfilling the objectives of this Act.

5 The NEDA and its instrumentalities shall ensure that PENCAS is considered in  
6 all its policy decisions and project evaluation systems. In order to ensure this, the  
7 composition of the NEDA Board shall always include the departments that generate  
8 the most crucial data on PENCAS accounts, such as the DENR and DA.

9 *Sec. 7. Involvement of Government Agencies.* – The following government  
10 agencies and the concerned offices and bureaus under or attached to them shall be  
11 involved in the establishment and institutionalization of the PENCAS:

- 12 a. National Economic and Development Authority (NEDA) as the Lead Agency;
- 13 b. Philippine Statistics Authority (PSA);
- 14 c. Department of Environment and Natural Resources (DENR);
- 15 d. Department of Agriculture (DA);
- 16 e. Department of the Interior and Local Government (DILG);
- 17 f. Department of Science and Technology (DOST);
- 18 g. Department of Energy (DOE);
- 19 h. Department of Tourism (DOT);
- 20 i. Department of Transportation (DOTr);
- 21 j. Department of Public Works and Highways (DPWH);
- 22 k. Department of Health (DOH);
- 23 l. Department of Human Settlements and Urban Development (DHSUD); and,
- 24 m. Other agencies as necessary.

25 *Sec. 8. Creation of the Natural Capital Units.* – Natural Capital units shall be  
26 created within the organizational structure of the NEDA, PSA, DENR, DA, DOE, DOT,  
27 DOTr, DPWH, DTI, DOH, DILG, DOST, DHSUD, and other agencies as necessary.

28 The head of the Natural Capital Units in the foregoing government agencies  
29 should be at a Division Chief or higher level. The Department Head shall designate  
30 existing personnel within the Department or hire new ones within its budget to operate  
31 its Natural Capital Unit.

1            *Sec. 9. Natural Capital Units at National Agencies.* – The Natural Capital Units  
2 at the NEDA, PSA, DENR, DA, DOE, DOT, DOTr, DPWH, DTI, DOH, DILG, DOST,  
3 DHSUD shall:

- 4            a. Develop and apply, with its various offices, attached agencies, GOCCs and  
5 beneficiaries, the data collection, development and compilation of resource or  
6 natural asset and ecosystem service accounts, environmental and emission  
7 accounts and ocean accounts, relevant to each agency’s mandates, and  
8 formulate viable data development approaches and methodologies in  
9 coordination with PSA;
- 10           b. Collaborate with the science community in conducting studies and research in  
11 support of policy development related to PENCAS;
- 12           c. Ensure that sustainable development principles, especially regenerative  
13 resource use, resource conservation and climate, environmental and indigenous  
14 biodiversity considerations, are integrated in all its bureaus and offices and in  
15 their policy, national and project planning and implementation based on  
16 PENCAS results; and strengthen its statistical capabilities, especially regulatory  
17 monitoring to provide environmental and natural resources data and accounts  
18 to other national government agencies, local government units, private sector,  
19 civil society, and other data users;
- 20           d. Prioritize the data generation for the PENCAS accounts for the blue economy,  
21 particularly for areas of national patrimony most in danger of exploitation and  
22 appropriation, such as the West Philippine Sea and the Philippine Rise;
- 23           e. Institutionalize open data for the studies and research in support of policy  
24 development related to PENCAS;

25            The DILG shall assist the local governments in building capacity and performing  
26 the above functions as far as they are able in order to build their own PENCAS  
27 accounts. It shall also consolidate local government data and statistics and compare  
28 these with the national accounts as generated by the other agencies.

29            *Sec. 10. Staffing Pattern for Natural Capital Units.* – The agencies concerned  
30 shall, as much as practicable, utilize existing qualified employees for staffing the  
31 Natural Capital Units. In case, however, of the lack of qualified employees who have  
32 the skills and capabilities required of the functions of the Units, the concerned agency

1 shall be allowed to include new plantilla items in accordance with the prescribed  
2 procedures therefore.

