An Overview on Natural Resource Accounting Towards Achieving Sustainable Development Goals in India

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Abstract: **The holistic approach of sustainable development has been felt and efforts are on the path of continuity as a universal call to action and ensure that all people enjoy peace and prosperity by 2030.In present scenario, most important noticeable focus must be on the process of assessing the worth of natural assets exhaustion and ecological degradation because of economic activities. In India the NITI Aayog, which is entrusted with responsibility to maintain and supervise the implementation process of the 2030 Agenda for Sustainable Development, resulted in working of significant ecological evaluation method, to be known as National Resource Accounting. The research paper seeks to assess the current status of NRA in India with its associated issues in the context of achieving Sustainable Development Goals.**

Keywords: National Resource Accounting, Sustainable Development, and Sustainable Development Goals.

I. INTRODUCTION

It only takes a gaze around us to know what natural resources are and how much we humans are dependent on them as they sets the stage for 'survival of life' on our mother planet and are also a part of the real wealth of nations. They are one of the key determinants of economic growth, human capital, financial capital, technology and other beings. However, acknowledging the use of natural resources for any country also conveys that it is a double-edged sword. As the usage rate of natural resources increases, it also shoots up their depletion rate, resulting in irreversible adverse changes. Hence, natural resources have to be managed effectively and in a sustainable manner. The holistic approach of sustainable development has been felt and efforts are on the path of continuity as a universal call to action and ensure that all people enjoy peace and prosperity by 2030.The SDGs set out a general and extraordinary plan that encompasses socio-economic-environmental horizons of the all-inclusive prosperity of societies. In present scenario, most important noticeable focus must be on the process of assessing the worth of natural assets exhaustion and ecological degradation because of economic activities. In India the NITI Aayog, which is entrusted with responsibility to maintain and supervise the implementation process of the 2030 Agenda for Sustainable Development, Out of the 17 SDGs, 5 SDGs , namely SDG 6(Ensure availability and sustainable management of water and sanitation for all), SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all.), SDG 11 (Ensure Sustainable Cities and Communities), SDG 14 (Life below Water) and SDG 15 (Ensure Protect, Restore and Promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss are directly associated with the sustainability of natural resources, suggested in working of significant ecological evaluation method, to be known as National Resource Accounting. Natural resource accounting is an accounting framework to compile data relating to natural resources. It is an accounting tool for environmental impact assessment, usage and allocation of natural resources and natural resource management decision. It is associated with the achievement of sustainable growth. Normally there is an inverse relationship between economic growth and environment. Cost of environmental degradation will make the fruit of economic growth bitter in long run. So,an accounting framework for natural and environmental resources is of utmost important. Natural resource accounts differ from other data as they are organized in terms of stocks and flows. NRA also combines national income and product accounting concepts with analysis of natural resource and environmental issues. The development of resource accounting is generally perceived as having gone along two different paths; these are characterized as "physical "accounts and "monetary" accounts.

II. NATURAL RESOURCE ACCOUNTING

The 35th meeting of the Government Accounting Standards Advisory Board (GASAB) has discussed the "Natural Resource Accounting (NRA)" as a promising tool for environmental impact assessment of projects in which usage of resources is envisaged. "Natural resource accounting is an accounting system that deals with stocks and stock changes of natural assets, comprising biota (produced or wild), subsoil assets (proved reserves), water and land with their aquatic and terrestrial ecosystems" (OECD, 2001).

The aim of the NRA is to provide information on the state of natural resources and the changes affecting them. Natural Resource Accounting, an accounting framework to compile data relating to natural resources, is a way to prepare India to achieve Sustainable Development Goals (SDG) by 2030.

Usefulness of NRA

It is more of an environmental accounting than a physical accounting. NRA starts with Physical Accounting and monetary valuation of resources and ends with its integration with economic accounting. It encompasses element of eco-justice in which profit, people and environment are equally considered, though it is difficult to assign monetary values to environmental resources.

NRA is a cycle of assessing the worth of environmental exhaustion and ecological depletion in view of economic engagements. Lately, it has turned into a significant ecological appraisal instrument. It has its primarily motive to interlink profit-making motive with environmental costs by connecting the environment with the economy for encouraging unhindered productivity. NRA can be termed as The accumulation of information on ecological resources in the purview of an accounting structure and furthermore encapsulates the reporting and analysis of related information Environmental accounting information disclosures lay micro foundation for macroeconomic measurement of "Green GDP". It is also used to improve benchmark for proper measure of country's national product. NRA can be applied at micro as well as at macro level.

III. PREVAILING STUDIES

Historical Evolution of NRA

The timeline for evolution of NRA is a major Milestones in years, such as in 1970s, Norway constituted first Environmental accounts, between 1983-87,World Commission on environment and development, also known as Brundtland Commission set-up, later in 1992,the UN Earth summit conducted in Rio de Janeiro.Further in 2003,SEEA-1993 issued and UNCEEA issued in the year 2005.In 2012,The SEEA-(CF) and SEEA(EEA) in 2013 was adopted by UN.Later in 2017,UN launched National Capital Accounting and Valuation of Ecosystem Services in selected five countries including India on trial basis.

The National account is based on the System of National Accounts (SNA), an internationally agreed standard set of recommendations and deals with the measurement of economic activity. But it was insufficient as it was based on neoclassical market theory, and its underlying key indicators were based on Keynesian macro model and not on long run growth model. Thus, a fresh approach was the demand of time. The then practiced conceptual framework provides the standardized methodology for implementation of NRA, and studying the environmental interactions are finalised by the System of Integrated Environmental and Economic Accounting (SEEA) under the guidance of UN. The UN Statistical Commission adopted the System of Environment-Economic Accounting (SEEA) in 2012 as first international standard regarding environmental-economic accounting and it broadens the traditional System of National Accounts Accounts (SNA) which focuses mainly on economic indicators. Later on, the System of Environmental and Economic Accounting Central framework (SEEA-CF) came into force with methodologies to value resources.

