

Sustainability



The Action Manifesto





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1 Introduction

“A problem that affects all, requires action from all”

The sustainability 100+ platform is a collaborative initiative by AB InBev and NW18 developed with the vision of fostering active dialogue and engagement on sustainability. The platform aims to unlock a multistakeholder-driven participatory approach to enable sustainable development. The platform explores the nuances of the environmental risks and required action through 4 thrust areas:

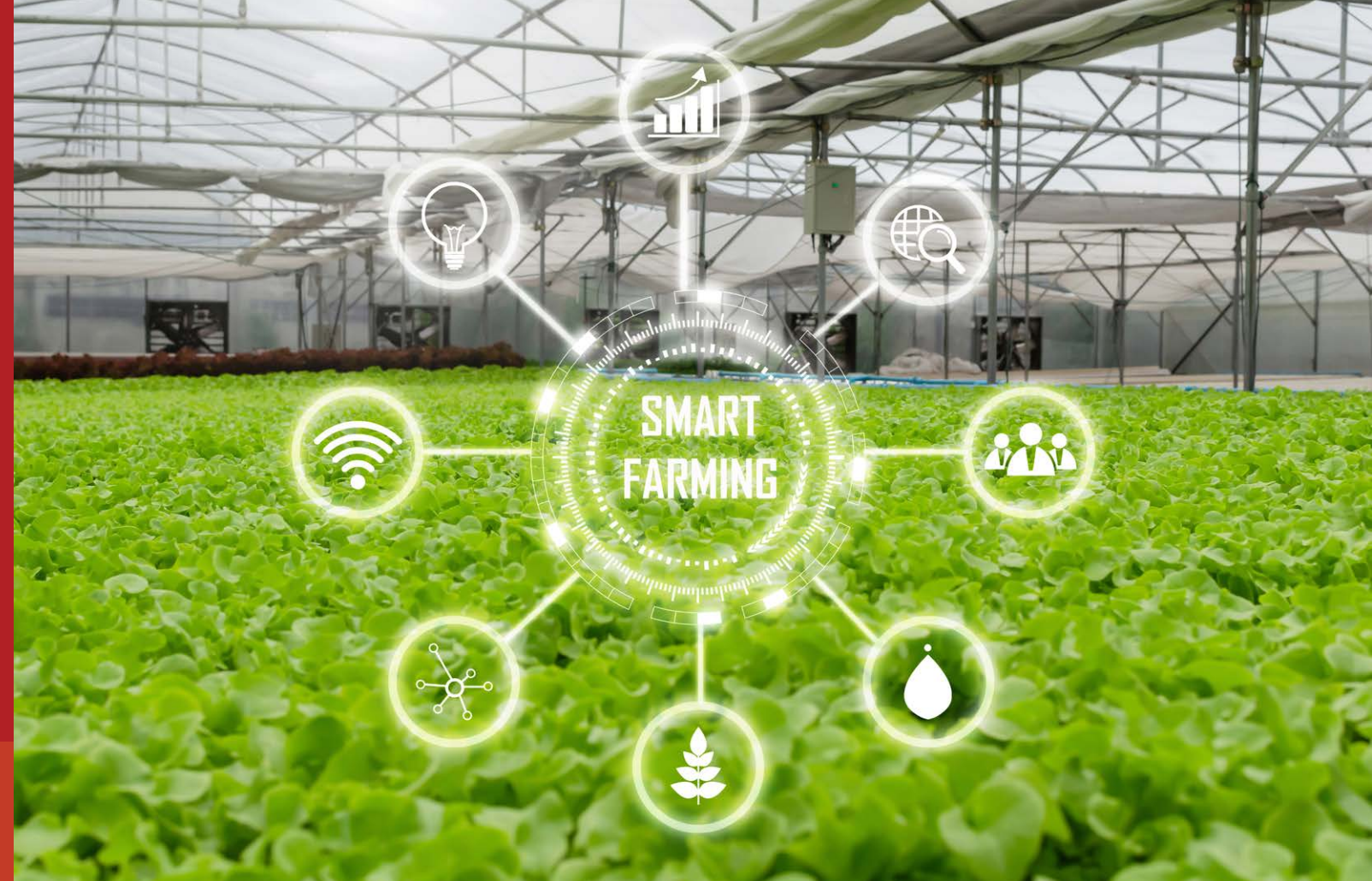
- Climate action
- Water stewardship
- Circular packaging
- Smart agriculture

These areas underpin some of the most pressing environmental challenges of our times. The objective of the platform is to catalyze collaboration and innovation by enlightening and empowering stakeholders. To this end, the platform draws on insights from the vast experience of diverse stakeholders to present the multifaceted nature of the impacts of environmental risk, the need for action and unique interventions being employed to ensue positive developmental outcomes. The platform highlights success stories and champions of change to bring to light the positive ripples created by the

The platform objectives

- Awareness building
- Enabling collaboration and innovation
- Creating a conducive ecosystem for environmental action and dialogue
- Identification of action areas and ideating on reform measures

efforts of these change agents. By presenting examples from the business world, government and civil society, the platform reinforces the value of a participatory approach to enable environmental action. Through the panel discussions and masterclasses convened as part of the initiative, a myriad of collective ideation and awareness building sessions were facilitated. Further details on the various programs undertaken under the initiative may be found at: <https://www.sustainability100plus.com/>. This whitepaper aims to further explore the key drivers and challenges to environmental action and the way forward through effective multistakeholder engagement. A balanced stakeholder consultation



exercise was undertaken for the preparation of this whitepaper with equal representation from civil society, private sector, and the government. Structured discussions were facilitated to capture diverse stakeholder perspectives on enablers and barriers to environmental action. The stakeholders also shared their inputs on the interventions they envisioned as effective to anchor the transition to a sustainable future.

The past year has served as a real-time stress test for the resilience of organizations across nature and scale. The deep humanitarian crisis unleashed by the pandemic has emphasized the importance of focusing on the fundamentals of our economy and driving future growth on

the values of sustainability, inclusion and equitable development. Today, we stand at an inflection point, where our collective will to act or ignore will define the quality of our lives in the years to come. This whitepaper aims to provide actionable insights to various stakeholders to partner in our collective journey to a sustainable future. KPMG in India provided support in the development of the whitepaper.

Discussions conducted on the Sustainability 100+ platform has been embedded throughout this whitepaper (in boxes similar to this) to help the reader explore a relevant topic further.

2 The Sustainability Risk Landscape

Why is it important to act now?

“ Navigating the complex risk landscape characterized by interdependencies, feedback loops and cascading effects ”

Our natural ecosystem thrives on intricate interdependencies that supports life on our planet. Human economic activity is highly dependent on this fine balance, as it provides the natural resources and an enabling environment for the industrial world to flourish. Unchecked extraction of natural resources and aggressive industrial expansion has progressively threatened the harmony inherent in our biosphere. This has resulted in mounting environmental concerns over the past decades. As of 2021, according to the World Economic Forum's Global Risks Report, four out of the top five global risks by likelihood are environmental in nature. These include extreme weather, climate action failure, human environmental damage, and biodiversity loss. This stands in stark contrast to the 2012 risk assessment, in which the top five risks by likelihood comprised of only a single environmental risk, underscoring the imminent nature of these environmental risks today.

Globally, we have been experiencing the physical impacts of climate change

including the wildfires in Australia, droughts in central America, cyclones and droughts in Africa and severe floods in South Asia. According to a recent UN study, Asia alone witnessed 3,454 disasters, with 975,622 lives being lost and \$2 trillion reported in economic damages¹. In 2021 alone, India experienced severe flooding in Kerala and Bihar, catastrophic cyclones in West Bengal, Tamil Nadu, and Odisha, as well as massive forest fires in Mizoram and Odisha. Today, it is evident that we live in a world where climate change is no more a far-fetched risk but an unmistakable reality. Further, a recent publication by the Intergovernmental Panel on Climate Change (IPCC) report has reaffirmed that human influence on climate change is unequivocal, and projects an increased frequency and severity of its impacts, including extreme weather events, heavy precipitation, agricultural and ecological droughts, among others². India ranks seventh on the global climate risk index, which quantifies impacts of extreme weather events on countries³. According to this study, loss per unit GDP of 0.72% was evaluated for India as a result of climate

impacts in year 2019. According to current projections, average temperatures in India is set to increase by approximately 4.4°C relative to the 1976–2005 average. This would culminate in further sea-level rise, variabilities in rainfall, increased propensity to droughts, and frequent and severe extreme weather events⁴.

These findings are extremely concerning as climate change has far reaching impacts and is widely recognized as a threat multiplying risk. Climate change has the potential to unleash havoc on water security, agriculture practices, energy access and public health. The nature of the risk, hence, has direct economic and social knock-on effects. Water availability, for instance, is directly impacted by climate change. Climate change has led to intensification of the water cycle, causing some regions to experience extreme flooding while others experience severe droughts. The world witnessed a 134% increase in flood-linked disasters in

comparison to the past two decades since 2000. In 2020, over 2 billion people lived in water stressed countries, lacking access to safe drinking water⁵. It is estimated that around one billion people in India face severe water scarcity for at least 1 month annually⁶. Water demands are increasing due to swift changes in economy and demography. A considerable portion of this is met by groundwater (38.5%), which is being extracted at a faster rate than it is replenished. As we become increasingly reliant on this dwindling source to meet our growing demands, India will experience a significant water deficit in the future. Access to safe drinking water is also a prominent issue, with an estimated 2 lakh deaths attributed to it annually. India currently ranks 120th out of 122 countries in the Global Water Quality Index, with NITI Aayog confirming 70% of water supplies to be contaminated⁷. Water is inextricably linked to public health, gender equality, hunger eradication, economic productivity, and biodiversity, among other areas.

4 <https://reliefweb.int/sites/reliefweb.int/files/resources/Assessment%20of%20climate%20change%20over%20the%20Indian%20region%20-%20A%20report%20of%20the%20Ministry%20of%20Earth%20Sciences%20%28MoES%29%2C%20Government%20of%20India.pdf>

5 <https://public.wmo.int/en/media/press-release/wake-looming-water-crisis-report-warns>, https://library.wmo.int/index.php?lvl=notice_display&id=21963#.YXKcORpBw2z

6 <https://www.science.org/doi/10.1126/sciadv.1500323>

7 <https://www.niti.gov.in/sites/default/files/2019-08/CWMI-2.0-latest.pdf>

1 <https://news.un.org/en/story/2021/09/1098662>

2 https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf

3 https://germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021_1.pdf

The concurrent manifestation of one or more environmental risks can, in turn, have serious implications for the economy. For example, water stress and climate change together can pose dire challenges to agricultural productivity. It is noteworthy that agriculture is in fact the primary contributor to deforestation, loss of habitats and biodiversity. Further, around 70% of global freshwater withdrawal is attributed to agriculture.⁸ It is, hence, imperative to enable sustainable transformation of economic activities such as agriculture which are vital for economic and social development.

