# How Economic Sustainability is Vital for Environment, Society and People while Reducing Poverty – A Case for India

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#### ABSTRACT

The experimental discovery demonstrates that economic complexity, cross-border trade, and unlimited power utilisation all play a role in reducing environmental damage. In contrast, non-stop energy use and economic expansion are to blame for rising pollution levels. Balancing economic growth that benefits social and environmental issues while reducing poverty has long been one of the top concerns for most countries. However, healthy development that results in successful adaptation has not occurred uniformly throughout the cosmos. In India, many rural people face difficulties for having uneven or deficit development besides being exposed to variable climatic conditions and extreme surroundings that add to hardship. Many Indian cities are densely packed and prone to natural calamities like landslides, urban flooding, sea level rise, and heat waves with limited knowledge to mitigate. There are discussions on whether and how the development of science, technology, innovation, and modern times disruptions can offer a much-needed solution to deliver social good and improve livelihoods for the attainment of ecological-social sustainability for humans.

# Keywords: Economic growth; Environment; Climate; Sustainability; Renewable energy.

# **1.0 Introduction**

To address sustainability challenges United Nations in 2015 articulated 17 Sustainable Development Goals with a renewed global vision and stressed the importance for joint actions by several social performers. Throughout the decades bygone, sustainability discipline has drawn myriad analysts, proponents, philosophers, educators, and scholars from distinct establishments and subjects covering the globe. Managing the environmental and social aspects is referred to as economic sustainability for the long-term development of a nation and its people. The tricky and ever-changing world we live in the zestful, and sustainability presents a modern perspective to understanding one which explicitly acknowledges that there are various means of understanding the world and that development is quite an economic-political affair.

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Indian economy is growing and is seen as one of the large and fastest developing nations. And the country's dependence on imported fuel/crude oil is continuing unabated and is estimated to reach 6 million barrels per day by 2030 (Projected import – IEA 2007). Here Biofuel is regarded as one of the alternatives that can be manufactured domestically and can be switched for petrol and diesel to fulfill the transportation need will be a much-needed potential choice. Consequently, it calls for examining likely socio-economic and environmental ramifications of biofuel manufacturing plans, especially on net GHG advantages from water requirement, availability of land for food production, land redevelopment, and biodiversity. Over the past few years, Industry 4.0 and maintainability have become critical points of the universe. Discussions center on the connection between the environmental aspects of Industry 4.0 and maintainability. The new mechanics evolved to provide the corporate to advance innovation and entrepreneurship, recover and reuse material, lower energy waste, enhance the market share, etc.

A planet of 7.5 billion-plus and will rise close to 10 billion people by 2050, the hitherto economic theories cannot serve us well. A structured application accelerating conversion to a resource-efficient, Green Economy, low carbon is probably the desired route feasible if all stakeholders and surroundings are to prosper, let alone live all over the 21st century (Leach Melissa, 2010). The ecological economics, circularity and CE, and bio-based give 3 plans to superscribe community, surrounding goals, and economic and encourage various routes for maintainability revolutions.

#### **1.1 Rationale of the paper**

To examine corporate and financial environmental aspects leading to sustainability (ESG) while adhering to well accepted standard/benchmark in the Indian context. And how it can positively impact various stakeholders at different stages to improvise their overall performance in equal and fair manner.

#### 1.2 The objective of the study

After having introduced the subject, the author has framed the following objectives.

- a) To study the broad environmental and sustainability-related aspects that include water waste, CO<sub>2</sub> emissions, reducing carbon footprints, NO<sub>2</sub> emission, waste reduction, and efforts by the administrators in India in balancing the ecological surroundings.
- b) To study a few of the development aspects of SDGs, their current status, and initiatives by the government and what is required needs to be explored and implemented for the country to transit itself to high-development nations while significantly improving rankings on various indicators.

#### 2.0 Review of Literature

From the advocates of maintainable evolution, we study that maintainability could be successfully directed by establishments, governments, and individuals that usefully

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#### 65 *E-ISBN: 978-81-956810-4-4*

consolidate financial, ecological, and social plans (WCED 1987). Although the noble purpose of economic equity and social equality, of course, requires to be encouraged, a more progressive reestablishment of possible preferences and a incrementally comprehensive honest apprehension for the surrounding may guide course of action further – Helen Kopnina (2016).

