POLICY BRIEF

Individual Green Footprint (IGF) – A Point-Based System to Incentivise Citizens on Environmentally Conscious Behaviour for a healthy and liveable planet!

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Abstract

The policy brief proposes a point-based system called "Individual Green Footprint (IGF)" to incentivise environmentally conscious behavior among individuals and households in India. The IGF system will capture contributions on various parameters, and the objective score will classify individuals/households into different categories and make them eligible for various incentives. The incentives could be around tax exemptions, lower borrowing rates, subsidies on public goods and services, etc. We could leverage AI for real-time tracking and apply incentives and penalties as applicable. The policy brief aims to mobilize individuals and households to take individual and collective action for protecting and conserving the environment in the period 2022-28.

Problem statement

Tackling the environmental, economic, and social impact of climate change requires a huge transformation across all sectors. Meeting ambitious sustainability targets requires a bold, whole-of-society approach sustained by long-term government commitment. While the Government and civic bodies are doing their duties, the general public can play a pivotal role in producing superlative outcomes. However, motivating, engaging, and incentivizing the public to involve themselves in better environmental outcomes around them is a challenge. We need a structured incentivisation system to incentivise environmentally conscious behavior among individuals and households.

Background

Between 1972 and 2021, CO2 emissions per capita of India grew substantially from 0.39 to 1.9 tons of CO2 per capita, rising at an increasing annual rate that reached a maximum of 9.41% in 2021. This translates into other forms of pollution as well and serves as a proxy for the scale of the problem. We have seen the corporate sector become conscious of ESG norms when penalties and incentive mechanisms were introduced. Governments are also offering subsidies and grant funding to research institutes, academic institutions, and private R&D

firms to boost innovation and develop transformative technologies such as renewable energy, carbon capture, waste management, and energy efficiency.

Some basic examples of how the IGF system could work in practice:

—Emissions Reduction:

- An individual who uses public transport or a bicycle instead of driving a car would receive points for reducing their carbon emissions.
- Similarly, an individual who purchases an electric or hybrid vehicle would receive points for reducing their carbon emissions.

—Energy Conservation:

- The introduction of smart meters is an important step towards improving energy efficiency and promoting renewable energy. The smart meter revolution should be user-centric and designed to provide real-time feedback to consumers on their electricity consumption, appliances using more power, and allow them to trade solar power. Consumers should be educated on how to use smart meters and encouraged to take actions to reduce their energy consumption and promote renewable energy.
- An individual who installs energy-efficient appliances in their home, such as Energy Star-rated refrigerators or air conditioners, would receive points for reducing their energy usage.
- An individual who installs solar panels or other renewable energy sources in their home would receive points for producing clean energy.

—Waste Reduction

- An individual who composts their food scraps and yard waste would receive points for reducing the amount of waste sent to landfills.
- Similarly, an individual who recycles or properly disposes of their electronic waste, such as old cell phones or computers, would receive points for reducing their environmental impact.

—Water Conservation:

- An individual who uses low-flow showerheads or toilets would receive points for reducing their water consumption.
- Similarly, an individual who collects rainwater for outdoor use, such as watering plants or washing cars, would receive points for reducing their reliance on municipal water supplies.

Incentives could be customized to target specific behaviors that are most beneficial for the environment. For example, an individual who scores high on the IGF system could be eligible for tax breaks or subsidies on the purchase of energy-efficient appliances or renewable energy sources. Alternatively, they could receive discounts on public transport or free access to public parks and recreational areas. The possibilities are endless and could be tailored to fit the local context and cultural preferences.

The use of AI and real-time tracking could allow for a more accurate measurement of an individual's environmental impact and make it easier to administer incentives and penalties. This would encourage individuals to adopt environmentally-friendly behaviors in their daily lives and create a culture of sustainability and environmental consciousness in India.
In summary, the IGF system has the potential to be a powerful tool in the fight against climate change in India. By incentivising individuals to adopt sustainable behaviors and reducing their environmental impact, we can create a more sustainable future for ourselves and future generations.

