🏆 reviewed paper

Sustainable Revolution for a Greener Planet – Possibilities in the Indian Context

Kurada Sharmila Dharani, Basudatta Sarkar

(Kurada Sharmila Dharani, Department of Planning and Architecture, National Institute of Technology Rourkela, Rourkela, 769008, Odisha, India, sharmilakurada@gmail.com)

(Dr. Basudatta Sarkar, Department of Planning and Architecture, National Institute of Technology Rourkela, Rourkela, 769008,

Odisha, India, sarkarb@nitrkl.ac.in)

1 ABSTRACT

The key challenge of the urbanisation process is the rise in population at a rapid pace. Although the reason is the aim of a better life for people, it is costing the environment and healthy living to a great extent in diverse ways. This sudden rise in population attracts uninvited guests like pollution, traffic, congestion, lack of green spaces, urban heat island effect, etc. The paper aims to study the environmental effects of the increased urban population, to bring sustainable awareness and environmental justice to the planet. The study draws comparisons of effects between the countries of the world and India, which in turn helps in formulating diverse ways to raise a sustainable revolution, and their applicability in developing countries like India. The approach helps understand the impact that can cause if not implemented at the earliest. The 2022 ranking of the Environmental Performance Index (EPI) and Sustainable Development Report (SDR) shows that India occupied the 180th position out of 180 countries, and the 121st position out of 163 respectively, indicating the necessity for a sustainable revolution in the context of India at a much bigger scale than the present. This not only shows different parameters affecting the planet but also the roles of diverse people in the revolution. The sustainable revolution can be achieved by the use of renewable energy techniques, energy-saving fixtures, control mechanisms, and responsive measures. The key methodology here is to apply these to the cities around the globe which would draw inspiration and awareness to others, thereby transforming the whole planet into sustainable practice. This revolution should start right from the smaller products at the building and the community level. The concern for health and luxury needs to be combined to form a single sustainable by-product. The perspective of products for a single-use needs to be changed and addressed. Sustainable awareness of different products, materials, and standards should be raised among diverse individuals, like students, teachers, employees, government servants, etc. Awareness campaigns at various places would help to revolutionise sustainable practice on a large scale, especially when the results are seen straight away. The paper concludes with the diverse ways of raising sustainable revolution that help in making a greener planet, which reduces expenses drastically and boosts people's confidence. Once, people get used to this, it would be a game-changer for the planet's health. The paper also discusses the role of government and people, where the former play a key role in taking the revolution to further heights.

Keywords: Sustainable, Sustainable Revolution, Awareness, Greener planet

2 INTRODUCTION

With time, humans' thought process and lifestyle changed over the years and centuries and is constantly changing in the quest to be better, intelligent, and more productive. The agricultural era helped them to understand nature, the value of resources, climate changes, seasons, animals, and much more, which can be called the best sustainable method of living to date, with the use of minimal resources, natural products, required amount of food production, clear and clean water resources and natural pathways. There is no record of human-made threats to the environment back then. After industrialisation, everything changed along with the human way of thinking and quest to expand, gain more opportunities, economy boost, and betterment of life. During this era, with the production of more goods, transportation, new factories and living quarters, the demand increased for resources at a larger scale right from land for construction to the breathing air. Pollution started everywhere on land, water, air, and human minds as well. Mankind adapted and believed to use their surroundings as they owned them. They utilised the resources of the environment as if they were never-ending, without even thinking of the circumstances.

Gradually over time, with their intelligence, betterment of life on earth, but on the verge of the most worsening circumstances, they understood that these natural resources are not infinite but limited. Although this thought process started some years ago it picked up acceleration a decade ago. People started to understand the terms of sustainability and its effects. Depleting resources and national calls for environmental betterment are the talks of the town and laid the foundation for sustainability in the world.

745

When the COVID-19 pandemic hit the world, people started to realise the importance of health, clean surroundings, nature, and life on earth. It is also observed that nature cures itself without the intervention of humans in a very practical way. Nevertheless, it should not be thought that the depleting natural resources will emerge with all their power in a few days. The resources that we used over the years need some centuries to gain their natural state and to be plenty as needed. Although the past cannot be changed but can be rewritten now, the future ahead should be well-thought through, planned, and implemented at its best to foster the health and wealth of the environment.

2.1 Sustainable Revolution

According to McManners, the term "sustainable revolution", is the revolution caused by the actions to combat climate change. It can also be called the change of methodology, process, and usage to overthrow the unsustainable means of overexploitation of resources, pollution, and damage to the environment, through measures, actions, policies, frameworks, and awareness. (Burns, 2012). The sustainable revolution can improve issues like extreme weather changes, decline in water resources, pollution, health, and safety, and the economy. (The Sustainability Revolution: What investors should know, 2021).

The Sustainable revolution helps achieve sustainability across sectors to make progress towards holistic sustainable development in the world. This not only ensures environmental health and well-being but also boosts social, and economic growth in each country (Burns, 2012). Among the other aspects, environmental sustainability is on the verge of a knife, which not only does affect mankind, but also every life on the earth, and the planet itself. So, environmental sustainability is of highest importance on the immediate basis.