Climate change impacts India hitherto being experienced and affects individual lives and livelihoods of innumerous. Thousands of persons are dying and falling sick because of the exhaustive heat boomers during summers each year – Rohini, P., Rajeevan, M., & Srivastava, A. K. (2016). The inhabitants in Indian towns & metros are unprotected from floods that are damaging to the economy, people, and nourishment, and hundreds are left without shelter in the process losing their property, belongings, and assets Dulal, H.B. 2019)

Going down groundwater and dwindling landholding size are moving out relocation and deprivation (Venot et al., 2010; Zaveri et al., 2016; Gupta, 2016). Within this framework of uncertainty, extreme climatic conditions and change aggravate prevailing risks, particularly in subtropical desert which is marked by extraordinary water level paucity and area mortification. Atmospheric environment threats are connected with systemic unfairness such as old socioeconomic and ministerial disparage, extreme poverty, livelihood options, and social class, and sex identity hierarchies (Gaiha and Imai, 2004; Banerjee et al., 2013; Singh et al., 2016b) to figure domestic susceptibility.

Maintainability is perceived through several lenses. Two perspectives are John Elkington's multi-generational theory born of the Brundtland Report and triple-bottom-line—profits, people, planet—matching the need of current but not weakening the capability of coming/new generations to meet their needs – Sarkis, J. (2020). Maintainability has evolved over the years and delineates one of the important and also much talked about problems of the decade just gone by. In the beginning, maintainability was mentioned only to water waste, CO2 emissions, environmental features related to the reduction of carbon footprints, etc. However, maintainability has gained a new definition connected to the Triple Bottom Line Planet, People, and Profit – Cricelli, L., & Strazzullo, S. (2021).

Digitalization has the potential to provide for a more maintainable future and likewise is deliberated to affect social sustainability, ecological sustainability, and sustainability in general. Consequently, it will provide a beneficial effect on reducing CO2, climate change, and more sustainable energy and agriculture saving. Although ecological issues can be rectified by digitalization, it plays a more crucial role in economic maintainability since it evolves in economic maintainability through automation, connectivity, and proficiency, Brenner, B., & Hartl, B. (2021). SDGs helped as a powerful medium and hasten advancements on crucial universal alliances and agreements such as gender inequality, climate change, sustainable cities, social inclusion, and poverty reduction (Tollefson and Gilbert 2012; Winkler and Satterthwaite 2017).

It is evident from the numerous examples of 'wealthy' nations neglecting to pay attention even to the token needs of supervising the propylene discharge that impact atmosphere switch that financial prosperity does not spontaneously guide to options for

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environment tender types of infinite power (e.g., The Economist 2015). Supply chains and maintainable operations are deep-rooted and well-known subjects in performance management teaching. Maintainable supply chain investigation centered on a triple bottom line when environment and economics play roles (Hallinger, 2020) and social issues receive growing recognition (Nath and Agrawal, 2020; Walker et al., 2014).

#### 3.0 Research Methodology

The article is descriptive, and the author has used secondary data from reliable sources – namely, a few authentic websites that include MoSPI, Government documents, domestic and international online publications, and various industry chambers, academic journals, business newspaper articles, among others.

#### 3.1 Analysis

The nations that exhibit financial intricacy are those with fast-track monetary expansion and high electricity consumption. A unique country with the highest financial involution, India becomes the obvious choice for our case study. India is confronting environmental deterioration, deprivation, and inhabitants squeezed on one side, then again, from people from heightened movements because of financial development, switching consumption habits and styles. India is still grappling with achieving water, socio-cultural security, livelihood, and food for its populace, even after 75 years of independence.

Both neutral and formal analyses reveal lasting deprivation, social inequity, energy and water, joblessness and underemployment, food shortages, ecological footprint, and other issues that hamper the advancement of development. The identified six components of ecological footprint are forestland, fishing grounds, carbon footprint, crop-area, pasture-area, and roofed structure, and its shift through time. The task henceforth in making progress consistent with the environment is to re-establish the financial plan in a way that will not damage the environment since economic well-being is a must.