Glimpses of Global NRA Practices

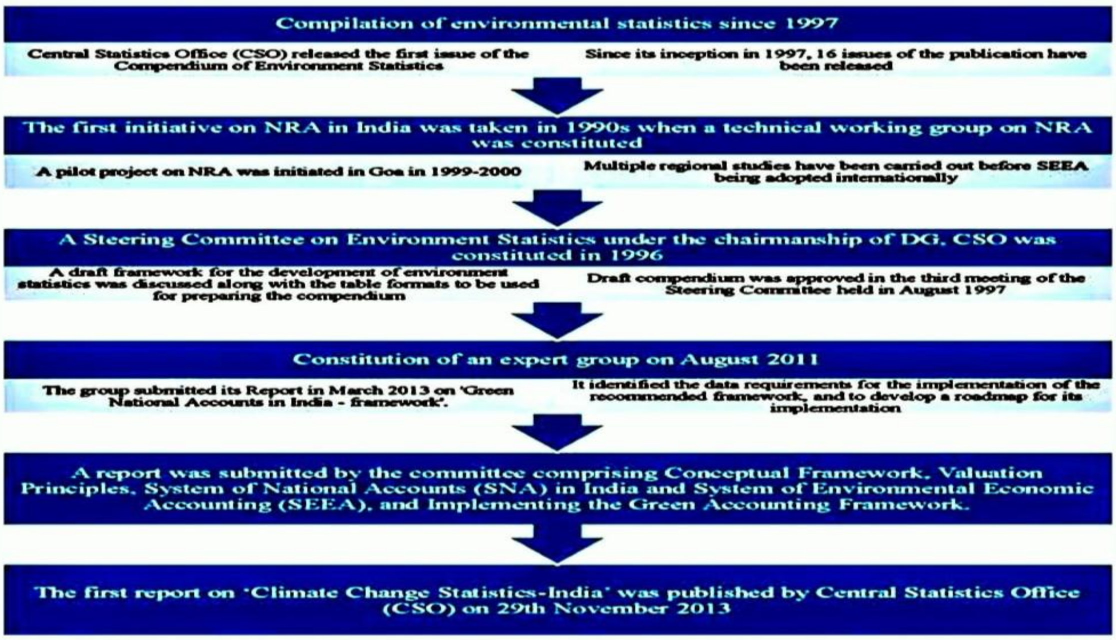
- France has been developing several physical flow accounts and environmental protection, natural resource asset accounts and resource management expenditure accounts since 1980s.
- Since 1990s, Canada has been producing annual environmental accounts.
- Physical and monetary asset account for oil, gas and coal has been developed by Columbia since 1992.
- Germany has mapped private as well as public sector natural resource consumption and prepares data on extraction, use, export and recycle of renewable and non-renewable resources per annum.
- National Water Commission and Australian Bureau of Statistics have adopted water account.
- China has made endeavour to compute an environmentally adjusted macroeconomic aggregate (Green GDP) by deducting the cost of environmental damages from its GDP.

- Mexico comes up with system of Economic and Ecological Accounts which cover mineral, soil, energy, water and land.
- Netherlands has come up with National accounting Matrix that shows link between environmental physical flow accounts and flows account of System of national accounts.

India's effort towards NRA

In India, compilation of environmental statistics has been in practice since 1997 by Central Statistics Office (CSO) under Ministry of Statistic and Programme Implementation (MoPSI). Since the year 2000, CSO has conducted more than 150 studies regarding formulation and implementation of natural accounting in India. An expert group was constituted by MoPSI on 4th August 2011, which prepared a framework on Green National Accounts in India as contemporary national accounts system were unsatisfactory basis for economic evaluation. For NRA implementation in India; an expert group was constituted in august 2011 by the MoPSI which reported in March 2013 titled "Green National Accounts in India-Framework". The report recommended that SEEA can serve the economic valuation purpose in India. A working committee was formed in 2018 with members from CAG, Ministry of Environment, Forest and Climate Change (MoEFCC), MoPSI etc to frame a draft on NRA so as to enhance decision making quality but it came up with framework of asset account mainly for four major natural resources such as, land, water, mineral and energy, and forestry and wildlife resources. Government Accounting Standard Advisory Board (GASAB) also discussed about the tentative challenges and presented the concept note in 2020 for step wise implementation process of NRA in India through short, medium and long term goals. Short term goals (2019-20 to 2021-22) focuses on compilation of asset accounts on mineral and energy resources in states and also commencement and preparation of disclosure statement on revenues and expenditure concerned to NRA. Medium term goals (2022-23 to 2024-25) focus on preparation of National Asset Accounts on water, land, mineral and energy resources, and forest resources and preparation of supply and use table in economic terms where as long term goal (2025-26 onwards) highlighted to prepare economic account and functional account and to work upon depletion adjusted economic aggregates.

Figure 1 India's Effort towards Natural Resource Accounting



Source: GASAB,June 2020

IV. OBJECTIVES OF THE STUDY

Recent global initiatives like Agenda 2030 for sustainable development call for a much planned and integrated approach. The fundamental of SDGs depends on well planned resource management so there is urgent need to look beyond macroeconomic indicators like GDP and GDP per capita as a measure of country's sustainable development. NRA will be a great step toward this.

The present paper narrates the status of NRA system in India in respect of achievement of the SDGs, identifies the lacuna prevailed in this system and also put forward some suggestions for strengthening the system by eradicating such lacuna to obtain the optimal outcome from it.

