



INTERNATIONALIZING LIFESTYLES FOR ENVIRONMENT MESSAGES FOR G20

ACT4EARTH

SDG CHARTER POLICY BRIEF

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ABSTRACT

Sustainable consumption and lifestyles must be seen from the perspective of resource value chains that include resource extraction, manufacturing, processing, use by consumer, and disposal. Mainstream frameworks on sustainable consumption and production focus more on upstream and mid-stream components, such as resource efficiency and circular economy. Lifecycle approaches need to consider the consumption of goods and services along with extraction of resources, production and disposal. Since demand, including lifestyle choices, drives supply, it is important to focus on downstream components and linkages across resource value chains. To understand the sustainability of lifestyles and consumption for G20 countries and the European Union, a composite index and indices on consumption sectors (such as food, transport, residential, and waste management) are developed in this paper. The objective of this brief is to contribute to framing of lifestyles and sustainable consumption, as well as implications for internationalizing LiFE. We also examine the application of various instruments to promote LiFE; including policy instruments, market instruments, and social instruments. Implications for internationalizing lifestyles through G20, Global Indicator Framework for SDGs, and United Nations Framework Convention on Climate Change is then discussed.

Keywords: SDG 12, lifestyles, sustainable consumption, G20, sustainable development, climate change



INTRODUCTION

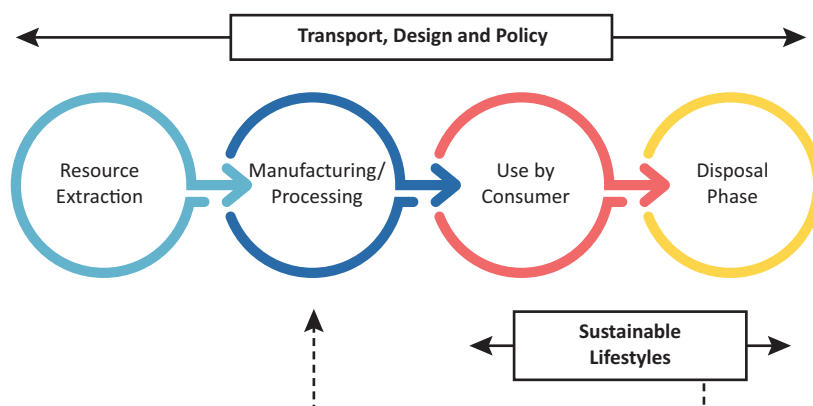
There has been a focus on unsustainable patterns of production and consumption at the global level since the adoption of Agenda 21: an outcome document of the United Nations Conference on Environment and Development (UNCED). It is clearly understood that sustainable production and consumption are the keys to accomplishing sustainable development. Through the Johannesburg Plan of Implementation in 2002, countries reaffirmed that fundamental changes in the way societies produce and consume goods and services are indispensable for achieving global sustainable development. At the United Nations Conference on Sustainable Development (Rio+20) in June 2012, UN member states adopted the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns (hereafter the 10YFP). In 2015, responsible consumption and production became twelfth of the seventeen sustainable development goals (SDGs). SDG 12 seeks to advance responsible and sustainable consumption and production by encouraging reduction of wasteful consumption and efficiency in production, by raising awareness and promoting responsible practices among governments, businesses and consumers. The Global Strategy for Sustainable Consumption and Production 2023-2030 advocates for four pillars of actions through: global movement, linking of SCP to global commitments, enabling changes, and empowering countries (UNEP, 2022).

Sustainable consumption and lifestyles must be seen from the perspective of resource value chains that include resource extraction, manufacturing, processing, use by consumer, and disposal (Figure 1). Broadly, resource value chain consists of two ends: upstream and downstream. The upstream segment includes resource extraction and the downstream segment includes end consumers and disposals. Cross-cutting aspects include design, transport and policy and regulatory frameworks. In some frameworks, midstream can include manufacturing/processing and transportation. Sustainable consumer lifestyles or sustainable lifestyles is a part of the downstream segment of resource value chains. Based on the concept of sustainable development, a working definition of sustainable lifestyles proposed through this paper is *“individual consumer choices and attitudes towards the consumption of goods and services to further human well-being, spur innovations, while minimizing ecological footprint and waste so as to promote intragenerational and intergenerational equity for sustainable development”*.

