

STUDY OF NATURAL RESOURCES ACCOUNTING IN INDIAN CONTEXT

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Abstract

A nation's ability to grow socially and economically depends on its natural resources being used, conserved, and protected. The Natural Resource Accounting (NRA) system is concerned with the stocks and fluctuations of natural resources, including water, land, aquatic and terrestrial ecosystems, biota, and subsurface resources. Accounts for natural resources can be kept in both monetary and tangible values. The resources might include non-commercial environmental resources like water, air, and biological life as well as those that support commercial forms of production. Since India's economy is among the fastest-growing in the world in this globalised period, there is a greater use of natural resources. Because the sustainability of the nation's natural resources is at stake, it is imperative that both government and private organisations use natural resources responsibly. An accounting framework is required for this purpose, and Natural Resources Accounting (NRA) makes this feasible.

Keywords: Natural Resource Accounting, GASAB, Natural Resource Valuation Methods,

INTRODUCTION

Even while natural resources don't directly interact with market transactions, they might nevertheless be regarded as economic assets. Globally, people are becoming more conscious of environmental concerns these days, and they are becoming more concerned about safeguarding the environment from natural resource depletion and destruction. Countries constantly launch programmes aimed at promoting sustainable growth and environmental protection for this reason. Effective accounting of natural resources is one of the key components of several projects. Aside from these advancements, in 1993 the UN published the worldwide criteria for national account maintenance, which were revised in 2009. We can currently observe the extensive global efforts being made to develop the idea and use natural resource accounting (NRA). The System of National Accounts (SNA) has been one of the major worldwide advances. SNA offers an accounting framework for identifying and quantifying the

economic components of an economy's production, consumption, and wealth creation. It also aids in the analysis and evaluation of an economy's performance over a certain period of time. The relationships and exchanges that occur between the environment and the economy are characterised by the System of Environmental and Economic Accounting (SEEA).

CONCEPT OF NRA

The gathering, examination, and evaluation of information on natural resources is known as natural resource accounting. The NRA system is concerned with the stocks and fluctuations of natural resources, including water, land, aquatic and terrestrial ecosystems, biota, and subsurface resources. Natural resource accounts can be maintained in both financial and material terms. In addition to those that facilitate commercial forms of production, the resources may comprise non-commercial environmental resources such as water, air, and biological life. Natural resource accounting is a means of establishing links between the natural world and the economy. As part of the environmental accounting process, the financial and physical accounts are updated. Environmental and Green accounting are other names for natural resource accounting. Since the current methodology used to calculate GDP globally ignores the degree of environmental harm, NRA offers certain characteristics that may be useful in estimating a country's GDP (gross domestic product) in a scientific manner. A country's GDP will be more realistically estimated if it takes into account the extent of environmental harm it has experienced (Pettman & Herath, 2005).

REVIEW OF LITERATURE AND RESEARCH GAP

Accounting for natural resources is essential for gauging national well-being and the degree of sustainable development. There are various restrictions on how countries' GDP is calculated (Pettman & Herath, 2005). Both governmental and commercial sectors must work to safeguard natural resources if the country is to develop sustainably and the planet is to function as a whole (Ashok et al., 2019). When measuring the success of a business, one of the most important things to take into account is the assessment of environmental performance. They want a staff with experience in environmental accounting procedures. Policymakers can utilise a new concept (the Green Gross Domestic Product) to evaluate sustainable growth with the aid of environmental accounting. (Rounaghi, 2019). The existing national income measurement techniques are impractical because they understate the revenue-generating role of the usage of natural resources. Thus, a framework that accurately assesses India's level of sustainability and assesses losses to natural capital is required (Gundimeda et al., 2006). The primary flaw in the GDP calculation process is that it ignores the harm done to natural resources. This paradigm for accounting for natural resources can solve the problem of determining GDP. Accounting and the

economics stream must work together to create an interdisciplinary framework in order to achieve this goal (Okafor, 2012). In addition to focusing on return on investment, measuring the total success of a firm should also take into account the amount of natural resources consumed and how that contributes to both the macroeconomic and microeconomic facets of sustainable development (Bardy & Massaro, 2013). The country's sustainable development will benefit from increased accountability for the use of natural resources that results from institutionalising the environmental accounting process (La Notte & Burritt, 1999). Accountability for its use is a contentious issue, and stakeholders agree that a standardised approach to natural resource accounting and disclosure (Tello et al., 2016). Only when a structured information system for biodiversity conservation supports the accounting procedures will environmental accounting for biodiversity management be effective. Strong practise and research support in a specific setting is required to achieve this (Feger & Mermet, 2017). Inadequate oversight and control over the use of natural resources have a detrimental effect on a nation's evaluation of its sustainable development, which in turn has an effect on the economy's overall growth (Bassey et al., 2020). It is necessary to make an effort to change the procedures used to calculate national income by taking into consideration the accounting features of natural resource value (Common, 1991). The literature on natural accounting and the environment is beginning to highlight the growing depletion of natural resources (Parameshwar & Abhishek, 2020; Shivalingegowda et al., 2019). Based on a thorough examination of past research, both domestically and globally, it has been determined that the majority of studies have examined the necessity of accounting for natural resources and have reexamined the techniques used to calculate the GDP of the country while taking into account the depletion of natural resources. There haven't been any studies that look at the state of natural resources accounting in India today or analyse how much academics in the accounting and economics disciplines know about it.

