



Unlocking the Hidden Gains: Exploring the Climate Co-benefits of Sustainable Actions

Introduction

Climate change is no longer a distant threat but a present reality with increasingly visible impacts such as rising global temperature, shifting weather patterns, and more frequent extreme weather events that underscore the urgent need for comprehensive climate action. Mitigating climate change requires significant reduction in greenhouse gas (GHG) emissions. Adopting sustainable practices such as transition to renewable energy, sustainable way of living, etc. can help in combating damaging impacts of climate change, therefore, sustainable policies/projects are often heralded for their direct impact on reducing GHG emissions. However, benefits of these initiatives extend far beyond their primary environmental goals i.e., GHG reduction. From improving the environment, public health, and preserving biodiversity to enhancing social equity, and fostering economic growth, sustainable policies/projects offer a multitude of advantages that are often overlooked. **These additional benefits, known as climate co-benefits, represent the hidden gains of sustainable climate action.** In this article, we will delve into the myriad ways that sustainable policies not only address climate change but also create a ripple effect of positive outcomes. By exploring these

climate co-benefits, we can better appreciate the comprehensive value of adopting green practices and policies, ultimately reinforcing the necessity for swift and decisive action in our efforts to build a resilient and green future.

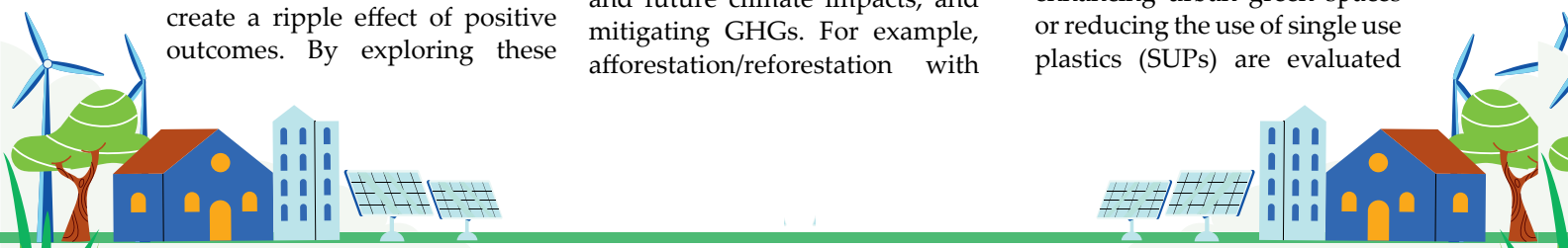
Understanding “Co-benefits” and “Co-benefit Methodology”

At its core, a co-benefit approach is a win-win strategy aimed at capturing both developmental goals and climate benefits in a single policy or measure. **Climate actions/policies, aimed at combating climate change by reducing GHGs, can also deliver on other benefits which are called “Climate Action Co-benefits”.** For example, development of renewable and alternative energy technologies reduces dependency on conventional fuels (e.g., coal, petrol, etc.) that not only limits GHG emissions but also create green jobs, boost economy, along with other environmental and socio-economic benefits. Conversely, **development programmes, in addition to delivering development goals, can also provide “Climate Co-benefits”** by increasing the resilience of natural systems, helping populations adapt to current and future climate impacts, and mitigating GHGs. For example, afforestation/reforestation with

their primary objectives of biodiversity/land restoration, also support local communities, act as carbon sink, recycle GHGs, thereby helping in climate change mitigation. Despite underscoring the positive effects of climate actions, both terms have different nuances in their meanings. The **“Climate Action Co-benefits” are deliberate pursuit of pre-planned additional positive outcomes** that are narrowly focused and directly linked to a specific climate action. In contrast, the **“Climate Co-benefits”** has a wide range of positive outcomes that are narrowly focused and directly linked to a specific climate action. In contrast, the **“Climate Co-benefits” has a wide range of positive outcomes that arise unexpectedly and are recognised retrospectively** from any developmental program.

