



Task Force 02

SUSTAINABLE CLIMATE ACTION AND INCLUSIVE JUST ENERGY TRANSITIONS

Transition to a Low-carbon Economy and Sustainable Consumption and Production – The role of GALERI

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TF02

Abstract

To address the interlinkages between development, environment and climate agendas, the G20 has been prioritizing new approaches like Circular Carbon Economy (2020), Creative Economy (2022) and Lifestyles for Sustainable Development (LiFE) (2023), and the Bioeconomy (2024). G20 High-level principles (HLPs) on Lifestyles for Sustainable Development agreed during the G20 Presidency of India, advances Sustainable Consumption and Production (SCP), including through resource efficiency and circular economy, by providing support to SMEs and social entrepreneurship among others. This process entails systemic transformation which needs to be supported through promotion of research and innovation for development, deployment and dissemination of technologies related to SCP and also encourage innovative models of finance. Transitioning to sustainable lifestyles can reduce carbon dioxide (Co₂) emissions by 2 billion tones (Gt) per year by 2030 (IEA, 2023). Recently, during the Indian G20 Presidency stakeholders willing to collaborate on alternate economic models and rebalance environmental, economic, and social priorities, came together to form a Global Alliance for Life Economies Research and Innovation (GALERI). GALERI can be an effective vehicle to translate Principles into Action, and promote wellbeing, equity and sustainability through international cooperation and triangular cooperation.

Diagnosis of the Issue: Inequalities and Lifestyles contributing to Climate Crisis

Lifestyle-induced consumption-based emissions are significant contributors to the degradation of ecosystems and breaching of planetary boundaries. However, an analysis of these consumption patterns reveals a glaring inequality in carbon emission contributions. According to the UNEP Emissions Gap Report (2023), nearly half (48%) of global emissions are attributed to the wealthiest 10 % of the population, primarily residing in developed nations, while the lowest 50 % of the global population accounts for just 12% of total emissions (UNEP, 2023). When considering per-capita emissions including emissions from domestic consumption, public and private investments, and imports and exports of carbon embedded in goods and services traded with the rest of the world, the bottom 50% of households emit an average of 1.6 tCO₂e per capita. In contrast, the top 1 % emits an average of 110 tCO₂e per capita. Super-emitters in the top 0.1 % and 0.01 % exhibit the fastest growth in carbon footprints since 1990, with averages of 467 tCO₂e and 2,531 tCO₂e per capita, respectively. These high-emitting households span all major economies, resulting in significant inequalities within and between countries and regions (Lucas, 2022).

The inequality is also depicted in the cross-country comparisons where the United States of America stands at 14 tons of CO₂ equivalent (tCO₂e) per capita GHG emissions, which is more than double the per capita global average GHG emission of 6.3 tCO₂e in

2020 (including LULUCF)¹. LDCs emit 2.3 tCO₂e per capita annually, on average. The US was followed by 13 tCO₂e for Russia, 9.7 tCO₂e for China, about 7.5 tCO₂e for Brazil and Indonesia, and 7.2 tCO₂e for the European Union. For India this is as low as at 2.4 tCO₂e (UNEP, 2022 p. xvii).

Considering historical CO₂ emissions (excluding LULUCF) starting 1850 onwards and till 2019, the US and the EU accounted for 25 % and 17 % of total fossil CO₂ emissions, respectively. This has been 13 % for China, 7 % for Russia, and India, Indonesia, and Brazil each contributed 3 %, 1 %, and 1 %, respectively. The Least Developed Countries (LDCs) collectively contributed only 0.5 % to historical CO₂ emissions (UNEP 2022, 9). Similar disparities exist under SDG 12 (Target 12.2) on sustainable consumption and production patterns, with Northern America and Europe having a 14% higher material footprint than domestic material consumption, while sub-Saharan Africa exhibits a 32% lower material footprint than domestic material consumption (UNSGR 2023).