2.2 Necessity

According to (Burns, 2012), the greenhouse gases that have been released over the years will settle in the atmosphere for millions of years and will increase if it is not realised at the earliest that this has enormous impacts on climate change, sea level rise, floods, droughts affecting agriculture, severe storms, the spread of pandemics and epidemics. Burn's study (2012) shows that environmental change has been happening since 1760 due to pollution, natural resources consumption, marine loss, deforestation, biodiversity loss, tourism, etc. All these challenges and issues are turning the world unsustainable in the modern era. This led to treaties, agreements, and policies in many countries nationally and internationally. The sustainable revolution helps in achieving these goals and sets targets in a more fast-paced advanced way than before. It is not limited to the developed countries, but every nation on the Earth. Mutual cooperation and respect can help each other in combating environmental changes, as each nation has a different set of measures and strategies for its diverse and unique biodiversity.

3 RANKING SYSTEMS

The sustainable measures followed across the world are measured by varied tools in different categories. The holistic approach by different countries to meet the seventeen Sustainable Development Goals (SDGs) is assessed globally by the United Nations, by providing a Sustainable Development Index through annual reports. The fundamental principles of SDGs are much more than environmental protection, like inclusion, cooperation, in-control production and consumption, and global access to clean energy. So, to spotlight environmental sustainability, encourage competition and help the countries to keep track of their climate target goals by 2050, the Yale Centre for Environmental Law & Policy and the Centre for International Earth Science Information Network (CIESIN) at Columbia University's Earth Institute developed a common ranking system called Environmental Performance Index (EPI). (Wolf, 2022).

The Environmental Protection Index (EPI) helps provide a summary of the sustainable ranking of different countries using 11 issue categories, which are further divided to 40 performance indicators on ecosystem vitality, environmental health, and climate change performance. (Wolf, 2022). This EPI ranking is released biennially in even-numbered years. In the year 2022, the EPI ranked 180 countries across the world to measure the state of sustainability in each country, using the data from international organisations, research institutes, academia, and government agencies upon verification by a third party. Denmark with its overall EPI score of 77.90 secured first place in EPI 2022 results, followed by the United Kingdom, Finland, Malta, and Sweden. (Wolf, 2022). From this analysis it is quite evident that most of the European countries are in



the top tiers with sustainable measures and policies, whereas Asian countries like India, Myanmar, Vietnam, Bangladesh, Pakistan, and Papua New Guinea were placed the lower tiers going off track towards their environmental goals and targets. According to the report released by the EPI which is the Summary for Policymakers, EPI data analysis shows that financial resources, good governance, human development, and regulatory government policies are some of the reasons for the elevated rankings of sustainability of top-tier countries. Although EPI helps with comparisons of different countries regarding sustainability, strategies and policies followed by pioneering nations are beyond their scope of analysis. Hence, this paper studies the best practices, strategies, and policies implemented in top-tier nations for the betterment of sustainable approaches worldwide.

3.1 EPI Analysis

The analysis of the Environmental Performance Index (EPI) framework, based on policy objectives, issue categories, and indicators has resulted in a trend score for the last decade in which Malta has increased its score most by 25.4 points and Burundi decreased by 13 points in the overall category. Wolf (2022) emphasises that this trend scores much more than the actual EPI score of each country, because the trend score implies the country's actions over the last decade, thereby enhancing the policy gauge, measures, and strategies that helped uplifting the trend score drastically over the decade. The top three nations with greater trend scores against each policy and issue category are listed below in Table 1 and Table 2 respectively.

Sl.no.	Policies	Abbrev.	Trend Score - Top-tier Countries		
1	Ecosystem Vitality	ECO	Malta, Kuwait, Croatia		
2	Environmental Health	HLT	Estonia, Lithuania, Portugal		
3	Climate Policy	PCC	Finland, United Kingdom, Afghanistan		
Table 1: Environmental Performance Index (EPI) policies with top-tier nations in trend score, 2022					

Sl.no.	Policies	Issues	Abbrev.	Trend Score - Top-tier Countries
1	Ecosystem Vitality	Biodiversity & Habitat	BDH	United Arab Emirates, Bahamas, Croatia
2		Ecosystem Services	ECS	Malta, Mauritius, Micronesia
3		Fisheries	FSH	Mozambique, Cabo Verde, Panama
4		Acid rain	ACD	Montenegro, China, Republic of Congo
5		Agriculture	AGR	Saudi Arabia, Oman, Tonga
6		Water Resources	WRS	Denmark, Finland, Netherlands
7	Environmental Health	Air Quality	AIR	Estonia, Lithuania, Moldova
8		Sanitation & Drinking Water	H20	Iraq, Sao Tome and Principe, Sudan
9		Heavy Metals	HMT	United Arab Emirates, South Korea, Singapore
10		Waste Management	WMG	Georgia, Mauritius, Norway
11	Climate Change Policy	Climate Change Mitigation	ССН	Finland, United Kingdom, Afghanistan

Table 2: Environmental Performance Index (EPI) policies and issues with top-tier nations in trend score, 2022

3.1.1 <u>Ecosystem Vitality</u>

Ecosystem vitality policy gauges the measures followed by different nations to protect and preserve the ecosystems and their services. It is assessed based on various categories like biodiversity and habitat, ecosystem services, fisheries, acid rains, agriculture, and water resources. Malta, Kuwait, and Croatia lead the ecosystem vitality policy with their enormous development over the last decade.