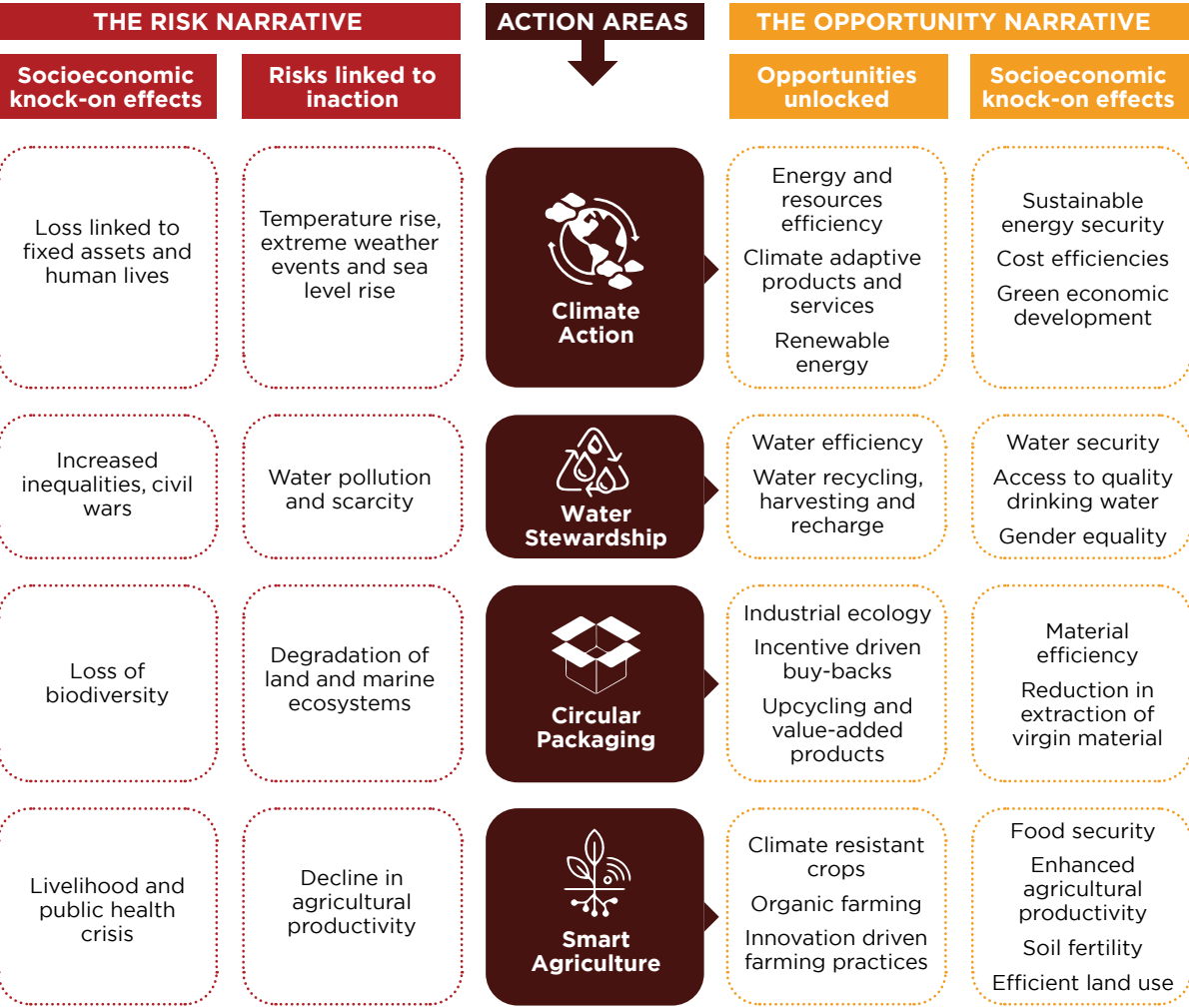
The current economic growth model relies heavily on consuming natural resources and generating waste. This perpetuates

a dual threat of resource scarcity and pollution. Packaging waste, in particular, has caused severe damage to our land and marine ecosystems, especially due to its propensity to be ingested by local fauna. It has been estimated that only 9% of the total plastic waste generated since 1950s has been recycled⁹. While another 12% has been incinerated, which further increases air pollution and accelerates climate change, the remaining plastic waste has ended up in landfills or the natural environment. Microplastics have emerged as a new threat, as exposure to sunlight or harsh environment degrades the plastic to particles small enough to enter our bodies through food and water. As plastics can act as vectors for other harmful chemicals, the impact on human health is quite alarming.

Given the nuanced and complex relationships of economic activities and the environmental risks, there is global recognition of the unique and unforeseen impacts environmental risk materialization can have on the economy and society. Financial risk linked to climate change and biodiversity loss have gained prominence over the past few years. Climate change is being regularly mentioned in financial stability reports published by governments globally. The 2021 financial stability report published by the Reserve Bank of India

extensively covered climate change-linked perspective. The emergence of environmental risks as mainstream parliamentary and boardroom agenda points towards the urgent need for action. The time is now, to turn around imminent risks into opportunities by proactively partnering in the transition to a sustainable future. There is a global consensus that this transition requires the collective will and creative energies of various stakeholders across the world for creating a shared and inclusive future.

The environmental risk and opportunity landscape



8 <https://www.fao.org/3/i7959e/i7959e.pdf>
9 <https://www.economist.com/international/2018/03/03/the-known-unknowns-of-plastic-pollution>



3 The global agenda

What are key global initiatives to address the emerging risks?

“Global efforts to harmonize the confluence of economic growth, social justice and environmental conservation”

Environmental issues have been a source of concern for leaders globally since the advent of industrialization. The first ever world conference centered on environmental issues was convened in Stockholm in year 1972¹⁰. This was a landmark event as it marked the start of a global cooperative movement on environmental conservation. This conference culminated in the establishment of the United Nations Environment Programme (UNEP) and paved the way for the Earth Summit held in Rio in year 1992. This summit was attended by 178 countries and resulted in the development of a sustainability-focused action plan “Agenda 21”, development of the United Nations Framework Convention on Climate Change (UNFCCC), and agreement on the Convention on Biological Diversity. These events set the foundation for the eight Millennium Development Goals (MDGs), which were adopted in year 2000, focusing on poverty eradication, social justice and environmental sustainability. The MDGs were succeeded by the 2030 Agenda for Sustainable Development in 2016. This

Global agenda led to the adoption of 17 inter-linked Sustainable Development Goals (SDGs) which cover social, economic, and environmental development. The SDGs consists of 169 targets focusing on people, planet, prosperity, peace, and partnerships, and has served as the framework guiding national action in sustainable development worldwide. Action on the SDGs requires a transformation-oriented approach with a focus on innovation in technologies, financial mechanisms, partnerships, and policies. As the SDGs were envisioned to be achieved by 2030, this decade is being called “the decade for action”. In India, the Government has aligned the country’s developmental agenda to the SDGs and has institutionalized an SDG index that closely tracks progress on the Goals at the national level.

While the SDGs provide an overarching framework for wider sustainability aspirations, the global community has tailored multiple collaborative interventions to drive action in specific areas aligned with the Goals. This fosters a specialized global

¹⁰ <https://www.un.org/en/conferences/environment/stockholm1972>, https://www.iisd.org/system/files/2020-09/still-one-earth-stockholm-diplomacy_0.pdf



The emphasis on partnerships, global collaboration, and active private sector participation are the key differentiators of the SDGs. There is a global consensus that achieving the ambitious targets set forth in the SDGs requires global cooperation, localization of the Goals, and a multi-stakeholder participatory approach.

The success of the Goals hinges on individual stakeholders imbibing sustainability-linked values in their respective pursuits. In this ‘decade for action’, it is important that we live by the dictum “Mobilize everyone, everywhere” to ensure that no one is left behind.

ecosystem to bring together relevant expertise in tackling the prevailing issues in the focus area. Some key global initiatives pertaining to the focus areas of this whitepaper have been discussed here.

1. Climate Action

The United Nations Framework Convention on Climate Change (UNFCCC) is the foundational treaty that drives global climate response. The Conference of Parties (COP) is the apex decision making body for the convention and have been convened every year since 1995 (except in the year 2020 due to pandemic-induced global lockdown restrictions). COP21, held in Paris in 2015, has been a landmark conference and led to the development of the Paris agreement. This agreement outlined the ambition to limit global average temperature rise to well below 2°C above pre-industrial levels. This year, COP26 has taken center-stage on the global platform in the aftermath of the repercussions of the pandemic. This COP, being held in Glasgow, is widely considered



as a decisive conference to accelerate global climate action efforts. This conference also provides an opportunity to further structure the vision articulated in the Paris Agreement, especially pertaining to climate mitigation measures and financing mechanisms.

2. Water Stewardship

Considering the critical role water plays across several developmental areas, UN has over 30 bodies under its ambit that contribute to water conservation and management in diverse capacities¹¹. UN Water is the central UN entity that coordinates and facilitates coherence in water-focused activities throughout the UN network, including enabling access to quality water, remediation of polluted water, water conservation, among others. The Global Water Partnership is also a noteworthy action network built on the Rio-Dublin principles of integrated water management¹². This network facilitates capacity building, knowledge sharing, and advocacy. There are numerous other water management focused global think tanks, such as the World Water Council, that support active stakeholder engagement to address water-linked issues.



3. Circular Packaging

Circular economy has been a widely discussed topic in the context of resource efficiency and plastic waste management. The concept has gained further traction in recent years in the light of escalating waste crisis. In some geographies, such as the European Union (EU), dedicated policy directives have been established to catalyze the adoption of circularity across industrial sectors. The EU Circular Action Plan is a vital aspect of EU's sustainability agenda termed as the



EU Green Deal. EU, along with UNEP and UNIDO (United Nations Industrial Development Organization), has facilitated a Global Alliance on Circular Economy and Resource Efficiency (GACERE)¹³. Currently, 15 countries have partnered in this alliance with EU, including India, Canada, Chile, South Africa, Japan, and Switzerland, among others¹⁴. The World Circular Economy Forum, Platform for Accelerating the Circular Economy and the Ellen MacArthur Foundation are strategic partners for this initiative. With the help of public and private partners, the World Economic Forum launched the Global Plastic Action Partnership in 2018 to accelerate our global response to plastic pollution and transition to a circular economy. Additionally, there are other collaborations, such as Global Partnership on Waste Management, which promotes knowledge sharing on circularity.

4. Smart Agriculture

Sustainable and climate resilient agriculture are crucial enablers in the transition to a low-carbon, sustainable economy. Considering the food security and livelihood implications linked with agriculture, it is vital to support innovation, knowledge sharing, technology access and active engagement in climate-smart and eco-sensitive agricultural practices. This is becoming increasingly important in view of land availability constraints, booming population, declining soil fertility and water scarcity. There are numerous global collaborative initiatives focusing on knowledge sharing and capacity building of various stakeholders in the agricultural value chain. The Global Alliance on Climate-Smart Agriculture is one such platform that focuses on enabling sustainable agricultural practices through a farmer-centric approach¹⁵.



The case of SDG 17: Partnership for the Goals

“It is the long history of humankind that those who learned to collaborate and improvise most effectively have prevailed.”

Charles Darwin



Progress on the ambitious 2030 agenda relies on novel and effective partnerships and collaboration. SDG 17 draws emphasis on systemizing and streamlining collaboration specifically among countries to enable access to capital, technology, capacity, and trade. The Goal also focuses on bringing about policy coherence. It is widely recognized that the success of the Global Goals is possible only through collaboration between businesses, civil society, and policy makers, among others, across boundaries and sectors. SDG 17 is, hence, based on the premise that collaboration and partnerships maximize value creation by enabling pooling of resources, augmenting innovation, sharing risks, and harnessing complementary capabilities. Further, transformative and systemic change can occur only by addressing the root cause of developmental challenges which requires lateral and vertical stakeholder collaboration. The key role played by partnerships in sustainable development include:

1. Policy coherence, standardization of metrics and unified understanding of developmental issues
2. Knowledge sharing enabling amplification of impact
3. Augmented capabilities and resources unlocking enhanced reach and scale
4. Risk sharing to deliver sustainable solutions at scale
5. Maximizing outputs and efficiencies by harnessing synergies
6. Nurturing relationships and unlocking novel partnerships that enable innovation and scale
7. Enabling access to quality and reliable data
8. Harnessing the value of diverse perspectives, experiences, ideas, and approaches towards enabling novel solutions to complex challenges

¹¹ <https://www.unwater.org/about-unwater/>

¹² <https://www.gwp.org/contentassets/05190d0c938f47d1b254d6606ec6bb04/dublin-rio-principles.pdf>

¹³ https://ec.europa.eu/environment/topics/circular-economy_en

¹⁴ https://ec.europa.eu/environment/international_issues/gacere.html

¹⁵ <https://www.fao.org/gacsa/en/>

4 Multistakeholder participatory approach

Who should act and why?