According to AR6 WG-III report of the Intergovernmental Panel on Climate Change in 2019, approximately 34% (20 GtCO₂-eq) of total net anthropogenic GHG emissions came from the energy supply sectors, 24% (14 GtCO₂-eq) from industry, 22% (13 GtCO₂-eq) from agriculture, forestry and other land use or AFOLU, 15% (8.7 GtCO₂-eq) from transport and 6% (3.3 GtCO₂-eq) from buildings (IPCC, 2022). Much of the emissions come from upstream segments such as industry and power generation. The key question here is: can consumer choices and attitudes (downstream segment) drive upstream actions?

In the climate change discussions, the idea of ‘Lifestyle for the Environment – LiFE Movement’ was introduced by India’s Prime Minister, Shri Narendra Modi, during the 26th United Nations Climate Change Conference

FIGURE 1: SUSTAINABLE LIFESTYLES AND RESOURCE VALUE CHAINS



of the Parties (COP26) in Glasgow last year. The idea promotes an environment-conscious lifestyle that focuses on 'mindful and deliberate utilisation' instead of 'mindless and destructive consumption' through advocating sustainable choices by 'Pro-Planet People'. Key concepts around LiFE include reduce, reuse and recycle, along with circular economy. India's updated National Determined Contribution aims to *"put forward and further propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation, including through a mass movement for 'LiFE' – 'Lifestyle for Environment' as a key to combating climate change"* (GOI, 2022). Lifestyles will be a major area of focus for the upcoming G 20 Presidency that India will assume from December 2022 (MEA, 2022).

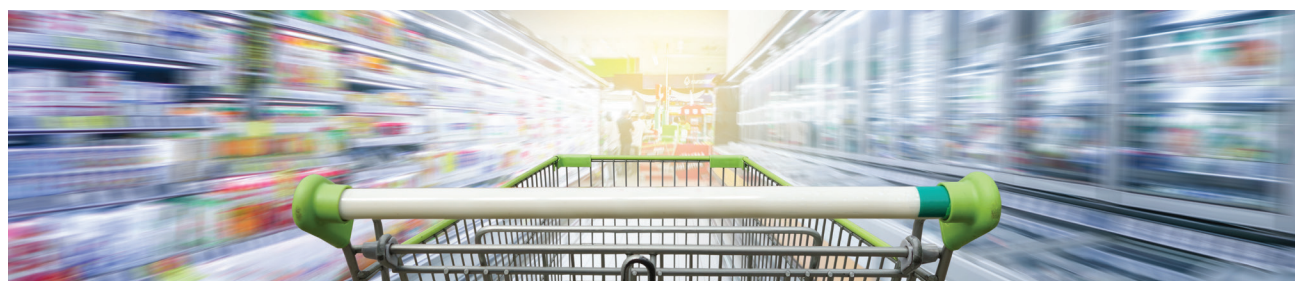
The rationale behind the LiFE movement in India includes three aspects:

- » emphasis on mass movements (*Jan Andolans*) as a social instrument in areas, such as cleanliness drives and voluntary giving up of subsidies for cooking fuels;
- » focusing on growth fuelled by demand and consumer driven innovations – both in terms of markets and policies; and
- » internationalizing lifestyles as an issue of global concern.

According to Mission LiFE of Niti Aayog, along with policy and regulatory measures to address environmental issues, harnessing the power of collective action led by individuals is crucial to solve complex problems (NITI, 2022). The question of the choice of consumption goods at a given level of income is typically framed in economics as a matter of consumer sovereignty. However, social and policy objectives accepted by political choice may trump consumer sovereignty under certain circumstances. For example, intoxicants may be banned, vaccination for contagious diseases may be mandatory, and people may be taxed for consuming harmful products, or given subsidies for consuming certain socially beneficial goods and services. An important aspect in influencing consumer choices is media advertisement.

When it comes to individual choices, various perspectives are important. Governments may view individuals as constituents who are to be governed. Markets may view individuals as consumers whose purchasing decisions are to be influenced. From the perspective of environmentalists, consumers are humans embedded within planet earth. Understanding the motivations of individuals for adopting sustainable lifestyles is complex, since these would vary from individual to individual. Choices are further influenced by the surrounding environment, work culture, urban amenities and marketing campaigns. To make the concept of lifestyles more actionable for policy makers, one approach is to take a sectoral perspective where consumers or individuals make choices. Key consumption sectors that have a bearing on resource footprint include transport, residential sector, food choices and waste management.