Malta addressed the causes of biodiversity loss, with a target of creating awareness of the term "biodiversity" and steps to protect and conserve it sustainably for its citizens. Malta valued and understood the advantages of conservation by integrating national policies, and decision-making. It promoted incentives and addressed environmental harmful subsidies and shifted all the directly benefitting sectors by the ecosystem services to the sustainable approach. It also made significant contributions to reducing the rate of loss of natural habitats, forest cover, overexploitation of resources, managing agriculture and aquaculture in sustainable approaches, addressing pollution through effective measures, maintenance of marine biodiversity areas, and



reducing the extinction of threatened species through improved conservation status. Safeguarding ecosystems, reducing the impacts of climate change, regulating access to national genetic resources, and recognising the contribution of local communities towards sustainable biodiversity are some of the measures followed by Malta during its process of attaining sustainability. (CBD Strategy and Action Plan - Malta, 2012).

Kuwait kickstarted the measures with a detailed process of documenting its biodiversity to understand and ensure its continual characterisation and monitoring, planning the biodiversity to prevent and mitigate adverse impacts and their causes to help the ecosystem to function better, managing and strengthening the conservation policies, enforcing the legislative laws, using biological resources within sustainable limits, and reviewing and valuing them at regular intervals. It educated and involved public participation through programmes, refining school curricula, advertising issues, and promoting national programmes to develop a deep understanding of the values of biodiversity in society. Every measure it planned has a clear objective based on analysis of research, past policies, issues, training required and main constraints. It prepared a strategic response with an agenda for action, short-term of initial 3 years, medium-term of within the next two years, and long-term goals for 5-10 years. This helped Kuwait to gauge its policies and measures to a great extent. (CBD Strategy and Action Plan - Kuwait, 2010).

Croatia prevented the loss of terrestrial biodiversity, and reduced marine and coastal biodiversity by increasing the number of protected areas. It implemented its plans for the protection of endangered species, established landscape management plans, conserved characteristic landscape features, planned the use of natural resources, and promoted restoration initiatives for agricultural and degraded forest lands. It encouraged cultivation on arable lands to achieve sustainable agriculture and to maximise the required products. It aimed to demine all mine-infested areas at the earliest, provided economic measures to ensure utilisation of abandoned spatial reserves and the transformation and remediation of industrial zones with closed-down factories. In planning its settlements, it reduced the growth of large cities to functionally equip the medium and smaller towns with 7000 to 30000 inhabitants, promoted development models – which improve the space and preserve the physical and ecological integrity of resource areas. (Strategy for Sustainable Development of the Republic of Croatia, 2009).

3.1.2 Environmental Health Policy

Environmental Health Policy measures the countries' protection against the risks to environmental health. Protection is assessed based on the air quality, access to sanitation and drinking water, pollution by heavy metals, and management of waste (Wolf, 2022). Estonia, Lithuania, and Portugal lead this policy with their strategies over the last ten years.

Estonia identified that biodiversity in wetlands, and forests are affected by air pollution and has taken steps to reduce their impact. Measures were taken for the exhaust of harmful gases from vehicles, conservation of aquatic habitats like lakes, rivers, streams, and springs, treatment plants for wastewater. Policies to strengthen the laws have helped for their betterment. (Nature Conservation Development Plan until 2020, 2012). Lithuania's policies for the reduction of harmful risks to the environment are strengthened by action on the level of pollutants, air quality, illegal waste, safe drinking water supply, wastewater, and sanitation facilities. Campaigns to promote environmentally friendly transportation are some of the measures they adopted over a few years. (Environment and health performance review - Lithuania, 2009). Portugal has devised strategic laws and policies to ensure better environmental health for its citizens by reducing the main emission sources and harmful concentrations of oxides, especially in urban and industrial areas. They improved the water quality by close monitoring and reducing diffuse and organic pollution with treatment facilities, management of waste by separate collection, landfill diversion targets, reduction of waste generation, and by limiting energy recovery to non-recyclable materials (The Environmental Implementation Review 2019 - Country Report Portugal, 2019).

3.1.3 <u>Climate Policy</u>

Climate change policy is the latest policy in EPI 2022, which has a single-issue category, climate change mitigation, which measures the progress of each country in combating climate change. This policy helps the mitigation of environmental threats and improves human health and safety. It is composed of various indicators: emission growth rates of greenhouse gases (GHG), carbon dioxide, methane, fluorinated gases,



nitrous oxide, black carbon, projected GHG emissions in 2050, growth rate in carbon-dioxide emissions from land cover, GHG intensity growth rate, and GHG per capita. Adjusted emissions for GHG measure the rate of average annual emissions over the years and the reduction in emissions. In each country this needs to be at least \geq 7.59% per year for CO2, \geq 5.0% for CH4, \geq 3.94% for F-gases, \geq 1.95% for N2O gases, and \geq 1.87% for black carbon to achieve the fullest sustainable score in EPI. Projected GHG Emissions in 2050 help track countries path to zero emissions of GHG (CO2, CH4, F-gases, and N2O set for the 2050 climate target, calculates the average emissions and extrapolates them for 2050. The growth rate in carbon-dioxide emissions from land cover needs to be the lowest possible for each country. The GHG intensity growth rate highlights the need for action in all the countries in this regard. Finland, the United Kingdom, and Afghanistan lead this category over the last decade (Wolf, 2022).

