Asian Journal of Multidimensional Research
ISSN: 2278-4853 Vol. 13, Issue 1, January 2024 SJIF 2022 = 8.179
A peer reviewed journal

GREEN HOUSEKEEPING: THE INDIAN CASE

Prof. (Dr.) Suvasis Saha*

*Professor,
Department of Business Management,
Dean, Faculty of Commerce,
Social Welfare and Business Management,
Calcutta University, INDIA
Email id: dr.suvasis123@rediffmail.com

ABSTRACT

Sustainability of the world is required for the next generation to have equitable, economic, social and environmental share that would lead the world to development , the very important consideration being that planet, people, prosperity, peace and partnership should be balanced so that quality of life in the world will be the first priority. The global sustainability can only exist when at the micro level the firms behave in the same order. The order that Sustainable Development Goal (SDG) summit set theU.N. Agenda 2023 this was astutely and adroitly crafted for world is trustee of the future generation was noteworthy. This is definitely the zone where firms have to contribute in the public and private business arena. The way to embark on in this pathway is specific).

KEYWORDS: *'LIFE', 'Definitive Stakeholder', 'Nano Technology', Recycle, 'AECEN' 'NEP' Reuse, Repair, Refrain, Biogas,'C2C', 'MICE'.*

INTRODUCTION

India along with other Heads of the Nation met at United Nations Head Quarters in New York in days between 25 through 27 September 2015 and committed to work tirelessly in pursuit of implementation of UN Agenda 2030. This gave birth 17 Sustainability goals contrary to Millennium Goals (which restricted itself to 8 only[1]) ushering an accountability of better quality of life and equitable distribution of economic sustainability, social sustainability and environmental sustainability.

LIFE (life Style for Environment announced on World Environment Day) coined by the Hon'ble Prime Minister and endorsed again in G20 set up, is making ripples among the nations to perform accordingly and meet the need of the sustainable global world. India, according to Hon'ble Prime Minister Modi will be the third largest economy2 way before 2045 announced by him in the global platform. The Gobal backdrop is that just 15% of the world's population consumes 80% of economically traded resources, where as the 33 % of the population who live in the poorest countries consume only 3 %.[3].

Glimpse to 'Standard of Living'[4] is as under:-

Some sectors/public utility services	% household without access to 2005-2006	% household without access to 2015-16	% household without access to 2019-21	% household without accessto(Decline) average annual rate reduction2005-2006	% household without access to (Decline) Average annual rate reduction 2015-16 to 2019-21
Cooking Fuel	52.9	26	13.9	-2.7	-2.4
Sanitation	50.4	24.4	11.3	-2.6	-2.6
Drinking Water	16.4	5.7	2.7	-1.1	-0.6
Electricity	29	8.6	2.1	-2	-1.3
Housing	44.9	23.5	13.6	-2.1	-2
Asset*	37.5	9.5	5.6	-2.8	-0.8

*ownership of devices like radio, TV, telephones, computer, animal carts, cycle, motorbike, refrigerator, etc. Modified from data presented by TOI, July 21, 2023

While, the poverty is shading out slowly, but it be observed that in case of India it is still existing and has to be tackled keeping in mind that the U.N. Charter based on which various Agenda is being framed with the apex issue of poverty being eliminated in all its forms and along with "Declaration of Right of Development". It envisages a world in which consumption and production patterns and use of all natural resources in the placenta of air to land, rivers, lakes and aquifers from ocean to sea are all sustainable. Sustainability has three dimensions the economic, social and environmental.

The New Agenda contributes to fundamental changes in the way occupants of the planet produce and consume goods and services. The Governments, International organizations, the business sector and other non-state actors and individuals must contribute to changing

unsustainable consumption and production pattern. The scientific, technological and innovative capacities should therefore move towards more sustainable patterns of consumption and production. The U.N. encourages the implementation of the 10 year plan on Sustainable Consumption and Production through its 17

Sustainable Development Goals by year 2030. Indian's Life Style for Environment (LIFE) campaign spotlighted by G20 rightly extols the principles of responsible and sustainable consumption. Countries must take responsibility of their environmental footprints .Otherwise, efforts to improve the sustainable of domestic production risks being outweighed by-or exacerbating degradation elsewhere. A common understanding could unlock stronger collaboration among governments, businesses, international organizations and others. Development of shared knowledge base based on internationally standardized and harmonized framework.[5]

The agency (ies) to bring the change are the Governments, International organizations, the business sector and other non-state actors and individuals and they are to do the Green Housekeeping .