The climate co-benefit methodology refers to a structured approach used in environmental and climate policy analysis to **identify and quantify additional benefits beyond mitigating climate change** that result from implementing projects aimed at reducing GHG emissions. These methodologies are implemented in following steps –

- **Identification and Planning**– Sustainable projects such as enhancing urban green spaces or reducing the use of single use plastics (SUPs) are evaluated



for their primary impacts and secondary co-benefits.

- **Quantification**– Tools like Life Cycle Assessment (LCA) and Multi-Criteria Analysis (MCA) are used to measure these benefits in concrete terms like CO2 reduction, air quality improvement, etc.
- **Integration**– Ensures that these co-benefits are integrated into project designs, promoting initiatives like renewable energy that not only reduce emissions but also stimulate local economies and community involvement.
- **Monitoring and Evaluation**– Tracks Key Performance Indicators (KPIs) to assess project success and identify areas for enhancement.
- **Reporting and Scaling** – Document successful outcomes, facilitating knowledge sharing with factual data and enabling similar projects to be replicated and expanded, thereby bolstering sustainable development initiatives.

Climate Action Co-benefits - a holistic approach to sustainable development

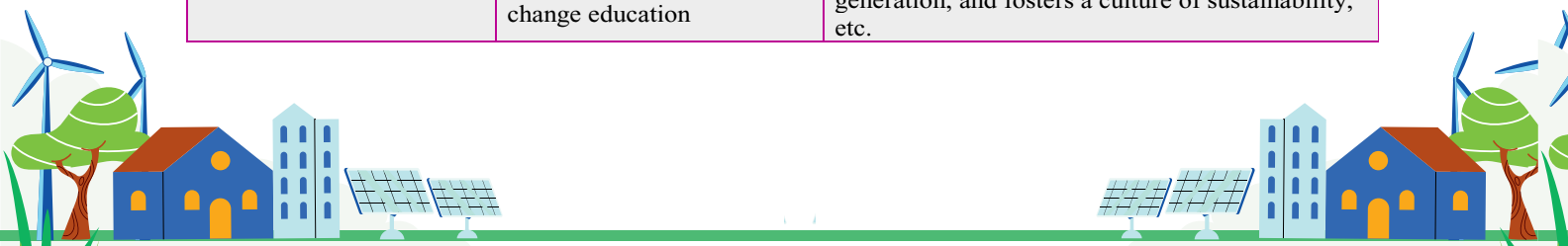
As humanity grapples with the impacts of climate change, resource depletion, and social inequalities; sustainable development has emerged as an indispensable strategy for addressing these multifaceted challenges. **Effective climate actions in response to the environmental degradation caused by climate change are intrinsically linked to the Sustainable Development Goals (SDGs).** For example, SDG 13 explicitly focuses on climate

action, aiming to combat climate change, however, the effects of climate change also undermine progress toward other SDGs, such as SDG 1 (No Poverty), SDG 2 (Zero Hunger), and SDG 3 (Good Health and Well-being), by exacerbating resource scarcity, food insecurity, and health crises. Furthermore, environmental sustainability is a cornerstone of several SDGs, including SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), and SDG 15 (Life on Land). Therefore, sustainable development requires integrated strategies that address multiple issues. In this regard, **aligning climate action with the broader SDG framework can foster a holistic approach and create synergistic solutions** to sustainable development.

By identifying and implementing strategies that deliver multiple benefits, the **co-benefit approach ensures that climate action reinforces progress across various SDGs**, creating a more integrated and effective pathway to sustainable development. Integrating mitigation and adaptation techniques with SDG considerations increases efficacy of climate action strategies. Moreover, by identifying and leveraging co-benefits arising from such strategies increase the likelihood of climate actions being approved and taken up by decision-makers and also attract support from stakeholders. Following table summarises a few climate action strategies, their primary goal, and associated co-benefits –