Finland increased the adaptation measures for climate change to cut down greenhouse gas emissions, assessed the impacts of climate change, and developed required frameworks in policies with close monitoring systems (CBD Strategy and Action Plan - Finland, 2007). The United Kingdom improved its climate change rankings with its increase in green infrastructure, promotion of sustainable materials, increase in the use of digital services, webinars, conferences, etc, to reduce travel needs. ecological initiatives, water and energy efficient equipment and raising sustainable awareness through education, and programs (Preparing for Climate Change: A Climate Change Adaptation Strategy, 2020). Afghanistan prioritized low emission and climate-friendly energy projects, especially in rural areas to provide accessible energy to stimulate rural economic growth, aims to reduce GHG emissions utilizing support from the Climate Technology Initiative Private Financing Advisory Network (CTIPFAN), and promoted low-carbon, sustainable development, and renewable energy usage for the better tomorrow. (Climate Change and Governance in Afghanisthan, 2015).

From, the strategies initiated by the pioneering nations, enumerated above, it can be observed that countries tend not to aim for complete 100% of success at once, but are setting targets for some issues for specific time horizons, analyzing and evaluating them, and moving forward by gradually improving their policies and measures.

4 EXISTING SUSTAINABLE PRACTICES IN INDIA

With its diverse cultural and biodiversity species, India is a major contributor to the world's biodiversity. From assessments and studies over many years, India came up with some sustainable targets for the nation with their updated strategic plans by including Aichi biodiversity targets, and Millennium development goals. As a part of the process, India aligned the concerned bodies to these strategic goals to conserve biodiversity. The government of India assigned many departments at different levels to keep the track of the goals. Although this eased the process for central monitoring, the inclusion of many ministries at the national, state, and local levels, but this lags the decision-making to move forward.

India addressed the Aichi biodiversity strategic goals by taking into consideration of few main topics like awareness, integration, and upgradation of policies, phasing out the unsustainable and harmful practices, promotion of sustainable practices through subsidies and incentives, and involving stakeholders and other business elites for sustainable production and consumption. These not only pave way for the conservation of biodiversity but are also helpful in bridging the gap between the people and the government.

The government of India made the mandatory curriculum for the students at the school level through National Council of Education Research and Training (NCERT) and Ministry of Human Resource Development (MoHRD) programs across the country to raise awareness among the students, and also introduced electives for higher education, awareness campaigns through the Paryavaran Mitra program, National Green Corps Programme, etc. The government also integrated and updated policies like the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA), initiatives like Environmental Performance Index (EPI), and The Economics of Ecosystems and Biodiversity (TEEB - India) for the evaluation of vast biodiversity in India. India is also investing in improving medicinal plants, organic farming and forest cover through National Mission on Medicinal Plants (NMMP) and National Project on Organic Farming Scheme (NPOF). Green National Accounting and other green certification initiatives are advising bodies on the tools for sustainable practices and encouraging the conservation initiatives taken in the private sector. For the prohibition of the use of harmful chemicals and fertilizers, the government reduced

749

the prices for potassium and phosphorous to encourage their usage and increased the prices for urea which is harmful to agriculture.

Few of the other things India is currently working on are, the reduction of loss of natural habitats, marine, and coastal ecosystems, agriculture, pollution, and measures for invasive alien species, etc. For the conservation of these systems and services, India is investing in various programs and schemes. For the reduction of afforestation, and to control and mitigate climate change, National Afforestation and Ecodevelopment Board (NAEB) is set up for monitoring and guiding the forest development agencies. India also added around 3 million hectares of forest cover over the last decade, through the Green India Mission afforestation program. These programs not only facilitated the forests and the beneficiaries but also reduced the emissions from afforestation and forest fires. Green India Mission also helped in the restoration of Chilika lake in Odisha. For the conservation of lakes and wetlands, the National Programme on Conservation of Aquatic Ecosystem (NPCAE) scheme helps in, by preventing the degradation of aquatic ecosystems through sustainable conservation measures. The government of India is also exploring the marine and aquatic life in Indian waters, through more research centres like Central Marine Fisheries Research Institute (CMFRI), National Centre for Sustainable Coastal Management (NCSCM), etc. Actions were also being taken on the brackish water, research and education on fisheries, animal husbandry, expansion of fisher folk, etc. These are all being scaled by the Integrated Coastal and Marine Management (ICMAM) Programme, National Institute of Ocean Technology (NIUT), and Fisheries Survey of India (FSI) under the Ministry of Agriculture (MoA), and Ministry of Earth Science (MoES). Sustainable management of agriculture and other ecosystem services fosters the wealth, health, and welfare of direct beneficiaries and the environment. The government seeks to manage sustainability through the National Agricultural Policy (NAP) and National Mission for Sustainable Agriculture, Coastal Aquaculture Authority for the regulation of coastal activities. Not only these, but Government also taking conservation measures for degraded areas, and forests. The best example is Madhya Pradesh's land use management to combat land degradation. (CBD Fifth National Report - India, 2014).