Mainstream frameworks on sustainable consumption and production focus more on upstream and mid-stream components such as resource efficiency and circular economy. Lifecycle approaches need to consider the consumption of goods and services along with extraction of resources, production and disposal. Since demand, including lifestyle choices, drives supply, it is important to focus on downstream components and linkages across resource value chains. The objective of this brief is to contribute to framing of lifestyles and sustainable consumption and implications for internationalizing LiFE, along with examining instruments including policy instruments, market instruments, and social instruments. The scope of the analysis is limited to G20 countries – considering the global importance of their collective resource consumption.



LIFESTYLES AND CONSUMPTION INDEX FOR G20

To understand the state of lifestyles and consumption for G20 countries and the European Union, a composite index and indices on consumption sectors (such as food, transport, residential and waste management) have been developed. Table 1 summarises the indicators used in calculating the metrics for G20 countries and the European Union.

TABLE 1: INDICATORS AND DATA SOURCES USED FOR DEVELOPING METRICS ON SUSTAINABLE CONSUMPTION

Sector	Indicator	Data source	Year
 Transport	Total final energy consumption in transport sector (TJ/capita)	IEA World Energy Balances https://www.iea.org/data-and-statistics/data-product/world-energy-statistics-and-balances	2019
 Food	Meat and dairy production (tonnes/capita)	UN (2019), Gapminder (v6) and HYDE (v3.2); FAR (2020); Eurostat (2018) in OurWorldInData.org/meat-production	2018
 Residential Buildings	Total final energy consumption in residential sector (TJ/capita)	IEA World Energy Balances https://www.iea.org/data-and-statistics/data-product/world-energy-statistics-and-balances	2019
 Waste Disposal	Plastic waste generation (tonnes/capita)	Source: Jambeck <i>et al</i> (2015) in https://ourworldindata.org/grapher/plastic-waste-generation-total ; Eurostat	2010 and 2015

The choice of index is based on key sectors that have been extensively covered in the literature and contribute significantly to sustainable consumption on the downstream or end-consumer side. The downstream side of production and consumption systems pertain to lifestyles and consumers, as opposed to upstream, which includes aspects related to resource extraction. The choice of these indicators is also constrained by data availability. For example, the reason for leaving our food-waste was that the data for all types of food waste (households, out-of-home consumption and retail) is not available for all G20 entities – for Turkey, no data was available for food waste; for EU, data was not available for out-of-home consumption category.

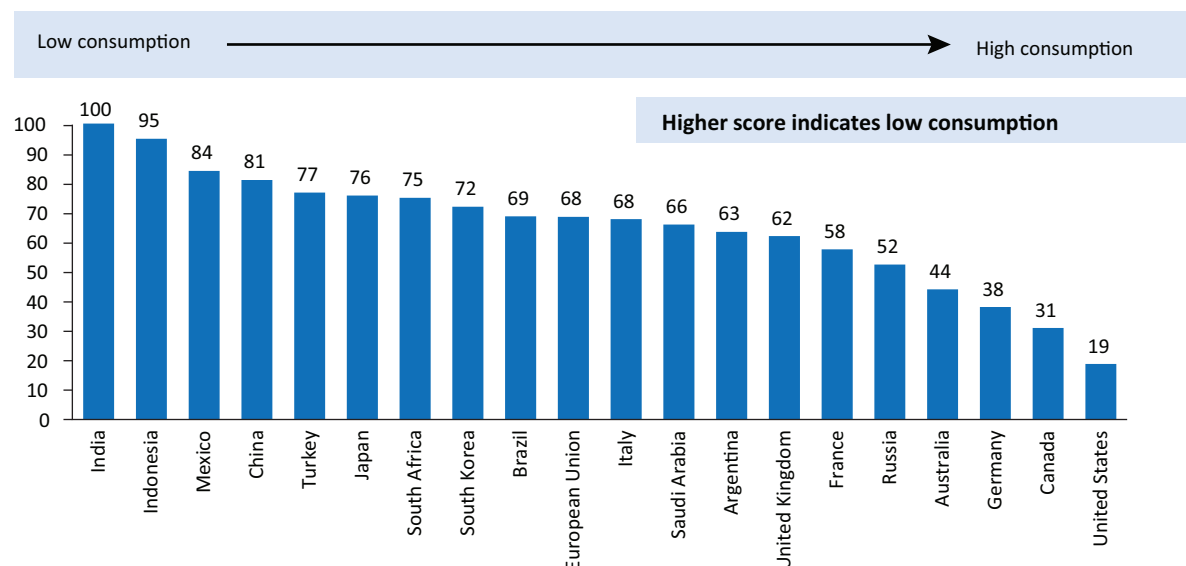
Further computation and normalization of indicator values is done for identifying and collecting basic data, so that it falls in the range of 0-1. This procedure makes the respective values of the chosen indicators (as mentioned in the above table) unitless, so that indicators are comparable for construction of an index. In the index, the best performer gets a value of 1, while the worst performer gets a value of 0; moreover, all values become unidirectional.

