

Behabitive Approach towards Sustainable Development of the Region

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Abstract— Development is something that everyone wishes to have. The race of becoming a developed country in the world, generation ago, neglecting the very essence of life on earth—climate, environment and natural resources, left the present generation to face the dire consequences. When the whole world started feeling the heat of climate change, environment and resource depletion, sustainable development took the center stage. Many countries, including India, have come together to fight for the climate change and save our environment and natural resources. Many a times it happens that policies are framed, rules are made but effective implementation remains to be a big question in country like India. Besides policies and rules, general attitude of the people towards the concern has, so far, not been seen as the potential factor in sustainable growth, which perhaps, looks small but can contribute immensely towards the cause. Behavior can truly influence the state of wellbeing of the planet. This paper discusses the behabitive approach towards the sustainable development so that our generation, at least, will not be blamed by the coming generation.

Keywords—Behabitive; Sustainable; Climate Change; Resources; lifestyle.

I. INTRODUCTION

Sustainability, in broader sense, is concept where human and nature enjoys the good-will of each other in present generation without affecting the rights of better lifestyle of a future generations. Sustainability speaks the truth that our survival depends, directly or indirectly, on the nature and its resources. A development cannot be treated as sustainable development unless its concept brought to the knowledge of all the stakeholders through proper learning [1]. At the same time it greatly deviates from its concept if it's not practiced in day to day life.

So far so good, we were considering the industries responsible for the environment degradation, which resulted into catastrophe like flood, drought, global warming, ozone depletion, el-Nino, etc. But, when we intrude further, we can make out the fact that the environment degradation is an outcome of the human behavior caused by collective ill-efforts, their beliefs, customs, values, etc [2]

Ironically, when we are feeling acute shortages of the resources, which are depleting at faster rates as compare to it get replenished, we have not given the importance of our own lifestyle, which should be in harmony with nature and society as well [3]. It is worthwhile to note from the Fig No 2 [4] that the growth of the population thereby their need in energy

consumption, which utilizes natural resources [4].

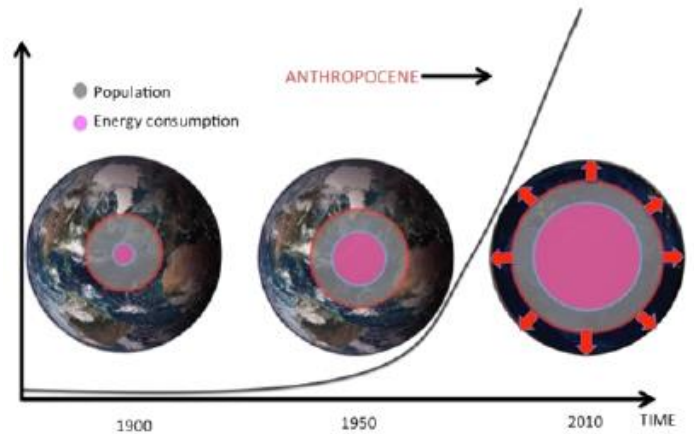


Fig. No.1 Dipiction of Population and Energy Consumption change over the century period [4]

With the advent of technologies and development, the quality of lifestyle has increased but we failed to make it sustainable lifestyle where the concern for the future generation lost. Therefore, the time has come to consider behabitive approach of an individual; society and organization are not only important but pre-requisite for sustainable development of the region [5].

II. WHY BEHABITIVE APPROACH

It is evident that the industrial development causes to emit poisonous gases, which are called as Green House Gases (GHG). Fig. 2 shows the percentage of GHG emission from various practices [6]. GHG emission started to rise from 1800s [3]