The country is also investing in reducing pollution levels, through Central Pollution Control Board (CPCB). Through CPCB, the air quality is controlled and monitored by National Air Quality Monitoring Programme (NAMP), and for the improvement of the environment in urban areas, Eco-city program has been initiated. CPCB is also responsible for water quality, noise pollution, and control of pesticides and fertilizers under MoA. The control and eradication of invasive alien species are being implemented through NBAP 2008 by the Forest Invasive Species Cell in the Indian Council of Forest Research and Education, Dehradun. And for the reduction of the anthropogenic threats on coral reefs and ecosystems, extinction of threatened species, plant genetic species, soil erosion, and Himalayan eco-system conservation, measures are taken by the government of India.

Although India has well-addressed the majority of the above-discussed issues affecting environmental sustainability, the results are not up to the mark as aimed for. These results show that either the laws and policies framed are not implemented to their fullest, lack stringent monitoring and applicability, lack promotional awareness of the applicable bodies, lack financial resources, or irresponsibility of the citizens for a better tomorrow.

5 ANALYSIS OF STRATEGIES ADOPTED IN INDIA

The Fifth National Report that is submitted to Convention on Biological Diversity (CBD) by India showed various strategic action plans that the country has for different issues, regulated by the multi-tier heads at national, state, and regional levels. Not only does India sign to abide by CBD but also others like Aichi Biodiversity Targets and Millennium Developmental Goals along the way, showing its interest in sustainability and responsibility for Earth. It is fairly seen that India progressed towards the set targets and goals by incorporating them into the planning process at every level, and also allocating respective departments to take responsible charge of the actions that help in achieving the goals set. Until here, there is not much difference observed between India and the other pioneering nations, but it is seen that India when setting their targets for the future or the upcoming years, there is no measurable gauge, like no quantitative targets are found, as like reducing the emissions by some percentage in a set of time or increasing the awareness to a maximum of at least some percentage of youth. This quantitative framework against each strategic goal is missing in the report, hence on a bigger picture, the fact that India is constantly improving





on the reports is not on the global indicators and indices as they are not improving to their full potential. The term Improvement is subjective, either less or more, is also improved. It is also observed that when analysing a target, the entire report needs to be taken into account, not just the immediate beneficiaries. For example, when analysing the awareness goal, it is important to know the number of schools or organizations enrolled in the last few years, or the number of students opting for the respective electives, but it is also very important to know how many people are actually in the same field practicing after the tenure of the course. The reasons for the people's shift to different sectors are numerous, but the government needs to try to identify and resolve them to the core, for the positive result of the goal. These kinds of holistic approaches at different levels for different targets need to be thought of to cover future improvements.

While the rest countries are progressing towards development and invention, India is still in the stage of basic eradication and prevention measures at the primary level in terms of the environment. The major missing quantitative framework for every issue is the vital reason for the least ranking. According to CBD reports, it is evident that India is constantly putting work into environmental sustainability, through many schemes, programs, and strategies, goals like Aichi biodiversity targets, millennium developmental goals, etc. but the outcome is not on par with measures across the globe. This is due to varying many reasons like vast areas, more schemes and policies, failure of the government for not being stringent, awareness in people, the responsibility of the citizens, and lack of drive to be sustainable powering countries.

6 DIVERSE WAYS OF IMPLEMENTING ENVIRONMENTAL SUSTAINABILITY

Although India has been constantly updating and analysing its position in attaining sustainability, there are some intakes from other neighbouring countries which could help this sustainable revolution. The amount of incentives for the stakeholders needs to be increased to encourage a particular strategy that requires effective and frequent communication and cooperation between central, state, and local bodies, enforcing and strengthening laws, and promoting public participation.

Among the many diverse ways of achieving environmental sustainability: increase in infrastructure facilities for waste management, green cities, access to safe sanitation and drinking water, increase in investment in renewable energy, updating and developing more policies for the usage of renewable energy standards, promotion of sustainable awareness through creative programmes and advertisements, introducing various environmental educational programmes for youth and volunteers, assisting the stakeholders to shift to sustainable practices through online and offline programs and workshops, encouraging environmental friendly vehicles for transportation, ban on environmental harmful products like plastic and dangerous chemicals, increase in recycling stations and treatment plants, regulation of fishing in only designated protected areas, encouraging and close monitoring of sustainable fish-catching practices and communities, regulations and standards for industrial and vehicle emissions, ban on unsustainable pesticides, promotion of organic and sustainable farming, and more generally increase in applicability of advanced technology systems.

The necessity of the sustainable revolution for the concern of the whole planet needs to be accelerated right from the grassroots level. Just at the thought of any needs, the question of "is it sustainable?", needs to be rolled out in every human mind on this earth. Only with that thought process, we can achieve absolute sustainability on this planet. The thought process needs to start right from the basic needs like food, water, air, and shelter.