V. RESEARCH METHODOLOGY

The study is descriptive in nature and is purely based on secondary sources of data. It discusses the statistics to check the present scenario of NRA in India towards achieving SDG Goals. The particular study is a new initiative of The NITI Aayog's report, popularly known as 'SDG India Index Baseline Report, 2018' as well as in 2019,2020,2021 and 2023 in which the progress of the states and UTs towards achieving the SDGs was disclosed. The descriptive analysis of available literature are collected from various prevailing research findings, reports, research works,statistics,news reports, relevant ministries/expert groups/committee constituted and discussions and published information from various websites to fulfill the above desired objectives.

VI. POSITIONING OF NRA

Natural resources accounting is an interaction of assessing the worth of ,accountability of natural resources exhaustion and ecological degradation, also propose strategies to control ecological debasement due to over-misuse of natural resources. It has been termed as the accumulation of information on ecological resources in the purview of an accounting structure and furthermore encapsulates the reporting and analysis of related information. The information produced can necessarily be utilized to keep up a parity between economic development or advancement and the condition of ecological well-being.

In recent time, Valuation of environmental resources is may create issue due to their non-tradable characteristics or due to non existence of an active market. Most of the natural and environmental resources are not traded in market as they are nature's gift. Non-market values are more difficult to measure than market values. In such situation, willingness to pay by consumers for consuming a particular natural resource is the most frequently used technique to value the natural resource. Alternatively, the amount paid by individuals to compensate for the loss of an environmental resource is used for valuing environmental resources. Economic value is not only what people actually pay, but what they are willing to pay. The behaviour makes the base to understand the value of non-market goods.Furthermore,the Environmental reporting is a real issue, especially for large corporate houses of India having vast and dynamic activities, thus impacting socioeconomic and environmental setup of the country as a whole. The reporting and accountability of actions taken for ensuring global sustainability and impairment of societal wealth ensured through business actions is extremely important for sustainable societal welfare. Therefore, provisions for the development of various the valuation methodologies associated with natural resources is required.

NRA Linkages with SDGs:
The fundamental of SDGs depends on well planned resource management, so there is urgent need to look beyond macroeconomic indicators like GDP and GDP per capita as a measure of country's sustainable development. NRA will be a great step toward this. In 1983, the United Nations Environment Programme initiated development of environmental accounting.NRA does not itself create mechanism to reach SDGs but provide valuable lessons and practices for development and implementation of policies for SDGs at country level.
NRA starts with physical accounting and monetary valuation of resources and ends with its integration with economic accounting. It encompasses element of eco-justice in which profit, people and environment are equally considered, though it is difficult to assign monetary values to environmental resources. Integrated environmental accounting are segregation and elaboration of all environmental and economic accounts, linkages of physical resource accounts with monetary environmental accounts and balance sheets. assessments of environmental costs, benefits, and accounting for the maintenance of the tangible wealth. NRA can be used in identification of natural resource depletion and to undertake resource management and decision making, helpful in data compilation and exploited in national SDG policy process making and analysis.

VII. NATURAL RESOURCE ACCOUNTING IN INDIA

India as a nation is entrepreneurial and at the verge of change. With its youth needs to be engaged in early education and action to create and sustain a long-term momentum that can help the nation see their targets through and drive SDGs action. In the present Scenario, the NITI Aayog , in India, which is entrusted with responsibility to maintain the NRA by supervising and executing the implementation process of the 2030 Agenda for Sustainable Development, provides necessary information and timely guidance to the different states and union territories (UTs) at the time of creating blueprint of their 'Vision and Strategy' documents as well as finalizing 'Goals and Targets' which ultimately help the country to move towards achieving the SDGs.India played a leading role in the construction of the United Nations Sustainable Development Agenda 2030 and much of the country's National Development Agenda is reflected in the Sustainable Development Goals. Countries around the world have been considering how to implement and measure success against the goals, also with 17 Goals, 169 Targets and 306 National indicators, the SDGs might be challenging to understand apart, defining and measuring the success also raises issues. National Institute for Transforming India(NITI Aayog) has taken the lead by bringing out the SDG India Index – Baseline Report 2018 and showing how SDGs will be calculated in India. The NITI Aayog published the Baseline Report of the Sustainable Development Goals (SDG) India Index, which exhaustively records the progress made by India's States and Union Territories towards implementing the 2030 SDG targets. The SDG India Index tells us where a State/UT currently stands on each of the indicators considered and will present incremental change in subsequent versions.The SDG India Index Baseline 2018, in December reveals that the States of Kerala and Himachal Pradesh top the list of States and UTs for their aggregate performance towards the Sustainable Development Goals, 2030. While considering the issue associated with the achievement of SDG 6 it is found in the SDG India Index Baseline Report,2018 that only 71.8 per cent of the rural people in India have access to adequate drinking water, thus far from accomplishing nation target.If the SDG 7 is considered, it is observed that as per the National Family Survey04 , 2015-16, 81 percent of the urban households in India can use clean cooking fuels whereas it is only 24 per cent in case of the rural households. The average percentage of the Indian households having access to clean cooking fuels is 43.8 only. The contribution of the renewable energy sources in electricity generation in India is not significant. Only 17.51 per cent of the total installed electricity generating capacity is contributed by the renewable energy sources in the country. Thus, under SDG 7, the India's progress is not at all satisfactory. The information regarding the achievement of SDG 11 as disclosed in the SDG India Index Baseline Report, 2018 reveals that on an average, 73.58 per cent of the wards in India have been able to develop a system of cent per cent door-to-door waste collection. Only five states and four UTs have been successful in reaching the target of 100 per cent door-to-door waste collection, in respect of which India's performance has been far from satisfactory level. India has adopted various steps in protecting and enhancing the coastal and marine ecosystem to attain SDG 14. The Government of India has undertaken like 'Project Sagarmala'etc as a part of National Perspective Plan and adopted certain steps to reach the targets under SDG 15. In particular, the National Environment Policy, 2006; National Agroforestry Policy,2014 and Green Highways Policy,2015 have been launched from time to time in order to increase the total area covered under forest in India to at least 33 per cent which is presently about 22 per cent. Another index was also constructed in December, 2019 applying the same methodology as used in the SDG India Index Baseline Report,2018.Most important noticeable focus must be on the process where root cause of sustainability is taken care of and it has been mandatory by wish and by law to make it. Till now, NRA has served more towards achieving SDG target and less attention is on development and monitoring strategies and policy tools thus a shift is required towards its strategic formulation. A more precise but systematic NRA System is required for fuller implementation of SDGs. Economic account, Financial account, Asset account, physical supply and use table material flow account, air emission account, solid waste account, environment protection and expenditure account environmental taxes and subsidies account, condition account, ecosystem extent account, biodiversity account etc. are possible uses of NRA for estimating the SDGs indicators and targets. Green indicators like green national income, green GDP is needed to be calculated. Recognition should be given to organization which practices environmental accounting disclosures. The observation on the basis of this index reveal that India, slowly and steadily, is reflective to make a notable improvement in the status of India's progress towards achieving the targets set under the SDGs.