The normalization procedure using x as a variable is as follows:

$$x\text{-index} = [x - \min(x)] / [\max(x) - \min(x)]$$

Here $\min(x)$ and $\max(x)$ were lowest and highest values for the variable x . The scores received by each state with respect to each indicator are then averaged using equal weights.

For scoring, the standardized values are then multiplied by 100 to arrive at scores. These are then depicted graphically (Figure 2). The higher the score, the lower the consumption is in per capita terms for the individual.

FIGURE 2: LIFESTYLES AND CONSUMPTION INDEX FOR G20 COUNTRIES AND EU


Country	Meat and dairy production (tonnes/capita)		TFC in transport sector (TJ/capita)		TFC in residential sector (TJ/capita)		Plastic waste generation (tonnes/capita)		Sustainable Consumption Index	Sustainable Consumption Index Score
	Value	Index	Value	Index	Value	Index	Value	Index		
India	0.01	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	100
Indonesia	0.01	0.96	0.01	0.93	0.00	1.00	0.02	0.90	0.95	95
Mexico	0.06	0.72	0.02	0.83	0.01	0.98	0.03	0.83	0.84	84
China	0.06	0.69	0.01	0.92	0.01	0.85	0.04	0.77	0.81	81
Turkey	0.04	0.79	0.01	0.86	0.01	0.84	0.08	0.58	0.77	77
Japan	0.03	0.86	0.02	0.75	0.01	0.75	0.06	0.67	0.76	76
South Africa	0.06	0.72	0.01	0.86	0.01	0.89	0.09	0.52	0.75	75
South Korea	0.05	0.76	0.03	0.66	0.02	0.67	0.04	0.79	0.72	72
Brazil	0.14	0.26	0.02	0.82	0.01	0.99	0.06	0.68	0.69	69
European Union	0.09	0.51	0.01	0.88	0.01	0.88	0.10	0.47	0.68	68
Italy	0.06	0.70	0.02	0.72	0.02	0.54	0.05	0.74	0.68	68
Saudi Arabia	0.02	0.91	0.06	0.33	0.02	0.70	0.06	0.70	0.66	66
Argentina	0.13	0.29	0.02	0.83	0.01	0.78	0.07	0.64	0.63	63
United Kingdom	0.06	0.70	0.03	0.71	0.02	0.49	0.08	0.58	0.62	62
France	0.09	0.55	0.03	0.67	0.02	0.47	0.07	0.61	0.58	58
Russia	0.07	0.63	0.03	0.68	0.04	0.00	0.04	0.79	0.52	52
Australia	0.19	0.00	0.06	0.32	0.02	0.65	0.04	0.79	0.44	44
Germany	0.10	0.49	0.03	0.68	0.03	0.36	0.18	0.00	0.38	38
Canada	0.13	0.30	0.08	0.06	0.04	0.05	0.03	0.83	0.31	31
United States	0.14	0.24	0.08	0.00	0.03	0.19	0.12	0.32	0.19	19

Source: Based on FAO (2022), IEA (2022); and Jambeck et al (2015)



Among G20 entities, India has the highest score in the Lifestyles and Consumption Index, while United States has the lowest score. Annexure 1 presents the sub-indices on lifestyles and consumption for G20 countries and the EU. India has the highest score—and thus the lowest consumption—for all the four consumption sectors (food consumption, transport, residential sector, and plastic waste generation). These score do not indicate the normative direction of lifestyles and consumption, but merely indicate the present level of consumption. As mentioned, these metrics are constrained by data availability, especially when it comes to indicators which strictly deal with downstream segments of resource value chains. The way the index has been developed is that differences in per capita incomes have not been accounted for. Since the point of the index is not to indicate a normative direction, in future, this index can be standardized using per capita incomes to determine how efficient or sustainable 1 passenger-km or 1 kilocalorie is across countries.

The question here is: can G20 countries give the quality of life to its citizens without increasing environmental degradation and without compromising the resource needs of future generations? Can countries do more and better with less? Can countries deliver more goods and services to ensure better quality of life, with less impact in terms of resource use, environmental degradation, waste and pollution?