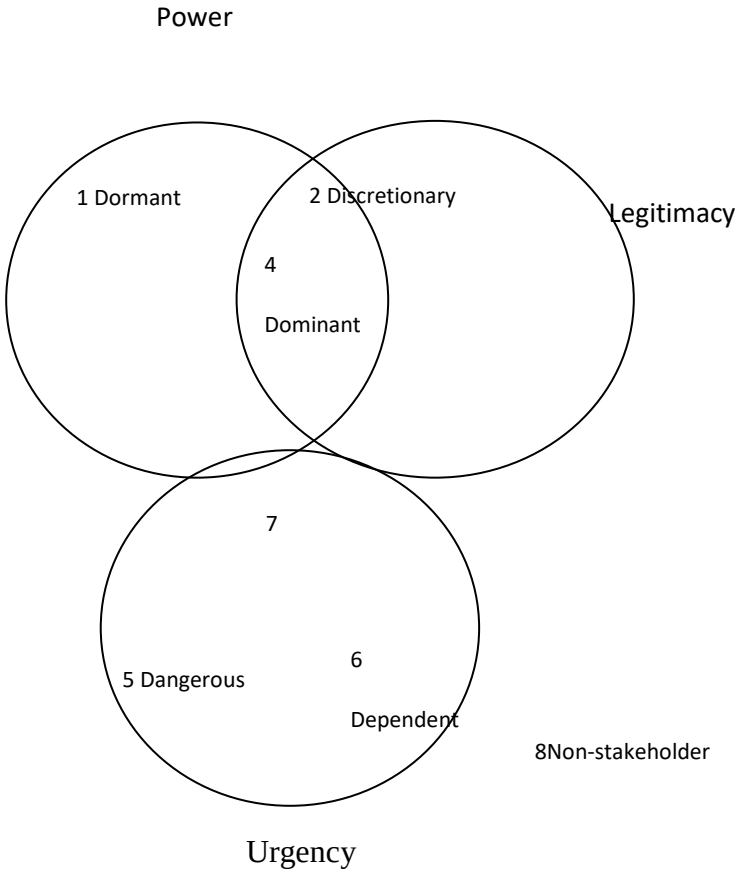
Change

The agency(ies) are all stake holders, at micro level they are to concentrate more on Agenda goals 6,7,8,9, and 12 as relevant affairs of their green housekeeping. The themes of the goals are as under:

1. Ensure availability and sustainable management of water and sanitation for all. (goal 6)
2. Ensure access to affordable, reliable, sustainable and modern energy for all.(goal 7)
3. Promote sustained inclusive and sustainable economic growth, full and productive employment and descent work for all.(goal 8)
4. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. (goal 9)
5. Ensure sustainable consumption and production patterns. (goal 12)

Having stated the ‘Green House Keepers’ domain of accountability. One must look into the types of Stakeholders of Green.

Source: Stakeholders types as per Mitchhell et al 1997[6] (modified).



The concerned stake holder group is the intersection of the Venn Diagram ie. Portion'P∩L∩U'

Where P=Power, L=Legitimacy and U= Urgency. This is shown as numeric '7' which is 'Definitive Stakeholder'. This group is the **target audience** of Green House Keeping. The rest of the deliberations will be directed towards their implementations towards Agenda 2030.

At executional level one has to do the following steps[7];

1) Compliance and Risk Management.
2) Resource Management (Materials, Energy and Water.)
3) Green travel Planning
4) Capital Investment to add green technologies.

A few words about each of the issues will help the materialize the green housekeeping at the micro level.

1) Compliance and Risk Management.

The starting statement is that 'Negative Externality' by the institution whatever be the type of firm should be reduced or totally annihilated. This would even stop the economic leakage, which at micro level leads a step towards economic and social sustainability. The firm has to use a four spiked fork to handle the Compliance and Risk Management at the Micro level:

1. Be actively be part of the Asian Environmental Compliance and Enforcement Network (AECEN).
2. 2)National Policy of Pollution Abatement (NPPA)of 1992
3. The National Environmental Policy (NEP) of 2006. (this is implemented through Ministry of Environment and Forest)
4. The Acts that impact Environment Compliance the is done through the Central Pollutions control Board and State Pollution Control Board.(these two boards are governed by the MOEF rather they are the wings of the MOEF)

A word about each is beneficial for the academia.

The objectives of AECEN were the following:

1) Promote the development and implementation of improved environmental policies, Laws regulations and institutional arrangements.

2) Strengthen practitioner capacity through specialized training and skill development.

3) Facilitate regional sharing of best practices and information.

What the firm has to do is look for, how to get into the network to remain in tune to international order. The knowledge part gets the fill up being part of the AECEN.

The Economic instrument as a compliance tool gets fill up under the NPPA1992 (this being the risk determination yardstick also). The objective of NPPA are the following:

1) Prevention of pollution at source.