OBJECTIVES OF THE STUDY

By assessing the research gap and summary of the literature survey, the objectives identified are as follows

- To evaluate India's natural resource accounting system as it is today.
- Researching the many methods for valuing natural resources that are available.

METHODOLOGY

The current study is qualitative and empirical in nature, and is based on data from secondary sources. Government reports, newspaper stories, academic journals, and other archive material are some of the ways that secondary sources of information are obtained.

PURPOSE AND AIM OF NRA

- Data on the present state of natural resources and how they have changed over a specific period of time are the primary goals of NRA. It is a crucial link in the chain of sustainable development as a result.
- Establishing a framework for the gathering and arrangement of data on the state, use, and worth of natural resources and environmental assets is one of NRA's other goals.
- It also entails evaluating the costs associated with programmes implemented for natural resource management and environmental preservation.
- Moreover, NRA is required to integrate notions of product accounting and national revenue with an examination of environmental concerns and natural resource availability.

NRA AND EIA (ENVIRONMENTAL IMPACT ASSESSMENT)

An EIA methodology that is standardised is essential for sustainable development. Because natural resources are finite, they can only be used to their full potential by incorporating environmental regulations and concerns into the nation's development process. Natural resource accounting offers the framework for determining the total economic advantages from accounting for the natural resources employed in the nation's development process, as well as the foundation for environmental impact assessments through state-by-state resource asset accounts. The government itself, a commercial company, or techniques using private-public partnerships may carry out the environmental impact assessment. By using standardised models to fight environmental changes, the NRA's impact assessment aids in the effective management of environmental resources and the achievement of sustainable development.

NRA AND CLIMATE CHANGE MANAGEMENT

An efficient system for managing climate change must include a robust database that includes information on the intricate nature of climate change as well as the expenses paid in preventing adverse effects on the environment. Accurate data is necessary for the government to formulate appropriate climate change policies. Environmental reports may be quite helpful to political entities when they are making choices on various elements of climate change. A collection of financial and statistical data from natural resource accounting is provided, which helps create a framework that is helpful for tracking, evaluating, and assessing climate change.

India has a long tradition of funding environmental research. The domains of wetlands, coastline marine habitats,

forests, and other environmental environmental challenges have all seen a large number of research efforts. The NRA's ability to gather precise data on natural resources and evaluate them using monetary values is one of its main shortcomings. This study aims to elucidate the basic conceptual features of the Natural Resource Appraisal (NRA), its current state as seen from the Indian point of view, the methods employed for natural resource appraisal, and the opinions of scholars in the fields of accounting and economics.

CURRENT STATUS

In India, there is a mother-child-like bond between man and the natural world. This connection gradually deteriorates as a result of man's unquenchable yearning for the natural world. The Indian government has pledged to safeguard the environment and guarantee the sustainability of natural resources by keeping an eye on how nature is being exploited. Moreover, since 1970, India has come to view this issue as a developmental agenda item that is necessary for a healthy environment. During this time, legislation pertaining to environmental preservation was proposed and passed.

In India, the first NRA plan was adopted in the 1990s. A technical working group on NRA was established as part of this endeavour. The group's recommendations were taken into account when a pilot project on NRA was started in Goa in 1999–2000. The CSO in this field commissioned a number of works.

By forming an expert committee on August 4, 2011, a crucial step towards the implementation of the NRA in India was taken; the MoSPI carried this out at the request of the country's then-prime minister. The group's chairman was University of Cambridge professor Sir Partha Das Gupta. The expert group's primary goal was creating a framework for "Green National Accounts in India" and organising a system for carrying it out. In March 2013, the expert group turned in their report. The way in which natural resource accounting are prepared was the primary focus of the report.

In a span of five years, from 2013 to 2018, the CSO released two publications: Envistats-India and data pertaining to climate change. The information on four main resources and their stock positions in India was enhanced by these studies. In all of India's states, the four main natural resources are land, forest, minerals, and water. These recommendations were derived by the expert committee led by Professor Sir Partha Das Gupta. Additionally, in order to compile the accounts, the Envistats began presenting India's aggregate environment accounts in accordance with the physical asset accounts of the four previously stated natural resources.

The Government Accounting Standards Advisory Board (GASAB) had its 35th meeting on February 3, 2020, and during that discussion, the significance of NRA and its function in project environmental impact assessments were emphasised. During the discussion, they also talked about how important the NRA is for predicting

resource consumption. For compliance purposes, the advisory board has developed guidelines on revenue recognition, adjustments for earlier periods, outside help, and contingent liabilities. A sketch of the regulations and accounting standards relevant to financial transactions connected to the utilisation of land, forests, mineral wealth, and water have also been produced, and a pilot study was conducted in two states. These standards are similar to the internationally accepted cash-basis accounting techniques.