Moreover, to what extent can individual consumer choices be internationalized? Will lifestyles be a matter of consumer sovereignty, or can policy, economic and social instruments nudge individual choices? Furthermore, can individual choices nudge policy and markets through social movements and instruments?

INSTRUMENTS TO NUDGE LIFESTYLES AND CONSUMPTION



Three categories of instruments become important when it comes to nudging lifestyles and sustainable consumption. These include policy instruments, market instruments and social instruments; these three categories are not mutually exclusive. For example, policy instruments may be vital to introduce market instruments, such as pricing and procurement. Similarly, consumers' movements and social movements fuelled by social instruments may be vital to bring about changes in policy and advertising norms. Therefore, these categories of instruments can interact with each other.

Policy Instruments: Policy instruments are used by governments when they have a good understanding of the issue as well as the legitimacy to intervene. Policy instruments can include policy frameworks and goals, regulatory and legislative instruments, public finance instruments, making certain standards mandatory, programmatic interventions, procurement, fiscal instruments (taxes and subsidies) and rights-based approaches such as 'right to repair'¹.

Market Instruments: These instruments seek to harness the potential of markets and promote not just internalizing of externalities, but also innovations and business models that drive new products and services, promote responsible waste management and phase out environmentally harmful products and services. These include carbon markets, labelling, extended producer responsibility, and new products and services.


¹ Rights based approaches is a tool towards accountability as well as positive transformation, to meet societal objective involving rights holders (who do not experience full rights) and the duty bearers (the institutions obligated to fulfil the holders' rights). For lifestyles and sustainable consumption, one such tool deployed is the 'right to repair'. A 'right to repair' is the right of the owner of a device to repair it themselves or have it repaired by a professional of their choice. This tool is fuelled by social movements involving people, repairers and sustainability groups – who advocate that reusing, refurbishing and repairing products will lead to benefits not just in terms of sustainability, but also in terms of cost savings and creation of employment. India, European Union, Germany, France and United States have taken steps towards the 'right to repair'.

Social instruments: Social Instruments aim at awareness generation and capacity building of consumers through providing information about a product or a service, such as product qualities and certifications, to influence consumer behaviour. Social instruments also include self-regulating and bottom-up instruments at the individual and community levels, like carpooling.

Table 2 depicts instruments for nudging lifestyles and sustainable consumption for the four sectors considered in the analysis. The instruments followed by * denotes the ones that are being deployed in G20 countries for the G20 sectors.

TABLE 2: INSTRUMENTS FOR NUDGING LIFESTYLES AND SUSTAINABLE CONSUMPTION

	Policy Instruments	Market Instruments	Social instruments
Transport 	<ul style="list-style-type: none"> » Taxation on fuel and high fuel/emissions vehicles » Congestion charges » Toll roads » Government encouragement to participate in carbon emission trading schemes » High parking fees/ maximum parking norms » Land use constraints » Investing in public infrastructure* » Investment in research » Registration fees » Emission and fuel efficiency standards* 	<ul style="list-style-type: none"> » Provision of eco-mobility » Company logistics and contracts » Withdrawing inappropriate products » Consumer reward schemes » Advertising of responsible products 	<ul style="list-style-type: none"> » Campaigns on policy measures » Advertisements » Public awareness campaigns
Food 	<ul style="list-style-type: none"> » Regulation of marketing of unhealthy food and drink » Critically test existing food-safety standards* » Set goals for a zero or negative-effect food system » Taxation on resource and carbon intensive food items » Subsidies on food products with low emissions and environmental impacts 	<ul style="list-style-type: none"> » Withdrawing inappropriate products » Use of contracts and conditions to shape supply chains » Consumer reward schemes » Focused marketing on only healthy and sustainably produced foods » Labelling* 	<ul style="list-style-type: none"> » Build cultural appeal for healthy diets, organic food, from sustainable food systems » Legislative change campaigns » Campaigns for alternative products
Residential Buildings 	<ul style="list-style-type: none"> » Appliance standards* » Building codes* » Mandatory audits » Utility demand side management* » Mandatory labelling and certification* » Taxes and tax benefits » Subsidies » Water harvesting schemes 	<ul style="list-style-type: none"> » Energy performance contracting » Cooperative procurement » Energy efficiency certificate schemes* » Pricing of water » Procurement 	<ul style="list-style-type: none"> » Voluntary certification and labelling* » Awareness raising, education and information campaigns » Billing disclosure programs*