Climate Action Strategy / Sector	Climate Action Primary Goal	Climate Action Co-benefits
Implementing energy-efficient technologies	Mitigation: lowering GHG emissions	Reducing energy costs, improving air quality, and increasing productivity, etc.
Transition to renewable & alternate energy sources	Mitigation: reducing emissions by replacing fossil fuels by solar, wind, green H2, etc.	Creating jobs, reducing air pollution, improving public health, and enhancing energy security, etc.
Improved waste management practices and promotion of circular economy	Mitigation: reduce energy uses by recycling material to prevent use of raw materials	Reduces methane and other GHG emissions, stimulate innovation, create green jobs, and promote sustainable consumption patterns, etc.
Carbon Capture and Storage (CCS) technology	Mitigation: removing carbon dioxide from atmosphere	Preserve jobs in sectors dependent on conventional sources of energy and promote economic stability, reducing air pollution, improving public health, etc.
Development of carbon sink through afforestation and reforestation	Mitigation: enhanced atmospheric carbon sequestration	Improve biodiversity, natural buffers against extreme weather events such as flood, reduce erosion, and improve water cycle, generate employment opportunities, forest products and ecotourism opportunities, etc.
Public Transportation and Active Transport	Mitigation: reducing emissions by promoting public transit, e-vehicles, cycling, and walking over car use	Reducing traffic congestion, lowering transportation costs, improving public health through increased physical activity, and reducing air pollution, etc.
Sustainable Agriculture Practices	Adaptation: Enhancing soil health and water management to cope with climate variability	Carbon sequestration in soils and reduced emissions from fertilizer use, increasing crop yields, improving food security, reducing water use, and conserving biodiversity, promotion of agroforestry, etc.
Water Management Strategies	Adaptation: implementing measures to manage water resources more effectively in the face of climate variability	Flood risk reduction, water quality improvement, improved access to clean water and sanitation healthy aquatic ecosystems, reliable water supply supports agriculture, industry, etc.
Coastal Protection and Infrastructure Resilience	Adaptation: enhancing infrastructure & natural systems to withstand coastal hazards and sea level rise due to climate change	Natural habitat protection for mangroves and other marine species, attracts tourism and recreation and boosting economy, Coastal forests and dunes act as natural barriers to storm surge, protecting coastal communities and historical sites from erosion, etc.
Urban Planning and Design	Adaptation: integrating climate resilience into urban development and infrastructure planning	Green roofs and urban forests improve urban liveability, air quality improvement, access to green spaces promotes physical activity and mental well-being of community, enhances social cohesion, etc.
Disaster Risk Reduction and Early Warning Systems	Adaptation: strengthening early warning systems and disaster preparedness to reduce climate-related risks	Reduce property damage and economic losses, community engagement enhances resilience and empower local communities, reduced disruptions to livelihoods, etc.
Education and Awareness	Adaptation: public awareness campaigns, training and capacity building, climate change education	Increases public engagement, fosters behavioural change, and builds community resilience, enhances workforce capabilities, promotes innovation, raises awareness, empowers the next generation, and fosters a culture of sustainability, etc.



Why a Co-Benefits Approach is Appropriate for India?

In past, owing to the reason that developing and least-developed countries do not bear responsibility for the problem of climate change as compared to developed countries, **India's climate actions were guided by the principle of common but differentiated responsibilities.** Today, with changing negotiation contours pushing for symmetrical involvement of all nations and respecting the reasons of ethics & prudence, India aims to sustain its growth trajectory that entails growing energy demand while also aspiring to achieve decarbonisation. However, **implementing stringent climate policies and transition to sustainable practices are challenging for India** due to its large population, need for rapid economic growth, and reliance on fossil fuels for energy, etc. which are further complicated by its susceptibility to a wide range of climate change related risks due to its various climate zones and ecosystems, financial constraints, technological gaps, and the global pressure to balance development with environmental goals. Moreover, **targeting SDGs individually may overlook their interconnectedness, leading to imbalanced resource allocation, and missed synergies and trade-offs.**