Countryside gives an ideal opportunity to conduct a study and background to survey the hardship of zonal dissimilarities in establishments (both informal and formal) that include values, culture, and belief systems and their impact on the bricolage pursuits. Bricolage is 'producing do by striving mingling of resources hitherto at hand to new issues and possibilities' (Baker & Nelson, 2005). Here, the reference drawn to a few articles has examined two Social Enterprises operating in various domains focusing on separate geographical localities.

Fast-track growth in industrialization has caused a sizeable thriving in fossil fuel consumption in India. The terrible impacts of this thriving are in the rise of enveloping air pollution. Nitrogen dioxide (NO2) emission is chiefly responsible for ground-level ozone, a chief element of smog. Besides, it is directly responsible for forming different nitrate compounds that add to the extent of inhaling particulate matter in the beneath environment.

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In factory areas, an increase in NO2 emission can be related to the upswing in the extent of direct fossil fuel utilization in the device of oil and coal. The consumption of petroleum fuel is chiefly noticeable in vehicular transportation, which is in the manufacturing cities in India. We move now to dormitory areas, and an increase in the NO2 emission can be related to spirals in the high-rise buildings, improper usage of burners, vehicular choking, and the extent of humidity. A sustained increase in population in the dormitory localities is putting coercion on the prevailing road transport infrastructure, perceived in vehicular choking in most cities in India.

Important to acknowledge some of the initiatives by the Indian government in addressing sustainability.

- The organized introduction of State Mission in composite and galvanic vehicles. Apportionment of US 89.41 million dollar from the State Clean Power fund for hastening up The State Mission for an Ecologist India. The Environment Ministry's allocation increased by US 67.1 million dollar (apex).
- The National Mission for Enhanced Energy Efficiency (NMEEE) 4-initiatives:
  - Perform Achieve and Trade (PAT) It will be considered by issuing certificates for energy savings which are again traded.
  - Market Transformation for Energy Efficiency (MTEE) The focus will be on encouraging the manufacturing of utilities that are inexpensive and energy-efficient.
  - Energy Efficiency Financing Platform (EEFP) To provide required monetary support at reasonable rates for energy efficiency project implementation.
  - Framework for Energy Efficient Economic Development (FEEED) Floating innovative monetary instruments to encourage the production and use of energy efficiency devices by lowering risks for banks and investors.
- India conveyed message at the UN meeting about its **COP-27** commitment towards reaching **Net-Zero** by 2070. Government of India has also conveyed further plan of reducing the *discharge ferocity* of its Financial Output (**GDP**) up to 45 percent by the year 2030.

The focal point of the present discussion is also on the socio-economic and environmental ramifications of first-generation biofuel crops as they battle for food for land and livestock creation. The First-generation crops influence biofuel creation for a long time into the future, as the technologies are well settled and solid creation plans survive.

Typically, solid biomass (agro-residue and fuel wood) is used as a source of electricity for heating, baking, and power production. Biofuel is one more utilization of biomass. There are various renewable sources of biomass feedstock for biofuel manufacturing, which include starchy crops, oil crops, cellulosic material, and sugar crops. Hypothetically, biofuels get manufactured from any organic material, but based on the cultivation practices, the process involved, and the type of biofuel crop are grouped as first and next-generation crops.

Universal usage of crop residue covers, and is not exhaustive to, soil mulching, biomanure, thatching for rural homes, animal feeding, and fuel for domestic and industrial usage.

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Despite the familiarity of its value, cultivators burn a considerable part of the crop residues on-farm to ensure the crop grows in a clear area. The energy produced from farming biomass waste can significantly replace fossil fuel, lower emissions of greenhouse gases, and supply renewable energy to close to 1.6 billion humans in emerging nations that yet go without access to power.

A few researchers' work advocates that electricity generation from renewable energy sources has little environmental effect compared to fossil fuels while supplementing infinite power utilization as it may be a beneficial plan for purifying surrounding accomplishment in Indian context. The same gets validated that electricity generation from renewable sources will be of better environmental quality in the province (Refer to Figure 1 self-explanatory).