Present Scenario, in India the NITI Aayog, which is entrusted with responsibility to maintain the NRA by harmonizing and supervising the implementation process of the 2030 Agenda for Sustainable Development, provides necessary guidance to the different states and union territories (UTs) at the time of sketching their 'Vision and Strategy' documents as well as finalizing 'Goals and Targets' which ultimately help the country to move towards achieving the SDGs. Out of the 17 SDGs, 5 SDGs , namely SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), SDG 11 (Sustainable Cities and Communities), SDG 14 (Life below Water) and SDG 15 (Life on Land) are directly associated with the sustainability of natural resources while the others are indirectly connected with it. The NITI Aayog published in December, 2018 a report, popularly known as 'SDG India Index Baseline Report, 2018' in which the progress of the states and UTs towards achieving the SDGs was disclosed. The SDG India Index 2018, which was used in measuring the status of such progress, was constructed considering 13 SDGs out of the 17 SDGs (excluding SDGS holistic view on the social, economic and environmental status of the different states and UTs of India.

Criteria: A score of 100 implies that the state / UT has established itself as the best performer in respect of achievement of the national target for 2030 while a score of 0 indicates that the state /UT has been the worst performer. By applying the SDG India Index in the said report, the states and Uts were categorized into four groups, such as Achiever (having index score equal to 100), Front Runner (having index score greater than or equal to 65 but less than 100), Performer (having index score greater than or equal to 50 but less than 64) and Aspirant (having index score less than 50).
States and Union Territories are classified as below based on their SDG India Index score:

- Aspirant: 0–49
- Performer: 50–64
- Front-Runner: 65–99
- Achiever: 100

SDG India Index 2018
The values of the SDG India Index 2018 reflecting the average performances of the different states and Uts of India towards achieving the 13 SDGs and their respective targets, range between 0 and 100. As per the report, the index score varied between 42 and 69 in the different states of India while it ranged between 57 and 68 in Uts. This report also shows that no state or UT was placed in the category of 'Achiever' whereas three states, namely Himachal Pradesh, Kerala and Tamil Nadu, and two Uts, namely Chandigarh and Puducherry found place in the category of 'Front Runner'. Assam, Bihar and Uttar Pradesh were placed in the 'Aspirant' class. The remaining states and Uts established themselves as 'Performer'. The study discusses the progress of achieving the SDGs connected with the sustainability of natural resources. While considering the issue associated with the achievement of SDG 6 it is found in the SDG India Index Baseline Report,2018 that only 71.8 per cent of the rural people in India have access to adequate drinking water. So, India is now far from achieving its national target. Similarly, if the SDG 7 is considered, it is observed that as per the National Family Survey – 4 , 2015-16, 81 percent of the urban households in India can use clean cooking fuels whereas it is only 24 per cent in case of the rural households. The average percentage of the Indian households having access to clean cooking fuels is 43.8 only. The contribution of the renewable energy sources in electricity generation in India is not significant. Only 17.51 per cent of the total installed electricity generating capacity is contributed by the renewable energy sources in the country. Thus, in respect of reaching the targets under SDG 7, the India's progress is not at all satisfactory. The information regarding the achievement of SDG 11 as disclosed in the SDG India Index Baseline Report, 2018 reveals that on an average, 73.58 per cent of the wards in India have been able to develop a system of cent per cent door-to-door waste collection. Only five states and four Uts have been successful in reaching the target of 100 per cent door-to-door waste collection. However, in respect of waste treatment India's performance has been far from satisfactory level. In India the percentage of the total waste generated which gets treated is only 24.8. India has adopted various steps in protecting and enhancing the coastal and marine ecosystem to attain SDG 14. The Government of India (GOI) has undertaken 'Project Sagarmala' as a part of National Perspective Plan for the comprehensive development of India's coastline and maritime sector(promoting blue economy)The GOI has adopted certain steps to reach the targets under SDG 15(In particular, the National Environment Policy, 2006; National Agroforestry Policy,2014 and Green Highways Policy,2015etc frameworked)

SDG Baseline Index 2019

Another, applying the same methodology as used in the SDG India Index Baseline Report,2018.The results obtained on the basis of this index reveal that there has been a notable improvement in the status of India's progress towards achieving the targets set under the SDGs. The India's composite index score ascertained in December, 2019 has increased to 60 which was 57 in 2018. While analyzing the different components of this score it is found that the SDGs 6, 7 and 9 have made significant contribution towards enhancing the India's SGD composite score. It implies that the GOI has taken appropriate measures to ensure availability and sustainable management of water and sanitation as well as access to affordable, reliable, sustainable modern energy for all for improving its status in respect of achieving the SGDs associated with the sustainability of natural resources. Considering the index scores of the different states and Uts computed in December,2019, it is observed that all the three states belonging to the 'Aspirant' category as per the SDG India Index Baseline Report,2018, namely Assam, Bihar and Uttar Pradesh have found place in the category of 'Performer' and five states, namely Andhra Pradesh, Goa, Karnataka, Telangana and Sikkim which were placed in the Performer category in 2018 have been able to consolidate themselves in the 'Front Runner' category. So, there has a noticeable improvement in the performance of these states in respect of reaching the SDGs.