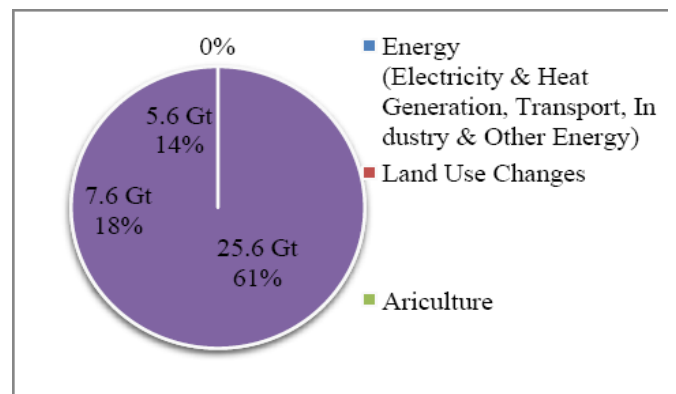


Fig No. 2 GHG Emission [6]

Implementing industrial policies to curb the harmful emission involves the financial burden, which proves to be costly. On the contrary, to concentrate on behavior aspects can be effective on both the fronts such as cost and strategy. It has been well documented that an individual will not respond or adopt sustainable lifestyle even though it is needed for their benefit [7]. Attitude always brings secured and long-lasting changes in the behavior of a person [5]. One must ponder over the basic behavioral and social aspects that can lead to mitigation of the menace of environmental degradation and related problems [7]. Fig No. 3 shows such aspects.

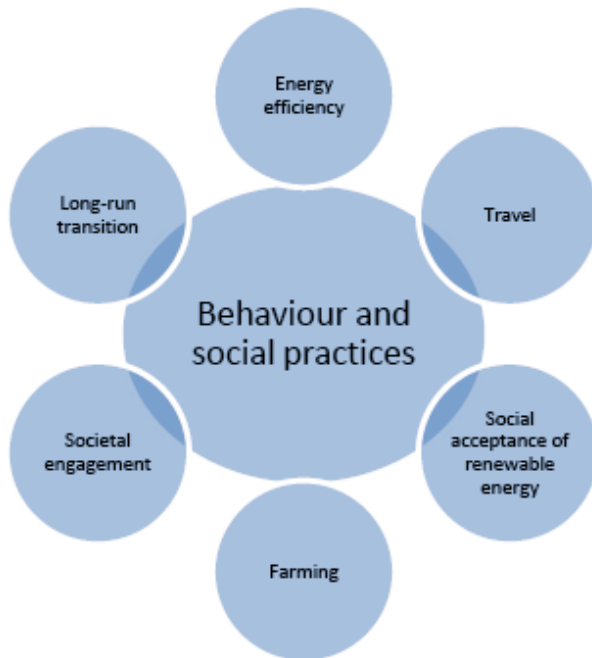


Fig No. 3 Basic behavioral and social aspects [7]

Let us explore the behavior aspects, perhaps, the known but often neglected in routine lifestyle and decisions.

A. Construction Practices and Developmental rules

Due to robust economy of the country, the per capita income is on the rise in many geographical areas. This is leading to increase in the spending and purchasing power of the citizens. Infrastructural growth is on high records these days. While doing so, we must adopt certain practices which would lead to sustainable development. Few but not limited can be traced out as below:

- i) Instead of using granite, marble, and other highly decorative building materials for aesthetic purpose, an individual should give priority for installation of solar SPV on roof top, Water flow sensors in their all taps for the controlled flow of water and hence, saving. Use of double layered sash windows to be adopted for reducing the total solar radiations.
- ii) Every individual should go for energy and water audit every year to see and curb the wastages if any. Thereby, one can identify the appliances, which are consuming more energy and can be discarded.

- iii) While planning the building, principles of planning should be so selected that the use of energy is minimum.
- iv) Every individual must install Roof Top Rain Water Harvesting, which should be strictly monitored by the local body authority. Half of the rain water can be stored for the secondary use and rest can be let into ground water recharge.
- v) For the upcoming colonies and layout, mandatory provisions must be made to develop Public Utility Plot as an Eco-Friendly Park rather than swimming pool and other luxurious facility. A common community facility must be provided by the builder to celebrate the festivals, which, otherwise consumes great amount of water, energy and many times encourages pollutions.
- vi) Alike the mandatory provisions of leaving certain percentage of land for public utility and as open space, there should be the introduction of the provision of leaving certain percentage of land for afforestation. The due credit and benefit, in-lieu of that may be given to the builder.
- vii) A continuous awareness program must be organized for the Societies and residents for optimum utilization of the resources.
- viii) Every block in a colony must be provided with cooperative store for the daily needs of the inhabitants. It will discourage them to go out far distance using their vehicles and hence energy can be saved. For wandering inside the society, everyone may be encouraged to use cycle ride.

