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Exploring India's Sustainable Development Goals: A Descriptive Analysis and Investigation into Public's Attitude Towards Sustainability Goals

Atul Vijay P
Asst. Professor
St. Joseph's Institute of Hotel Management & Catering Technology, Palai, Kerala
Email: atulvijay.p@gmail.com, atul@sjihmct.ac.in

Abstract

This paper aims to comprehensively understand the 17 SDG goals envisioned for India and explores the general public's attitudes towards these goals. Through an analysis of NITI Aayog's coordination efforts, and public sentiments, the research seeks to contribute to the broader discourse on sustainable development and international cooperation.

Assuming the G20 presidency on December 1, 2022, India directs its focus towards fostering inclusive and sustainable growth, enhancing digital infrastructure, and strengthening the global trade system. Positioned as a key G20 player with a rich cultural diversity, India endeavours to contribute to global economic advancement through robust domestic policies, including economic reforms, and active engagement in international collaborations addressing trade, financial stability, and sustainability. Drawing from its substantial experience in renewable energy, India provides meaningful insights for global environmental sustainability (Reddy, 2023).

NITI Aayog, the premier think tank of the Government of India, undertakes the pivotal role of coordinating the Sustainable Development Goals (SDGs). Tasked with mapping schemes and targets related to the SDGs, NITI Aayog identifies lead and supporting ministries for each goal. Concurrently, the Ministry of Statistics and Programme Implementation (MoSPI) leads discussions on formulating national indicators for the SDGs (india.un.org, 2024).

Key Words: Sustainability goals, G20 Summit, Sustainable practices, Sustainable behavior

Introduction

The aim of the paper is to understand the 17 SDG's formulated by the UN. Further an exploration of the SGD related initiative by the Government of India is reviewed. An exploratory survey is conducted to understand the awareness, attitude and behaviour of the public about the SDG's. The paper explores if there is a positive correlation between the attitude of the public and the behaviour of the public towards the SDG's.

Literature Review

Sustainability in the Indian Scenario

According to the blog article published by united nations india, "Despite extensive geopolitical challenges, India's G20 Presidency managed to successfully advance several key priorities, including those highly valued by the UN system, through the consensus New Delhi Leader's Declaration and other prior deliverables. This included the new G20 Action Plan to Accelerate Progress on the SDGs, commitments to triple global capacity in renewable energy, raising ambitions on MDB reform, very much in line with the UN Secretary General's call for an SDG Stimulus, a s well as the strongest-

ever gender equality language of any G20 Leaders' Declaration, including setting the stage for a new ministerial level G20 Working Group on Gender Equality to be taken forward by Brazil. Together with its solidarity with the Global South, exemplified by the inclusion of the African Union in the G20, the Indian G20 Presidency took critical steps towards a fairer and more effective multilateralism."

NITI Aayog, the Government of India's premier think tank, has been entrusted with the task of coordinating the SDGs, mapping schemes related to the SDGs and their targets, and identifying lead and supporting ministries for each target. In addition, the Ministry of Statistics and Programme Implementation (MoSPI) has been leading discussions for developing national indicators for the SDGs. (india.un.org, 2024)

The Honourable Prime Minister of India Narendra Modi said at the 76th session of the United Nations General Assembly, "Today, every sixth person in the world is an Indian. When Indians progress, the development of the world also gets a boost. When India grows, the world grows. When India reforms, the world transforms"(GOI & UNRCO, 2024).

Categorisation of SDG

People (SDGs 1-6)	Prosperity (SDGs 7-11)	Planet (SDGs 12-15)	Peace	Partnerships
• No Poverty • Zero Hunger • Good Health & Wellbeing • Quality Education • Gender Equality • Clean water & Sanitation	Affordable & clean energy Decent work & economic growth Industry Innovation and Infrastructure Reduce Inequalities Sustainable cities & communities	Responsible consumption and production Climate action Life below water Life on land	Peace, Justice & Strong Institutions	Partnership for the Goals