“A holistic approach towards revitalizing shared resources is only possible when you, me and everyone else joins forces to conserve and rejuvenate nature”

Nature is a shared asset and is a fundamental prerequisite for enabling good health, societal wellbeing, financial stability and economic progress. According to a UN study, one quarter of all the deaths each year (amounting to 13 million deaths each year) are linked to environmental risks¹⁶. Recognizing the indispensable role of nature in human health and wellbeing, the UN Human Rights Council has recently declared “access to a healthy environment” as a fundamental human right¹⁷.

We rely on nature for our basic necessities and utilize natural services as sinks for the byproducts of our economic activities (including waste and pollution). Our dependence on nature is absolute and yet we live in times where there is a tangible mismatch between our demands and nature’s ability to supply. It

is pragmatic for us to course correct and focus on adjusting the demand and supply to a state of equilibrium¹⁸.

The premise for a multistakeholder participatory approach

We exercise our collective influence on the biome through the decisions we make through our roles in society and the economy. The complexities of the cause-and-effect conundrum often makes it challenging to ascertain the “where”, “how” and “when” of the repercussions of the decisions we make. While the intricacies of the impact are often unknown, it has been observed that the cost of environmental inaction is often paid by the people who can afford it the least. It is vital for each player in the economy to synergize, collaborate and complement efforts to drive

environmental action. We may play the role of a policy maker, an academican, business executive or a concerned citizen, with each role comes our responsibility to be sensitive to the needs of our environment and appropriately inform our decision-making process. Our decisions, in turn, have a bearing on the decisions made by other stakeholders in the economy. For the purpose of this whitepaper, the stakeholders in the economy have been broadly categorized into the Government, private sector entities and the civil society.

Who are the stakeholders?



¹⁶ <https://www.who.int/publications/i/item/9789240000377>

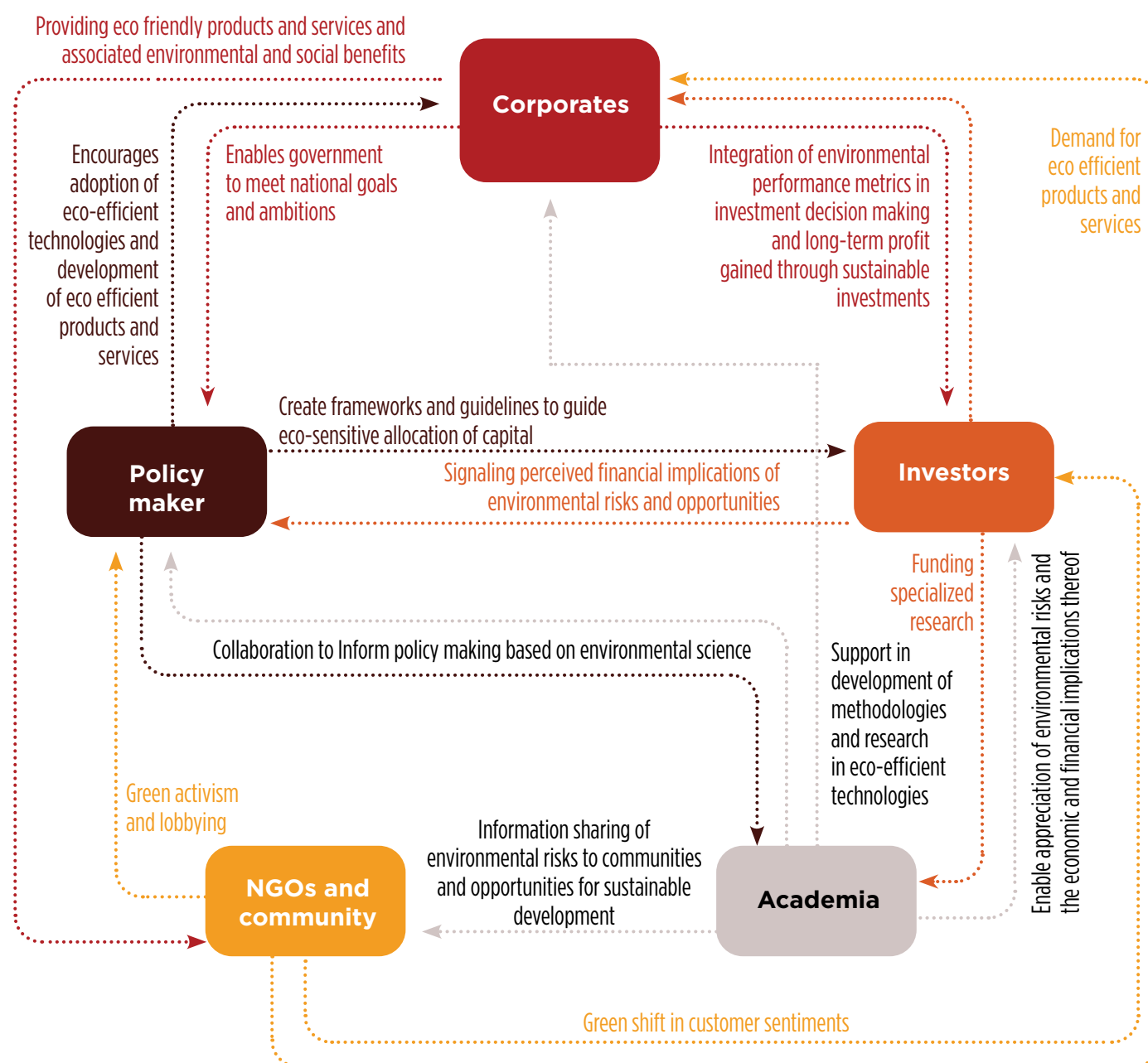
¹⁷ <https://news.un.org/en/story/2021/10/1102582>

¹⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957629/Dasgupta_Review_-_Headline_Messages.pdf

Collective resolve and complementary actions by each of these stakeholders is critical to create an environmental movement that mitigates the damage exerted on natural services. In a utopian scenario, each stakeholder would recognize the need, appreciate the science, and proactively collaborate with other relevant

stakeholders to ensure compatibility of decision-making with the needs of the environment. The figure below illustrates this scenario, where unified understanding and concerted efforts creates an enabling environment for embedding sustainable actions in existing economy.

The environmental action ecosystem: the utopian scenario



Sustainability 100+ initiative provides a platform to enable multi-stakeholder dialogue, watch this video to find out more:
<https://www.youtube.com/watch?v=YYpMyKn9YrM>

A fracture in any of these interlinkages has the potential to stall or derail actions supporting environmental conservation. To understand the indispensable role of a holistic multistakeholder-centric approach, the potential role of each stakeholder group has been further explored in the section subsequently.

Government's role in driving environmental action

The fiduciary responsibility of the government and policy makers is to drive social progress and sustainable economic development. Furthermore, the government has significant influence on changing the course of action across stakeholder groups. Some key actions through which the government can nudge other stakeholders to engage in environmental action includes:

- Policy reforms integrating sustainability considerations across economic activities
- Budgetary allowance encompassing programs to support environmental conservation and rejuvenation
- Facilitation of awareness building for all the stakeholders
- Incentivization of environmental action
- Potential to institutionalize environmental action through existing capabilities, infrastructure, and partnerships e.g., driving social and environmental justice through existing legal instruments, embedding environmental considerations in regulations around key financial instruments, etc.
- Authority to apply penal provisions to curtail actions detrimental for the environment and society
- Creating regulatory frameworks and institutions to support access to technology and finance
- Building systemic accountability and transparency through effective environmental governance
- Enabling effective data management from grassroot to apex level



The role of private sector

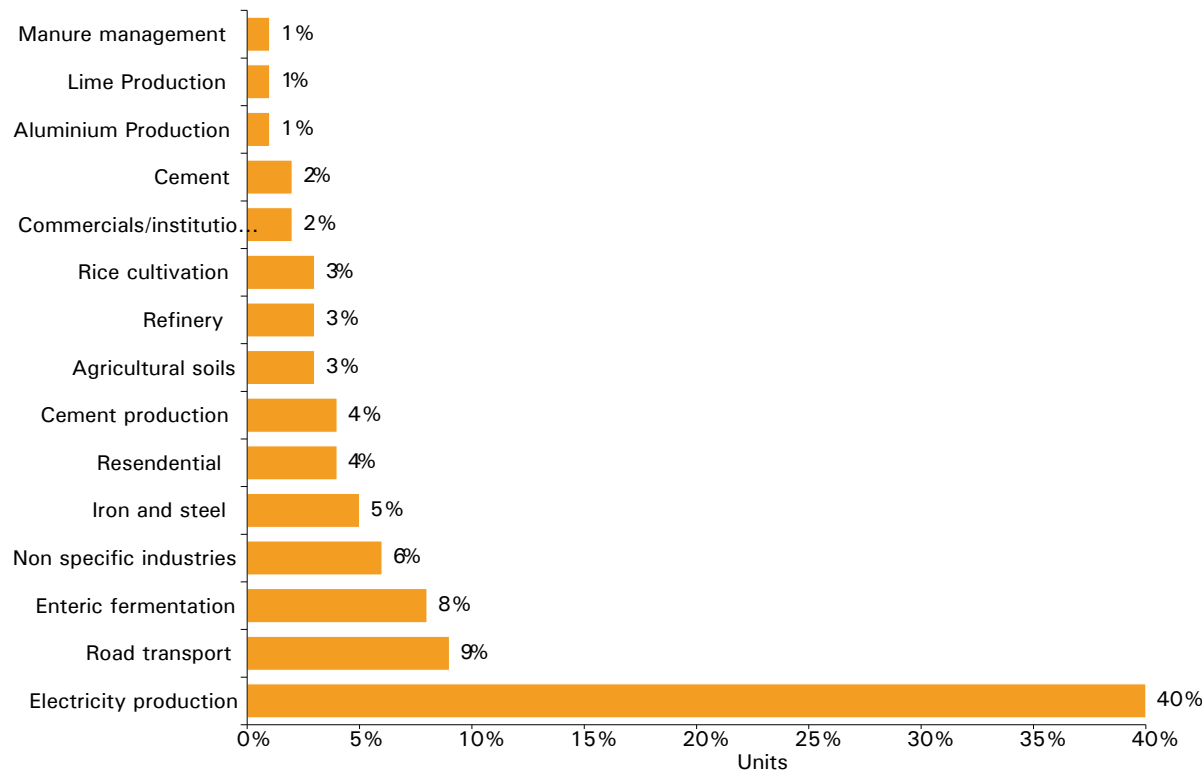
From the private sector perspective, the risk and opportunity narrative to environmental action is compelling. Further, certain businesses can drive greater impacts in specific environmental action areas attributable to the nature of their business and their reliance on natural resources. This has been further explored through the lens of the four thematic pillars of the whitepaper.