SDG India Index 2020

It developed in collaboration with the United Nations in India, tracks progress of all States and UTs on 115 indicators that are aligned to MoSPI's National Indicator Framework (NIF). The initiative to refine and improve this important tool with each edition has been steered by the need to continuously benchmark performance and measure progress, and to account for the availability of latest SDG-related data on States and UTs. The process of selecting these 115 indicators included multiple consultations with Union Ministries. Feedback was sought from all States and UTs and as the essential stakeholder and audience of this localisation tool, they played a crucial role in shaping the index by enriching the feedback process with localised insights and experience from the ground.

The SDG India Index 2020–21 is more robust than the previous editions on account of wider coverage of targets and indicators with greater alignment with the NIF.The 115 indicators incorporate16 out of 17 SDGs, with a qualitative assessment on Goal 17,andcover 70 SDG targets. This is an improvement over the 2018–19 and 2019–20 editions of the index, which had utilised 62 indicators across 39 targets and 13 Goals, and 100 indicators across 54 targets and 16 Goals, respectively.

Figure 2: The SDG India Index 2020-21 Reports

Monitoring the progress of Localisation: SDG India Index

Goal-wise ranking of States/ UTs and overall ranking based on performance on all goals

Promotes competition among the States/ UTs in line with NITI Aayog's approach of competitive federalism

Enable States/ UTs to learn from peers

Supports States/ UTs in identifying priority areas

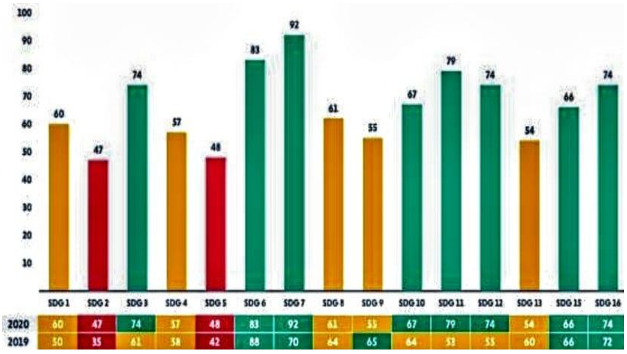
Highlights gaps in statistical systems

Baseline report – 2018	V2.0 report – 2019-20	V3.0 report – 2020-21
13 goals	16 goals + qualitative analysis on goal 17	16 goals + qualitative analysis on Goal 17
39 targets	54 targets	70 targets
62 indicators	100 indicators	115 indicators
Goal-wise ranking on States/ UTs	Goal-wise ranking on States/ UTs + State/ UT profiles	Goal-wise ranking on States/ UTs + State/ UT profiles
Preceded National Indicator Framework (NIF)	Aligned with NIF: 68 indicators completely aligned, 20 refined, 12 new to cover goals 12, 13, and 14	Aligned with NIF: 76 indicators completely aligned, 31 refined, 8 in consultation with the line ministries

Source: Press Information Bureau

First Comprehensive measure of SDG performance and localisation with National and State/Ut rankings

Figure 3: (a) Goal-wise India results, 2019-20 and 2020-21 and, (b) The top-five and bottom-five States in SDG India Index 2020-21:



Top-5 States	75	Kerala
	74	Himachal Pradesh, Tamil Nadu
	72	Andhra Pradesh, Goa, Karnataka, Uttarakhand
	71	Sikkim
	70	Maharashtra
Bottom-5 States	61	Chhattisgarh, Nagaland, Odisha
	60	Arunachal Pradesh, Meghalaya, Rajasthan, Uttar Pradesh
	57	Assam
	56	Jharkhand
	52	Bihar

Source: Press Information Bureau pib.gov.in

Overall Results and Findings

The country’s overall SDG score improved by 6 points—from 60 in 2019 to 66 in 2020–21. This positive stride towards achieving the targets is largely driven by exemplary country-wide performance in Goal 6 (Clean Water and Sanitation) and Goal 7(Affordable and Clean Energy), where the composite Goal scoresare 83 and 92, respectively.

Mizoram, Haryana, and Uttarakhand are the top gainers in 2020–21in terms of improvement in score from 2019, with an increase of 12, 10 and 8 points, respectively.

While in 2019, ten States/UTs belonged to the category of Front-Runners (score in the range 65–99, including both) twelve more States/UTs find themselves in this category in 2020–21. Uttarakhand, Gujarat, Maharashtra, Mizoram, Punjab, Haryana, Tripura, Delhi, Lakshadweep, Andaman and Nicobar Islands, Jammu and Kashmir and Ladakh graduated to the category of Front-Runners (scores between 65 and 99, including both). The project targets and impacts all 36 State Governments and Union Territory Administrations in India. NITI Aayog, Ministries of Government of India (GoI), States/UTs and UN in India consultatively selected 62 SDG Indicators on which performance is computed and ranked.

SDG India Index 2021

The Sustainable Development Goals (SDGs) Baseline Index 2021-22 is linked to the National Indicator Framework (NIF) and the SDG India Index, which are used to monitor progress toward achieving the SDGs in India. This report covers 16 goals, 70 targets, and 115 indicators, providing a comprehensive framework for tracking progress.

North Eastern Region District SDG Index and Dashboard 2021-22 focused on the North Eastern Region, ranking districts based on their performance on SDGs. East Sikkim ranks first, followed by Gomati and North Tripura.