	Policy Instruments	Market Instruments	Social instruments
Waste Disposal	» Right to repair » Product restrictions or bans  » Standards for recycled materials » Bans/restrictions on landfill » Tax benefits for recycled materials » Landfill and incineration taxes » Programmatic interventions*	» Deposit Refund Schemes » Pay-as-you throw pricing for waste collection system » Soft loans to construct waste segregation & processing facilities » Labelling and certification schemes* » Take back/ buy-back schemes/ Extended producer responsibility*	» Capacity building » Social movements and sensitization » Awareness raising and campaigns*

*Instruments that are being considered in G20 countries

In the transport sector, most of the G20 countries have used the policy instruments pertaining to fuel efficiency and emissions, along with investment in public infrastructure. Brazil uses registration taxes on vehicles based on their engine size and their manufacturer's fleet average efficiency, while the United Kingdom has clean air zones where drivers must pay to drive through if their vehicles do not meet the required emission standards. One way to promote better consumer choices and lifestyles that lead to a more sustainable use of transport is through the availability of car parking. The availability of car parking space influences greatly what transport people take, even in places that have good public transport (Al-Fouzan, 2012). A maximum parking requirement provides a ceiling which ensures that even if developers wanted more, they would not be able to build more parking space. Using maximum parking requirements, rather than minimum parking requirements, will reduce the amount of private car usage and encourage consumers to use alternative and more sustainable modes of transport. Another way to promote better consumer choices and lifestyles is through the social instrument of raising awareness about the health benefits that using active transports (like walking and cycling) brings (Egset & Nordfjærn, 2019). There is scope to deploy more instruments, especially when it comes to market instruments and social instruments, in the transport sector.

In the food sector, for G20, most policies have focused on food safety and to some extent on labelling. This is also because for many developing countries, ensuring food availability has been a focus along with minimizing waste in the storage and food distribution segments. Thus, for most countries the focus has been on production segments of agriculture value chains and on food safety. Market instruments can play an important role in pricing, communication, production and distribution of environmentally sustainable and healthy food products. Communicating aspects like – the production form, origin, materials used, transport, impact on the environment, packaging used and possible waste that will be generated – may help consumers in making informed choices on food and promote sustainable food consumption. Corporate financiers, traders, processors, brands and retailers that make up the global supply chains must support the transition to sustainable food production through their procurement practices; by investing in greater transparency and traceability along food supply chains and by creating supplier assistance programs to share information and incentivise sustainable practices.

For G20 countries, the dominant focus of instruments has been in the categories of standards and labelling for energy-efficient buildings and automatic-networked residential appliances. Thus, for these countries, this implies a higher emphasis on the application and effective implementation of technologies, equipment, and appliances at sub-national, national, and international levels. The G20 Energy Efficiency Leading Programme (EELP) in collaboration with the International Energy Partnership for Energy Efficiency Collaboration (IPEEC)



focuses on promoting energy efficiency through research, information dissemination, policy options and designing and strengthening the development and implementation frameworks. While there has been a heavy focus on energy, considerable gaps exist in the residential building sector on water conservation – when it comes to deploying large scale interventions. Moreover, many interventions are focussed on public buildings and need to further consider private residential spaces.

In the waste management sector, governments have focused on programmatic interventions, along with awareness measures such as extended producer responsibility, with the latter still being at a nascent stage. The South Korean Government introduced the 'volume-based waste fee system (VBWF system)', under which residents are charged waste disposal fees based on the amount of waste disposed. In Alappuzha, Kerala, the urban local body has implemented project 'Clean Homes, Clean City' since 2012, wherein it has focussed on the segregation and treatment of wet waste at the source. The local body offered subsidies to promote and ensure effective implementation of mini-personal plants for wet waste composting. The 'Good Green Deeds' campaign of South Africa seeks to change people's attitudes, behaviours towards responsible management of waste and keeping their neighbourhoods clean, green and safe. The Department of Consumer Affairs in India announced the development of a comprehensive framework on the 'right to repair'. The 'right to repair' refers to a government legislation that is intended to allow consumers the ability to repair and modify their own consumer electronic devices, where otherwise/previously the manufacturers of such devices require the consumer to use only their offered services.

WAY FORWARD: INTERNATIONALIZING LIFESTYLES AND DEPLOYING INSTRUMENTS

The messages from our stakeholder dialogue point to the need for nudging consumer behaviour by a variety of stakeholders. The recommendations from the study as well as the stakeholder consultations (TERI, 2022) are summarized below.