- **Climate change:** Private sector can drive actions through business operations in distinct and diverse ways. In the area of climate change mitigation, energy intensive sectors can make substantial contributions by decarbonizing their operations. Sectors such as energy, automobile, cement, iron, and steel can play a vital role in furthering the global decarbonization agenda. For these sectors, engagement in climate action is also crucial from a transitional climate risk management perspective. The financial sector can

also nudge positive actions among corporates by incorporation of climate risk considerations in their lending and investment decision-making. Private sector, irrespective of scale and nature, must incorporate climate adaptation in their strategic planning endeavours and contribute towards business sustainability and economic stability. Further, climate action unlocks immense opportunities in specific sectors, such as clean energy, sustainable agri-business, eco-efficient technologies, among others. Startups and incubators in these sectors can be important enablers of decarbonizing the economy.

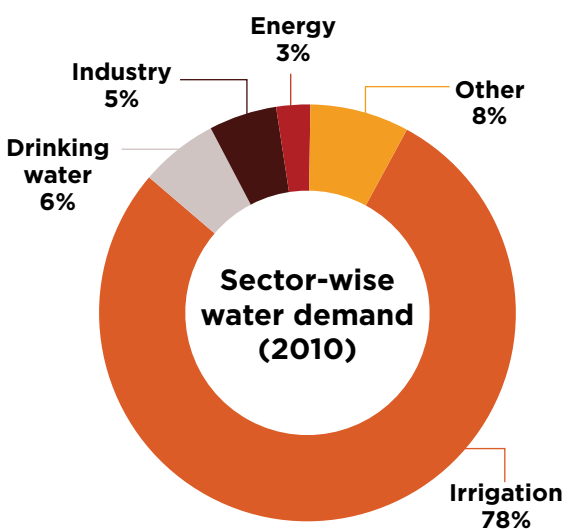
Discover more about the role of electric vehicles in decarbonizing transport sector at <https://www.sustainability100plus.com/msite/abinbev-video-page/decarbonizing-transport-sector-the-role-of-electric-vehicles-6940761.html>

Top 15 emission categories in CO₂ equivalent



- **Water stewardship:** As of 2010, agriculture sector consumed 78% of the total water used in India, with 45% of total irrigation requirements sourced from groundwater. Any deficit in water supply has a profound impact on the operations of all stakeholders. Instances of forced shutdowns of power plants and company operations during times of water scarcity have regularly been witnessed in the past. Corporates can implement new technologies and reduce leaks in the infrastructure to improve water efficiencies in their business. With the growing economy fueling demand for industries and energy, the IEA World Energy Outlook anticipated India's total energy-related water withdrawals to almost double by 2040¹⁹.

Learn more about translating water stewardship vision to action at <https://www.sustainability100plus.com/msite/abinbev-video-page/sustainability-class-for-aam-janta-episode-7-6697511.html>



- **Smart agriculture:** The agriculture sector is mired in environmental challenges, such as water stress, extreme weather events, deteriorating

soil fertility and increasing weather variabilities, among others. These risks, coupled with the socio-economic vulnerabilities of the farming communities, highlights the need for innovative and cost-efficient solutions. Private sector players have a vital role to play in supporting the transformation of the agricultural sector by infusing capital for sustainability-focused agricultural innovation, digitalization of farming practices and delivering eco-efficient technologies. Agri-businesses and startups are well positioned to leverage their existing capabilities to deliver climate compatible solutions, water-efficient, soil-friendly and cleaner technological alternatives. Further, the private sector also has the potential to drive responsible consumerism through its brand campaigns. The financial sector, too, has a vital role to play in ensuring the reallocation of capital to smart agricultural business to support the growth and development of sustainable agri-enterprises and business models.

Please explore agriculture sector's transition to sustainable sourcing at <https://www.sustainability100plus.com/msite/abinbev-video-page/masterclass-4-transition-to-sustainable-sourcing-in-agro-6606071.html>

- **Circular packaging:** Packaging waste, particularly made from plastic, has quickly become a by-product of our lifestyles, and only seems to increase with growing wealth and affluence. Around 43% of manufactured plastic in India is used for packaging, mostly single use. According to CPCB, an estimated 3.3 million metric tons of plastic waste was generated in 2018-19, translating to 9,200 tons per day (TPD). However, its earlier projections

19 <https://iea.blob.core.windows.net/assets/5a314029-69c2-42a9-98ac-d1c5deeb59b3/WEO2015.pdf>

in 2015, based on 60 cities in India, estimated generation of around 25,940 TPD, underpinning the issues with plastic waste data estimation²⁰. CPCB has found the collection efficiencies to be just over 80% in 2014, with only 28.4% of this collected plastic waste being treated and the remaining being disposed in landfill or dumping areas. Recycling of plastic can be an expensive affair, especially with multi-layered plastics seen prominently used for food packaging. However, businesses and local bodies have an opportunity to turn this activity into a sustainable business model. Self-sustained Dry Waste Collection Centers have already been established in Bengaluru, providing impetus for other Urban Local Bodies to follow suit and establish monetized collection model. With the Plastic Waste Management Rules 2021 extending applicability of these rules to brand-owners and plastic waste processor (including recycler and co-processor), private sector has an incentive to responsibly partake in reducing the hazard of plastic and packaging waste. These rules will have a significant impact across the entire plastic manufacturing value chain, including over 40,000 processing units²¹. The community can further contribute to this movement by ensuring that the waste collection infrastructure setup by the government and private sector is utilized effectively.

Learn more on how to rethink packaging for a waste-free future at <https://www.sustainability100plus.com/msite/abinbev-video-page/rethinking-packaging-for-a-waste-free-future-6656221.html>

Civil society's role in bringing about change

The civil society has the most significant potential to drive transformational

change and collaboration. The requisite organization, scale and capacity for achieving progress on the Global Goals is reliant on the mobilization of civil society in environmental action. Academia, NGOs and individuals together can ignite policy dialogue, participate in advocacy and create the foundation for a people's movement to drive environmental action. Some potential areas of engagement and action for the civil society includes:

- Development and delivery of environment-linked technical expertise through academic research
- Articulation and advocacy of ground level realities, environmental challenges and social challenges linked with environmental risks
- Sharing of rich cultural knowledge and developing culturally compatible environmental action programs enabling wide engagement
- Navigating the complexities of intervention delivery at the grassroots level and customization of programs to the local context
- Facilitation of capacity building and awareness building exercise
- Environmentally conscious consumerism and creating demand for eco-friendly products/services
- Enabling data collection and metrics through active engagement in monitoring local environmental metrics
- Support crowdfunding, microfinance and blended finance-backed mechanisms to deliver socio-environmental impact

Please explore more on how civil society can engage through responsible consumerism at <https://www.sustainability100plus.com/msite/abinbev-video-page/sustainability-for-the-aam-junta-6605501.html>

²⁰ <https://www.downtoearth.org.in/blog/waste/draft-plastic-waste-management-rules-2021-addressing-the-bigger-problem-75939>

²¹ <https://plastindia.org/pdf/Indian-Plastics-Industry-Report-2018-2.pdf>



5 The Prevailing Response

What is currently being done by each stakeholder group and why?



Aaditya Thackeray
Cabinet Minister of Tourism & Environment for the Government of Maharashtra

“Our state’s Majhi Vasundhdara actually focuses on local action for climate change”

A dynamic environment, shifting mind sets and the quest for inter-generational justice has spurred stakeholders to action.

The materialization of environmental risks and the emergence of opportunities has nudged the government, private sector and civil society to embrace an environmentally conscious approach to decision making.²² This section presents a glimpse of some actions being undertaken by these stakeholders across the thrust areas of the whitepaper.

The Government

The Indian government has been steadfast and proactive in its approach to environmental action. It has curated numerous policies that aim to navigate the complexities of balancing social and economic development along with environmental action. The Ministry of Environment, Forest and Climate Change (MoEFCC), the Ministry of Water Resources, River Development and

Ganga Rejuvenation, and the Ministry of Agriculture & Farmers’ Welfare are some of the key ministries involved in the country’s environmental action efforts. A dedicated Prime Minister’s Council on Climate Change (PMCCC) has been established to allocate dedicated governance oversight in the country’s climate action plan. The country has a comprehensive National Action Plan for Climate Change (NAPCC) comprising of eight missions that cut across the themes of climate change mitigation and adaptation. The national level climate policy directives are cascaded to the state level through the State Action Plans on Climate Change (SAPCC). In addition to the national mission, the country also employs carbon pricing-based interventions to catalyze the transition to a low carbon economy.

The country’s policy design has focused

on enabling positive environmental and developmental outcomes by tapping into the synergies inherent in the SDGs. These policies and programs have enabled decarbonization of the economy, while extending access to vital resources such as energy and water. For e.g., the PM KUSUM Yojana incentivizes the uptake of solar powered pumps for farmers by extending significant subsidies. The program also aims to convert 1.5 million grid connected agriculture pumps to solar by 2022. It has been forecasted that this intervention will lead to savings of 27 MtCO₂ emissions per annum at the national level²³. In the area of climate action, India has proactively facilitated global multilateral coordination towards climate change mitigation and adaptation. India has been at the forefront of the International Solar Alliance (ISA) that aims to overcome challenges regarding the uptake and scalability of solar-based energy solutions. The launch of ISA is a landmark for India as it is the first international intergovernmental alliance headquartered in the country. The ISA framework has recorded global

acceptance, with 70 countries of the 88 signatories ratifying the framework. To mobilize multilateral efforts in climate change adaptation, India has initiated the formation of the global Coalition for Disaster Resilient Infrastructure (CDRI). CDRI aims to provide technical support and stimulate financial investments in disaster resilient infrastructure. In addition to these multilateral efforts, India has also entered various bilateral arrangements with other countries for environmental action.

The country has also developed numerous indices and dashboards to pin accountability and enable effective environmental governance. The NITI Aayog SDG Index and the Comprehensive Water Management Index (CWMI) are examples of national efforts to track performance on various environmental focused metrics at the state level.

State governments are actively working on orienting developmental programs to the SDGs. Explore state level actions in Haryana through the link: https://youtu.be/_1Z4EpYnlsc

Glimpse of National progress on the Goals

The NITI SDG index monitors progress on the Goals at the national level and assigns scores for each state and UT against each of the 17 Goals. The Index cover 115 indicators across 70 targets pertaining to the first 16 Goals. The raw data across these indicators is normalized to rescale the performance against the targets and arrive at a composite score. The index serves as a vital tool to track progress against the SDGs across the nation.