Review of the research related to SDG's of India

An analytical study about the SDG goal 6, "clean water and sanitation" concludes that, decrease in both total internal renewable water resource and total renewable water resource is expected, as the population is growing but the available amount of renewable water resource is not. In future, with more population growth, per capita available renewable water resource is likely to decrease further.(Roy & Pramanick, 2019)

A bibliometric study on Emerging trends in Ayurveda and SGD concluded that, here was exponential growth from 1993 to 2012, followed by a tapering off until 2019. However, the onset of the COVID-19 pandemic resulted in a surge in Ayurveda research, with the highest number of annual publications occurring in 2020 and 2022, even in higher-quality journals within the top two quartiles. Highest number of publications as well as citation was form India(Nedungadi et al., 2023)

A systematic review of the potential of biofuel in promoting SDG in case of India. Results of the review reveal that the current research focuses on exploring biofuel potential and feedstock viability but has limited coverage of the impacts. There is a marked disparity between the objectives set forth in policy and the actual sustainability outcomes of biofuels in India.(P. Das et al., 2024)

Carbon pricing in the form of climate action (SDG13) is the key mitigation and adaptation strategy to sustainable development. Several policy measures, like, energy efficiency, urban green infrastructure, and renewable energy subsidy and most importantly, carbon taxes can be implemented to stimulate transformation pathways.(Sen & Sahoo, 2024)

The review article focusing on transformative policies for India's energy agriculture and transport sector concluded that, India, a rapidly industrialising and the most populous nation on earth, is struggling to find a balance between improving its citizens' lives and pursuing sustainable development. To achieve carbon neutrality by 2070, GOI has implemented policies in the energy, transport, and agriculture sectors, which are crucial for national development and, at the same time, responsible for producing the majority of GHG emissions.(Saranga et al., 2024)

The SDG 14 which aims to reduce marine pollution, ocean acidification and sustainable use of coastal and ocean resources. In India SWQM (sea water quality management has interrelation to the SDG 14. (Sanitha K. Sivadas et al., n.d.)

The World Bank urges that financial inclusion can contribute substantially to achieve 7 of the 17 Sustainable Development Goals (SDGs) i.e., eliminating extreme poverty (SDG 1), reducing hunger and promoting food security (SDG 2), achieving good health and well-being (SDG 3), fostering quality education (SDG 4), promoting gender equality (SDG 5), promoting shared economic growth (SDG 8), and promoting innovation and sustainable industrialization (SDG 9).(Dash & Mohanta, 2024)

The Indian governance system's attempts to make cooperative and competitive forms of federalism work in a complementary manner for the localised implementation of SDGs. The enablers used in this process are the policy and institutional environment, monitoring and evaluation systems, multistakeholder engagement, and financing. Through these enablers, the central government operationalised a combination of policies and guidelines instead of setting up a control mechanism through legal compliance. It also utilises its multiple governance roles to steer sub-national actions to localise SDG 11: i) oversight through annual state review by NITI Aayog, ii) strategic planning of the National Urban Policy Framework, and iii) financing through fiscal federalism, government schemes, and the Aspirational Districts Programme.(Richa Kandpal & Mahesti Okitasari, 2023)

The article titled, "Progress on Sustainable Development Goal indicators in 707 districts of India: a quantitative mid-line assessment using the National Family Health Surveys, 2016 and 2021", assesses the mid-line progress of Indian districts on health-related SDGs, highlighting the need for increased momentum on critical indicators. It recommends creating a strategic roadmap with honest evaluations of existing programs, developing robust metrics, establishing timely data systems, and prioritizing interventions. Inter-Ministerial initiatives with governance under the Prime Minister's and Chief Ministers' Offices are advised. Addressing health and social determinants is crucial for India to achieve its economic potential and SDG targets.(Subramanian et al., 2023)

Understanding resilience is crucial for cities to achieve sustainability and address

vulnerabilities. The Resilience Master Plan is key to this goal. Kozhikode's 2035 Master Plan addresses sustainability but overlooks the impact of disasters like floods, coastal erosion, and epidemics. Given the increasing severity of these threats, a resilience plan is essential. Implementing these proposals will boost Kozhikode's resilience, ensuring sustainable development in the long term.(Kumar S & C.a, 2022)

