

Assessing Green Accounting Adoption and Practices in Region 1: A Participatory Action Research

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ABSTRACT

Green Accounting integrates environmental costs and benefits into traditional accounting systems to measure the impact of human activity on ecological systems and resources. Despite the enactment of Republic Act No. 11995 or the Philippine Ecosystem and Natural Accounting System (PENCAS) Law, studies on the adoption and practices of Green Accounting at the regional level remain limited.

This study assessed the current status of Green Accounting adoption in Region 1 through Participatory Action Research. Data were gathered from a review of related literature and existing policies, and from a validated participatory workshop conducted in December 2025 with stakeholders from regional agencies, state universities, and provincial governments.

Thirty-five stakeholders were invited; 15 attended physically while all 35 received the complete workshop output for review and validation. The Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis and Political, Economic, Social, Technological, Legal, and Environmental (PESTLE) analysis were used to evaluate the region's readiness for implementation.

Findings revealed a significant gap between awareness and actual implementation. Key challenges identified include lack of institutional capacity, unclear policy guidelines, and limited stakeholder engagement. While the Philippine Statistics Authority (PSA) has conducted seminars on the PENCAS Law, explicit provisions and mechanisms for Green Accounting adoption at the local level are still lacking.

Based on these findings, the study recommends policy adjustments, targeted awareness initiatives, and institutional capacity building to facilitate Green Accounting implementation. Integrating Green Accounting into existing regional and local frameworks can contribute to environmental sustainability, economic resilience, and the achievement of the Sustainable Development Goals (SDGs). This study provides baseline data to support policy development and academic discourse on Green Accounting in the Philippines.

Keywords: Green Accounting, Environmental Accounting, Participatory Action Research, SWOT, PESTLE, PENCAS Law, Sustainability, Policy

INTRODUCTION

The Philippines has a rich history of environmental accounting dating back to the 1991 Environmental and Natural Resource Accounting Project (ENRAP), piloted by the World Bank in collaboration with the Department of Environment and Natural Resources (DENR). This initiative led to the adoption of the United Nations System of Environmental-Economic Accounting (SEEA) by the former National Statistical Coordination Board (NSCB).

Subsequent programs such as ENRAP 2 and the Wealth Accounting and Valuation of Ecosystem Services (WAVES) have further institutionalized green accounting practices in the country. As a signatory to the Sustainable Development Goals (SDGs), the Philippines has committed to incorporating environmental sustainability into national accounts.

Philippine Statistics Authority (PSA) Resolution No. 04, Series of 2016, underscores the importance of providing data support to monitor the country's performance vis-à-vis the SDGs. Recent developments, including the Extended Producer Responsibility (EPR) Act, Mineral Reporting Standards, Green Economy Initiatives, Project TRANSFORM, and the Natural Capital Accounting (NCA) system, demonstrate government commitment to sustainable practices. The DENR's Integrated IEC Action Plan and risk-based ecosystem services approach further underscore this sustainability drive.

Despite these national policy advances, Republic Act No. 11995 or the Philippine Ecosystem and Natural Capital Accounting System (PENCAS) Law lacks explicit provisions and mechanisms for Green Accounting adoption at the regional and institutional levels. Moreover, green accounting is not yet a standalone subject in accountancy and forestry curricula, reflecting a gap between policy intent and educational practice.

In Region 1 specifically, no baseline study has assessed the current status of Green Accounting adoption and practices. This gap hinders evidence-based policy making and capacity building at the local level.

Objectives of the Study

This pioneering interagency collaboration aimed to assess the current state of Green Accounting adoption in Region 1. Specifically, the study sought to:

1. **Evaluate** the capacity of government agencies, stakeholders, and educational institutions to implement Green Accounting principles and practices;
2. **Assess** the skills and capacity-building needs of stakeholders in implementing and monitoring Green Accounting practices; and
3. **Develop** actionable recommendations to enhance Green Accounting adoption, thereby supporting the effective implementation of the PENCAS Law in the region.

METHODOLOGY

Research Design

This study employed a **Participatory Action Research (PAR)** design. PAR is a collaborative, cyclical approach that enables stakeholders to co-generate knowledge and action plans. It ensures that the research process is owned by the participants and that outputs are validated by those who will implement them.

Participants and Sampling

Participants were selected through purposive sampling based on their direct roles in PENCAS implementation across regional agencies, SUCs, and LGUs. Thematic coding was applied to workshop outputs and validated through member checking with all 35 stakeholders.