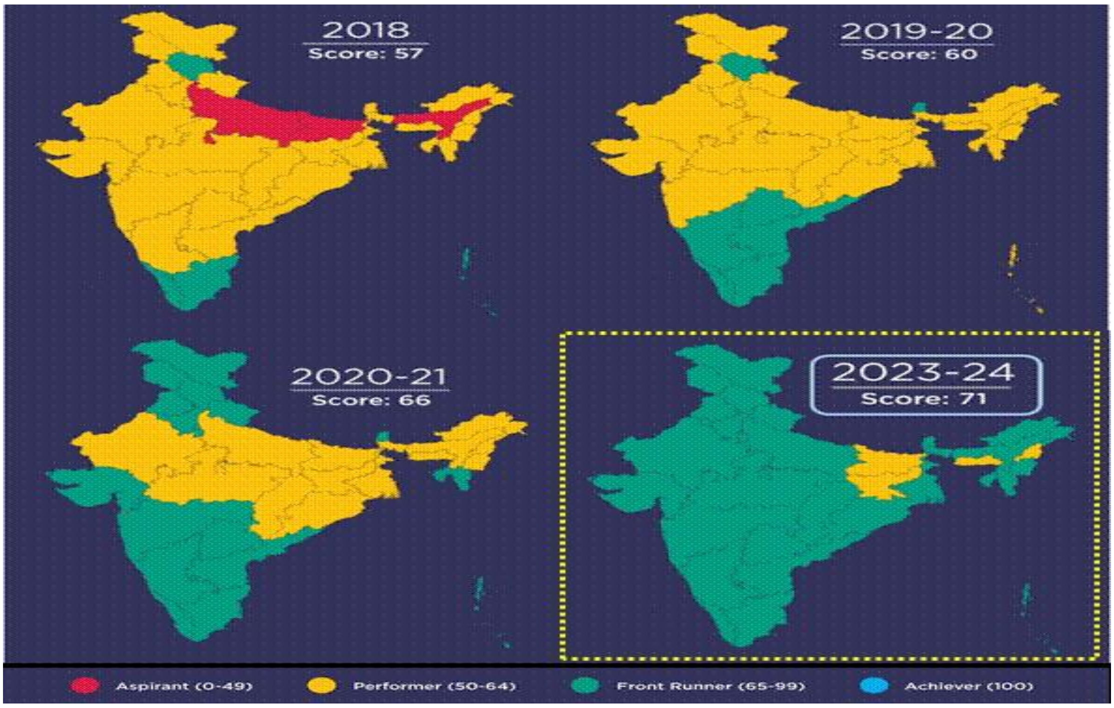
The specific linkage to NRA is not detailed in the study, precisely, the SDG India Index and the North Eastern Region District SDG Index provide a framework for evaluating performance and progress toward SDGs. These indexes can be used to inform policy decisions and resource allocation, which may be relevant to NRA's role in assessing and rating entities based on their sustainability performance

SDG India Index 2023-24

The SDG India Index 2023-24 doesn't directly reference a "NRA" linkage, but it does mention NITI Aayog's role in coordinating the adoption and monitoring of Sustainable Development Goals (SDGs) at national and sub-national levels Furthermore, India accelerates progress towards the SDGs despite global headwinds after 2021-22. India's overall SDG score improved to 71 for 2023-24, up from 66 in 2020-21 and 57 in 2018. Scores for States range from 57 to 79 in 2023-24, marking a substantial improvement from the year 2018 range of 42 to 69. The index measures progress on 16 SDGs using 113 indicators aligned with the National Indicator Framework (NIF).Certain Government schemes like Pradhan Mantri Awas Yojana, Ujjwala, Swachh Bharat, and Ayushman Bharat-PMJAY have contributed to rapid improvement in SDG scores. Significant progress in Goals 1 (No Poverty), 8 (Decent Work and Economic Growth), 13 (Climate Action) and 15 (Life on Land).

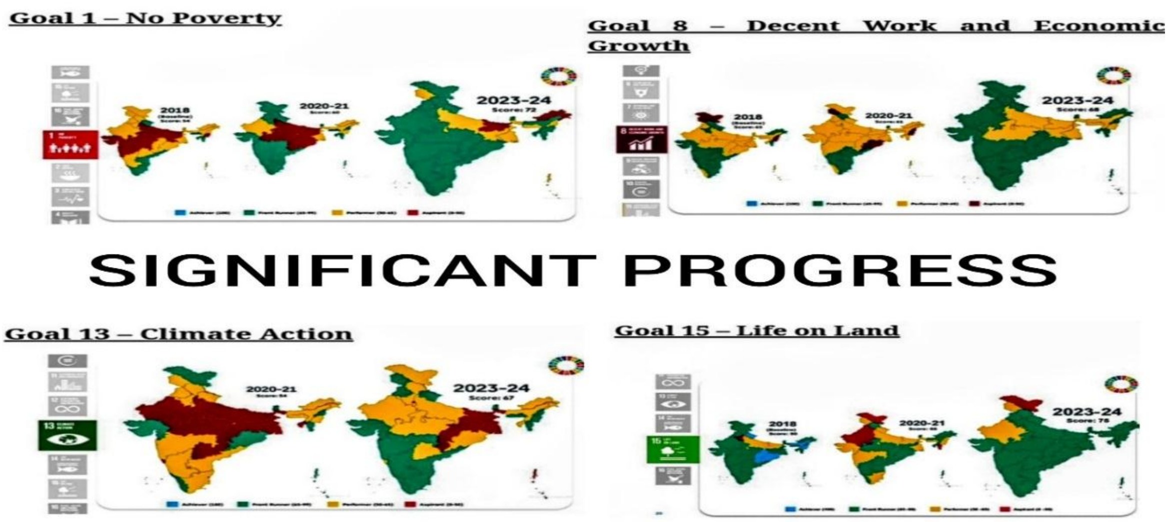
Progress on the SDGs over the last four editions of the Index