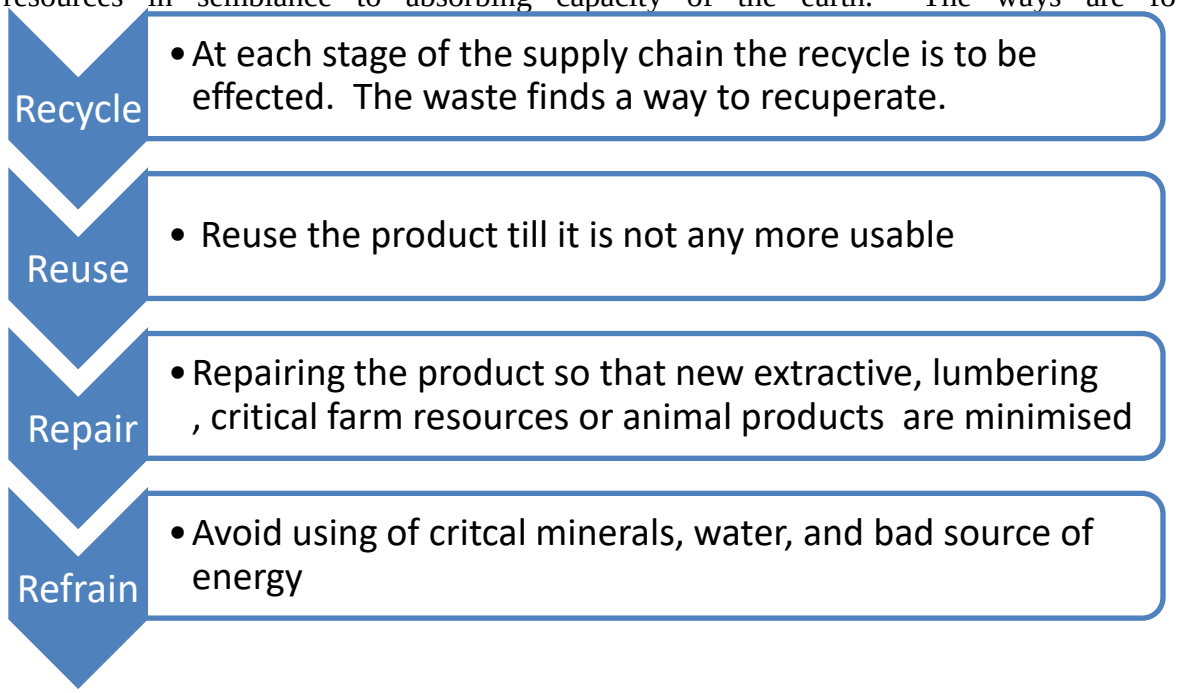
2) Adoption of best available technology

3) The polluter pay principle and

4) Public participation in decision making

The NEP's key environmental objectives include conservation of critical environmental resources, intra-generational equity, and livelihood security for the poor, efficiency in environment resource use, enhancement of resources for environmental conservation, integration of environment in economic and social development. It identifies a new framework for legal action that includes application of a mix of civil and criminal sanctions, adoption of innovative economic instruments and public -private partnerships in strengthening environmental compliance and enforcement.

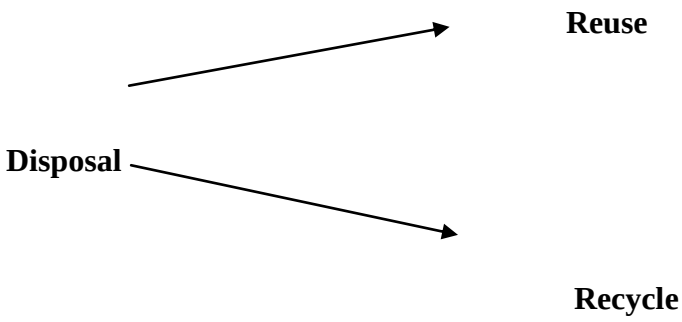
Prevention of pollution at source Pollution prevention refers to reducing the use of resources in semblance to absorbing capacity of the earth. The ways are four:



One has to understand that the Product Life Cycle finds a direct and more proportionate relationship with between Use and Repair i.e.

REPAIR ⇄ USE

The case **of REUSE and RECYCLE HAS THE ONLY SOURCE DISPOSAL i.e.,**



Disposal is biggest source to reduce pollution as **Use can be controlled**. The **reuse** depends on opportunity to diffuse the product usage pattern; it is based many times on the ingenuity of the person to reduce **economic outflow** or **incentives** in such a behavior pattern.

Recycle depends on the source of waste management, which is mainly of two types **a) Organized** and b) **Unorganized** and both the types culminate in use of technology to reduce the pollutant. Therefore, herein is the interplay of management solutions and technology solutions to churn out a proper Recycled output.

Adoption of Best Available Technology

Jared Diamond in his book 'Collapse'[8] lists eight factors that have historical significance in profoundly understanding the reason of collapse of the society, these are namely, deforestation and habitat destruction, poor soil, water management, overhunting, overfishing, the impact of newly introduced species on native species, overpopulation', impact of increased per capita earning of the population. The islands of Ester Island, Pitcairn, Anasazi tribe of North America, Maya in Central America, and the Viking in Iceland are some evidences of environmental disasters hitting them at some stage of time.