Several studies have shown that disparities in consumption-based emissions have been driven by more intricate relationship between wealth and income inequality. In China income inequality significantly influenced direct CO₂ emissions across the income groups (Cheng et. al, 2021). Similarly, in the US, the per capita carbon footprint of the highest income group (>200,000 USD per year) is about 2.6 times higher than the per

¹ Land use, land-use change and forestry (LULUCF): A GHG inventory sector that covers emissions and removals of GHGs resulting from direct human-induced land use, land use change and forestry activities.

capita carbon footprint of the lowest income group (<15,000 USD per year) with 12.3 tons (Feng et. al., 2021).

The challenge of unsustainable lifestyles gained prominence during global climate negotiations, as highlighted by Prime Minister of India during COP 21 in Paris in 2015. The Paris Declaration, recognizes *“that sustainable lifestyles and sustainable patterns of consumption and production, with developed country parties taking the lead, play an important role in addressing climate change.”* Subsequently, India launched LiFE (Lifestyle for Environment) during COP 26 as a mass movement aimed at promoting mindful and deliberate utilization instead of mindless and destructive consumption. Following UNFCCC COP processes have also emphasized the importance of transitioning to sustainable lifestyles and patterns of consumption and production including the Sharm el-Sheikh Implementation Plan 3 at COP 27 (2022) and the first Global Stocktake at COP 28 (2023). More recently, LiFE was further recognised through a resolution (led by India and co-sponsored by Sri Lanka and Bolivia) on promoting sustainable lifestyles at the Sixth Session of United Nations Environment Assembly (UNEA) (MOEFCC, 2023).

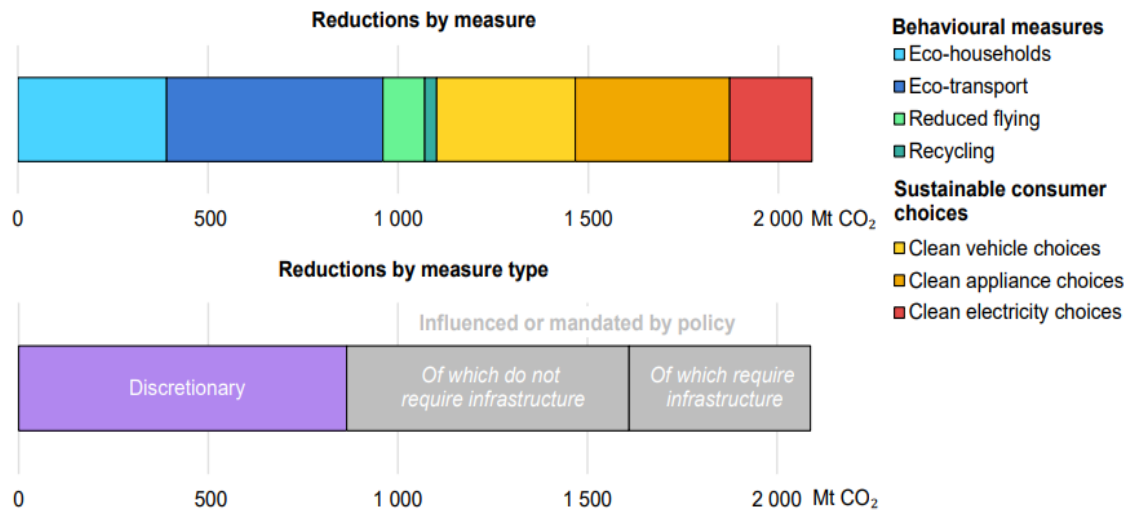


FIGURE 1. Reductions in annual global CO₂ emissions from LiFE measures, 2030

Source: IEA (2023). *LiFE lessons from India: The benefits of advancing the Lifestyle for Environment (LiFE) initiative through the G20*. International Energy Agency².