Upon the consideration of every first aspect of food – the thought process needs to start from the food grain level to the actual recipe. When a buyer approaches the farmer, it is necessary to know the use of manures used, and their quantity, agricultural practices, land use, water composition, etc. for the benefit of sustainability. To make this process, much easier, there must be a checklist of the things, that need to be standardized by the related departments in the government, for different food products, which need to be checked by the concerned office in the area, before selling to the buyer. This can be best possible with sustainable practice by the farmer, stringent monitoring at the office level, and a responsible buyer. This also leads to the awareness, that is needed by the farmer - for the use of the products to the practices, the officer-in-charge - for the quality checks and monitoring progress, and the buyer – for the responsible use of sustainability on this Earth. These small steps in weaving sustainability into the minds of the people can draw a bigger revolution as it is connected to many aspects and processes. This not only brings changes to

751

the food system but fosters health and well-being, food product businesses, packaging businesses, sustainable education, environment, waste management, land and ocean pollution, health and well-being of all species on earth, etc. This list can go on with just the small thought process and steps, turning the table of unsustainability on Earth.

If similar changes go on simultaneously with water, air, and shelter, the world of sustainability is not so far. Applying the grassroots level strategy, immediate measures need to be taken care of the water available in the house, by using the required amount of water as needed without wastage, mandatory installation of percolation pits, usage of grey water, the community level installation of water treatment plants at regular intervals, measures for the conservation of ponds, lakes, wetlands, rivers, oceans, etc. Stringent measures on the dumping of waste into water, conservation and expansion measures of aquatic species, etc, need to be improved in a much faster way than the present. Even for better air quality, a mandatory percentage of green space needs to be standardized by the government for every plot, rules for the plantation on either side of the roads need to be enforced, and usage of environmentally friendly vehicles and cycle paths need to be encouraged at least around few zones in a region, which can be multiplied further. Both the government and the citizens should encourage the use of public transportation across.

Building shelter by whatever means, became one of the most essential habits for humankind, say for stay, work, worship, gather, dine, etc. which can't be denied for security and protection purposes, but not at the risk of the environment. The use of sustainable building materials for construction can reduce the impact on the environment. At least the upcoming new buildings need to be built through the use of eco-friendly materials during the initial stages. Also within each household, the maximum number of products used in the house needs to be as sustainable as possible. This cannot be possible without the eco-friendly product's availability, awareness and research. Incentives need to be given for the manufacturing of eco-friendly products for the revolution to spread wider.

In this way, we not only built a better sustainable Earth but also can improve employment opportunities for youth, especially in India, and can generate abundant wealth and knowledge on sustainability as well. Through employment, a better family, a better community, a better country, and a planet can be created.

7 ROLE OF DIFFERENT INDIVIDUALS

When the world promises to be sustainable, it is the responsibility of every nation to keep that up. Similarly, for a nation, the citizens and the ruling body play a major role in this sustainable contribution. Here citizens may be students, workers, employees, government servants, or politicians while the ruling body is the government. Although the former are greater in numbers, but the complete power lies in the latter, as the process of effective execution of policies and laws that makes it to the top. The stringent monitoring and administration of the government in implementing the policies play a key role in achieving this kind of target. However, the common people have also to be accountable for their awareness, usage, and follow-up of sustainable products and practices in their day-to-day life. Their check on everyday activities in terms of sustainability can improve their own and environmental health to a great extent.

Also, the students can take up a few small tasks every week as part of their curriculum, to plant saplings round, attend workshops on sustainable practices, and demonstrate the practices learned to illiterates around at least once in two months as a part of their excursions, encouragement on innovative thinking and experimentation, taking oaths on the conservation measures of the environment, avoiding the use of environmentally harmful products in school premises, charging fines on the usage of the environmentally harmful transportation systems around 2km radius of the schools, encouragement on the use of public transportation whenever required, by explaining to them the benefits of the use. These not only help in making the place sustainable in small means but also cultivates habits for the students for a lifetime. These should not be limited to the school level but also upscaling them to the university level can be beneficial. By their actions and thoughts, they can influence their immediate surroundings for a better change.

Workers and employees play a major role in society, their wave action can hit the planet very strongly, as they are the ultimate power in the majority of their families. Their thoughts and actions can influence both the older and the younger generations in the family, and peers in society. Hence, it is very important to bring a change in their thought process, which can be achieved through the things they are mostly glued to, like articles, news, podcasts on sustainability, the environment, etc. Not only these advertisements, and news



753

articles, but also the organizations they are a part of, can bring much impact on them. Organizations need to take part in environmental protection, workshops, etc. Through healthy competition on conservation measures between each organization, incentives can be given by the government, for a better world, which could inspire other organizations to take part in the revolution.

Although the above two play a vital role in this revolution, the whole power of turning the table of unsustainability lies in the hands of the government. The effective execution of all the processes discussed in the entire paper needs a helping hand that takes the country to the top place in sustainability. The government needs to take stringent actions and be responsible for the sustainable revolution for a better planet. It also needs to encourage sustainable actions from all bodies, and invest more in these green practices and sustainable ways of life. Subsidies, incentives, and allowances are some of the few giveaway awards for encouragement. Prohibition and ban of harmful products, laws, policies, and practices can help the revolution to a great extent.