The gurus of contemporary technology proposes the fact that 'Nanotechnology' of K. Eric Drexler could be important navigator and singularity spokesperson Raymond Kurzwell could also be some beacon in regard to available Technology.

K.E. Dexler in 1986 described how nanotechnology, which is the manipulation of single atom(s) and molecules at the nanometer level will create a new era of prosperity and affluence. The programmable molecular machines called 'assemblers'[9] that would build perfect molecular structures in virtually any form. The assembler has the possibility to build any new product. Say, today the availability of synthetic meat, food safety (such as detection of food borne pathogens, reduction/elimination of heavy metal reduction, mitigating allergans, elimination of pesticides/additives/drugs and inhibition of biofilm formation.) , food preservation (Antibacterial agents, Encapsulation of nutraceutical improves their stability and bioavailability leading beneficial effects to humans) and molecular disassembly of pollution created by the Industrial Revolution.

Kurzweil , in 2005 forecasted an exponential acceleration of technology in which humans increasingly became enmeshed with machines. Genetics, Drexlerain nanotechnology, artificial Intelligence, and robots all become one in what Kurzweildefines as 'Technological Singularity' [10]. In this singularity, new types of hybrid organic/machine intelligence will be formed that are far superior to existing organism and machines. The combination of machine and biology would end death and starvation, creating a world beyond our human shortsightedness.

Polluter Pay Principle

The polluter pay principle is enacted to make the party responsible for producing pollution responsible for paying for the damage done to the natural environment[11]. This means that external negativity caused by the individual firm does not over ride accountability. Corollary is that the firms have the duty to **'care for the environment'**. In European and Indian laws the following **principles**[12]get reflected:

1) Duty of care is embedded in the waste management regulations. The producer of waste is responsible for its safe disposal- transferring it, to a waste contractor does not remove the generator or consumer out of his duty.

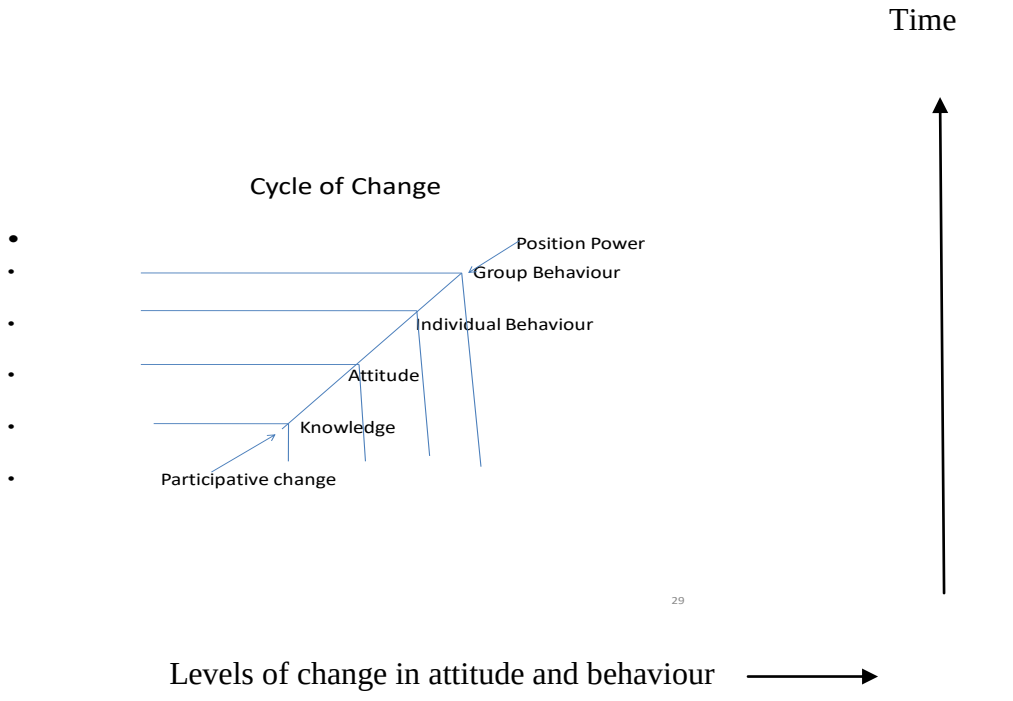
2) Producer take back legislation requires the producers and users of electrical goods, packaging and batteries to pay for their recovery and recycling.

3) Purchasers of sites with contaminated land can require the organisation who contaminated that land to pay to remediate it.

Public participation in decision making

Mathur Praveen et.al.[13]; while reporting on public participation in environmental decision making in case study analysis stated as Case Study of two limestone mines in reference to state of Rajasthan wherein EIA had to be done stated the following in the paper.