Figure 1: Renewable energy impacts positively the environment

Source: Graphical presentation finding by Wan, X., Jahanger, A., Usman, M., Radulescu, M., Balsalobre-Lorente, D., & Yu, Y. (2022).

The United Nation's (2015) Maintainable Evolution Targets encompass supplying inexpensive and clean electricity, encouraging maintainable preserving worldly environs, production, and consumption, and guaranteeing service and development. Although, across the universe, 106 crores poorest humans have without power, and 300 crores humans go without non-residue combustible for baking. The performance is irregular as 75 percent of the 57 crores person (apex.) who secured entry from 2011 onward reside in Asin region. While the number of people left wanting energy came under 100 crores in the year 2017, a downturn of 9.7 crores compared to year 2016.

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69 *E-ISBN:* 978-81-956810-4-4

Conversations with businessmen and clients in these mostly nourishment markets expose entrepreneurs with low teaching levels, below-par information technology connectivity and usage, and fragile property rights, which shows the part of word-of-mouth in these faraway scatter landscapes that employ 'bricolage' resource use. Important to highlight India's latest ranking per Human Development Report by United Nations for 2021-22. India ranked 132 out of 191 countries (69.11 out of 100 percentage basis) 'Medium' Human Development category. The country ranked 123 out of 160 countries (76.88 out of 100 percent basis) and was in the 'Low' Human Development category in 1990. Therefore, it revealed that impeded progress is made even after 30 years post-economic reforms implemented – **MILES TO GO!** 

 Table 1: Multidimensional Poverty Index for India's Population

			SDG 1.2							
	Multidimensiona Index	Multidimensional Poverty Index		Population in multidimensional poverty						
	Year and survey	D	Headcount	Intensity of deprivation	Number of poor (year of the survey)	Number of poor (2020)	Inequality among the poor	Population in severe multidimensi onal poverty		
Country	2010-2021	Value	(%)	(%)	(thous and s)	(thousands	Value	(%)		
Estimates bas	ed on surveys for 20	016-2021								
India	2019/2021 D	0.069	16.4	42.0	230,739	228,907	0.010	4.2		

Source: Human Development Report 2021-22 by UNDP

Table 1 reveals headcount is 16.4 percent in multidimensional poverty, particularly the intensity of deprivation is 42 percent which is very high.

# Table 2: Multidimensional Poverty Index for India – Select Components of Overall Multidimensional Poverty

	Multidimensional Poverty Index		Population <sub>a</sub> vulnerable to	Contribution of deprivation in dimension to overall multidimensional poverty			SDG 1.2 SDG 1.1 Population living below income poverty line (%)		
	Year and survey	b	multidimen sional poverty	Health	Education	Standard of living	National poverty line	PPP \$1.90 a day	
Country	2010-2021	Value	(%)	(%)			2009-2020	。2009- 。 2021	
Estimates bas	ed on surveys for 20	16-2021							
India	2019/2021 D	0.069	18.7	32.2	28.2	39.7	21.9	22.5	

Source: Human Development Report 2021-22 by UNDP

5<sup>th</sup> International Conference Impact of Current Events on Future of Business Vignana Jyothi Institute of Management (VJIM), Hyderabad, India

Table 2 exhibited that 18.7 percent of people are susceptible to intricate deprivation. Further, examining the subscription of the distress in Health is 32.2 percent; Education is 28.2 percent in dimension to overall multidimensional poverty. Lastly, the population living below the poverty line is 21.9 percent. While some 22.5 percent of people narrowly live on \$ 1.90 a day (PPP basis).