Policy recommendations that the government can implement to support the IGF system:

1. *Establish a regulatory framework*: The government should establish a regulatory framework that mandates individuals and households to measure and report their carbon footprint. The framework should outline the minimum requirements for measuring and reporting carbon footprint, including the parameters to be considered, the frequency of reporting, and the reporting mechanism. The IGF system should be integrated into existing government policies and schemes such as Swachh Bharat Abhiyan, Smart Cities Mission, and National Clean Energy Fund, among others. This will ensure that the IGF system becomes a part of the government's larger plan for sustainable development.
2. *Develop a robust data management system:* The government should establish a robust data management system that would capture and process the carbon footprint data generated by individuals and households. The system should be secure, efficient, and scalable to handle a large volume of data. The government could partner with technology companies to develop and implement such a system.
3. *Provide incentives*: The government should provide incentives to individuals and households that have a high IGF score. These incentives could be in the form of tax exemptions, lower borrowing rates, and subsidies on public goods and services. The government could also partner with private companies to offer discounts on eco-friendly products and services.
4. *Establish a multi-stakeholder committee*: The committee should comprise representatives from the Government, civil society organizations, industry, academia, and startups. The committee should be responsible for designing the IGF system, setting targets, and monitoring progress.
5. *Develop a standardized scoring methodology*: The scoring methodology should be based on scientifically validated metrics and data sources. The methodology should be transparent and easily understandable by the public.
6. *Encourage public-private partnerships*: The government should encourage public-private partnerships to support the IGF system. Private companies could invest in research and development to create innovative solutions that would help individuals and households reduce their carbon footprint. The government could provide funding

and other forms of support to such companies. The IGF system should encourage innovation and entrepreneurship in the area of environmental sustainability. Startups and entrepreneurs should be incentivized to develop new technologies and solutions that contribute to the IGF score.

7. *Implement a public awareness campaign*: The government should implement a public awareness campaign to educate the public about the IGF system and the importance of reducing their carbon footprint. The campaign could be carried out through various media channels, including social media, television, radio, and print media. The campaign should leverage social media, celebrities, and influencers to maximize outreach. Campaign should aim to create a sense of urgency and encourage the public to take action.
8. *Allocate resources*: Adequate resources should be allocated to ensure the successful implementation and scaling of the IGF system. This includes funding for the development of the scoring methodology, technology infrastructure, public awareness campaigns, and training programs for stakeholders.
9. *Evaluation and monitoring*: The IGF system should be continuously evaluated and monitored to assess its effectiveness and identify areas for improvement. The committee responsible for the IGF system should regularly report on the progress towards the targets set and make necessary adjustments to ensure the system is effective in achieving its goals. A grievance redressal mechanism should be established to address any concerns or disputes related to the IGF system. The mechanism should be easily accessible and transparent.
10. *Leverage technology*: The IGF system should leverage technology such as AI, IoT, and blockchain to ensure real-time tracking, monitoring, and compliance. The system should also have strong data privacy and security protocols.

As noted earlier, the success of Mission LiFE and the Individual Green Footprint (IGF) system will depend on a whole-of-society approach. Therefore, the government should play a leading role in creating a favorable policy environment for the initiative to thrive. In conclusion, the Individual Green Footprint (IGF) system has the potential to mobilize individuals and households to take collective action to protect the environment. However, the success of the system will depend on the government's commitment to creating a favorable policy. By implementing the above policy recommendations, the government can create the necessary incentives and regulations to support the IGF system and accelerate India's transition towards a more sustainable future.

References

Tiseo, Ian. (2023, May 5), Emissions in India - Statistics & Facts, Statista https://www.statista.com/topics/8881/emissions-in-india/

UN News, (2023, April 21) Human, economic, environmental toll of climate change on the rise: WMO
https://news.un.org/en/story/2023/04/1135852

IISD. (2019, April 16) P4R Examines Whole-of-Government, Whole-of-Society Approaches in 2030 Agenda Reviews, IISD: SDG Knowledge Hub.
https://sdg.iisd.org/news/p4r-examines-whole-of-government-whole-of-society-approaches-in-2030-agenda-reviews/

IEA (2021), India Energy Outlook 2021, IEA, Paris https://www.iea.org/reports/india-energy-outlook-2021, License: CC BY 4.0

EY India. (2023, February 17) How a global minimum tax will affect sustainability tax incentives, EY India.
https://www.ey.com/en_in/tax/how-global-minimum-tax-affects-sustainability-tax-incentives

UNEP. (2022, November 7) How artificial intelligence is helping tackle environmental challenges, UNEP.
https://www.unep.org/news-and-stories/story/how-artificial-intelligence-helping-tackle-environmental-challenges

Maher, Hamid. Meinecke, Hubertus. Gromier, Damien. Garcia-Novelli, Mateo and Fortmann, Ruth. (2022, July 7) AI Is Essential for Solving the Climate Crisis, BCG
https://www.bcg.com/publications/2022/how-ai-can-help-climate-change