SDG In focus	Leading states	Lagging states	India score
2 ZERO HUNGER	Kerala and Goa	Bihar and Jharkhand	47/100
6 CLEAN WATER AND SANITATION	Goa and Telangana	Assam and Rajasthan	83/100
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	Tripura and Nagaland	Gujarat and Goa	74/100
13 CLIMATE ACTION	Odisha and Kerala	Bihar and Jharkhand	54/100

22 https://iea.blob.core.windows.net/assets/2571ae38-c895-430e-8b62-bc19019c6807/India_2020_Energy_Policy_Review.pdf

23 https://unfccc.int/sites/default/files/resource/INDIA_%20BUR-3_20.02.2021_High.pdf



Renewable energy and clean energy alternatives



Key central legislations and NAPCC missions

- National Solar Mission
- National Electric Mobility Mission Plan

Key policies, schemes and projects

- National Wind Energy Programme
- National Policy on Biofuels
- PM-KUSUM solar pump sets scheme
- Renewable Purchase Obligations (RPOs)
- Renewable Energy Certificates (RECs)
- National E Mobility Programme
- Faster Adoption and Manufacturing of Hybrid and EV (FAME) India Scheme
- Green Energy Corridor
- Electric Vehicle (EV) policy
- Emission Standards and Auto Fuel Policy
- Ethanol Blended Petrol Programme (EBP)

Examples of some state missions, policies and schemes

- Haryana State Renewable Power Policy
- Karnataka Solar Policy
- Telangana Electric Vehicle and Energy Storage Policy
- Maharashtra Wind Power Policy
- Maharashtra Solar Power Policy
- Maharashtra State Renewable Energy Policy

Energy efficiency



Key central legislations and NAPCC missions

- Energy Conservation Act, 2001
- National Mission for Enhanced Energy Efficiency (NMEEE)

Key policies, schemes and projects

- PAT Scheme
- Standards and Labelling Scheme
- Market Transformation for Energy Efficiency initiative
- UJALA: Unnat Jyoti by Affordable LEDs for All
- Street Lighting National Programme
- Super-Efficient Equipment Programme (SEEP)
- National Programme on Energy Efficiency and Technology Upgradation in SMEs
- Development of energy conservation guidelines for MSMEs
- Framework for Energy Efficient Economic Development (FEEED)
- Municipal Energy Efficiency Programme (MEEP)
- Energy Efficient Buildings Programme
- Pradhan Mantri Sahaj Bijli Har Ghar Yojana –Saubhagya
- National Energy Efficient Fan Programme (NEEFP)

Examples of some state missions, policies and schemes

- Haryana State Solar Mission and Energy Efficiency Programme notifications
- Karnataka Renewable Energy Policy
- Maharashtra State Energy Conservation Policy

Afforestation



Key central legislations and NAPCC missions

- The Forest (Conservation) Act, 1980
- Green Indian Mission

Key policies, schemes and projects

- National Afforestation Programme under National Afforestation and Eco Development Board
- Twenty Point Programme
- Namami Gange (forestry intervention)
- National Green Highways Mission
- Large Forest Fire Monitoring Programme

Examples of some state missions, policies and schemes

- Haryana State Forest Policy
- Haritsena Maharashtra Mission
- Telanganaku Haritha Haram
- Karnataka Forest Act, 1963
- Tripura Forest Environmental Improvement and Poverty Alleviation Project (TFIPAP)

Climate adaptation



Key central legislations and NAPCC missions

- National Disaster Management Act, 2005

Key policies, schemes and projects

- National Disaster Management Plan (NDMP), 2019
- Flood Management Programme (FMP)
- National cyclone risk mitigation project
- Flood Management and Border Areas Programme (FMBAP)
- National Guidelines for Preparation of Action Plan – Prevention and Management of Heat Wave
- Ocean climate change advisory services under the Deep Ocean Mission

Examples of some state missions, policies and schemes

- Haryana State Disaster Management Authority
- Karnataka State Disaster Management Plan
- Maharashtra State Disaster Management Plan
- Telangana Climate Change Adaptation Policy for Industrial Areas

Water access and management



Key central legislations and NAPCC missions

- National Water Mission
- Jal Shakti Abhiyan
- Jal Jeevan Mission
- The Water (Prevention and Control of Pollution) Act, 1974

Key policies, schemes and projects

- Atal Bhujal Yojana (community driven ground water management)
- Ganga rejuvenation programme

Examples of some state missions, policies and schemes

- Action plan for River Yamuna
- Karnataka State Water Policy
- Karnataka Groundwater Act 2011
- Telangana Mission Bhagiratha
- Telangana Water, Land and Trees Act, 2002 (adapted from Andhra Pradesh Act)
- Maharashtra State Water Policy

Sustainable agriculture



Key central legislations and NAPCC missions

- National Mission on Sustainable Agriculture

Key policies, schemes and projects

- National Food Security Mission (NFSM)
- Bringing Green Revolution to Eastern India (BGREI)
- Mission for Integrated Development of Horticulture
- National Bamboo Mission (NBM)
- Pradhan Mantri Krishi Sinchayee Yojana (aims to drive water efficiency and conservation)
- Ration Balancing Programme (RBP) (focus on optimum feeding of animals)
- Soil Health Card scheme
- Gramin Krishi Mausam Seva (GKMS)
- National Agroforestry Policy, 2014

Examples of some state missions, policies and schemes

- Haryana State Agricultural Policy
- Karnataka Agriculture Policy
- Karnataka Agriculture Mission
- Telangana's 'Mission Kakatiya' (irrigation)
- Maharashtra State Agriculture Mechanization Scheme
- Maharashtra Chief Minister Water Conservation Programme

Packaging waste management



Key central legislations and NAPCC missions

- Swachh Bharat Mission
- Bureau of Resource Efficiency (BRE)
- Solid Waste Management Rules, 2016
- Plastic Waste Management Rules, 2021

Key policies, schemes and projects

- National Policy on Resource Efficiency/Circular Economy
- Guidelines for the disposal of non-recyclable fraction (multi-layered) plastic waste
- Guidelines for co-processing of plastic waste in cement kilns
- Consolidated guidelines for segregation, collection, and disposal of plastic waste
- Guideline Document: Uniform Framework for Extended Producers Responsibility
- Standard Guidelines for Single-Use Plastic (issued to all states/UTs)

Examples of some state missions, policies and schemes

- Himachal Pradesh Non-Biodegradable Garbage (Control) Act, 1995
- Madhya Pradesh Jaiv Anaashya Apashista (Niyantaran) Adhiniyam, 2004
- Maharashtra Non-Biodegradable Garbage (Control) Act, 2006
- Punjab Plastic Carry Bags (Manufacture, Usage and Disposal) Control Act, 2005

The Private Sector

Indian private sector engagement in environmental action has been spurred by a combination of factors, such as regulatory impetus to adopt an environmentally conscious approach and rising external stakeholder interest in environmental performance. In contrast to the early 2000s, wherein environmental action was largely a regulator-driven agenda, we see Indian conglomerates actively engaged in proactive environmental initiatives. Corporate non-financial reporting mandates, such as the Business Responsibility Report (BRR) in 2012, has also propelled corporates to engage in environmental performance monitoring and strategic planning. The market coverage of

BRR mandate was enhanced in a phased manner from year 2012 to year 2019. Today, the top 1000 companies in India (by market capitalization) are required to publish BRRs as part of their annual disclosures. A noteworthy shift in the Indian corporate landscape is the increasing engagement of the financial sector in integrating environmental performance in their evaluation. This has been primarily motivated by the global developments that link environmental risks to financial stability. The increasing interest of private sector and the country’s ambitions in climate action also led SEBI to publish disclosure requirements for issuance and listing of green bonds²⁴.

Thrust area	Glimpse of private sector initiatives	Leading practices
Climate action	<ul style="list-style-type: none">Carbon Disclosure Project (CDP): The project enables companies to make comprehensive disclosures of their carbon inventory. In FY2020, around 220 Indian companies participated in CDP.Science Based Targets initiative (SBTi): The initiative enables corporates to undertake ambitious GHG reduction targets based on climate science and aligned with the Paris Agreement. As on 2021, globally 2,007 companies are taking action aligned to SBTi criteria. In India, 64 corporates have subscribed to SBTi, out of which 34 companies have committed to take up science based targets and 28 companies have set targets already²⁵.Indian corporates are also engaged in global initiatives such as RE 100 and EP 100	<ul style="list-style-type: none">Comprehensive GHG inventorying encompassing Scope 1, Scope 2 and Scope 3 emissionsScience based climate target setting and carbon neutrality commitmentEnergy efficiency programsClean and alternate energy adoptionClimate risk assessment (operational and portfolio level)Climate-linked financial disclosure

Champion story: Gramoorja promotes decarbonization efforts by providing sustainable and community driven energy solutions. Find out more on the impact delivered in climate action at https://youtu.be/649MWQRV_eY

24 https://www.sebi.gov.in/sebi_data/meetingfiles/1453349548574-a.pdf
25 <https://sciencebasedtargets.org/>

Thrust area	Glimpse of private sector initiatives	Leading practices
Water stewardship	<ul style="list-style-type: none">CEO water mandate is an initiative spearheaded by UN Global Compact initiative aimed at stimulated corporate leadership engagement in water stewardship. Globally, 205 companies have endorsed the mandate. Further, there are 14 Indian companies that have endorsed the CEO water mandate.	<ul style="list-style-type: none">Water neutrality and positivity pledgesWater risk assessmentApplication of 3R principle of reduce, reuse and recycleWater body rejuvenation projectsGround water recharge focused interventionsZero liquid discharge capabilities

Champion story: The Rainwater Project works towards a community-based water stewardship program. Find out more about their water conservation efforts at <https://www.youtube.com/watch?v=benTuj1NCKM>

Smart agriculture	<ul style="list-style-type: none">Indian agribusinesses have been actively engaged in fostering sustainable food value chains. Companies have been focusing on augmenting the adaptive capabilities of the farming community along with development of climate-smart and eco-efficient products. A gradual increase in the provision of bio-control based solutions and organic farming focused solutions have also been noted.The Sustainable Trade Initiative is a regional public private collaboration for sustainable landscape governance for tribal farmers. This initiative enables cooperates to engage with Verified Sourcing Areas (VSA). Such initiatives play a central role in creating sustainable agricultural value chains.	<ul style="list-style-type: none">Climate smart agricultural products and services (seeds, crops, fertilizers etc.)Enhancing access to resource efficient technologies for small landholdersPromoting uptake of clean technological alternatives for meeting energy and water needs
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Champion story: Kisan Hub is leading the way in digital technology-backed transformation of crop management. Discover their impact at <https://www.youtube.com/watch?v=LrQelzS4KWY>



Jan Craps
CEO & Co-Chair
Budweiser Brewing
Company APAC

“We try to adapt our strategies with different agencies and government to align with what is important for the environment and communities where we operate”



Kartikeya Sharma
President - India & South
East Asia, AB InBev

“Our efforts are guided by our ambitious 2025 Sustainability Goals. Sustainability is not just part of our business, but, is our business”

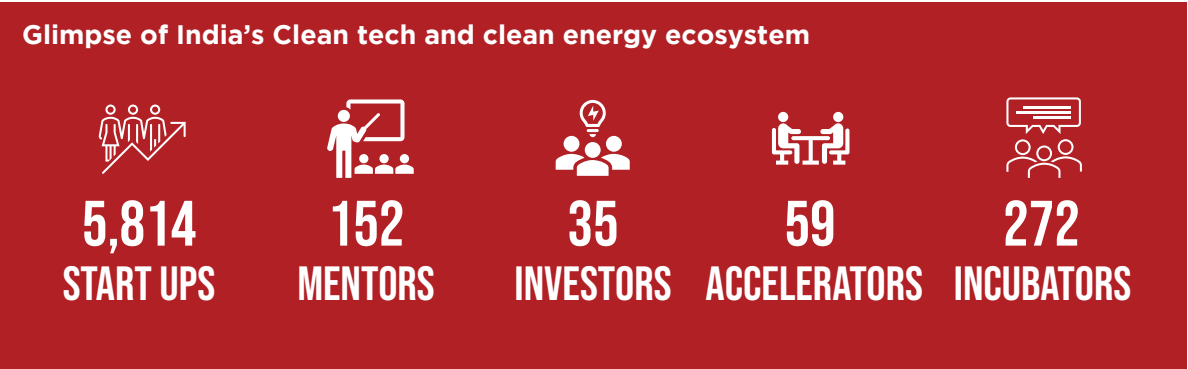
Thrust area	Glimpse of private sector initiatives	Leading practices
Circular packaging	<ul style="list-style-type: none"> Companies are targeting on reducing the use of virgin material in packaging and also trying to increase the post-consumer reusability and recyclability of the packaging material. Corporates have also been focused on designing packaging that is recyclable, compostable or biodegradable 	<ul style="list-style-type: none"> Increased usage of post-consumer recycled material in new packaging Application of life cycle approach to packaging material development to enhance reusability or returnability Targets on reduction in usage of virgin plastic and increasing recycled content

Champion story: Recykal, India's first waste commerce company, is transforming the waste management ecosystem. Find out more about their impact at <https://youtu.be/9Oie9yrMEXA>

The current clean technology startup ecosystem

The ecosystem of clean tech and clean energy startups play an indispensable role in enabling access to innovation and technologies. Startups can support the value chains by providing clean technology innovation and bridge existing gaps in services and products required for the sustenance of a green economy. A thriving startup ecosystem anchors the growth

and scalability of emerging and novel business models. Under the Department of Industry and Internal Trade, the Start Up India Action Plan aims to foster a conducive ecosystem for India's fledgling startup ecosystem. As part of this plan, India's largest entrepreneurial portal has been developed, which includes various sustainability focus sectors²⁶.