Let us mention some of the government's initiatives on a few select indicators:

- i. Total no. of people 12,69,442 trained under DDU-GKY (Deen Dayal Upadhyaya Grameen Kaushalya Yojana)
- ii. Total verified applications 8,39,50,000 on National Scholarship Portal
- iii. No. of children 4,10,00,000 vaccinated under Mission Indra Dhanush
- iv. Total no. of free treatments 3,62,45,100 done under PM Jan Arogya Yojana
- v. Total no. of 22,91,30,548 Soil Health Cards dispatched
- vi. No. of beneficiary farmers 11,37,00,000 under PM Kisan Samman Nidhi Yojana
- vii. No. of farmers registered 11,42,07,960 under PM Fasal Bima Yojana (since 18)
- viii.No. of houses 2,71,48,282 completed under PM Awas Yojana
- ix. No. of LEDs 36,86,85,331 distributed under the Ujala Scheme
- x. Total no. of households 2,81,69,724 electrified under Saubhagya (since Oct-17)
- xi. Total no. of LPG connections 9,56,57,999 released under PM Ujjwala Yojana
- xii. A total of 11,68,20,000 Household toilets were constructed under Swachh Bharat

Source: https://transformingindia.mygov.in/performance-dashboard/ accessed on 7-Mar-23

Financial intricacy is without fiscal yardstick conveyed in the arrangement of a state's prolific yield and indicates the composition that materializes to carry and incorporate learning. The theory of financial intricacy illustrates the refinement of prolific format based on two sub-concepts – ubiquity and diversity.

# **4.0 Conclusion and Implications**

The study has highlighted that the after-revolution era in India shows a growth in discrepancies covering environment and community class and between countryside and metropolitan areas. With interest in sustainability that includes sustainable business picking up at a fast pace globally, the need now is for an accepted and clear standard/benchmark for examining corporate and financial environmental, ESG, and circular economy strategies.

Hence, there is a need for India to have a wide-ranging and all-inclusive expansion that will positively impact the populace fairly and equally, particularly the impoverished, businesses, environment & sustainability aspects (refer to Figure 2). Indian government should promote funding in infinite power undertakings and encourage and help conventional power businesses to boost green automation novelty that may subscribe to the work of atmosphere moderation, thereby achieving sustainability.

5<sup>th</sup> International Conference Impact of Current Events on Future of Business Vignana Jyothi Institute of Management (VJIM), Hyderabad, India



# Figure 2: Sustainability Image

*Source:* https://www.google.com/search?client=firefox-b-d&q=Infographics+on+Sustain ability#imgrc=dHvE-w37bWzRFM (Accessed on 9-Mar-2023)

# 5.0 Scope for Further Research

Future research can include state-wise and industry-wise sustainability aspects with supportive and relevant data so that finding becomes the actionable yielding solution in today's era.

# References

Baker, T., & Nelson, R. E. (2005). Developing something from zero: Facility creation through by way of bricolage. *Administrative Science Quarterly*, *50*(3), 329-366.

Banerjee, A., & Madhurima, C. (2013). Jungle breakdown and means of domestic societies in India: An individual rights perspective. *Journal of Horticulture and Forestry*, 5(8), 122-129.

Brenner, B., & Hartl, B. (2021). The identified connection among digital conversion and bionomical, monetary, and group maintainability. *Journal of Cleaner Production*, 315, 128128.

5<sup>th</sup> International Conference Impact of Current Events on Future of Business Vignana Jyothi Institute of Management (VJIM), Hyderabad, India

Cricelli, L., & Strazzullo, S. (2021). The financial angle of technology maintainability: A methodical evaluation. *Sustainability*, *13*(15), 8241.

Dulal, H. B. (2019). Metropolis in Asia: how are they adjusting to climate switch? *Journal of Environmental Studies and Sciences*, 9, 13-24.

Gaiha, R., & Imai\*, K. (2004). Vulnerability, surprises, and continuance of deprivation: approximation for semi-arid countryside South India. *Oxford Development Studies*, *32*(2), 261-281.

Gupta, J., & Vegelin, C. (2016). Maintainable evolution targets and inclusive growth. *International environmental agreements: Politics, law, and economics, 16,* 433-448.

Hallinger, P. (2020). Examining the cognitive framework of the understanding base on administering for maintainability, 1982–2019: A meta-investigation. Sustainable Development. https://doi.org/10.1002/sd.2071.