About one-fifth of the emissions reductions needed by 2030 to put the world on a pathway to net zero emissions need to come from transitioning to sustainable lifestyles. Around 60% of the emissions saving by LiFE measures could be directly influenced or mandated by governments. There is a clear role for governments to simultaneously

²Eco-households refers to measures such as adjusting thermostats in buildings or switching off appliances; eco transport refers to measures such as slower driving speeds, carpooling, and public transport use; reduced flying includes substituting flights with teleconferencing or modal shift to high speed rail; recycling refers to recycling of goods to reduce the need for primary production of materials like steel or plastics; clean vehicle choices includes purchase of EVs; clean appliance choices refers to the purchase of energy efficient or low emissions appliances; clean electricity choices refers to the installation of rooftop solar PV on households.

provide a supportive policy framework. LiFE measures would also save consumers globally around USD 440 billion in 2030. The reductions in per capita CO₂ emissions in advanced economies by 2030 (relative to a ‘business-as-usual’ trajectory) are three- to four-times greater than in emerging market and developing economies (see Fig 1). IPCC suggests that “demand-side measures and new ways of end-use service provision can reduce global GHG emissions in end-use sectors by 40–70% by 2050 compared to baseline scenarios, while some regions and socioeconomic groups require additional energy and resources” (IPCC 2022, 34 C.10 of SPM). Beyond energy systems, there is a need to look into metrics that cover lifestyle aspects related to water consumption, waste generation, food systems and climate adaptation, and related infrastructure systems (TERI, 2023).

Relevance for the G20 agenda and priorities

G20 Brazil has prioritized social inclusion and the fight against hunger and poverty, identifying inequality as a major challenge being at the root of several crises. G20 Brazil has also placed energy transitions and promotion of sustainable development in all its dimensions as a key objective along with reform of global governance institutions. This comes at the back of the outcomes of the Indian G20 presidency where efforts were made towards holistic solutions and wellbeing going much beyond existing understanding of economic growth and development.

The Indian G20 presidency adopted nine High Level Principles (HLPs) on Lifestyles for Sustainable Development in 2023. The HLPs aim at integrating the fragmented climate, development, and environment agendas while ensuring basic needs of all communities, particularly poor people and people living in vulnerable situations. The New Delhi G20 Leaders Declaration urged the International Organizations to incorporate G20 High Level Principles on Lifestyles for Sustainable Development into their programs.³

³ The HLPs may be particularly relevant for mobilizing and allocating resources and may inspire new process-oriented innovations in G20 akin to the creation of new ministerial level working groups (ex. sustainable finance, 2021), ad-hoc taskforces (ex. global mobilization against climate change, 2024), joint working groups (finance and health, 2022, finance and environment, 2024), panels of independent experts (ex. MDB reform, 2023).