Champion story: The startup ecosystem has been at the forefront of anchoring environmental action. Agri-tech startup Fasal is one such example. Find out more at <https://youtu.be/d-U2d7jYm5A>

²⁶ <https://www.startupindia.gov.in/content/sih/en/search.html?sectors=5f48ce5f2a9bb065cdfa1767%205f48ce5f2a9bb065cdfa17be%205f48d0ca2a9bb065cdfc47bd&roles=Incubator&page=0#>

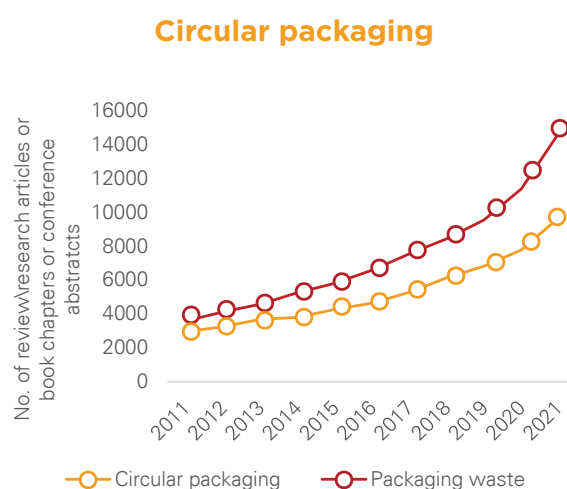
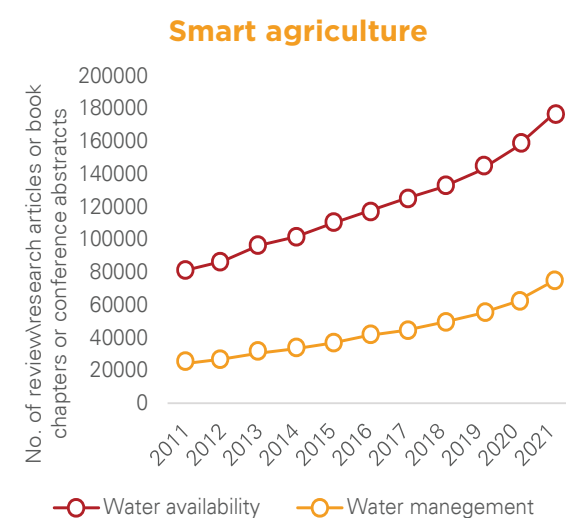
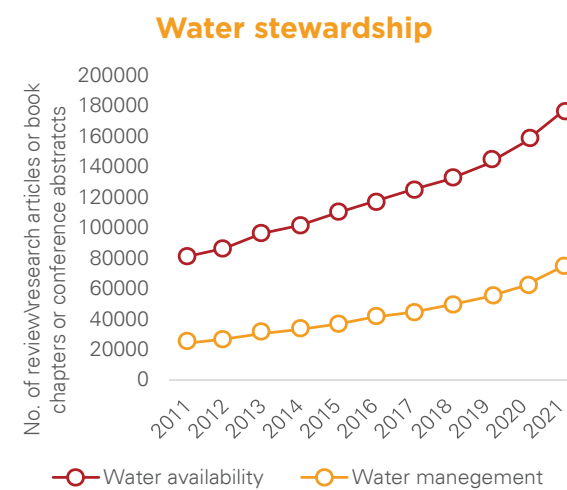
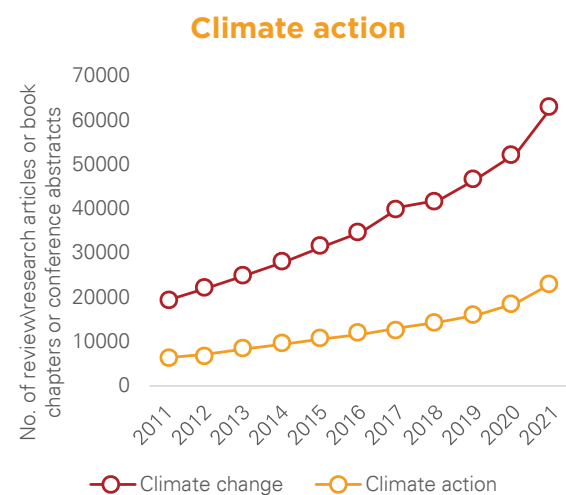


The Civil Society

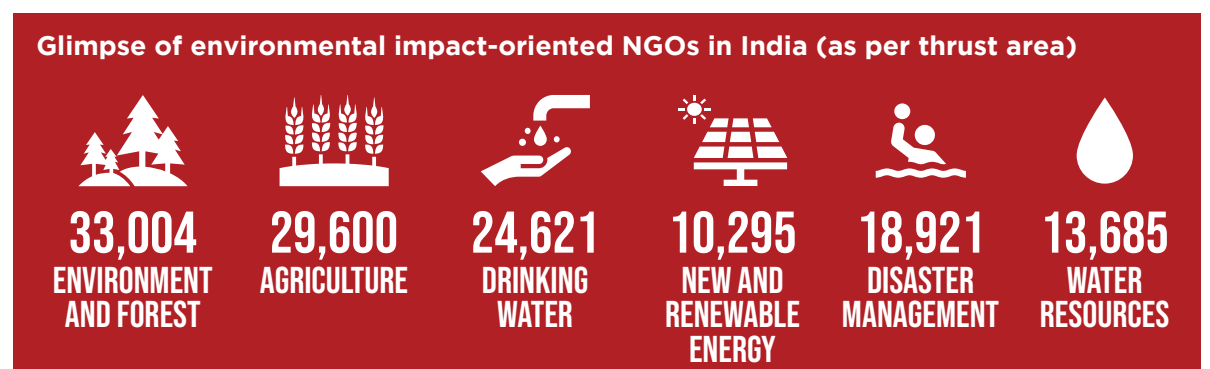
Shared community experiences and cultural beliefs have often been the precursors to environmental activism. Academia and NGOs play a vital role in bringing to light the challenges imposed by environmental risks on local communities and individuals. Further, the academia has a central role to play in providing evidence on the science of environmental risks and linked impacts. Beyond the fundamental science, academia explores the cause and effect of environment risks and strives to link them to economic activities. Increased research activity in a particular domain is often indicative of the potential interest

and implications of the topic on human wellbeing and economic activity. In this context, it is noteworthy that research activity across the pillars of this whitepaper over the past decade yields upward trends²⁷. The trend line is steeper for emerging areas, such as circular economy, which has gained prominence recently. Furthermore, the rise is seen to be steeper across the thrust areas post-COP21, held in Paris, pointing towards increased international dialogue in climate change, prompting a corresponding increase in research activity.

²⁷ This data was obtained through thrust area-specific multiple keyword search on Science Direct (<https://www.sciencedirect.com/>)



NGOs have the potential to mobilize resources and create awareness to ensure grassroots level transformation. For a multistakeholder participatory approach, NGOs are the change agents who can facilitate collaboration, active engagement and an outcome-oriented approach to environmental action. NGOs are at the forefront of facilitating and monitoring community driven environmental interventions, environmental literacy-focused programs and other interventions that require on ground support and oversight.



Champion story: Academicians have been actively engaged in environmental action. Prof. Saji Varghese's work in making straws from coconut leaves is an exemplar of the potential of academia-led eco-innovation. Please explore the story further at <https://youtu.be/Blzt7EATca>

6 ACT: Ascertain, Collaborate, Transform

What is the imperative for enhancing stakeholder involvement?

“Transformative change is possible – we and our descendants deserve nothing less.”

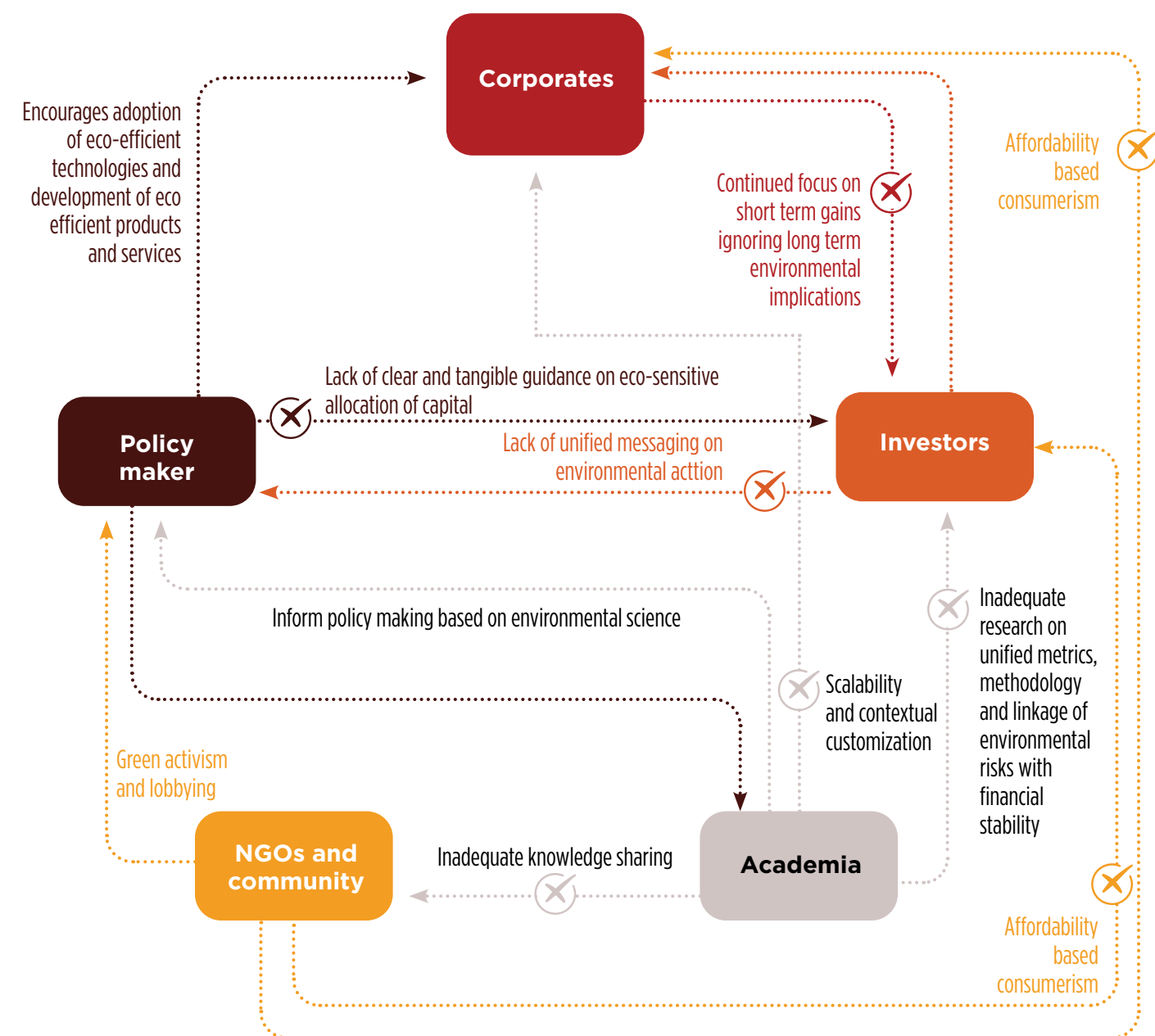
-The Dasgupta review, 2021

While progress is being made to achieve national and global sustainability aspirations, stakeholders have a higher propensity to work in silos. This limits the potential for effective implementation and delivering impact at scale. The lack of a cohesive approach to collaborative partnerships can break the interconnecting pathways in the stakeholder ecosystem (as can be seen in the figure on page 33). This observed discord is a product of multifaceted barriers encountered by each stakeholder. Further, the interplay of individual barriers faced by diverse stakeholders creates larger hurdles to collective action.