- » **Internationalizing lifestyles and promoting normative shifts through G20:** A critical mass is needed for norms and institutions to change. There is need for a global campaign that can be supported by all relevant actors, at country and global levels, that will help promote understanding on sustainable lifestyles. Through G20, India can take a leadership role in internationalizing lifestyle for environment. India can work towards the launch a 'G20 Coalition on Lifestyle for the Environment' and a 'G20 Roadmap/Coalition on Responsible Advertisement'. The issue can be further internationalized through the United Nations General Assembly; for example through a mandating report by UN Secretary General. Lifestyles could also be considered as a theme for the High-level Political Forum - Sustainable Development Goals. Table 3 presents key hooks for internationalizing lifestyle for environment.

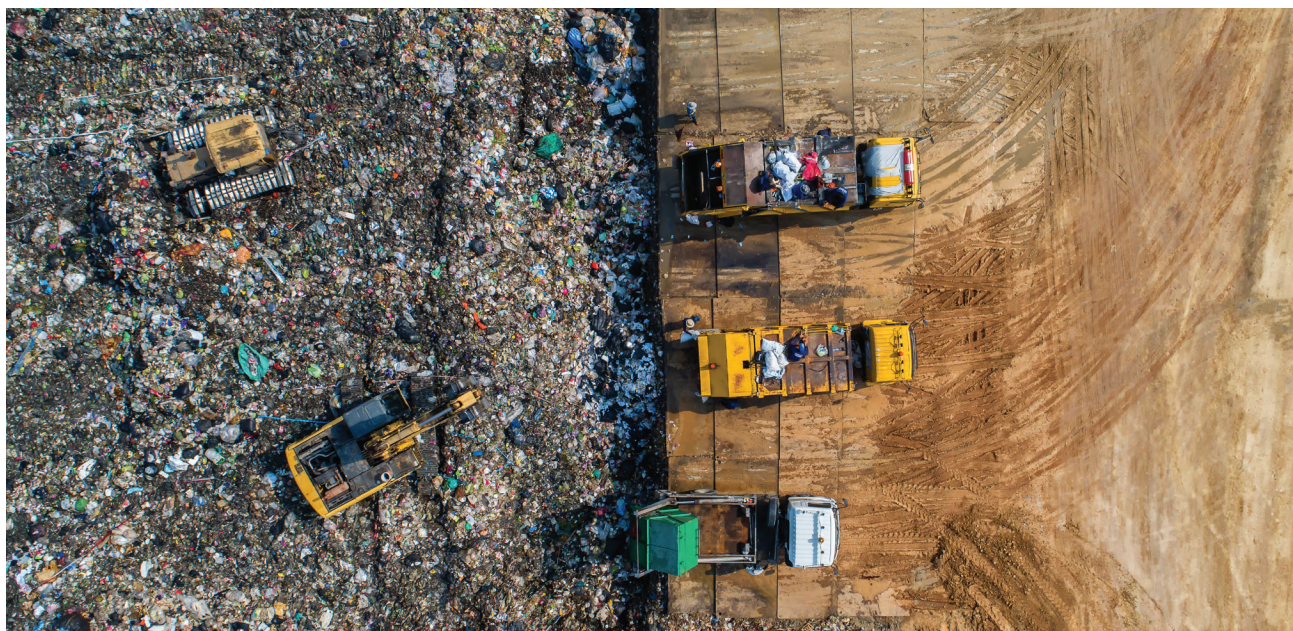
TABLE 3: HOOKS FOR INTERNATIONALIZING LIFESTYLE FOR ENVIRONMENT OR LIFE

G20 Forum	Global Indicator Framework for SDGs	UNFCCC	UNGA
<ul style="list-style-type: none"> » LiFE as a major cross-cutting theme » G20 Coalition on LiFE » G20 Roadmap/Coalition on Responsible Advertisement 	<ul style="list-style-type: none"> » Include downstream indicators for SDG 12, including eco-labels and instruments such as spending on public awareness 	<ul style="list-style-type: none"> » Include mandate on sustainable lifestyles 	<ul style="list-style-type: none"> » Secretary General Report on lifestyles, along with UN agencies such as 10YFP/ One Planet Network and UNEP