B. Imparting Education for Sustainable Development

To infiltrate the concept and need of sustainable development in the minds of people, education be a strong media to do so. Education for sustainable development does not mean imparting teaching of environmental contents or sustainability concept; rather it includes the teaching of moral values, human rights and values, good governance, cleanliness, nature and cultures, sharing the responsibility, etc [3]. The education department of the country must come on a common platform to achieve the goal. The global Universities Partnership on Environment and Sustainability (GUPES) thinking of the promotion of the sustainability and environment concepts in teaching, research and management level [3].

C. Travelling

We always wish to have comfortable and luxurious travelling, which leads to consumption of more fossil energies. Use of Bus Rapid Transition System, Mass Rapid Transition System, Car pooling, Public Transportation System can save much of energy for the future.

D. Transit Oriented Development (TOD) Planning

Transit oriented development concept is better tool for sustainable growth and planning. The transit Oriented Development planning will transform urban development into sustainable development. The entire concept is based on

minimum usage of motor vehicle where fossil energy is utilized. It encourages to use walking, cycle ride and use of public transportation system. The local development authority should plan urban area looking into the concept of TOD. It not only reduces pressure on the ecology but greatly facilitates to utilize the urban spaces effectively [9]

E. Corporate Social Responsibility (CSR)

Although, few companies are doing developmental work under their CSR, but still the concept is fully grown in the country as compared to the industries and the benefits given to them [10] Statistics shows, Fig No. 4, that very few corporate sector are adopting CSR activities and that too majority of them are in either education sector or medical sector.

SN	Company	Revenue	Average Profit After Tax (PAT)	Actual Spend	2% of PAT
1	Indian oil corporation	442,459	7,783	83	156
2	Reliance industries*	368,571	21,138	288	423
3	Bharat petroleum corporation	223,315	1,438	8	29
4	Hindustan petroleum corporation	195,891	1,118	27	22
5	Tata motors	170,678	8,437	15	169
6	Oil and natural gas corporation	151,121	23,660	121	473
7	Tata steel	135,976	3,895	146	78
8	Hindalco industries	82,549	3,597	28	72
9	Coal India*	78,410	11,759	119	235
10	Bharti Airtel	71,506	6,511	33	130
11	NTPC*	66,366	9,334	49	187
12	Larsen & Toubro*	64,960	4,818	70	96
13	Mahindra & Mahindra*	63,030	2,948	22	59
14	Tata consultancy services*	48,894	8,935	51	179
15	Bharat heavy Electricals*	50,654	5,823	37	116
16	Steel authority of India*	51,428	5,153	61	103
17	GAIL (India)	44,861	3,891	54	78
18	Adani Enterprises*	39,416	1,940	14	39
19	ICICI bank*	37,995	6,366	24	127
20	JSW steel	36,964	5,169	32	31
21	Infosys*	33,734	7,128	26	143
22	HDFC*	29,930	3,608	3	72
23	Tata power company	26,020	1,117	9	22
26	Grasim industries	27,899	3,395	16	68
27	Reliance infrastructure*	24,181	1,229	4	25
28	Hero Motocorp	25,235	2,179	33	44
29	Reliance communications*	22,133	2,423	NA	48
30	HCL Technologies	20,831	1,778	4	36
31	Bajaj auto*	20,541	2,709	10	54
32	Idea cellular*	19,489	859	NA	17
33	Ultratech cement*	21,502	1,618	NA	32
34	Jindal steel & power*	22,473	3,814	88	76
35	Oil India	17,215	2,988	50	60
36	Jaiprakash associates	15,651	1,396	47	28
37	Ashok Leyland*	14,134	540	NA	11
38	Power finance corporation	13,075	2,695	13	50
39	Hindustan Zinc	12,061	4,823	8	96
40	NMDC*	11,269	5,737	0	115
41	Crompton Greaves*	11,615	691	NA	14
42	JSW ISPAT Steel*	12,124	-820	NA	N/A
43	HCL Infosystems*	10,856	161	NA	3
44	Punjab Lloyds*	10,313	-18	1	N/A
45	Power Grid Corporation of India*	10,312	2,664	25	53
46	ACC*	11,049	1,308	NA	26