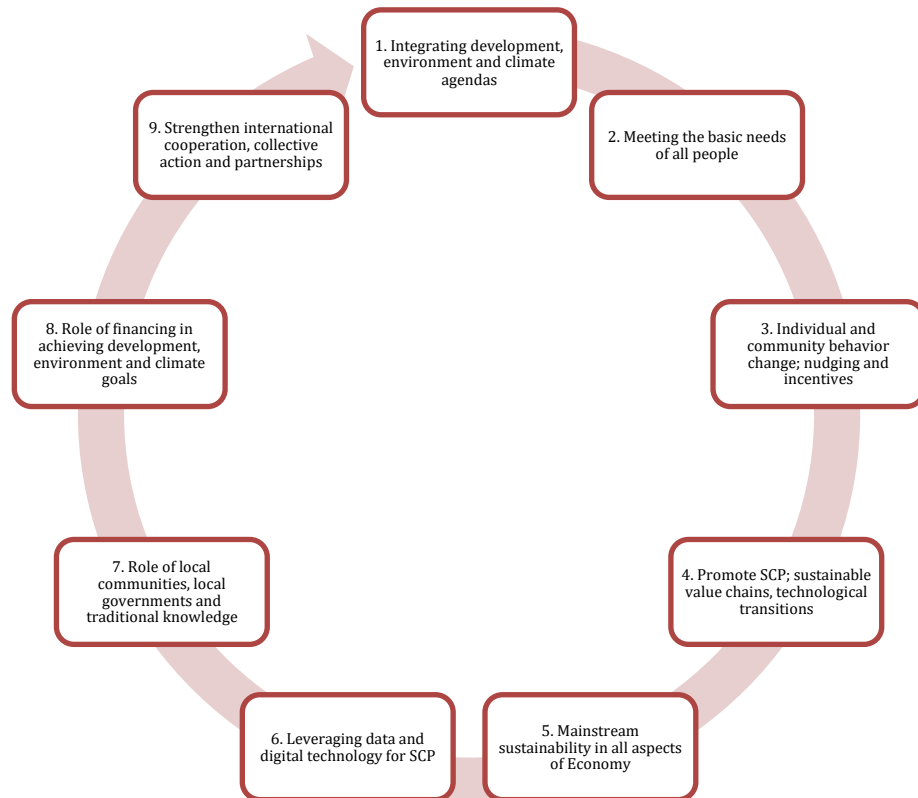


FIGURE 2. G20 HLPs on Lifestyles for Sustainable Development – A Synopsis

Source: Authors’ Illustration

During the Indian G20 Presidency, the G20 Development Ministers recognized the importance of sustainable consumption and regenerative economy principles, alongside pro-growth approaches. They suggest enhancing productivity, resource efficiency, and sustainable development through international partnerships.

Think 20 India introduced a unique task force on “LiFE, Resilience and Values for Wellbeing” that documented various facets of the LiFE paradigm and convened a major global meet in Bhopal, India in January, 2023. The Task Force 3 of Think 20 India deliberated on conceptualizing LiFE as a development paradigm and new institutional

mechanisms to support transformation towards a ‘Life Economy’ broadly captured by the following 5-Facets.

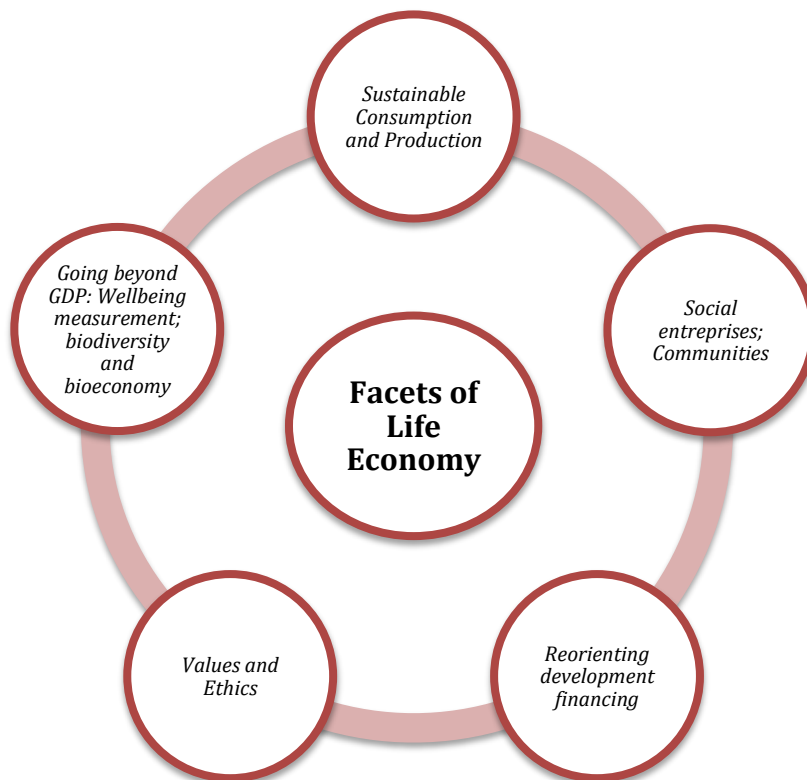


FIGURE 3. Facets of the Life Economy

Source: Authors’ Illustration based on Think20 India TF 3 Statement (G20 India, T20 TF3, 2023)

Recommendations

Following the adoption of the G20 High Level Principles (HLPs) on Lifestyle for Sustainable Development it is imperative that these principles are turned into action.