"It is clear that the public recommend participating not due to environmental concerns but for their moot interests of employment. It was found that illiteracy among the people is one of the causes of inefficient public participation process. It can be concluded that unawareness of public about their right to participate is being misused by the industry. Also, the authority shows no interest to make people aware of environmental impacts of their project and was liberal to the project impact on the environment and related issues. Thus, it can be concluded that the public involvement exercise was meant just to be in compliance with rules and regulations of the game. It seemed as if the public hearing was very well staged, so as fulfilling the criteria of obtaining environmental clearance for the project". Why did it happen so? Was the planning to have a participation was not proper?



(Diagram: Modified from Hersey and Blanchard)

Yes, the essay to make participation in the environmental decision making in Rajasthan did not work because of power being used, rather than using position power in seeking participation, the style should have been to first bring environmental awareness in terms of

necessity, then the knowledge pertaining to green benefits and external negativity plus the benefits of participation thereby bringing the individual attitude change and change in individual behaviour followed by change in group behaviour this will be the stable change[14].

2) Resource Management (Materials, Energy and Water.)

The three issues refer to:

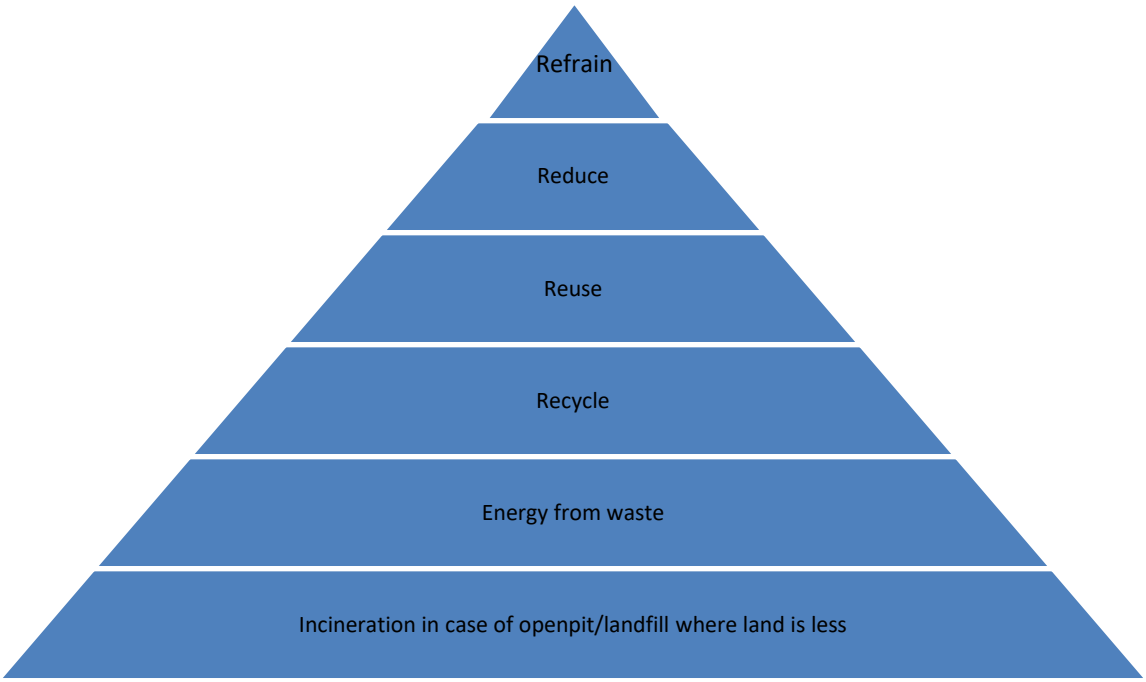
a) Waste Management.

b) Energy Efficiency.

c) Water conservation.

a) Waste Management;

The waste hierarchy is very important to understand in order to understand 'Waste Management'. The researcher is therefore modifying the waste hierarchy.



Waste Hierarchy (Modified from Green Exec utive of Gareth Kane pg 114.[15])

The author will briefly discuss each of the stages.

a) Incineration in case of consumer open pits or even in the furnace. Waste management of course in India depends on waste segregation (organised or unorganised i.e., level and kind of sepration as well as the level of waste management technology practiced in that state or country side). In general now a days in terms of environmental benefit, the incineration plants are more favourable to landfills, as it gives overall lesser Carbon dioxide (CO_2) emission and also the methane (CH4) emission is avoided. The landfill waste gets decomposed to produce methane, with a much larger global warming potential than CO_2.There exists a problem of leaching associated with landfill, if the soil is permeable it will lead to ground water

contamination, in case of incineration this problem gets eliminated. The non organic and non-recyclable materials do not decay in landfill. One may say that bio-gas in landfill sites get collected but it is reported that in that case also 25% of the biogas escapes.

b)Energy from waste. The types of waste are two-1) Domestic and the other 2) Industrial. The Domestic waste (Municipal Waste solid and Liquid), the source of this waste is largely the consumers.