Fig No. 4 Status of CSR of spending by the corporate [10]

The corporate sector enjoys the benefit of tax holidays and land on lease, they can contribute towards the sustainable growth of the region by utilizing their CSR fund (PAT) for activities which leads to low carbon society. Looking into the importance of CSR concept, India is about to enact the CSR law where corporate have to spend at least 0-2% PAT on such activities.

In the south-east region of Maharashtra i.e. many basic facilities are not available to the residents, which is stressing the environmental factors and causing it to get degrade further. Statistic shows Fig. No 5, the how the situation is prevailing.

Districts of Vidarbha	No safe Drinking Water (%)	No Toilet Facility (%)	No Bathroom Facility (%)	No Drainage Facility (%)	No Cooking Facility (%)
Buldhana	23	62.1	18.4	29.8	0.4
Akola	18.4	49.6	12.5	19.7	0.5
Washim	32.2	64.5	18.4	33.5	0.3
Amravati	12.9	42.2	13.2	22.4	0.6
Yavatmal	27.3	66.1	20.6	45.4	0.4
Wardha	11.8	40.2	13.8	33.7	0.7
Nagpur	8	22	8.2	22	0.6
Bhandara	20.3	37.4	24.8	49.2	0.3
Gondiya	21.3	46.5	39.8	68.4	0.3
Chandrapur	22.3	54.4	22.7	40.4	0.6
Gadchiroli	29.7	71.9	42.5	63.6	0.5
Total	20.65	50.63	21.35	38.92	0.47

Fig No. 5 Status of Vidarbha [10]

It is evident from the above statistic due to non-availability of the basic facility, people of that are forced put pressure on environment and the whole idea of sustainability collapses. The cause can be address through the CSR to reduce the environment stress.

F. Minimization of Waste

Wastage is a big concern and it has become the behabitives of the people. Following examples exhibits the types of wastages, which everyone knows but neglected grossly.

a) Wastage of Electrical energy by way of keeping the PCs, Laptop on or on sleep mode, which definitely consumes power. Keeping mobile charges connected to the on-plugged even though it is not in use. Keeping fans, tubelight unnecessary on even if it is not in use and this problem is predominant in organization. The problem can be minimized if we use proper technology to get it automatically switched – off when not in use. But, people always find excuse by saying it involves the cost and indirectly they pay more amount besides putting pressure on environment and natural resources.

b) Wastage of Water, Food, Cloath, etc do affect the condition of the surrounding thereby voiletting the very concept of sustainability. Central Governemnt Water Committee Analysis reports that 82 liters of water can be saved if we use the bucket for bathing instead of shower. Almost 80 litres of water can be saved if cloths are washed in bucket and not on running tap.

We are the masters of the future but salve to the technology, which is putting our future generation at stake by knowingly neglecting the very purpose of the harmony between the human and the nature. Today, if we do not wake-up a time will come when we or our future generation will see the whole world dark, as if we all are blind.

III. CONCLUSION

We are the masters of the future but salve to the technology, which is putting our future generation at stake by knowingly

neglecting the very purpose of the harmony between the human and the nature. Today, if we do not wake-up a time will come when we or our future generation will see the whole world dark, as if we all are blind. Therefore, besides all policies, agendas, agreement and enactments, we need habitative approach to use the technology and to adopt the practices, which can lead to harmonious life with nature; then only the development will be called as sustainable development.

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