In this regard global stakeholder community was convened at the Global Summit on LiFE Economy in New Delhi on 26-27 November 2023 by the RIS⁴ with support from G20 India. An official Side Event on “Towards a Sustainable Future: Through Lifestyle for Environment and Just Green Transitions” was organized on the sidelines of the 2nd Development Working Group meeting in Kumarakom, Kerala, India in April 2023. An official side event at the Summit for a New Global Financing Pact in Paris was also convened in June 2023 on “Scaling up SDG and Climate Finance through the Life Economy: Insights for G20 Action”. To further deepen dialogue, research and innovation and support the G20 deliberations, the Global Alliance for Life Economies Research and Innovation (GALERI) was launched at the Global Summit on LiFE Economy supported by RIS, OECD, UNDP, Impact Hub, ADBI, Development Alternatives, GIZ, UNRISD, AUDA-NEPAD, and the Fourth Sector Group among others. We suggest the following actions for mainstreaming lifestyles for Sustainable Development (LiFE)⁵ and strengthening the GALERI:

⁴ Research and Information System for Developing Countries (RIS), is an autonomous policy think tank under Ministry of External Affairs (MEA), Government of India

⁵ G20 New Delhi Leaders Declaration

a. Moving from Principles to Action

The Think 20 India Task Force 3 observed that HLPs are aligned with the interconnected facets including, ethical foundations and value system, sustainable consumption and production, ensuring modalities for systemic transformation, financing resilient infrastructure, and innovative approaches to measuring wellbeing beyond GDP.

The convergence of G20 HLPs on lifestyles for sustainable development with initiatives from present Brazilian G20 presidency, such as the Bioeconomy Initiative and Task Force for Global Mobilization Against Climate Change, presents an opportunity for G20 countries to collectively address the challenges of climate change emanating from excessive consumption patterns (Chaturvedi, 2023).

In recent years, there has been a rise in social enterprises, purpose-driven or for-benefit enterprises, that prioritize social and environmental objectives alongside financial goals and are aligned with alternate economic approaches.⁶ These entities need to be supported for accelerated action in realising the objectives of the HLPs. These enterprises are integral to the new economy, aiming to provide essential services, including healthy food, affordable healthcare and housing, quality education, environmentally friendly transportation and energy, digital access, social services, water and sanitation, financial services etc. Encouragingly, numerous countries, including all G20 members, have taken initiatives for supporting such enterprises.

⁶ Examples include Bioeconomy and Bio-Hubs (for ecosystem restoration), Blue Economy, Care Economy, Creative Economy, Circular Economy, Frugal Innovation Economy, Green Economy, Regenerative Economics, Social Solidarity Economy, and Wellbeing Economy, among others.

b. Deploying new instruments in Technology and Finance

Technologies are critical tools for enabling successful green transitions and development transformations. There is an urgent need to highlight the drawbacks of present innovation reward system based on IPRs and to explore new instruments for rewarding R&D efforts. For example, the Ecological Impact Fund approach would, in the Global South, reward green innovations according to the emissions reduction achieved by their deployment rather than through monopoly rents based on patent exclusivity. Creating a global public good, such as the Ecological Impact Fund would greatly increase the diffusion of participating green innovations by rewarding deployment and reducing their price (Pogge, 2023). It would also incentivize work on developing additional green innovations specifically for poor populations and governments where procuring and disseminating technology are highly expensive.