3        *Sec. 11. Functions of the National Economic Development Authority and the*  
4 *NEDA Board.* – The National Capital Unit at the NEDA shall:

- 5        a. Coordinate the conduct of consultations, orientations and training seminars on  
6        the PENCAS and its implementation for the national government agencies, local  
7        government units and other concerned institutions as well as on request by the  
8        private sectors and civil society organizations, upon their request;
- 9        b. Coordinate the conduct of studies and research in support of policy  
10       development related to PENCAS and provide training for non-governmental  
11       entities on generating natural capital data and statistics;
- 12       c. Establish a mechanism for integration of environmental and regenerative  
13       resource conservation considerations in national, regional, local and sectoral  
14       planning, policy, project development and implementation based on PENCAS  
15       results, particularly assuring that legally extracted resources and energy are  
16       sufficient for the plans for their sustainable use;
- 17       d. Formulate and update indicators on the economy-environment interactions and  
18       regenerative and sustainable development indices;
- 19       e. Provide technical services to the
  - 20            i. Development Budget Coordination Committee (DBCC) for the integration  
21            of environment, ecosystems, natural capital, and climate change in  
22            macroeconomic planning and allocation of expenditures and capital  
23            outlays;
  - 24            ii. Investments Coordinating Committee that would review completeness  
25            of project-evaluation and ensure that it is inclusive of economic benefits  
26            and costs, sources of proposed natural resources, risks and uncertainty  
27            due to climate change, natural capital, environmental, biodiversity and  
28            social safeguards, justification of use of non-renewable resource, and  
29            matching of natural capital supply and demand; and,
  - 30            iii. any Task Forces or deputized or contracted entities, which may create  
31            or partner with for the coordinated functioning of the data-gathering  
32            agencies and quality decision-making



- 1            *Sec. 12. Functions of the Philippine Statistics Authority (PSA).* – The Natural  
2 Capital Unit at the PSA shall have a pivotal role in the implementation of the PENCAS:
- 3            a. Compile and collate PENCAS Accounts, and study and formulate viable  
4            approaches and methodologies for the PENCAS;
  - 5            b. Formulate templates, guidelines and digital aids to ensure that all units,  
6            especially local government, generating PENCAS data do so in a manner that  
7            can be efficiently consolidated, compared and analyzed, and ensure public  
8            accessibility for these tools;
  - 9            c. Explore ways and means to modify and improve current environmental and  
10            economic statistics, in coordination with the concerned data producers and  
11            users, including those in the academe, private sector, and non-governmental  
12            organizations;
  - 13            d. Include natural resource and environment-related questions in the PSA’s census  
14            and surveys, such as, but not limited to, Census of Establishments, Annual  
15            Survey of Philippine Business and Industry, Family Income and Expenditure  
16            Survey, Labor Force Survey, Survey on Tourism Establishments, Surveys of  
17            Household and Establishment Energy Consumption, Fisheries and Aquaculture  
18            Surveys, Agriculture, Livestock and Poultry surveys, Community Based  
19            Monitoring System, and any surveys these may change into or added to them;
  - 20            e. Collect data up to the fourth-digit level of the Philippine Standard for Industrial  
21            Classification particularly for data needed in the ocean accounts, and update  
22            the Input-Output and Supply and Use tables regularly;
  - 23            f. Develop a satellite account for the oceans, including ocean-based and ocean-  
24            related economic activities or sectors, coastal and marine ecosystems (e.g.,  
25            mangroves, seagrass, coral reefs, tidal flats, etc.), and marine water quality;
  - 26            g. Enhance the water accounts to include both water resources (quantity), water  
27            quality for surface water and groundwater (water asset account), and water  
28            supply and use account, including water supply in relation to climate trends of  
29            extreme climatic events in coordination with DENR and its Environmental  
30            Management Bureau and National Water Resources Board, and DPWH and its  
31            Bureau of Research and Standards;

- 1 h. Update the Input-Output table regularly, incorporating the PENCAS accounts;  
2 and,  
3 i. Serve as a repository of all PENCAS-related data and materials through the  
4 National Statistical Information Center and make the PENCAS data available on  
5 the PSA website.

6 Sec. 13. *Role of the Local Government Units.* – In the planning and local  
7 legislation duties, local governments shall endeavor to create and populate PENCAS  
8 accounts, in compliance with templates and guidelines from the PSA and DILG, and in  
9 addition, employ other innovative measures and methods of resource valuation,  
10 damage estimation, ecosystem services and natural capital accounting to highlight  
11 their ecological competitive edge.

12 Sec. 14. *Data and Research Support.* – The PSA, in coordination with the  
13 involved agencies, shall designate the required environment and economic statistics  
14 in the agencies and bureaus that shall be responsible for generating such data. The  
15 Department of Budget and Management (DBM) shall ensure that such research and  
16 data management are supported so as to prevent government spending that would  
17 unduly compromise PENCAS accounts and ecosystem services or the deterioration of  
18 the national patrimony.