India faces the challenge of securing food, nutrition, livelihoods, clean water, and sanitation due to degrading land and water resources. The study examines the soil quality and nutrient status of Indian soils, highlighting 11 major soil groups and issues like low soil organic carbon (SOC) and nutrient deficiencies. Strategies to improve soil quality include adding organic manures, adopting legume-based cropping systems, and improving cultivation practices. National strategies aim to double farmers' income through initiatives like Pradhan Mantri Krishi Sinchai Yojana, soil health cards, and action plans to enhance productivity and diversify crops. Emphasizing technology development and strengthening knowledge delivery systems are crucial for sustainable agriculture and meeting SDGs.(B. S. Das et al., 2022)

Policymakers and scholars recognize innovation and entrepreneurship as vital for economic development in developing countries. Public incubators, supported by governments, play a key role in fostering startups to advance SDGs. Countries like India have extensive incubator programs to achieve social, environmental, and economic goals. However, understanding of incubators' impact in developing countries is limited compared to industrialized nations. This paper examines India's experience with incubators, analyzing policy drivers, implementation by public agencies, and their effectiveness in achieving SDGs. Insights from India can inform strategies in other developing countries to leverage STI-based entrepreneurship for sustainable development.(Surana et al., 2020)

The study integrates Value-Belief-Norm (VBN) and Theory of Planned Behavior (TPB) frameworks to examine environmental behavior among Gen Z, particularly tree planting. It demonstrates that personal values influence attitudes and subjective norms, which in turn shape behavioral intentions and pro-environmental actions. Cultural practices like Vishu Thaineetham enhance personal norms and perceived control, promoting sustainability. The research highlights interdisciplinary insights from psychology, sociology, environmental science, and cultural studies, emphasizing the importance of cultural traditions in environmental action. The study calls for broad, culturally informed strategies and suggests further research to include diverse demographics, age groups, and longitudinal analyses for comprehensive understanding.(Raman et al., 2024)

Research Methodology

A survey was conducted to understand various aspects of sustainability. A structured questionnaire was created which consisted of five questions to evaluate the attitude of the respondents and five questions to evaluate the sustainable behaviour of the respondents and one question to understand the awareness of the respondents about SDG's. A five-point likert scale question was used in the survey. 46 people responded to the survey. A regression analysis was done using JASP, to understand the correlation between the awareness of SGDs among the respondents and the behaviour of people towards sustainability. Here, the attitude towards SDG's were considered as independent variables and the sustainable behaviour were considered as the dependent variable. The following hypothesis were formulated:

H0 - There is no significant relation between the attitude of respondents on the SDG goals and the sustainable behaviour.

H1 - There is a significant relation between the attitude of respondents on the SDG goals and the sustainable behaviour.

Findings and Discussion

Demographic Profile

Table 1: Age category of the respondents

Age	Frequency	Percent
18-25	29	63.043 %
26-35	8	17.391 %
36-45	7	15.217 %
46-55	2	4.348 %
Total	46	100%

Table 2: Occupation status of the respondents

Occupation	Frequency	Percent
Employed	15	32.609 %
Own Business	1	2.174 %
Student	30	65.217 %
Total	46	100 %

Table 3: Gender distribution of the respondents

Gender	Frequency	Percent
Female	9	19.565
Male	37	80.435
Total	46	100.000

The majority of respondents are of the age group 18-35, as shown in Table 1. Within this most of them are students, as shown in Table 2. The demographics represent the youth of our country. 80% of the respondents are male, as shown in Table 3.