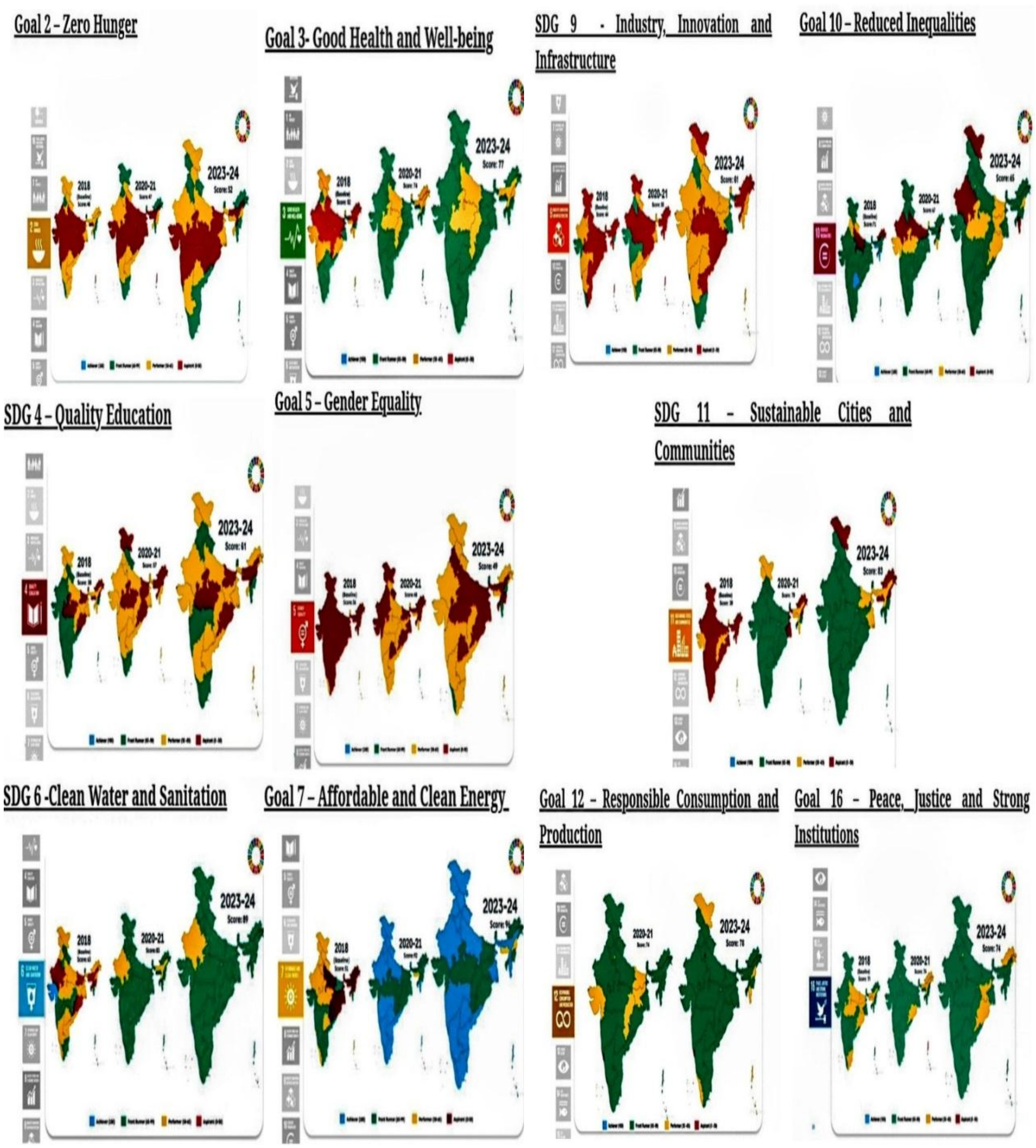
Figure 4: The fourth edition of the SDG India Index



Source: NITI AAYOG

Figure 5: The Goal wise progress of states since the baseline index





Source: NITI AAYOG

VIII. ROLE OF STAKEHOLDERS TOWARDS SUSTAINABLE USE OF NATURAL RESOURCE ACCOUNTING

Business enterprises:

- A sincere commitment by the top management to cultivate maintain and develop work culture throughout the organization for achieving sustainable.
- Developing clear-cut policies and programmes at administrative and technical levels for the purpose of pollution control.
- Strictly adhering to the policy and regulations
- Sharing knowledge and encouraging green practices with all stakeholders.

Government:

- International Solar Alliance
- UJALA Scheme (reduce the CO2emissions by 10 million tonnes per annum)
- National Action Plan on Climate Change
- National River Conservation Plan
- Policy level focus on Zero Emission vehicles.
- Project Sagarmala' development of India's coastline and maritime sector.
- The Environmental
- The National Afforestation Programme And Green Skill Development

Consumer Consumption in the target market:

- Educating stakeholders about the importance of sustainable consumption.
- Price-subsidies on sustainable products and services.
- Higher taxation on degrading products.
- Encouraging customers who purchase green products.
- Awareness and advertisement campaigns.
- Labelling the products as environment friendly.
- Strengthening consumer protection laws pertaining products

Professionals:

- Identify and estimate the costs of environment-related activities, monitor the use of resources such as water, electricity and fuels, make environmental considerations from part of capital investments, and assess the future impact of environmental risks.
- Applications of tools and techniques like Life-Cycle Assessment, Hierarchical Cost Analysis, Activity-Based Costing, Balanced Scorecard, etc. for effective natural resource accounting and fair reporting.
- Conduct Green or Environmental Audits to ensure necessary compliance of Environmental Laws, assessment of Environment Cost, Environment Impact Assessment, and Carbon credit, etc.