Overcoming these barriers is imperative to unlock the potential of complementary resources, capabilities and reach. Consequently, understanding the nuances of a multistakeholder participatory approach has become the need of the hour. The sustainability 100+ initiative aims to address this by bringing stakeholders together on a single platform to mutually discuss and appreciate common challenges. The dialogue facilitated by the programs under this initiative are envisioned to stimulate thought leadership and a multistakeholder-enabled approach to sustainable development.



The current discord in environmental action



We conducted a limited and balanced stakeholder engagement exercise to identify the drivers and barriers to environmental action for the three broad stakeholder groups. This consultation also explored stakeholder perceptions on overcoming barriers and further capitalizing on the drivers. An overview of the findings of the consultation process are presented below.

Stakeholder: Government



Aspirations and drivers

- Political will
- Physical impacts of environmental risks
- Global commitments
- Existing policy directives and legislation

Challenges and barriers

- Heterogenous and inconsistent policy application across strata of society as a result of varying context and awareness
- Inability to translate policies into on-ground realities due to capacity gap
- Change management and ensuring program continuity
- Challenges linked to discontinuity of regimes
- Lack of willingness to engage
- Lack of application of scientific evidence in strategic planning and resource allocation
- Receptivity to feedback and incorporation of suggestions
- Cost of the low carbon transition
- Inconsistent enforcement of existing regulations across geographies
- Capital lock-in and stranded assets

Transformative interventions

- Awareness and capacity building
- Multistakeholder engagement with a focus on goal alignment
- Scaling and replication of environmental interventions

Discover transformative water stewardship initiatives spearheaded by consistent stakeholder action in the state of Telangana at <https://www.youtube.com/watch?v=QeUWaRnrsfM>

Stakeholder: Private



Aspirations and drivers

- Policy impetus
- Cost efficiencies
- Regulatory pressure
- Investor pressure
- Reputational co-benefits
- Senior management commitment and enabling alignment to core corporate values and purpose
- Board engagement in corporate environmental performance
- Emerge as pioneer and differentiator
- Sector specific cost efficiency focused technological innovation with environmental benefits
- Staying relevant and future ready
- Rising customer demand for green products and services

Challenges and barriers

- Lack of policy coherence and complexities in implementing policy-compatible interventions
- Methodologies and frameworks to translate targets to realities
- For the financial sector, availability of quality and reliable data on environmental performance of clients
- Unavailability of robust climate models and lack of depth in understanding on climate scenario analysis
- Quantification and standardization of GHG inventorying process of certain financial services
- Integration of environmental risks in ERM
- Market maturity from an environmental risk appreciation perspective
- Time horizon of environmental risk materialization
- Disconnect of community
- development programs with the company's environmental action agenda
- Capital lock-in obsolete clean technological interventions
- Methodologies for clean technological prioritization
- Transitioning complex livelihood dependencies with existing technologies especially for shop floor workforce
- Uncertainly linked to feasibility of target achievement
- Capital lock-in and stranded assets
- Lack of technological maturity and cost viability
- Lack of future ready infrastructure in the public sector
- Vulnerability of supply chain as a result of supply dependencies
- End-of-life challenges with green solutions

Transformative interventions

- Awareness and capacity building
- Government impetus for phasing out legacy equipment and giving cost incentives for clean technological adoption in process lines
- Knowledge sharing and transparency
- Transparency with stakeholders
- Incentives for implementation of ecofriendly initiatives till market becomes mature
- Infusing private capital to priority sectors that have high impact on decarbonization
- Guidance on disclosures, unified metrics and calculation methodologies
- Limited but mandatory disclosure of environmental performance by MSMEs and other private companies not covered under the BRR/BRSR mandate
- Decentralization and privatization of large scale infrastructure
- Policies and mechanisms to support development of clean tech ecosystem
- New innovations for clean and green solutions
- Enhance cross learning and efficiency improvements through PPPs
- Partnership platform to enhance visibility
- Strengthening local technology ecosystem

Discover more on leading initiatives in climate action with a focus on Maharashtra at <https://www.youtube.com/watch?v=FMU6cUaOj78>

Stakeholder: Civil society



Aspirations and drivers

- Political will
- Budgetary allowances at the center and state level, coupled with effective central and state level environmental governance augmenting awareness

Challenges and barriers

- Lack of policy coherence and non-homogenous application of policies based on local regulators
- Technology monopolization
- Replicability and scalability of technological interventions to varying local challenges
- Cost as a barrier to access to technology
- Lack of willingness of civil society
- Environmental action often a branding and marketing agenda for corporates collaborating with NGOs and academia, making it challenging to drive meaningful environmental impact
- Time intensive administrative tasks required to attract fund through collaborations
- representatives to collaborate with the local government

Transformative interventions

- Capacity building
- Technical support and knowledge transfer
- Creating a people's movement towards increasing the willingness of stakeholders to engage
- Employee engagement in corporate environmental action projects to enable collaboration of executives with local communities for environmental conservation



Dushyant Chautala
Deputy Chief Minister of Haryana

“Make climate change part of school curriculum”



Dia Mirza
Actor, Producer, UN Environment Goodwill Ambassador & United Nations Secretary-General Advocate for Sustainable Development Goals

“I am learning to be a better citizen of the planet than ever before”



Sonam Wangchuk
Director, Himalayan Institute of Alternatives

“Every drop in the ocean counts. I request each and every individual to be part of this wonderful movement and show how the power of individual action can achieve a green planet”



Sam Kimmins
Global Head - RE100 The Climate Group

“We know that energy transition is inevitable”



8 Conclusion

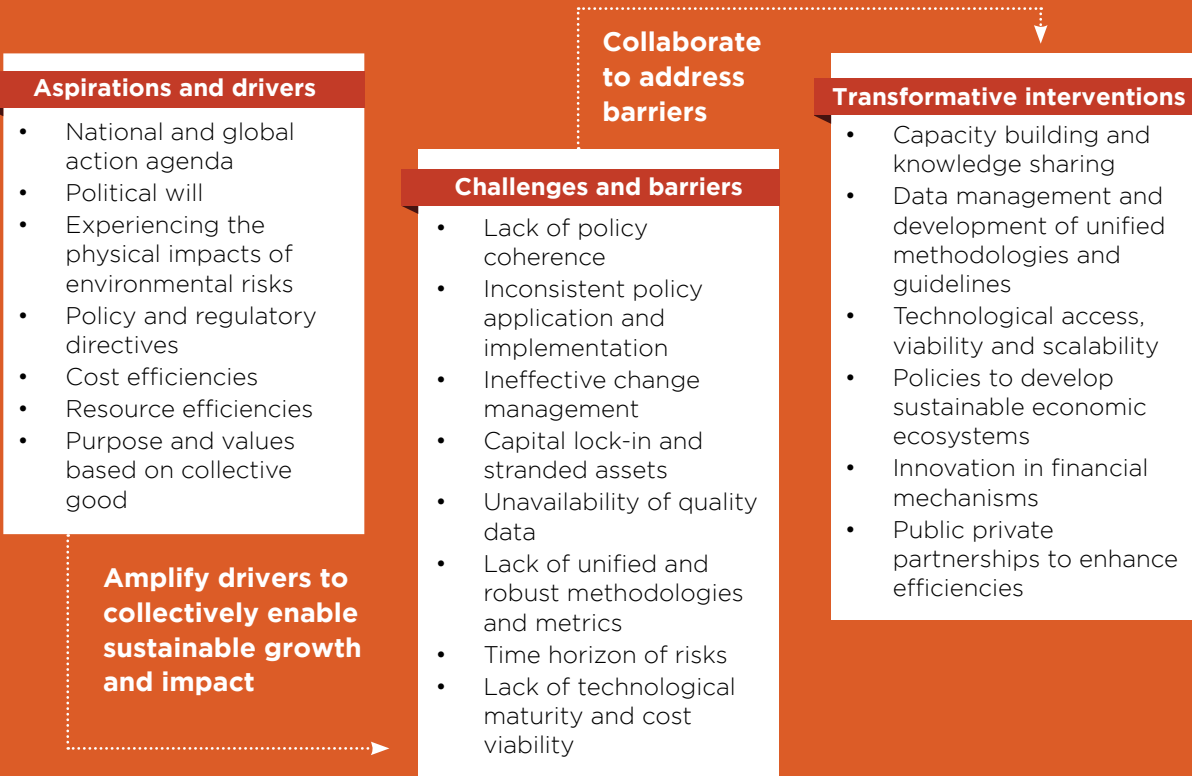
Environmental risks permeate across all stakeholder groups, with impacts experienced across geographies and strata of society. The flip side to the risk narrative is the ocean of opportunities created by the transition to a sustainable future. The Global Goals provide a blueprint for unlocking these opportunities while mitigating the risks. These Goals call for a paradigm shift in the way partnerships are evaluated, forged and nurtured. Government, private sector and civil society are key stakeholders with the potential to propel the narrative of sustainable and transformative change. While these individual stakeholder groups are motivated to act on environmental risks and opportunities, the current action landscape portrays a disconnected approach to environmental engagement. This has created a gap between intended and actual environmental outcomes.

Stakeholders widely recognize the need for collaborative action and cohesive

engagement with each other to realize the full potential of sustainable and inclusive development. It is imperative for stakeholders to be receptive and proactive to mutual needs towards overcoming barriers and paving the way to a low-carbon sustainable future. This whitepaper aimed to showcase the interventional areas where active engagement is required to surpass the challenges and achieve the intended outcomes of environmental action.

Similarly, the Sustainability 100+ platform aims to bring together stakeholders from various backgrounds to enable constructive exchange of ideas and identify opportunities for collaboration. The platform strives to ignite critical conversations to unlock novel partnerships and innovation for a sustainable and shared future. A compendium of articles on the four thrust areas of this whitepaper can be found at <https://www.sustainability100plus.com/article-list>.