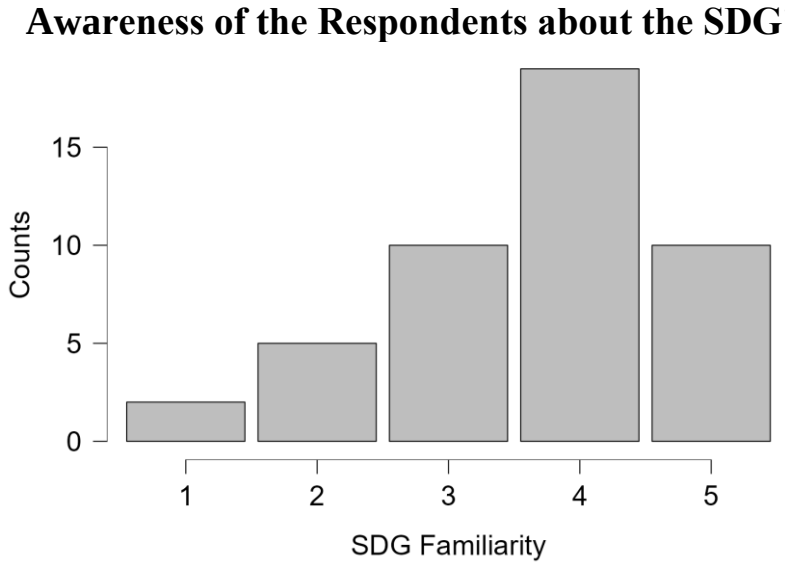


Figure 1: The column chart showing the awareness level of respondents about SDG's

Table 4: The familiarity of the respondents about SDG's

SDG Familiarity	
Valid	46
Missing	0
Mode	4.000
Median	4.000
Mean	3.652
Std. Deviation	1.079
Coefficient of variation	0.296

Majority of the respondents are aware about the SDG.