VALUATION APPROACHES IN NRA

Market price technique: The market price method is putting a monetary value on natural resources by determining the arm's length price, or the amount that buyers are ready to pay to obtain something from sellers who are willing to accept their offer. The price that is most pertinent to the producer's decision-making is taken into account when measuring natural resources using the basic, producer, and purchaser prices.

The producer's price method values natural resources according to the amount that the producer is able to collect from the buyer for a specific unit of an output good or service, less any value-added tax or other comparable tax that the government may impose prior to billing the buyer for the unit of an output good or service at the time of delivery. Any transportation costs that the buyer must pay independently in order to accept delivery at the specified time and location are included in the price.

Net present value method, the present value of natural resources' potential profits is used to determine their worth. The aforementioned strategy is exclusively employed in the absence of pertinent market transactions or purchase prices that would be utilised in the preceding two methods for the valuation of natural resources.

FINDINGS AND CONCLUSION

Secondary data analysis reveals that India is making an attempt to bring its natural resource accounting procedures up to speed with international standards. It is determined that the most crucial component of the information system for use in damage mitigation and environmental impact assessment is environmental accounting. The government may create a policy that directs sustainable environmental decision-making by using natural resource accounting methods. Additionally, the government will be inspired to simplify the NRA framework in order to bring it into compliance with international standards by the multidisciplinary joint study of individuals in the accounting and economics stream. The Sustainable Development Goals of the United Nations

will be accomplished by the efficient implementation of a range of policies, processes, and techniques, such as NRA, in environmental management operations. (Parameshwar & Abhishek, 2020). There are several issues with the study. These limits could eventually be used by researchers in the discipline of natural resource accounting. This research primarily examines the perspectives of academics in the domains of accounting and economics; it does not look at the perspectives of industrialists, regulatory agencies, or other stakeholders.

REFERENCES

- Ashok, M. L., Abhishek, N., & Divyashree, M. S. (2019). Accounting for corporate social responsibility in India: An analysis of selected companies in India. *Indian Journal of Accounting*, 51(2), 19-26.
- Bardy, R., & Massaro, M. (2013). Shifting the paradigm of return on investment: Towards a composite index to measure overall corporate performance. *Business Systems Review* 2(1), 29-46.
- Bassey, B. E., Uklala, P. A., Bassey, T. E., Adie, C. I., & Ibor, I. (2020). Natural resource accounting, auditing and reporting gaps: The Nigerian experience. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(7), 6523-6536.
- Common, M. (1991). Natural resource accounting and sustainability. *The Economic and Labour Relations Review*, 2(1), 89-121.
- Feger, C., & Mermet, L. (2017). A blueprint towards accounting for the management of ecosystems. *Accounting, Auditing & Accountability Journal*, 30(7), 1511-1536.
- Gundimeda, H., Sukhdev, P., Sinha, R. K., & Sanyal, S. (2007). Natural resource accounting for Indian states- illustrating the case of forest resources. *Ecological Economics*, 61(4), 635-649.
- Harris, M., & Fraser, I. (2002). Natural resource accounting in theory and practice: A critical assessment. *Australian Journal of Agricultural and Resource Economics*, 46(2), 139-192.
- La Notte, A., & Burritt, R. (1999). Users and uses of environmental accounting: The case of the Philippines. *Asian Review of Accounting*, 7(2), 46-65.
- Mozumder, P. (2004). Natural resource accounting and economic development. *The Journal of Developing areas*, 8(1), 213-215.

- Okafor, T. (2012). Natural resources accounting and sustainable development: The challenge to economics and accounting profession. *African Research Review*, 6(3), 59-70.
- Parameshwar & Abhishek, N. (2020). Structural framework of environmental accounting: A conceptual analysis of global reporting initiatives (GRIs). *Management Accountant*, 55(06), 33-36.
- Pettman, B., & Herath, G. (2005). Sustainable development and environmental accounting: the challenge to the economics and accounting profession. *International Journal of Social Economics*, 32(12), 1035-1050.
- Rounaghi, M. M. (2019). Economic analysis of using green accounting and environmental accounting to identify environmental costs and sustainability indicators. *International Journal of Ethics and Systems*, 35(4), 504-512.
- Saksena, S. (2021). Embracing natural resource accounting in India: Some reflections. *Sustainable Development Insights from India: Selected Essays in Honour of Ramprasad Sengupta*, 379-397.
- Saksena, S. (2021). Embracing natural resource accounting in India: Some reflections. *Sustainable Development Insights from India*, 379.
- Shivalingegowda, M., Abhishek, N., & Divyashree, M.S. (2019). An analysis of compliance level of global reporting initiatives in Indian scenario. *The Indian Journal of Commerce*, 72(1), 71-84.
- Tello, E., Hazelton, J., & Cummings, L. (2016). Potential users' perceptions of general purpose water accounting reports. *Accounting, Auditing & Accountability Journal*, 29(1), 80-110.