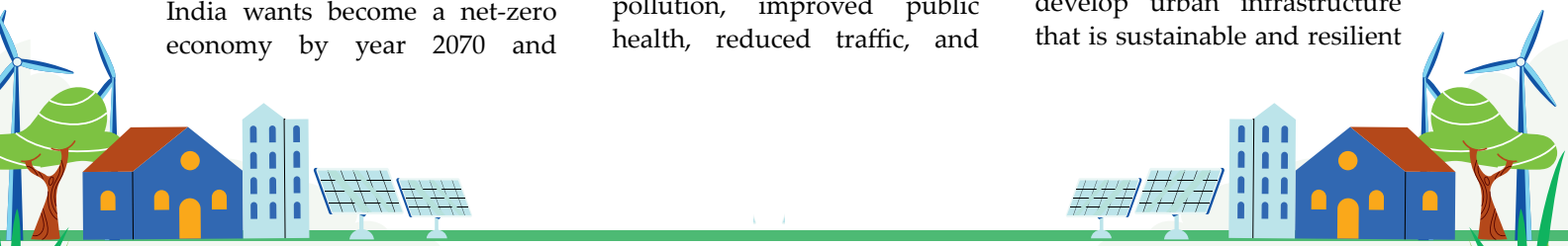
In the face of these challenges, integrated strategies are essential to address the multifaceted nature of climate action and sustainable development if India wants become a net-zero economy by year 2070 and

achieve developmental goals like becoming the world's third largest economy by year 2030, and a developed nation by year 2047. Considering these sustainable-development priorities, national policy-makers implicitly projected that **India stands to gain significantly by adopting climate co-benefit approach at the heart of its climate actions.** To turn this projection into a reality, India's climate action policies and missions have been designed to create synergies and promote trade-offs with SDGs to achieve multiple co-benefits. Following are few selected examples of these policies and missions from various economic sectors that signifies a substantial array of climate actions and their co-benefits, essential to achieve sustainable development –

- 'National Solar Mission', 'Perform, Achieve, and Trade' scheme, and 'Nation Green Hydrogen Mission' promote the development and use of renewable and alternate energy sources to replace fossil fuels and reduce GHG emissions while giving co-benefits such as reduced air pollution, improved public health, new job creation, lower energy costs, energy security, etc.
- 'National Electric Mobility Mission Plan', 'Faster Adoption and Manufacturing of Hybrid and Electric Vehicles' scheme, and 'Pradhan Mantri Gram Sadak Yojana' encourage the use of eco-friendly materials and technologies in transportation sector while providing co-benefits such as reduced air pollution, improved public health, reduced traffic, and

lower transportation costs, etc.

- 'Zero Effect, Zero Defect' certification scheme encourages industries, particularly SMEs, to adopt cleaner technologies and practices to reduce GHG emissions which also reduces air pollution and improves public health.
- 'National Mission for Sustainable Agriculture', 'Rashtriya Krishi Vikas Yojana', 'Pradhan Mantri Krishi Sinchai Yojana', etc. in agricultural sector promote the judicious use of fertilizers, organic farming, precision agriculture, and climate-resilient cropping systems resulting in reduced GHG emissions while also improving energy and water use efficiency, food security, enhanced resilience of farmers to climate impacts, etc.
- 'National Afforestation Programme', 'Green India Mission', and 'Compensatory Afforestation Fund Management and Planning Authority' aim to enhance India's forest and tree cover and ensure that afforestation activities compensate for forest land diverted for non-forest use thereby restoring degraded ecosystems and increasing carbon sinks while also increasing biodiversity, reducing soil erosion, improving water cycle, creating job opportunities for rural communities, and promoting ecotourism opportunities, etc.
- 'Smart Cities Mission' and 'Atal Mission for Rejuvenation and Urban Transformation' aim to develop urban infrastructure that is sustainable and resilient



to climate change impacts while also having co-benefits such as more efficient & less polluting urban environments, enhanced public health & sanitation, and reduced traffic congestion, etc.

- ‘Swachh Bharat Mission’ and ‘Solid Waste Management Rules (2016)’ focuses on waste management and sanitation improvements causing methane emission reduction while also improving public health & sanitation, and clean environment.