Helen Kopnina, (2016). The sufferers of un-maintainability: an obstacle to maintainable evolution targets. International Journal of Sustainable Development & World Ecology, 23:2, 113-121, DOI: 10.1080/13504509.2015.1111269

International Energy Agency (IEA), (2018). Universe Electricity Perspective 2018. Management Synopsis. Paris (France): OECD/IEA; Available from: https://webstore.iea.org/download/summary/190?fileName=English-WEO2018-ES.pdf.

Khalid, A. M., Sharma, S., & Dubey, A. K. (2021). Problems of emerging nations and the maintainable evolution targets: Case for India. *International Journal of Sustainable Development & World Ecology*, 28(4), 303-315.

Melissa Leach, Ian Scoones, and Andy Sterling, (2010). A book on Zestful Maintainabilities: Automation, Surroundings and Human Rights. Earthscan New York. ISBN: 978-1-84971-093-0

Nath, V., & Agrawal, R. (2020). Nimbleness and efficient applications as precursor of supply chain community maintainability. International Journal of Operations & Production Management. 17 New Balance (2020), Making masks for all. New Balance Shoes. https://www.newbalance.com/making-ppe-face-masks/

Prahalad, C. K. (2012). Poorest as a genesis of success innovations. *Journal of product innovation management*, 29(1), 6-12.

5<sup>th</sup> International Conference Impact of Current Events on Future of Business Vignana Jyothi Institute of Management (VJIM), Hyderabad, India

#### 73 *E-ISBN: 978-81-956810-4-4*

Rohini, P., Rajeevan, M., & Srivastava, A. K. (2016). On the changeability and rising movements of hotness swing over India. *Scientific reports*, 6(1), 1-9.

Sarkis, J. (2020). Supply chain maintainability: teaching from the COVID-19 pandemic. *International Journal of Operations & Production Management*, *41*(1), 63-73.

Singh, J. S., Kumar, A., Rai, A. N., & Singh, D. P. (2016). Photosynthetic microbes: a priceless bio-resource in farming, ecosystem, and surrounding maintainability. *Frontiers in microbiology*, 7, 529.

Tollefson J, Gilbert N. (2012). Rio an evaluation of performance. Nature. 486(7401):6-9.

The Economist. (2015). Why the Dutch dislike windmills. Dutch Quixote [Internet]. [cited Jul 2]. Available from: http://www.economist.com/news/europe/21656730-wind-energy-once-powered-netherlands-not-anymore-dutch-quixote?fsrc=nlw|hig|2-07-2015|EU

United Nations. Maintainable Evolution Targets. New York (NY, US): United Nations; (2015). Available from: https://www.un.org/sustainabledevelopment/sustainable-development-goals/.

United Nations. Maintainable Evolution Learning Plan. New York (NY, US): United Nations; (2017). Available from: https://sustainabledevelopment.un.org/.

Venot, J.-P.; Jella, K.; Bharati, L.; George, B.A.; Biggs, T.W.; Rao, P.G.; Gumma, M.K. and Acharya, S., (2010). Switching water reservoir: Agriculturists' adapting and zonal switches in ground use in the Nagarjuna Sagar irrigation task, South India. *Journal of Irrigation and Drainage Engineering*, 136(9), 595-609.

Walker, H., Seuring, S., Sarkis, J., & Klassen, R. (2014). Maintainable performances administration: of late movement and future regulations. International Journal of Operations & Production Management. 34 (5), https://doi.org/10.1108/IJOPM-12-2013-0557

WCED, (1987). Our Universal Future, Oxford University Press, Oxford, U.K.

Winkler IT, Satterthwaite ML. (2017). Abandon nobody afterwards? Continuing unfairness in the SDGs. The Int J of Hum Rights. 21(8):1073-1097.

Zaveri, E., Grogan, D. S., Fisher-Vanden, K., Frolking, S., Lammers, R. B., Wrenn, D. H., & Nicholas, R. E. (2016). Unnoticeable water, noticeable impact: groundwater utilization and Indian farming under climate change. *Environmental Research Letters*, *11*(8), 084005.

5<sup>th</sup> International Conference Impact of Current Events on Future of Business Vignana Jyothi Institute of Management (VJIM), Hyderabad, India