Transforming drivers into tangible actions



9 Tools and resources

Resource/ tool	Brief description	Tailored to stakeholder
Climate action		
OECD international repository in support of climate action	The OECD repository of international data and indicators on the environmental, economic, financial and social dimensions of climate change facilitates the provision of essential information for effective climate policies.	Policy makers, Academia, corporates
Reference: https://www.oecd.org/environment/climate-data/		
IPCC Atlas	The IPCC Atlas tool provides spatial and temporal analyses of the observed and projected climate change information highlighting the contribution of Working Group I to the sixth assessment report of IPCC. The tool additionally gives an insight to the regional synthesis for climate impact drivers.	Policy makers, Academia, Corporates, Start-ups and innovators, NGOs and activists
Reference: https://interactive-atlas.ipcc.ch/		
Global Climate Change: Vital Signs of the Planet (NASA)	NASA's Global Climate Change is a comprehensive resource platform on latest climate change facts, articles, solutions and educational videos catering to the interest of different stakeholders.	Policy makers, Academia, Corporates, Start-ups and innovators, Individuals and Communities, NGOs and activists
Reference: https://climate.nasa.gov/		
Action for Climate Empowerment (ACE)	Action for Climate Empowerment (ACE) is a term adopted by the UNFCCC to denote work under Article 6 of the Convention (1992) and Article 12 of the Paris Agreement. ACE encourages the members of society to engage in climate action through its resources on education, training, public awareness, international cooperation on the climate change issue.	Academia, Corporates, Start-ups and innovators, individuals and communities, NGOs and activists
Reference: https://unfccc.int/topics/education-youth/the-big-picture/what-is-action-for-climate-empowerment#eq-3		
Locating and Selecting Scenarios Online (LASSO)	The LASSO tool gives a step-by-step guidance through the process of identifying and downloading climate change scenarios—or projections—that are relevant to the stakeholder interest or research question.	Policy makers, Academia
Reference: https://lasso.epa.gov/		
Global Climate Action NAZCA	The Global Climate Action portal is an online platform where participants from around the globe - countries, regions, cities, companies, investors and other organizations - can display their commitments to act on climate change.	Policy makers, Regulators, Corporate, investors, Start-ups and innovators
Reference: https://climateaction.unfccc.int/		
Climate Watch- Global Historical Emissions	Climate Watch enables users to create and share custom data visualizations and comparisons of national climate commitments. The Global Historical Emissions tool of Climate Watch provides information about country/region wise, sector specific historical emissions for all Greenhouse Gases.	Policy makers, Regulators, Start-ups and innovators, Academia

Resource/ tool	Brief description	Tailored to stakeholder
Reference: https://www.climatewatchdata.org/ghg-emissions?end_year=2018&start_year=1990		
CAIT Pre-2020 Pledges Map (WRI)	The CAIT Pre-2020 Pledges Map highlights the pledges that were submitted by countries to the United Nations Framework Convention on Climate Change (UNFCCC) in 2009 and 2010, outlining actions countries would take by 2020. A dashboard and map view lets the users explore summaries, and in-depth information.	Policy makers, Regulators, Start-ups and innovators, Academia
Reference: http://cait.wri.org/pledges/		
CAIT Emissions Projections (WRI)	The CAIT Projections module provides access to emission projections for major emitters through the year 2100 (if data is available). Additionally, this tool increases the transparency of each scenario by publishing key assumptions and other related information.	Policy makers, Regulators, Investors, Academia, Think tanks, Startups and innovators, Corporates, NGOs and activists
Reference: http://cait.wri.org/projections/#/?collection=projections%20ghg%20emissions%20data&maxYear=undefined&minYear=undefined		
CAIT Business Emissions and targets (WRI)	The CAIT Business Emissions and Targets tool gives access to the Science Based Targets, absolute emissions of the FTSE Global 500 companies reporting on climate change.	Corporates, Policy makers, Regulators
Reference: http://cait.wri.org/business/		
Global Forests Watch (GFW)	GFW a mapping platform that increases transparency on the climate impacts of tropical deforestation. In addition, the platform provides access to comprehensible data on carbon emissions to develop benchmark for measuring countries' emissions and tracking progress towards meeting emissions-reduction goals.	Policy makers, Regulators, think tanks, Corporates, Investors, Startups and innovators, NGOs and activists, Academia, Individuals and communities
Reference: https://www.globalforestwatch.org/topics/climate/?topic=climate#footer		
NASA's Climate Time Machine	NASA's Climate Time Machine provides an insight into the impact of global warming on Earth through visualization of key climate indicators- sea ice, sea level, carbon dioxide, global temperature. The visualization provides us with changing satellite looks of the key climate indicators over the time.	Academia, Policy makers, Regulators, Corporates, NGOs and activists, Individuals and communities
Reference: https://climate.nasa.gov/interactives/climate-time-machine/		
Global footprint network's Footprint calculator	The Footprint calculator is a question-based assessment exercise to determine the sustainability level of the user's lifestyle and calculate the footprint generated by them. It provides users with results in unique format to give a sense of introspection on their present lifestyle.	Individuals and communities, NGOs and activists
Reference: https://www.footprintcalculator.org/home/en		
Climate Trace	Climate Trace is the world's first comprehensive tool providing information about independently tracked GHG emission.	Academia, NGOs and activists, Start-ups and innovators, Individuals and communities, Policy makers, Regulators
Reference: https://www.climate TRACE.org/inventory		

Resource/ tool	Brief description	Tailored to stakeholder
Water stewardship		
Water scarcity clock	Water scarcity clock is a webtool developed by World Data Lab enabling visualization of people living in water scarce areas. Variety of interactive functionalities enables users to explore the affected parts of the world and compare water availability in various countries.	Corporate, Investors, NGOs and activists, Start-ups and innovators, Academia, Individuals and communities
Reference: https://worldwater.io/		
WRI Aqueduct water risk atlas	The Aqueduct water risk atlas developed by World Resources Institute (WRI) facilitates the mapping and analysis of the current and future water risks across locations in the world.	Corporate, Policy makers, Regulators, Investors, NGOs and activists, Academia, Individuals and communities
Reference: https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=w_awr_def_tot_cat&lat=30&lng=-80&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baseline&timeScale=annual&year=baseline&zoom=3		
WRI Aqueduct country rankings	The Aqueduct country rankings developed by WRI provides country-wise water stress indicator in terms of baseline water stress, drought risk and riverine flood risk.	Corporate, Policy makers, Regulators, Investors, NGOs and activists, Academia, Individuals and communities
Reference: https://www.wri.org/applications/aqueduct/country-rankings/		
WWF water risk filter	The Water Risk Filter is a practical online tool that helps companies and investors assess and respond to water-related risks facing their operations and investments across the globe.	Corporate, Investors, NGOs and activists, Academia
Reference: https://waterriskfilter.panda.org/		
WASH Basins Toolkits and App	The WASH Basins Toolkits and App help users implement safe, sustainable and equitable water and sanitation practices that meet the real needs of communities. The app is developed on the principles of Integrated Water Resource Management (IWRM),	NGOs and activists, Individuals and communities, Corporate
Reference: https://www.frankwater.com/wash-basins		
AQUASTAT	AQUASTAT is the Food and Agricultural Organization (FAO) of the United Nations' global information system on water resources and agricultural water management. It collects, analyses and provides free access to over 180 variables and indicators by country from the year 1960 onwards.	Corporate, Investors, NGOs and activists, Academia
Reference: https://www.fao.org/aquastat/en/		
India watertool	India Water Tool is a comprehensive, high-resolution, user-friendly tool that helps companies and other users identify their water-risks, prioritize their sites for further action, and analyse and plan their water management interventions in India.	Corporates, Investors, Academia, NGOs and activists
Reference: https://www.indiawatertool.in/		

Resource/ tool	Brief description	Tailored to stakeholder
Smart agriculture		
Farm Sustainability Assessment by SAI platform	The Farm Sustainability Assessment (FSA) enables food and drink businesses to assess, improve, and validate on-farm sustainability in their supply chains. The FSA facilitates the standardization of farm assessment.	Corporates, Investors
Reference: https://saipatform.org/fsa/		
Global Alliance for Climate Smart Agriculture (GACSA)	GACSA is a multi-stakeholder platform on climate smart agriculture. It facilitates the empowerment of farmers through partnerships, knowledge exchange and enhancing agriculture, forestry, livestock and fisheries practices.	Corporates, Individuals and communities, Academia
Reference: https://www.fao.org/gacsa/en/		
AquaCrop	AquaCrop is a crop growth model developed by FAO's Land and Water Division to address food security and assess the effect of the environment and management on crop production.	Corporates, Investors, Individuals and communities, academia
Reference: https://www.fao.org/aquacrop		
CropWat	CropWat is a decision support tool developed by the FAO's Land and Water Development Division to calculate the crop water requirement and irrigation requirements based on soil, climate and crop data.	Corporates, Individuals and communities, academia
Reference: https://www.fao.org/land-water/databases-and-software/cropwat/en/		
CLIMWAT	CLIMWAT is a climatic database tool which is supposed to be used in combination with the CROPWAT program. The CLIMWAT tool provides observed agroclimatic data of over 5000 stations worldwide.	Corporates, Individuals and communities, academia
Reference: https://www.fao.org/land-water/databases-and-software/climwat-for-cropwat/en/		
ETo Calculator	ETo calculator is a software developed by the Land and Water Division of FAO to calculate reference evapotranspiration (ETo) according to FAO standards. The tool enables agro-meteorologists, agronomists, and irrigation engineers to use ETo in their crop water use studies.	Academia, Individuals and communities
Reference: https://www.fao.org/land-water/databases-and-software/eto-calculator/en/		
SoiLEX	SoiLEX is a global database tool developed by FAO. It provides access to country-wise existing legal policy instruments and frameworks on soil protection and prevention of soil degradation.	Academia, Regulators, Corporates, Investors, Individuals and communities
Reference: https://www.fao.org/soils-portal/soilex/en/		
Circular packaging		
Global Alliance on Circular Economy and Resource Efficiency (GACERE)	GACERE initiated by the European Commission and the United Nations Environment Programme (UNEP), in co-ordination by the United Nations Industrial Development Organization (UNIDO), aims to provide a driving force for circular economy transition, resource efficiency, sustainable consumption and production.	Policy Makers, Regulators, Corporate, Startups and innovators, Academia
Reference: https://ec.europa.eu/environment/international_issues/gacere.html		

Resource/ tool	Brief description	Tailored to stakeholder
Ellen Macarthur Foundation- New Plastics Economy	The New Plastics Economy Initiative run in collaboration with leading group of companies, policymakers, NGOs, provides a platform for the stakeholders across the plastic packaging value chain to fundamentally change global flows of plastic packaging material by 2025.	Policy Makers, Regulators, Corporate, Investors, NGOs and activists, Startups and innovators, Academia
Reference: https://www.newplasticseconomy.org/about/the-initiative		
Ellen Macarthur Foundation- Plastic Pact Network	The Plastics Pact network provides a unique platform to exchange learnings, and best practices among the organizations and initiatives around the world working towards circular economy.	Corporate, Academia, NGOs and activists
Reference: https://www.newplasticseconomy.org/projects/plastics-pact		
Circularity Calculator	The circularity calculator helps in the measurement of the circularity level of the products, communicate the information and further improve the circularity of products.	Corporate, Investors, Startups and innovators
Reference: http://www.circularitycalculator.com/		
OECD- Recircle	The OECD Recircle project is a resource for policy guidance to transition to a circular economy. The project aims to quantify the impact of policies to guide the stakeholders and member countries of OECD through quantitative and qualitative analysis.	Corporate, Investors, Regulators, Policy makers, Academia, Individuals and communities
Reference: https://www.oecd.org/env/waste/recircle.htm		
Material Circularity Indicator	The Material Circularity Indicator tool which is part of Circularity Indicators Project by Ellen Macarthur Foundation, enables companies to identify circular value of their products, evaluate the range of environmental, regulatory, and supply chain risks for their designs and products.	Corporate, Investors, Startups and innovators
Reference: https://ellenmacarthurfoundation.org/material-circularity-indicator		
India LCA Alliance (ILCAA)	ILCAA is a comprehensive knowledge sharing platform for capacity building about Life Cycle Assessment and Life Cycle tools among the relevant stakeholders in India.	Policymakers, Regulators, Corporate, Investors, Startups and innovators, NGOs and activists, Individuals and communities, Academia
Reference: https://www.indialca.com/		
LCI India Network	The LCI India Network formed by Confederation of Indian Industry (CII)-Godrej GBC, in cooperation with Ecoinvent, Switzerland, provides a resource platform for Life Cycle inventory data for stakeholders in India.	Corporate, Startups and innovators, NGOs and activists, Individuals and communities, Academia
Reference: http://www.greenbusinesscentre.com/lcanetwork		

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