IX. LUCANAE AND SUGGESTIONS

NRA,at its current status in India, appears to be in a nascent stage where a concerted effort is being made by multiple agencies to formalize it. Although a range of initiatives, both at the global and national level, have been taken by stakeholders at various levels, the regulation-backed enforcement is a major hindrance in implementing the concept in its true spirit. Implementation of NRA in India needs successful implementation of some meaningful steps namely accurate preparation of natural asset accounts, interchangeability of physical and monetary resources, economic accounting of resource depletion, functional accounting of environmentally significant events, and planned resolution of related issues with short, mid and long-term goals. The deliberations at various levels, with coordinated effort in framing NRA guidelines in line with the best global practices in India, had substantially increased the awareness amongst stakeholders. Stricter monitoring of country-specific SDGs and its alignment with an imminent NRA framework would inevitably blaze the trail for a collective focus not only towards sustainable development but also making it quantifiable and accountable. The Report of the Comptroller and Auditor General of India (CAG) on Audit of Preparedness for the implementation of SDGs (Report No. 8 of 2019) reveals that NITI Aayog which acts as nodal agency has adopted a good number of measures for the purposes of coordinating and supervising the implementation process of the 2030 Agenda. But no roadmap with defined milestones aligned with the targets under the SDGs to be reached in the years 2020, 2025 and 2030 has been designed. So, in order to make successful implementation of the SDGs, such roadmap should be prepared. Proper co-ordination should also be maintained amongst the concerned government agencies while designing this roadmap. The CAG Report also discloses that the Ministry of Finance, GOI and the State Governments have not initiated any tangible move towards ascertaining the financial resources required for implementing the SDGs. Suitable measures should, therefore, be undertaken by both the Central and State Governments in order to integrate SDG related financial resources in national budgeting for implementing the targets associated with the SGDs. Further, the National Indicator Framework (NIF) for assessing the progress on implementation of SDGs has not been finalized. It is one of the greatest lacunas in the mechanism for monitoring and reporting the progress on implementation of SDGs. In order to make the system of NRA effective for achieving the SDGs in due course, the NIF should be finalized and implemented.

X. CONCLUSION

The entire world has now understood the significance of natural resources and the effects of natural debasement. The natural resources are the valuable gifts of nature to the human beings. But because of Financial eagerness, people were obliterating the assets and have confronted significant effects. A final conclusion is that in order to attain healthy relationship between society and its environment, timely provision should be made for the changes that human actions and competition over utilization of resources may bring about in order to reduce potential conflicts. The Natural Resource accounting is significant and it works with its handiness in insightful purposes, this will bring an association between natural resources, financial development and ecological issues, and carry this to the consideration of decision makers. To achieve sustainable development goals is herculean task. It is worth appreciating India to have its early initiatives. The setbacks due to pandemic,now,requires a massive effort along with the involvement of the mass people with the holistic approach. It has to have micro level management with macro monitors for successful implementation of the programmes and schemes Taking account of present stock of natural resources and its stock movement is a great task with great difficulties. One of the particularly thorny problems relating to NRA is the valuation of resources in monetary terms. The way in which natural resources are priced is often the result of decisions based on subjective criteria.([GASAB], 2020) Adoption of proper methodology to value natural and environmental resources as per the framework of natural resource accounting is required for sustainable development in certain economic sectors such as tourism,etc. There are few study which reveals that Indian Automobile Industry is quite aware of performing their duties for the sake of environmental protection. But as to maintenance of ecological balance, most of the companies showed their lack of interest. The observation is that Indian Automobile Industry would be able to attain the UN stated Sustainability Development Goals regarding environmental protection and up gradation by 2030 if they will continuously perform their duties and report them as well with the help of appropriate environmental disclosures.

NRA is a new concept and is in the process of development, which would it be near approximation to the real customization ,again efforts are required, real power of the result of NRA must be evaluated ,with lots of different views such while, scholars are of the opinion that Green GDP is fake because depreciation in national income includes depreciation of natural resources as well, but till recently why was it not yet?NRA is herculean task with lots of efforts. Time is running as it goes,and we are already far lagging behind in catching sustainable development. In our opinion we must let the concept go on its progressive path, but in between there is need of heavy and priority focus on sustainability aspect which starts from its root level.

REFERENCES

[1] Concept Paper on Natural Resource Accounting in India – An Initiative of GASAB, Government Accounting Standards Advisory Board, New Delhi, June, 2020.[GASAB], Retrieved from http://gasab.gov.in/gasab/pdf/Preface_to_IGAS_and_IGFRS.pdf http://gasab.gov.in/gasab/pdf/NR-Accounting.pdf

[2] Garg, P. (2017).Development of sustainability reporting index (SRI) with special reference to companies in India. Decision, 44(4), 259-273.

[3] NITI Aayog, GoI. (2018). SDG India Index - Baseline Report 2018. http://niti.gov.in/writereaddata/files/SDX_Index_India_21.12.2018.pdf

[4] SDG India Index Baseline Report,2018, NITI Aayog, 14th December, 2018. Retrieved from NITI Aayog: https://niti.gov.in/sdg-india-index https://niti.gov.in/sdg-india-index. (n.d.).

[5] UNDP. (n.d.). https://stories.undp.org/the-great-transformation?utm_source=web&utm_medium=sdgs&utm_campaign=greattransformation. Retrieved from UNDP: https://www.undp.org/content/undp/en/home/sustainable-development-goals.html

[6] https://niti.gov.in/sdg-india-index, n.d.)

[7] http://gasab.gov.in (https://niti.gov.in/sdg-india-index, n.d.)

[8] https://sdgs.un.org/goals

[9] https://www.undp.org/content/undp/en/home/sustainable-development-goals. html#:~:text=The%20Sustainable%20Development%20Goals%20(SDGs,peace%20and%20prosperity%20by%202030.

[10] https://en.wikipedia.org/wiki/Sustainable_Development_Goals. (n.d.). Sustainable Development Goals. Retrieved from https://en.wikipedia.org/wiki/Sustainable_Development_Goals

[11] https://www.niti.gov.in/sites/default/files/2024-07/SDA_INDIA.pdf