A total of 35 stakeholders were invited; 15 attended the workshop physically. while all 35 received the complete output for review and validation.

Participants represented regional agencies, six state universities, and four provincial governments of Region 1: Ilocos Norte, Ilocos Sur, La Union, and Pangasinan.

They were organized into five clusters: Economic and Infrastructure; Governance and Oversight; Education, Tourism, and Human Development; Environment, Budget, and Planning; and Provincial Governments.

Data Collection Tools

The study utilized SWOT Analysis to identify internal Strengths and Weaknesses, and external Opportunities and Threats related to Green Accounting adoption. PESTLE Analysis was used to examine macro-environmental factors: Political, Economic, Social, Technological, Legal, and Environmental.

Data Collection Procedure

Data gathering involved three steps. First, document review was conducted to establish benchmark data from related studies, Republic Act No. 11995 (PENCAS Law), and existing national policies. Second, small-group discussions were facilitated with representatives from the five clusters. Third, a three-day participatory workshop was conducted on **December 15–17, 2025 at Sea and Sky Hotel, San Fernando City, La Union** to validate the SWOT and PESTLE outputs.

Data Analysis

Thematic coding was applied to the SWOT and PESTLE outputs to identify patterns and gaps, particularly between awareness and implementation. Cross-cluster triangulation was used to ensure reliability and validity of findings.

RESULTS AND DISCUSSION

The detailed results of the SWOT and PESTLE Analyses are summarized in Tables 1 and 2.

Table 1: Swot Analysis Summary For Ga Implementation In Region 1

Strengths	Weaknesses
Supportive government policies - RA 11995 PENCAS Law	Limited capacity and expertise in GA implementation
Growing public awareness and demand for environmental accountability	Lack of recognition of GA as standalone subject
Availability of data management systems and tools	Government policies do not prioritize GA
Compliance with existing environmental laws	Limited enforcement of laws
Natural resources and ecosystems supporting GA	Limited natural resources in some areas

Opportunities	Threats
Increased investment in green initiatives	Lack of stakeholder engagement
Educational policy/curriculum development on GA	Limited policy coherence among agencies
Job creation in green industries	Economic downturns
Development of new digital tools, AI, blockchain	Rapid technological changes, cybersecurity risks
Sustainable resource management	Climate change, environmental disasters

Table 2: Pestle Analysis Summary For Ga Implementation In Region 1

Dimension	Key Findings
Political	Strength: RA 11995 PENCAS Law. Weakness: Limited capacity, no prioritization

Economic	Strength: Cost savings, green investments Weakness: High upfront costs, limited funding
Social	Strength: Public awareness, community engagement. Weakness: No specialized training, resistance
Technological	Strength: Data systems, digital platforms. Weakness: Limited access, data security risks
Legal	Strength: Compliance with EIA/audits. Weakness: Limited enforcement, no specific GA regulations
Environmental	Strength: Natural resources, environmental awareness. Weakness: Degradation, climate impacts

The validated SWOT and PESTLE analyses reveal that while Region 1 has enabling conditions for Green Accounting, **significant gaps remain between policy, awareness, and actual implementation.**

Political Factors reveal supportive government policies and regulations such as RA 11995 or the PENCAS Law as a key strength. However, weaknesses include limited capacity and expertise in GA implementation, lack of recognition of GA as a standalone subject, and government policies that do not prioritize GA. Opportunities include increased investment in green initiatives, potential educational policy or curriculum development, and improved environmental decision-making. Threats include potential lack of stakeholder engagement, limited policy coherence among agencies, and potential economic costs and trade-offs.

Economic Factors show strengths in cost savings from sustainable practices and potential for green investments. Weaknesses include high upfront costs for green technology, limited access to funding, and dependence on government incentives. Opportunities include job creation in green industries, access to green financing, and growing demand for eco-friendly products. Threats include economic downturns, competition from cheaper non-sustainable alternatives, and regulatory changes.

Social Factors indicate growing public awareness and demand for environmental accountability and community engagement as strengths. Weaknesses include lack of specialized training and knowledge, social resistance to behavior change, and inequitable access to GA benefits. Opportunities include collaboration with community groups, integration of GA into education, and social marketing campaigns. Threats include social opposition, limited community buy-in, and negative social impacts such as job displacement.

Technological Factors highlight the availability of data management systems and tools and digital platforms for GA education as strengths. Weaknesses include limited access to technology and digital literacy, data security risks, and over-reliance on technology. Opportunities include development of new digital tools, collaboration with tech companies, and use of AI and blockchain. Threats include rapid technological changes, cybersecurity risks, and loss of traditional skills.