The Industrial waste is also metal, chemical and gaseous chemical. Wastes by nature normally are hazardous. The most common approach of waste conversion to energy is through combustion
to heat and /or electricity. The alternate means of obtaining energy from waste stream one knows that many waste are sometimes turned to fuel directly by using more efficient process such as anaerobic digestion. One can forward the example where organic waste is broken down by bacteria in absence of oxygen to Carbon Dioxide and Methane- this is known as bio-gas. This bio-gas can be used directly or again upgraded (i.e., separated) to be used as bio methane and several thermal process to produce fuels of different forms like gas.

c) Recycle- The waste mainly in industrial several points of supply chain should be collected in an organised collection process in original form again required separation of materials and then recycles them into three form pellets, flax or liquid. One has to understand that according to Indian Plastic Federation, Plastic is nearly100 % recyclable. Similarly, uncolored Glass is nearly 100 % recyclable, non laminated tin is also 100 % recyclable. Some are stating that steel is Green metal even. It is stated that a tonne of recycled paper saves 17 trees, 2.5 barrels of oil, 4100 kWh of electricity, 4 cubic metres of landfill space, and 31,780 litres of water[16]. It is estimated that waste management in India is potentially a $15 billion industry. Waste material if segregated and processed further, it can be a highly lucrative source of revenue generating. Out of the entire waste produced in India, 25% are dry waste components that can be recycled.

d) Reuse-The process of reusing starts with the assumption that the used materials that flow through our lives can be a resource rather than refuse. Waste, after all, is in the eye of the consumer and also the manufacturers. One person's trash is another person's treasure. The following are some examples of reuse[17].

1) Container can be reused at home or for school projects.
2) Reuse wrapping paper, plastic bags, boxes, and lumber.
3) Give outgrown clothing to friends or charity.
4) Buy beverages in returnable containers.
5) Donate broken appliances to charity or a local vocational school, which can use them for art classes or for students to practice repairing.
6) Offer furniture and household items that are no longer needed to people in need, friends, or charity.
7) Sheets of paper that have been used on only one side can be used for note-taking or rough drafts.
8) Old, outdated furniture can be reupholstered or slip covered. Have padding added to the furniture to give it a new look. Often the frame can be modified slightly to change the way it

looks.
9) Old towels and sheets can be cut in small pieces and used for dust cloths.
Books and magazines can be donated to schools, public libraries, or nursing homes.

8) Newspapers can be donated to pet stores.
9) Packing materials, such as polystyrene, plastic quilting, and similar materials, can be saved and reused again for packing.
10) Carry a reusable tote bag or take bags to the store when you go shopping. There are attractive nylon mesh bags available that can be stored easily in the glove compartment of your car. Durable canvas bags, which take very little space to tuck away when not in use, can also be used.
11) If you buy prepared microwaveable dinners, save the plates for outdoor parties or for children.

12) Old tires can be used in the garden and in the play yard.

Reduce :Each manufacturer and consumer adds to the waste management problem. If manufacturer or consumer reduces its waste, the problem will be reduced. The ways to reduce are the following:

1) The upgraded technology to the older will reduce the amount of raw material therefore input to output ratio elementarily will reduce the inputs of raw materials.

2) Let the product orientations be reduced and replaced by services.

3) Operational better management of product through sharing to products will reduce the necessity of possession of the private product.

4) Using of environmental sensitive raw materials or products by substituting them with environmental benign products.

5) The one time products or disposable type pens or razors should not be patented therefore the manufacturers and consumers should desists from it.

6) Packaging materials like plastic bags, boxes, packing peanuts, and plastic wrappers often choke the drainage and drains . Educating on shopping bags or bio degenerating bags or paper bags instead of using plastic bags.

7) Stimulating the local economy, buying local products means reducing negative environmental impacts i.e., carbon miles.

Refrain: It refers to an act to create any pollution. This can only happen when consumers and manufacturers embrace products that follow the 'Cradle-to-Cradle'(C2C) philosophy. It therefore, refers to a system that is a holistic design approach that mimics natural system. Like biomimicry, cradle to cradle's inspiration is found in nature's biological metabolism, where very little input is required to create complex organism and diverse materials, and all nutrient cycles are closed. The closed-loop production is at the heart of sustainable practices. Cradle-to-cradle is not a new technology it is a philosophy which is founded on the 3E's of sustainablility: ecology, economy and equity[18].The larger goal is to address the triple bottom line of Planet, People and Profit. Therefore is the significant shift from the erstwhile philosophy from the 'Cradle- to- Bury'. The manufacturer maintains ownership of the

product's material assets for continual reuse while the customer receives the service of the product. The product is thus described through human use value. From Cradle -to-Cradle philosophy it has upgraded itself to Cradle -to- Cradle Certification. Today the certification evaluates the sustainability of the product and the practices employed in manufacturing the product, focusing on the use of safe materials that can be disassembled and recycled as technical nutrients or composted as biological nutrients even throughout the supply chain.

b) Energy Efficiency

Energy Efficiency is an outcome of Sustainable Design Principles. It involves the reduction of energy use. A proper eco-friendly design should products, environment and lifestyles that require less energy. This is most probably what COP 28 also emphasised on. Prime Minister Modi when stated LIFE on hind side reflected that in his speech, climate change is indirectly an issue spurred by carbon emission and green house gases. Therefore, Energy efficiency should be ensured during the following stages:

a) Energy used while the process of manufacturing starts.

b) Energy used while the transportation of goods or services takes place.

c) Energy used while the other support operation are in progress(mainly for durable goods and buildings/infrastructure) and

d) Energy used for Demolitions of used products or services.

c) Water Conservation.