Comparison of the Attitude of the Respondents vs the Behaviour of Respondents

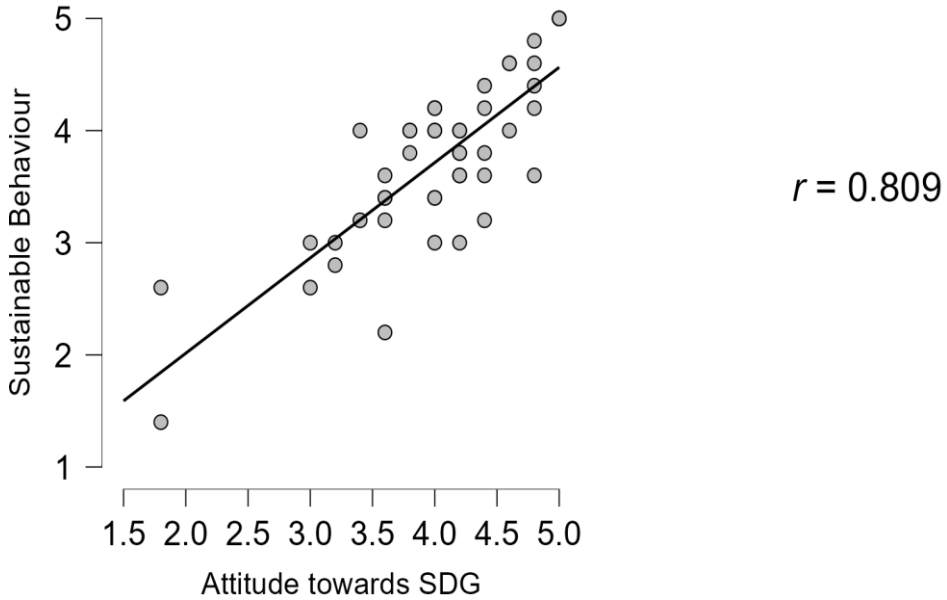


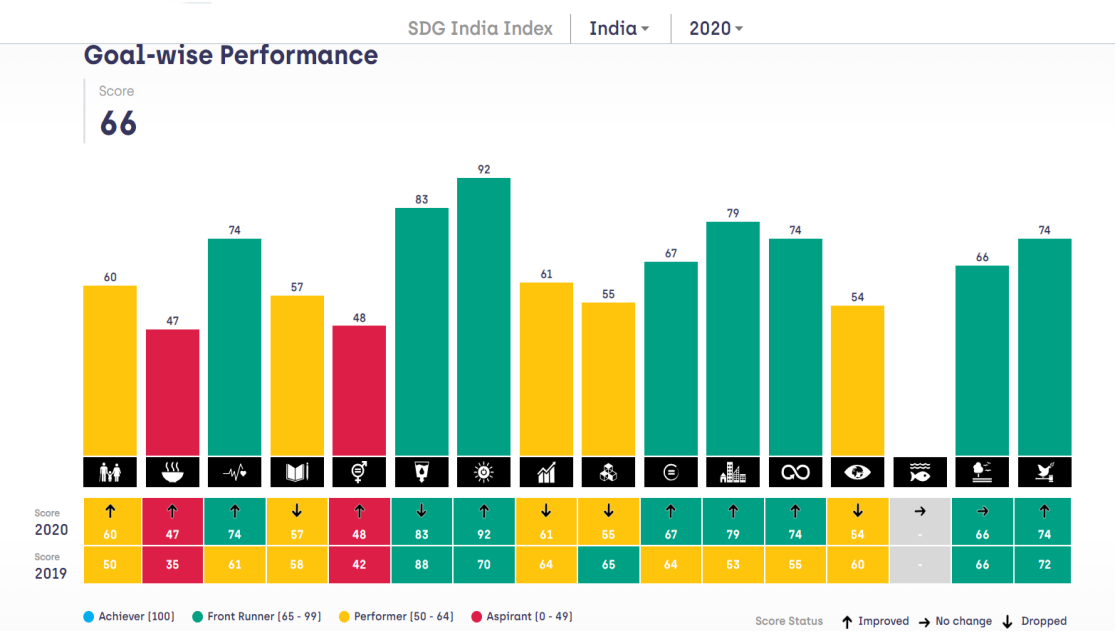
Figure 2: Scatterplot showing the correlation between attitude and behaviour

Table 6: Correlation between sustainable behaviour & attitude about sustainability

Pearson's Correlations

			n	Pearson's r	p
Attitude towards SDG	-	Sustainable Behaviour	46	0.809	< .001

There is a significant positive correlation between the attitude towards SDG's and sustainable behaviour among the respondents, r(44) = 0.809, p < .001.



Front Runner	1. Good health & well being, 2. Clean water and sanitation, 3. Affordable and clean energy, 4. Reduced inequality, 5. Sustainable cities and communities, 6. Responsible consumption and production, 7. Life on land, 8. Peace justice & strong institutions
Performer	1. No poverty, 2. Quality education, 3. Decent work and economic growth, 4. Industry innovation and infrastructure, 5. Climate Action
Aspirant	1. Zero hunger, 2. Gender equality

(NITI Aayog, n.d.)

From the website of NITI aayog the current standing of India and sustainability goals achievement is described as above. We have a long way to go towards zero hunger and gender equality. However, in the overall performance India ranks 112/166 and has a country score of 63.4 where the regional average is 67.2.

Conclusion

In conclusion, the Sustainable Development Goals (SDGs) established by the United Nations in 2015 serve as a critical framework for addressing global challenges and fostering sustainable development by 2030. In India, the responsibility for implementing and monitoring progress towards these goals falls under the purview of NITI Aayog. However, despite concerted efforts, India currently ranks 112 out of 166 countries in terms of SDG achievement, with challenges evident in achieving zero hunger and gender equality targets.

Nevertheless, the research findings highlight a promising trend: a positive correlation between respondents' attitudes towards the SDGs and their sustainable behaviours. This suggests that fostering a greater understanding and appreciation of the SDGs can potentially drive meaningful change at the individual and societal levels.

Moving forward, it is imperative for policymakers, civil society organisations, and other stakeholders to strengthen their efforts in addressing the gaps identified, particularly in areas such as hunger eradication and gender equality. Furthermore, promoting widespread awareness and engagement with the SDGs can serve as a catalyst for driving sustainable development in India and beyond. By harnessing the collective efforts of all stakeholders and leveraging innovative approaches, we can strive towards realising the vision of a more equitable, prosperous, and sustainable future for all.

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