8 CONCLUSION

The study concludes with the approaches of different countries toward sustainability, which can help developing countries follow and craft their path in achieving the common goal. The given time period, policies, execution, management, and individuals play a key role in achieving the target goal. The fact that India is constantly working on sustainability, but the results are not seen in the rankings, is mostly due to the lack of a quantitative framework and stringent monitoring system. Hence, it is suggested that first to set the priority towards these environmental rankings, work on the calculations that can take them to secure the topmost place, and work towards achieving it, which can enhance better results in the end in all aspects. Although there are many indicators and issues for sustainability environmental sustainability is of utmost priority in the present scenario for a better life and a better planet.

9 REFERENCES

A mid-term review of the Finnish strategy and action plan for the conservation and sustainable use of biodiversity in 2016. (2017, May). Retrieved from Convention on Biological Diversity: https://www.cbd.int/doc/world/fi/fi-nbsap-v3-p3-en.pdf

- Air quality policies in Estonia. (2015). Retrieved from UN Environment Programme:
- https://wedocs.unep.org/bitstream/handle/20.500.11822/17190/Estonia.pdf?sequence=1&isAllowed=y
- Baig, M., Straquadine, G., Baig, M., & Chair, G. (2014, May). Sustainable Agriculture and Rural Development in the Kingdom of Saudi Arabia: Implications for Agricultural Extension and Education. Retrieved from Research Gate: https://www.researchgate.net/publication/276232693_Sustainable_Agriculture_and_Rural_Development_in_the_Kingd om_of_Saudi_Arabia_Implications_for_Agricultural_Extension_and_Education
- Burns, T. R. (2012, December). The Sustainability Revolution: A Societal Paradigm Shift? Retrieved from Researchgate: https://www.researchgate.net/publication/235330779_The_Sustainability_Revolution_A_Societal_Paradigm_Shift/refe rences
- Cao, J., Garbaccio, R., & Ho, M. (2009, July). China's 11th Five-Year Plan and the Environment: Reducing SO2 Emissions. Review of Environmental Economics and Policy - REV ENV ECON POLICY. Retrieved from Research Gate: https://www.researchgate.net/publication/247577646_China's_11th_Five-Year_Plan_and_the_Environment_Reducing_SO2_Emissions
- CBD Fifth National Report India. (2014). Retrieved from Convention on Biological Diversity India: https://www.cbd.int/doc/world/in/in-nr-05-en.pdf
- CBD Fifth National Report Micronesia. (2014, December). Retrieved from Convention on Biological Diversity: https://www.cbd.int/doc/world/fm/fm-nr-05-en.pdf
- CBD Fifth National Report The Netherlands. (2014, April). Retrieved from Convention on Biological Diversity: https://www.cbd.int/doc/world/nl/nl-nr-05-en.pdf
- CBD Strategy and Action Plan Finland. (2007). Retrieved from Convention on Biological Diversity: https://www.cbd.int/doc/world/fi/fi-nbsap-v2-en.pdf
- CBD Strategy and Action Plan Kuwait. (2010, June). Retrieved from Convention on Biological Diversity: https://www.cbd.int/doc/world/kw/kw-nbsap-01-en.pdf
- CBD Strategy and Action Plan Malta. (2012, December). Retrieved from Convention on Biological Diversity: https://www.cbd.int/doc/world/mt/mt-nbsap-01-en.pdf
- CBD Strategy and Action Plan Republic of Korea. (2018, November). Retrieved from Convention on Biological Diversity: https://www.cbd.int/doc/world/kr/kr-nbsap-v4-en.pdf
- CBD Strategy and Action Plan Sao Tome and Principe. (2015). Retrieved from Convention on Biological Diversity: https://www.cbd.int/doc/world/st/st-nbsap-v2-en.pdf
- CBD Strategy and Action Plan Singapore. (2006). Retrieved from Convention on Biological Diversity: https://www.cbd.int/doc/world/sg/sg-nbsap-v2-en.pdf
- CBD Strategy and Action Plan Tonga. (2006, June). Retrieved from Convention on Biological Diversity: https://www.cbd.int/doc/world/to/to-nbsap-01-en.pdf