In 2019 by the Indian government started the Jal Shakti Abhiyan, which aims to accelerate water conservation efforts across the country. This water conservation scheme's key strategies include water conservation, rainwater harvesting, renovation of traditional water bodies, and watershed development. The main objective of NWM (National Water MIssion) is "conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources development and management"[19]. Based on the study titled "Reassessment of Water Availability in India using Space Inputs, 2019" conducted by Central Water Commission, the average annual per capita water availability for year 2021 and 2031 has been assessed as 1486 cubic meter and 1367 cubic meter respectively. Annual per-capita water availability of less than 1700 cubic meter is considered as water stressed condition whereas annual per-capita water availability below 1000 cubic meters is considered as a water scarcity condition[20]. Presently less than 1% of the worlds water being freshwater one should aim in ensuring the availability of water for future generation where the withdrawal of freshwater from an ecosystem does not exceed its natural replacement rate[21]. There are various sources of water such as wells, rivers, ponds, lakes, oceans, big dams and streams. As we all know, nearly 70 to 80 percent of the Earth's surface is covered by water, among which only 1-2 per cent water is pure and suitable for human use.

For purpose of the Indian firms this should get reflected in the following

1. Foot-operated taps, which can save water by using short bursts of water for rinsing in a kitchen or bathroom.

2. Pressurized water brooms, which can be used instead of a hose to clean sidewalks
3. Cooling towers conductivity controllers
4. Water-saving steam sterilizers, for use in hospitals and health care facilities
5. Rainwater Harvesting
6. Nutrient recovery
7. Recycled water for non-potable use
8. Direct and Indirect Potable Resuse
9. Source separation, Urine water diversion, Full Nutrient and Resource Recovery.
10. Waterless Car washes.

The government of India presently intends to increase water use efficiency by 20%; and firms by incorporating the same will help the country to achieve the mission.

3) Green Travel Planning;

Firms need to reduce the carbon footprint of travel, the travelling of individuals, groups and daily chores of business work and MICE (Meetings, Incentives, Conferences, Exhibitions). Firm is accountable, for this gets reflected in the Profit and Loss Account or the Income Expenditure Account.

Firms know that a phenomenal percentage of the expense is recorded and therefore the Net Profit or Income over Expenditure. Travel is not a factor of money accounting but impacts the Planet and the People. The carbon footprint reduction and reduction of this cost on this ground is important and the other component i.e., the third is Profit as par the

Triple Bottom LIne[22]. Green travel is not a passing trend but a portable lifestyle choice. According to a TripAdvisor survey, nearly two-thirds of travelers plan to make more environmentally sound choices over the next year.[23] This indicates that consumers are becoming environmental friendly. Among land transport, trains are generally very environmentally friendly, among non train travel are the electric buses, cycling, hiking and the walking. Traveling less and staying longer is a green travel planning. Selecting a full flight on a large plane in a fuel-efficient fleet is advisable. It is best to discard cruise and rather use non fuel using sail boats or labour oriented rowing boats for fun trips only padal boats be allowed. Green Travel planning also requires that Green Destination be preferred that has lesser of economic leakage, depend more on community marketing and entertainment. After travel the visitor should have helped the local economy, this being the standard and these all are also part of corporate CSR.

In India 8 Eco-friendly ways to travel could be:

1. Using tote bags and avoiding plastics all together.
2. Using public transport, car pools, walking or using bicycles.
3. Using CNG based vehicle.
4. Hiking.

5. Using the network of NGOs.

6. Not using virgin paper made materials.

7. Reducing the use of wood.

8. Renting hybrid cars or electric cars.

4) Capital Investment;

The capital investment by the firm/institution fall into two categories ,namely, (1)'Green' investments such as micro-renewable, rainwater harvesting of skimmers to remove fats and oils from effluent for recycling; and(2) standard improvements and upgrades of firm for moving towards cradle to cradle approach in the industrial pollution. India requires around Rs 11, 00,000 Crores as National Determined Contribution (NDC) per year as investment to meet the goal set by the Paris Agreement. The sources will automatically will be public, private and foreign direct funding. The Reserve Bank of India has introduced guidelines for banks and non-bank financial companies (NBFCs) to accept "green deposits**".** The purpose is to ensure funds are utilized for energy efficiency, clean transportation, climate change adaptation, sustainable water and waste management, green buildings, and terrestrial and aquatic biodiversity conservation[24]. Present budget of 2024 anticipates government action on green financing, including tax breaks for low-carbon technologies, policy pushes for green financing instruments etc., it is equally important for private sector organizations to adopt internal carbon pricing and promote investment in green technologies and solutions. In March, the Securities and Exchange Board of India (SEBI) introduced an ESG category of mutual funds. Asset management companies in India can now launch more than one ESG fund, and as reporting on such parameters improves, the increased rigor and transparency will boost investor confidence. Presently there exists 9 ESG fund in India, with an Asset under Management (AUM) of around 9,986 crores. This is specifically fund for corporates who are comploaint to Environment, Social and Governance specific to themes of Renewable