Similarly, financial globalization has constrained developing countries access to development and climate finance with rising debt distress levels post the Covid-19 pandemic. From the standpoint of G20 countries, there is need to undertake research and advocacy for reorienting finance towards alternative mechanisms of access to finance for the development sector. One such instrument is Social Stock Exchanges (SSEs). India has established an SSE a social stock exchange – under the regulatory ambit of Securities and Exchange Board of India (SEBI) for listing social enterprises, non-profits and voluntary organizations so that they can raise capital as equity, debt or as units like a mutual fund (MoF, GoI, 2019).

c. Integrating Social Science and Natural Sciences for Holistic Solutions on Wellbeing, Equity and Sustainability

Natural sciences, computational science and data science are contributing to technological disruptions and at the same time are source of innovative methods and tools to address climate change challenges, offer predictions on global warming, emissions, resource degradation, disaster risks, demographic challenges etc. Sophistication of such analyses and the flurry of results are rarely assimilated by social scientists in their pursuit of objectivity in assessments, policy advocacy and formulation, and perception of vulnerabilities and mitigation/adaptation strategies. This disconnect between natural sciences and social science disciplines needs to be addressed to achieve holistic solutions on wellbeing, equity and sustainability. The new development paradigm needs to be driven by policy instruments, economic instruments as well as social instruments alongside technological innovation, requiring inter-disciplinarity for designing holistic solutions.⁷

d. GALERI – Illustration of Modalities

GALERI aims to bridge existing gaps by fostering engagement, coordination, and collaboration in research and innovation among diverse stakeholders and streams, including governments, think-tanks, scientific agencies, academia, international organizations, businesses, and civil society. By leveraging such collaborative platforms,

⁷ Such convergence would be useful for just transition/ transformation pathways and arresting negative spillovers of unilateral climate action or green development initiatives.

the G20 can effectively implement the HLPs-inspired policies and initiatives, driving meaningful progress towards the SDG localization and green transition.