19 Sec. 15. *Government Planning Mechanisms and the Environmental Impact*  
20 *Assessment System.* – In all government planning, considerations of PENCAS shall be  
21 included. In the Environmental Impact Assessment System, the DENR shall ensure  
22 that the natural environment, ecosystem services and natural capital are framed as  
23 opportunities, benefits or assets as opposed to being merely a constraint or backdrop  
24 to absorb impacts. The Commission shall ensure a wide availability of tools, methods  
25 and skills that can support the consideration of ecosystem services as part of the  
26 Environmental Impact Assessment and ensure the inclusion of such in the  
27 development of the Implementing Rules and Regulations (IRR), further including in  
28 such rules accounting for activities that may degrade the natural capital considerably  
29 despite not being under the coverage of the Philippine EIS System.

30 Sec. 16. *PENCAS in the Educational System.* – The Department of Education  
31 (DepEd), Commission on Higher Education (CHED) and Professional Regulation  
32 Commission (PRC) shall lead in mainstreaming PENCAS in all relevant modules,

1 courses, curriculum, training and licensure examination. They may establish  
2 partnerships with different educational institutions and private entities for learning and  
3 development in forms of resource sharing, module and training development,  
4 standards development, and other similar forms.

5 *Sec. 17. Participatory Mechanisms and Citizen Remedies.* – Each Natural Capital  
6 Unit shall institute consultative mechanisms, mass collaboration measures and digital  
7 comment and recommendation solicitations to effectively popularize PENCAS and  
8 ensure wide comprehensibility and usage of the accounts. Any citizen shall have the  
9 right to information on any accounts generated under this Act, have the standing to  
10 compel the performance of any of the mandates under this Act, and seek justification  
11 from any government agency who may have ignored or neglected PENCAS data in  
12 their policy or decision-making. Major PENCAS accounts, results on nature’s wealth  
13 and the economic value of ecosystem services shall be released along with all releases  
14 of national economic data, such as GNP, GDP and other often-released measures of  
15 the state of the country’s economic health, and highlight the contribution of resources  
16 and ecosystems to the economy, income, and employment.

17 *Sec. 18. Rights of Nature.* – Nothing in this Act shall be construed to mean that  
18 nature has no intrinsic value separate and distinct from its economic value, or that it  
19 loses interdependencies and pricelessness by such valuation. Whenever data or  
20 accounts tend to show that valuation of ecosystems or discrete and identified life-  
21 support mechanisms will commodify and/or degrade them, any citizen is authorized  
22 to submit a registration to the Commission for the latter’s recognition of such intrinsic  
23 value and the right of such ecosystem or mechanism to exist and maintain its integrity,  
24 which registration the Commission is required to accept. The generated data and  
25 accounts can still be used but only for the purpose of the recognition of such rights  
26 rather than for commodification or ecologically unacceptable trade-offs.

27 *Sec. 19. Appropriations.* – The amount necessary to implement this Act shall  
28 be sourced from the excesses in funds, such as the funds under Republic Act 9147,  
29 otherwise known as the “*Wildlife Resources Conservation and Protection Act*”,  
30 Republic Act 8749, otherwise known as the “*Philippine Clean Air Act*”, and similar  
31 special accounts, especially the ones that have remained dormant.

1           The allocations shall be based on the plan and priorities decided by the NEDA,  
2 in coordination with the agencies performing the functions. These shall be included  
3 in the budget preparation of each agency to be incorporated in the annual General  
4 Appropriations Act under separate fund items.

5           Sec. 20. *Implementing Rules and Regulations (IRR)* – The NEDA, in  
6 consultation and coordination with appropriate national government agencies, civil  
7 society organizations, private sector and other stakeholders, shall promulgate the IRR  
8 for the effective implementation of this Act no later than one hundred eighty (180)  
9 days upon the effectivity of this Act.

10           Sec. 21. *Separability Clause.* – If any part or provision of this Act is declared  
11 invalid or unconstitutional, the other parts hereof not affected thereby shall remain in  
12 full force and effect.

13           Sec. 22. *Repealing Clause.* – Any law, presidential decree or issuance,  
14 executive order, letter of instruction, administrative order, rule, or regulation contrary  
15 to or inconsistent with the provisions of this Act are hereby repealed, modified, or  
16 amended accordingly.

17           Sec. 23. *Effectivity.* – This Act shall take effect fifteen (15) days after its  
18 publication either in the *Official Gazette* or in two (2) newspapers of general circulation  
19 in the Philippines.

*Approved,*