Energy, Health Care, Technology, Rainwater Harvesting, etc.. Some of the common types of ESG Funds are:-

a) Exclusionary Funds- These funds exclude some specific sectors or products.

b) Best-in-Class Funds- These funds invest in the companies with the best ESG ratings within their respective industries.

c) Thematic Funds- These funds invest in companies specifically focused on sustainable themes such as clean themes such as clean energy, gender diversity, water conservation etc.

d) Impact Funds-These funds invest in companies that create a positive social impact and seek to give investors

Higher Returns

Summary:

The micro -level orientation will only ensure LIFE (Life Style and Environment) to be implemented and G20 agenda be met the corporate is the bottom of the pyramid to this promise and the fulfillment of Paris agreement. The holistic view of this implementation is

very essential and therefore, it is the mixture of compliance and risk management, natural resource management, green travel planning and capital Investment. Corporate should try to be a ranked Environment, Social and Governance in the concerned industry category or classification.

REFERENCES:

1. https;/ research.un.org/ accessed on October 16,2023.

2. 'Modi ki guarantee.: In NCA 3rd term, Indian to be among top 3 cos.; TOI, July 27, 2023.

3. World Resource Institute, "how much of the world's resource consumption occurs in rich countries?', Earth Trend, http://earthtrends.wri.org/updates accessed September 25, 2010.

4. 'India Keeps reducing Poverty, but jobs got tougher of late' TOI, July 21, 2023.

5. West Chris,Global Trade on Thin Ice ET, July 19,2023

6. Mitchell, R.K., Agle, B.R. & Wood, D. J.; Towards a theory of Stakeholder Identification and Salience: Defining the Principle of Who and What really Counts. The Academy of Management review 1997, 22(4). pp.874.

7. Kane Gareth; Green Executive, Earth Scan, London, 2011. pp.111

8. Daimond, Jared. Collapse: How Societies choose to fail or Succeed. Penguin Books, New York, 2006.

9. Dexler, K.Eric, ;Engines of Creation: The coming Era of Nanotechnology, Anchor Books New York.1986

10. Kurzweil, Raymond. The Singularity is Near, Viking Press, New York, 2005.

11. Polluter pay principle;https://en.wikipedia.org/wiki/Polluter_pays_principle accessed on December 3, 2023.

12. Global Solutions in the book of Kane Gareth; Green Executive, Earth Scan, London, 2011. pp.72.

13. Mathur Pravven, Sharma Kriti, Kachhawa Yati, and Patan Sangeeta; Public participation in environmental decision making,

With special reference to project in Rajasthan in Current world Environment, Journal,

https://www.cwejournal.org/vol5no1/public-participation-in-environmental-decision-making- with-special-reference-to-project-in-rajasthan accessed on December 3, 2023.

14. Hersey, P., and Blanchard, K., Management of Organisational Behavior, Prentice Hall India, New Delhi, 1986, pp. 274.

15. ibid, pp 114.

16. Rathi Madhur; Recycling of Waste can generate crores in revenue in India, TOI, June 9, 2022. https://times of india. India times.com/blogs/voices/recycling-waste-can-generate-crores-in-revenue-in-india/ accessed on 13.12.2023.

17. Fahzy Rahman Abdul, Reduce, Reuse and Recycle; The Alternatives to waste Management; College of Agricultural, Consumer and Environmental Sciences, New Mexico State University.

18. Tynan Shanon, Cradle-to-Cradle Design, in the book Green Technology, Sage Reference Series,Washington DC,pp.123

19. https://nwm.gov.in/schemes accessed on 23.12.2023

20. www.pib.gov.in accessed on 23.12.2023

21. https://en.wikipedia.org/wiki/Water_conservation accessed on 23.12.2023.

22. Elkington John. *Harvard Business Review. Archived from from archieve on 22 March 2023.*

23. Sach Andrea, What is 'green travel,' anyway? A beginner's guide to eco-friendly vacatioplanning;https://www.washingtonpost.com/news/style/wp/2017/05/18/how-to-plan-an-eco-friendly-vacation-from-start-to-finish/ accessed on 12.01.2024

24. https://www.ey.com/en_in/climate-change-sustainability-services/green-finance-is-gaining-traction-for-net-zero- transition- in-india accessed on 13.01.2024