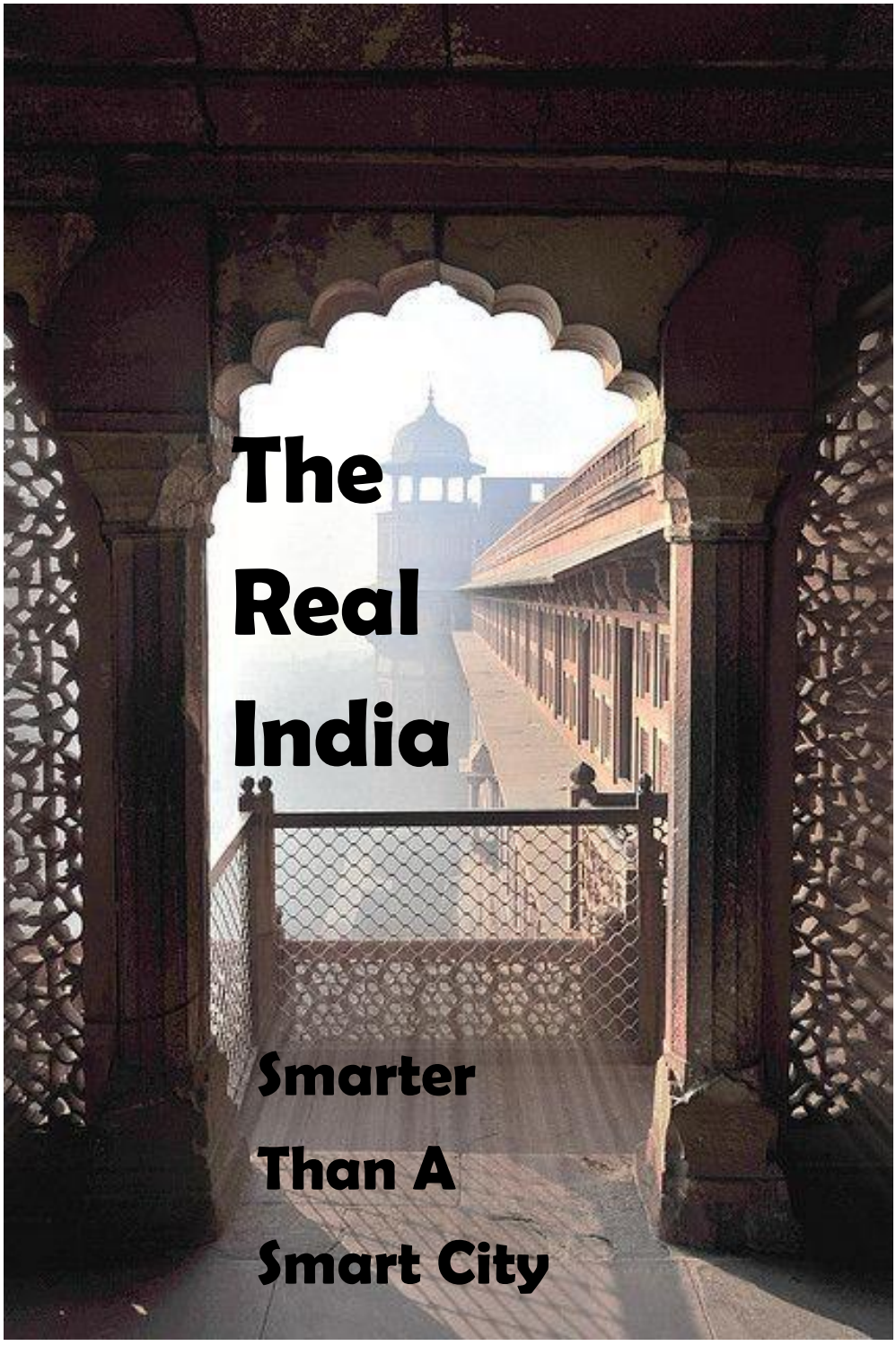

A Cultural Blue Print for Reaching All Sustainable Development Goals

(Mahajanam Trust)

Dear Reader,

This booklet is for the purpose of non-commercial circulation.

The thought processes contained in this booklet are inspired from the philosophy of the late Pujya Shri Hitruchi Vijayji Maharajsaheb.

Please know that this is a work in progress.