Sustainable Revolution for a Greener Planet - Possibilities in the Indian Context Climate Change and Governance in Afghanisthan. (2015). Retrieved from UN Environment Programme: https://wedocs.unep.org/bitstream/handle/20.500.11822/22447/Report_CC_Governance_Afghanistan_EN_v2.pdf?sequ ence=1&isAllowed=y Democratic Republic of Congo - 2013-2017 - Country Strategy Paper. (2013, June). Retrieved from African Development Fund: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Democratic%20Republic%20of%20Congo%20-%202013-2017%20-%20Country%20Strategy%20Paper.pdf Democratic Republic of Congo Country Plan. (2008, May). Retrieved from Organisation For Economic Co-operation And Development. Environment and health performance review - Lithuania. (2009). Retrieved from UN Environment Programme: https://wedocs.unep.org/bitstream/handle/20.500.11822/9495/-Lithuania_Environment_and_health_performance_review_-2009Lithuania_EnvirandHealthPerfRevi.pdf?sequence=3&isAllowed=y Environmental protection. (2022). Retrieved from UAE Government Portal: https://u.ae/en/information-and-services/environmentand-energy/environmental-protection Fisheries Co-Management in Mozambique. (2014, October). Retrieved from World Bank: https://documents1.worldbank.org/curated/en/626561586942285958/pdf/Fisheries-Co-Management-in-Mozambique-Lessons-from-the-Artisanal-Fisheries-and-Climate-Change-Project-FishCC-2015-2019.pdf Guzman, H., Cipriani, R., Vega, A., & Morales-Saldaña, J. (2019, December). Fisheries and conservation assessment of sharks in Pacific Panama. Aquatic Conservation: Marine and Freshwater Ecosystems. Retrieved from Research Gate: https://www.researchgate.net/publication/337843332_Fisheries_and_conservation_assessment_of_sharks_in_Pacific_P anama/references Kotagama, H. (2018, December). Final Report on Agricultural Land use and Land Tenure in Oman. Retrieved from Research Gate: https://www.researchgate.net/publication/329999870_Final_Report_on_Agricultural_Land_use_and_Land_Tenure_in_ Oman/citations Lithuania Air Quality Policies. (2015). Retrieved from UN Environment Programme: https://wedocs.unep.org/bitstream/handle/20.500.11822/17042/Lithuania.pdf?sequence=1&%3BisAllowed= Moldova Environmental Strategy for the years 2014-2023. (n.d.). Retrieved from UN Environment Progarmme: https://wedocs.unep.org/bitstream/handle/20.500.11822/9507/-Environmental_Strategy_for_the_years_2014-2023-2014Moldova_EnvironmentalStrategy_2014-202.pdf?sequence=3&%3BisAllowed= National Report of the Republic of Mauritius. (n.d.). Retrieved from United Nations Sustainable Development: https://sustainabledevelopment.un.org/content/documents/1109215Mauritius%20National%20Report.pdf Nature Conservation Development Plan until 2020. (2012). Retrieved from Convention on Biological Diversity: https://www.cbd.int/doc/world/ee/ee-nbsap-v2-en.pdf Overview of Wastes Management in Mauritius. (2012, September). Retrieved from UN centre for Regional Development: https://www.un-page.org/files/public/final_report_-industrial_waste_assessment_opportunities_for_industrial_symbiosis.pdf Preparing for Climate Change: A Climate Change Adaptation Strategy. (2020). Retrieved from GOV.UK: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/885242/moj-climatechange-adaptation.pdf Rosendal, R. (2014, November). Danish Policy on Waste Management - Denmark without waste. Retrieved from Research gate: https://www.researchgate.net/publication/287210935_DANISH_POLICY_ON_WASTE_MANAGEMENT_-_DENMARK_WITHOUT_WASTE Strategy for Sustainable Development of the Republic of Croatia. (2009, February). Retrieved from United Nations Environment Programme: https://wedocs.unep.org/bitstream/handle/20.500.11822/9452/-Strategy_for_Sustainable_Development_of_the_Republic_of_Croatia-2009Croatia_StrategyforSu.pdf?sequence=3&%3BisAllowed= The Bahamas. (2018, July). Retrieved from UN Sustainable Development: https://sustainabledevelopment.un.org/content/documents/19874VNR_document_03.07.18_master_document.pdf The Environmental Implementation Review 2019 - Country Report Portugal. (2019). Retrieved from European Commission: https://ec.europa.eu/environment/eir/pdf/report_pt_en.pdf The National Environmental Strategy and Action Plan (2013 – 2017) for Iraq. (2014). Retrieved from UN Environment Programme: https://wedocs.unep.org/bitstream/handle/20.500.11822/8726/-7)%20for%20Iraq-2013National_Environmental_Strategy.pdf?sequence=4&isAllowed=y The State of World Fisheries and Aquaculture 2020 - Sustainability in Action. (2020). Retrieved from FAO: https://www.fao.org/3/ca9229en/ca9229en.pdf

The Sustainability Revolution: What investors should know. (2021). Retrieved from ecofininvest:

https://tortoiseecofin.com/media/4252/ecofin-sustainability-revolution.pdf UAE National Air Emissions Inventory Project Final Results. (2019). Retrieved from Ministry of Climate Change Environment:

https://www.moccae.gov.ae/assets/download/fa2f8dd4/Air%20Emissions%20Inventory%20Report.pdf.aspx?view=true Voluntary National Reviews at HLPF 2016 Montenegro. (2016). Retrieved from NSSD 2030:

http://www.nssd2030.gov.me/animations/MORTuvod-zakljucak/NSSD2030.pdf

Waste Management - Switzerland. (n.d.). Retrieved from UN Sustainable Development:

https://sustainabledevelopment.un.org/content/documents/dsd/dsd_aofw_ni/ni_pdfs/NationalReports/switzerland/waste.pdf

Waste Management Technologies in Regions, Georgia. (2018). Retrieved from US Agency for International Development: https://pdf.usaid.gov/pdf_docs/PA00TBD7.pdf

Wolf, M. J. (2022). 2022 Environmental Performance Index. Retrieved from New Haven, CT: Yale Center for Environmental Law & Policy: https://epi.yale.edu/