Climate Action in Indian PSEs and need of Co-benefit Methodologies

Indian Public sector enterprises (PSEs), by contributing nearly 14% to GDP and employing nearly 1.5 million people, hold strategic importance and play crucial roles in nation building through working towards making India self-reliant. However, many PSEs being operational in hard to abate sectors, account for a substantial share of national GHG emissions. Despite that, **to align with national commitments and**

sustainable development goals of the country by adopting climate co-benefit strategies. Results from these climate actions and an outlook on future techno-commercial advancements have given confidence to PSEs to announce their net-zero targets. For example, GAIL (India) Limited, Hindustan Petroleum Corporation Limited, Oil India Ltd, and Chennai Petroleum Corporation Limited have committed to become net-zero by year 2040.

Despite these noticeable efforts,



- Mission Life (Lifestyle For Environment) is an India-led global mass movement to nudge individual and community action to protect and preserve the environment.

climate actions, many PSEs have devised independent climate actions such as venturing into using best available technologies, renewable and alternate energy sources, etc. while also supporting

PSEs operating in hard to abate sectors of economy face several challenges in complying with regulatory frameworks, achieving economic efficiency, maintaining international



competitiveness, and fulfilling social responsibilities. There are also cases where PSE's climate actions are plausible but due to limited knowledge & available assessment methodology, PSEs are unable to measure and report their climate actions. Climate action assessment methodologies are helpful for Indian PSEs in enhancing environmental performance, meeting regulatory compliance, driving economic savings, providing access to green financing, fostering innovation & boosting global competitiveness, fulfilling social responsibilities, and improving public image. **The scope of climate actions by PSEs is practically as diverse as their working areas** and therefore, it becomes imperative to develop unique co-benefits methodology for measuring the impact of specific climate actions by PSEs. While PSEs are already exploring such climate action assessment methodologies, specific methodologies for measuring climate action impacts of many initiatives like forestry and banning single use plastics (SUPs), etc. are limited.

As part of continuing efforts to tackle climate change and promote sustainable development, Standing Conference of Public Enterprises (SCOPE), an apex body of Indian PSEs has taken notable steps in partnership with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). Currently, SCOPE and GIZ are working on an ambitious project that aims to

institutionalize climate co-benefit methodologies in PSEs, not only for supporting low-carbon investments and pathways but also for accounting and reporting of their climate action efforts. In this regard, SCOPE will be organising few regional workshops in near future to help PSEs in creating holistic and effective climate action strategies by exploring climate co-benefit concept & methodology along with its role in prioritising various decarbonisation methods.

Conclusion and Way Forward

As the world navigates the complex landscape of climate action, the climate co-benefit methodology offers a promising pathway to holistic sustainability. Governments are starting to integrate the co-benefit approach into policy frameworks, promoting projects that deliver multiple positive outcomes.

The co-benefit methodology is also expanding into various sectors such as circular economy and forestry, broadening its scope and impact. Co-benefit methodology has the potential to embed sustainability into the core of development and unlocking a future where climate goals and broader societal well-being go hand in hand. Adoption of climate co-benefit methodologies offers transformative benefits that may help PSEs to meet regulatory requirements, secure backing from governments

and other stakeholders, attract funding, align with their goals of promoting sustainable development, and serve the public interest. Collectively, these advantages underscore the climate co-benefit methodology as a robust approach for achieving holistic and sustainable development outcomes. Besides having so much usefulness, these methodologies have few limitations such as gaps in data collection, discrepancies in data quality, and non-availability of precise frameworks for quantifying both primary climate impacts and secondary co-benefits. PSEs are taking up sustainability projects such as forestry and banning SUPs but limited comprehensive frameworks to measure their impacts on environment & society keep them deprived of obtaining benefits from their sustainable efforts. By developing and embracing climate co-benefit methodologies, PSEs can ensure that their efforts to address climate change not only enhance the well-being of people and the planet but also grant tradable green credits to PSEs. This article is an attempt to introduce the concept of co-benefits, its linkage with SDGs, and how PSEs can take advantage of co-benefit methodologies. In continuation to this, forthcoming articles will endeavour into co-benefit methodologies, designed for measuring impacts of specific climate actions by PSEs such as forestry initiatives and banning SUPs. Stay tuned!!