- » **Strengthening global indicator frameworks:** SDG 12 indicators can include/have more downstream indicators – especially, when it comes to consumers and individuals – along with instruments such as eco-labels. This will be an important step forward when it comes to internationalizing lifestyles.
- » **Promoting adaptation and mitigation behaviours:** From a Global South perspective, when discussing lifestyles, climate change adaptation and mitigation need to be considered. Under UNFCCC, the Subsidiary Body for Scientific and Technological Advice (SBSTA) can be given a mandate to produce technical reports on adaptation and mitigation lifestyles.
- » **Deploy a variety of instruments:** There is need to examine the scope of deployment of all types of instruments, ranging from command and control to voluntary instruments. The role of responsible advertising is essential and this is a segment which remains to be tapped.
- » **Promoting science-based actions:** Science should help in understanding some of the successful solutions—behaviour change solutions, market solutions and policy solutions—that are being deployed in G20 and how these can be replicated and scaled in various contexts. Metrics need to consider a full system analysis when assessing lifecycle implications of products and services. When examining GHG emissions or water use in food items, there is a need to consider energy and water consumption in irrigation, fertilizer production and other inputs as well.
- » **Deriving inspiration from indigenous communities:** Indigenous communities are known to live in sync with nature, in a way that does not harm the environment. Traditional knowledge is important to preserve, as these may inspire behavioural interventions and insights.
- » **Empowering consumers:** Considering disposal-related choices are made by consumers, waste management capacity and engaging with the informal sector is important. Consumers need services rather than the products, which implies that policies should aim at providing well-functioning and accessible public services, along with enabling conditions for the market. For example, for mobility, policy instruments may be accompanied by certain business models, such as ride sharing.



- » **Consideration of pricing and retrofitting:** It is important to look at the aspect of pricing as masses may not be able to afford expensive goods and services. In the mobility section, we are talking about scrappage of the older vehicles, but unfortunately talking very little about retrofitting of technologies and increasing the life of vehicles. Retrofitting and supporting technologies should be explored to consider affordability as well as minimizing waste generation.
- » **Focusing on wasteful consumption promoted by existing policies:** Apart from measuring aspects, like how sustainable are procurement policies of the government, there is a need to capture aspects of policies that promote unsustainable consumption; for example, promotion of policies such as electricity subsidies that promote indiscriminate exploitation of groundwater. There is a need to better understand as to what wasteful consumption is and how is it further promoted by existing policies.
- » **Encourage participation of people:** The philosophy behind LiFE is that climate change must now become a movement of the masses. Addressing climate change requires participation of people. Stakeholders must actively think of ways in which we nudge citizens towards climate-friendly practices. Citizen science can be promoted and citizens can be involved in data collection. By being involved in the process, citizens have a sense of agency: they feel like they have a say in the decision-making process.
- » **Driving demand-responsive innovations:** India is a global influencer, not just in terms of the size of country's population, but also in innovations through policy actions, individual actions and industrial actions. For growth and development, it is essential to encourage agility in entrepreneurs who can shift more quickly to market demand. Thus, demand (downstream) driving innovations (upstream) in the supply side is key.
- » **Enabling social movements by empowering citizens:** A key step is to empower pro-planet people by providing them with the necessary tools such as education, skills and information. It is essential to engage with social movements around community based sustainable consumption, to ensure a diversity of perspectives. More sustainable alternatives should be available and easily accessible, along with providing the enabling conditions to nudge sustainable behaviour. The aspect of trust also becomes important. Looking at it from the consumer behaviour perspective, it is very important for consumers to be able to trust the information that they get.

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WORLD SUSTAINABLE DEVELOPMENT SUMMIT

The World Sustainable Development Summit (WSDS) is the annual flagship Track II initiative organized by The Energy and Resources Institute (TERI). Instituted in 2001, the Summit series has a legacy of over two decades for making 'sustainable development' a globally shared goal. The only independently convened international Summit on sustainable development and environment, based in the Global South, WSDS strives to provide long-term solutions for the benefit of global communities by assembling the world's most enlightened leaders and thinkers on a single platform. Over the years, the Summit series has witnessed the participation of 54 Heads of State and Government, 103 Ministers, 13 Nobel Laureates, 1888 Business Leaders, 2745 Speakers, and 38,280 Delegates.

ACT4EARTH

Act4Earth initiative was launched at the valedictory session of WSDS 2022. Building on the discussions of WSDS, this initiative seeks to continuously engage with stakeholders through research and dialogue. Act4Earth initiative has two components: **COP27 Compass** and **SDG Charter**. The COP Compass will seek to inspire and mobilize leadership at all levels, for inclusive transitions through ambitious and informed policies and measures which will enable paradigm shifts – towards meeting the UNFCCC and Paris goals through mitigation, adaptation and means of implementation. The SDG Charter will seek to identify gaps and suggest ways for strengthening and mainstreaming sustainable development in policy agendas for enhanced environmental, social, and economic outcomes.



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