Legal Factors show compliance with existing environmental laws and frameworks for EIA and audits as strengths. Weaknesses include limited enforcement, complexity of laws, and lack of specific regulations for GA. Opportunities include development of new laws supporting GA and collaboration with government agencies. Threats include changes in laws negatively impacting GA, lack of government support, and legal challenges.

Environmental Factors identify natural resources and ecosystems supporting GA and environmental awareness as strengths. Weaknesses include environmental degradation, limited natural resources in some

areas, and climate change impacts. Opportunities include sustainable resource management, conservation and restoration efforts, and collaboration with NGOs. Threats include climate change, environmental disasters, and loss of biodiversity.

KEY FINDINGS AND DISCUSSION

1. Policy-Awareness Gap

While the PENCAS Law provides a strong political foundation, the analysis shows weaknesses in institutional capacity, curriculum integration, and policy coherence. This confirms the gap between national policy intent and regional implementation in Region 1.

2. Capacity and Resource Constraints

Across Economic, Social, and Technological factors, weaknesses center on lack of funding, training, and digital access. This aligns with the study objective to assess capacity-building needs of stakeholders and institutions.

3. Opportunities for Institutionalization

All clusters identified opportunities in curriculum development, green financing, community engagement, and new technologies. These can be leveraged to operationalize Green Accounting in Region 1, particularly through education and interagency collaboration.

4. Risks to Sustainability

Threats such as economic instability, social resistance, climate change, and weak enforcement pose risks if not addressed through coordinated action and sustained commitment.

Overall Implication

The findings suggest that effective Green Accounting implementation in Region 1 requires: strong institutional commitment, targeted capacity building, clear policy guidelines, and sustained multi-stakeholder engagement — all of which are critical to fulfilling the mandates of the PENCAS Law and the Sustainable Development Goals (SDGs).

CONCLUSION

The study confirms a critical awareness-implementation gap in Green Accounting adoption across Region 1, despite existing legal frameworks like RA 11995 (PENCAS Law).

SWOT and PESTLE analyses reveal systemic weaknesses — particularly low institutional capacity, fragmented stakeholder engagement, and limited curricular integration — while highlighting opportunities in SDG-aligned funding and growing regional cooperation.

By fostering sustained political commitment and collaborative governance, Region 1 can accelerate Green Accounting implementation, strengthen environmental sustainability, and enhance economic resilience in line with national and global sustainability goals.

The actionable recommendations — targeted awareness campaigns, mandatory GA training, curriculum embedding, and establishment of a regional GA taskforce — provide a clear roadmap for policy adjustment and capacity building in the region.

RECOMMENDATIONS

Based on the findings, the following **actionable recommendations** are proposed to accelerate Green Accounting adoption in Region 1 in alignment with RA 11995 (PENCAS Law):

Environmental Accounting

1. Develop Environmental Cost Accounting Guidelines
2. Integrate Environmental Costs into Decision-Making
3. Promote Sustainable Resource Use
4. Enhance Transparency and Disclosure

Financial Accounting & Coa Alignment

Note: COA has specific guidelines for government accounting and financial reporting. GA policies must align with existing COA frameworks and standards.

1. Develop Budgeting Guidelines for Environmental Expenditures
2. Establish Tracking and Reporting Systems
3. Provide Incentives for Sustainable Practices
4. Develop COA Audit Guidelines
5. Include Environmental Audit Components
6. Conduct Specialized Training for COA Auditors

Governance & Institutional Mechanisms

1. Establish a Regional GA Task Force under RDC-1
2. Develop a Regional GA Framework and Action Plan
3. Formulate Environmental Reporting Guidelines
4. Ensure Inter-Agency Coordination
5. Develop GA Standards and Compliance Mechanisms
6. Foster Multi-Stakeholder Collaboration

Capability Building & Curriculum Integration

1. Implement Mandatory GA Training Programs
2. Embed GA in Academic Curriculum
3. Develop Learning Resources
4. Establish Teacher Training Programs
5. Create a Center of Excellence for GA

Target Groups: Government agencies, private sector, academe, research institutions, and local communities.

Stakeholder Engagement

1. Identify and Map Key Stakeholders

2. Develop a Communication and Engagement Plan
3. Conduct Stakeholder Analysis
4. Establish Partnerships
5. Provide Tailored Capacity Building

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