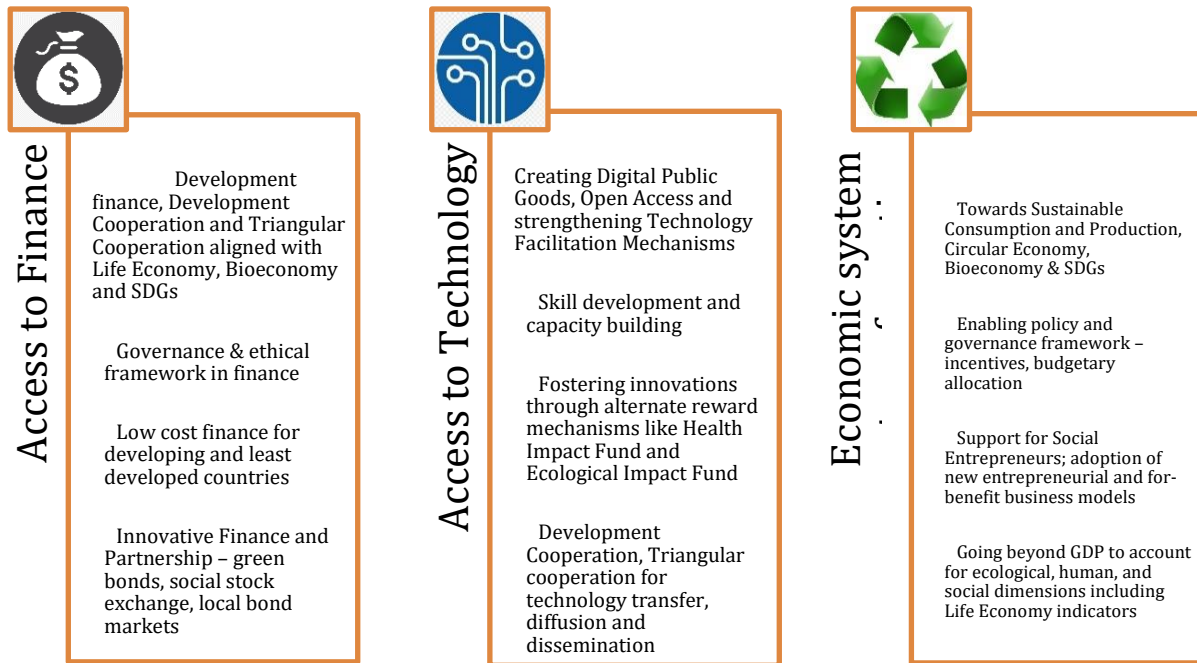


FIGURE 5. Role for GALERI – Potential Areas for Mapping, Research and Innovation.

Source: Authors' Compilation

Scenario of outcomes

The work of GALERI is expected to be aligned with the priorities of the Development Working Group (DWG) and Environment and Climate Sustainability Working Group (ECSWG) of the G20 in support of sustainable consumption and production, circular economy, equitable development and wellbeing. GALERI can be an effective platform to bring across a host of stakeholders and participants that may work towards transitioning to a low emissions lifestyle trajectory which is inherently based on individual, collective and historical responsibilities and capabilities towards climate change adaptation and mitigation. Currently, despite best efforts there are wide divergences of views and positions on climate justice, mitigation and adaptation strategies, within complex realities of inequality and development gaps exacerbated by existing economic models that pay scant attention to values, ethics and normative frameworks. GALERI will seek to explore new pathways based on innovative methods of communication, fresh evidence and new conceptual frameworks that are needed to forge common understanding on opportunities and challenges.

References

- Chancel, Lucas. "Global carbon inequality over 1990–2019." *Nature Sustainability* 5, no. 11 (2022): 931-938.
- Chaturvedi, Sachin. "Accelerating Sustainable Development with Convergence of SDGs, Localization and Lifestyles." *CEBRI-Revista: Brazilian Journal of International Affairs* 8 (2023): 194-216.
- Cheng, Yiyang, Yanan Wang, Wei Chen, Qian Wang, and Guoli Zhao. "Does income inequality affect direct and indirect household CO₂ emissions? A quantile regression approach." *Clean Technologies and Environmental Policy* 23 (2021): 1199-1213.
- CoP 27 Egypt. The Conference of the Parties, Sharm el-Sheikh Implementation Plan. (2022)
- CoP 28 UAE. The Conference of the Parties, First global stocktake. (2023).
- Feng, Kuishuang, Klaus Hubacek, and Kaihui Song. "Household carbon inequality in the US." *Journal of cleaner production* 278 (2021): 123994.
- G20 India. T20 Task Force 3 LiFE, Resilience and Values for Wellbeing Statement. (2023)
- IPCC. Summary for Policymakers. In: *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, UK and New York, NY, USA. 2022)
- Ministry of Environment Forest and Climate Change (MOEFCC), "Historic Resolution on Promoting Sustainable Lifestyles", 1st March 2024. (2023).

Ministry of Finance (MoF). Union Budget proposes creation of a social stock exchange under the regulatory ambit of Securities and Exchange Board of India (SEBI) for listing social enterprises and voluntary organizations. (2019).

Pogge, Thomas. "An ecological impact fund." *Green and Low-Carbon Economy* 1, no. 1 (2023): 15-21.

The Energy and Resources Institute. *Internationalizing Lifestyles for Sustainable Development*. SDG Charter, Act4Earth and World Sustainable Development Summit. New Delhi: The Energy and Resources Institute. (2023)

United Nations Environment Programme *Emissions Gap Report 2022: The Closing Window — Climate crisis calls for rapid transformation of societies*. Nairobi. (2022).

United Nations Environment Programme. *Emissions Gap Report 2022: The Closing Window — Climate crisis calls for rapid transformation of societies*. Nairobi. (2022).

United Nations Environment Programme. *Emissions Gap Report 2023: Broken Record – Temperatures hit new highs, yet world fails to cut emissions (again)*. Nairobi. (2023).



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