It is put together from a profound feeling of compassion for all the people of our country and the benevolent Earth and all its creatures and a sincere desire to bring peace to all. And also from a place of prayer, that may we all reduce our karmic debt by reducing the measure of distress we are causing to so many living beings through our current actions, individually and collectively.

We wish to pursue the solutions for the situation that Humanity finds itself in, with sincerity and commitment, and welcome every single one of you to join us in researching, brainstorming, sharing and learning from one another to find a way forward together.

We wish to further solidify the effort of putting these ideas across for joint contemplation to as many people as possible, for which we welcome all suggestions, corrections, case studies, references and any other relevant inputs.

We also invite people with an academic inclination, from the disciplines of Economics, History, Geography, Sanskrit, Indology, Ancient sciences, Education, Artisanal Craftsmanship and various others, to help us substantiate and widen the scope of this brief booklet

Kingly email us to send us your suggestions, feedback or simply even just to say hello at:

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Executive Summary

This essay aims to view the direction and socio-economic structure that we as humans have chosen for our collective well being and progress, and measure it in relation to the impacts this choice is making on the planet we have to conduct human life on for generations more to come. It is a request and invitation to all who read it, to review and reconsider the industrial development model, the current gadget dependent lifestyle, and consumerist way of life which has become the known culture to us.

Our choices may make us temporarily happy or satisfied as we go about our daily life, pre-occupied with our routines. But is everyone else around us, most fellow humans as ok as we are in life? Does everyone have access to clean air, clean drinking water, nutritious food, the same hazard free conditions of life, a fulfilling family and community life, security of a home, security for their future and the future of their children? Is the earth in a state of constant replenishment after we extract what we need from it? If most of these answers are yes, then we have made the right choice. If there is even a doubt that this may not be the case, then we are on a collision course with our future and need to review our choices.

This essay also presents the pre-colonial, real Indian economic model of India, as a model for all countries of the world to adopt to be able to meet the Sustainable Development Goals:

- to De-Industrialise from the large scale, resource intensive, polluting, subsidy based Industrial model, rife with social inequity and numerous hidden long term costs and
- Re-Industrialise, adhering to the parameters of the real Indian Economic Model, that is based not simply on output and production, but also inherently contains principles of waste-free production, conservation of natural resources, non violence towards other living beings, every human's individual progress and development, values and ethics and mutual respect for all stake holders. It is a model free from hidden costs.

"The point is not of something being Eastern or Western, modern or ancient. The point is the lifestyle for which the Western culture has become a living example. The tremendous exploitation of resources which is required to generate the materialistic lifestyle followed there, and the tremendous waste created as a consequence of it- is astounding."

- **The Late Pujya Shri Hitruchi Vijayji Maharajsaheb**

This essay seeks to explore the beginnings and foundations of the system by which and under which we conduct our social and economic lives today, and trace its evolution and impacts to where it has brought us today. Also, there is the hope that it may assist the reader to estimate or envision the future we are headed towards 1) if we do not make structural changes to the vehicle called modern life on which human life currently rests, and subsequently 2) if we DO make the changes to infuse it with basic life values and a spirit of humanity.

India's Economic Downfall in the Last 600 years from Having a Share of 28% of the World's GDP to a Mere 3.36% today

According to economic historian Angus Maddison in *Contours of the world economy, 1–2030 CE: essays in macro-economic history*, the Indian subcontinent was the world's most productive region, from 1 CE to 1600. (See table below). India and China alone accounted for 55% of the world's GDP. According to current figures published by the IMF World Economic Outlook (April 2019), India contributes 3.36% of the total world's GDP.

Year	% of the World GDP (in 1990 International Dollars)	Period	Historical and Economic Events
0-1000 A.D	32.0%	Classical Era	The Indian Subcontinent- A cluster of kingdoms and entry of the Mughals
1000 A.D.	28.0%	Early Medieval Era	
1500s	24.35%	Late Medieval Era	Mughal Rule in India and the arrival of the Portuguese
1600s	22.39%	Early Modern Era	British East India Company begins the subjugation of India
1700s	24.43%		The British defeat the Mughals
1820s	16.04%		The British gain total control; an aggressive spread of the Macaulay Education System; beginning of the Industrial Revolution
1870	12.14%	Colonial Era	Industrial Revolution and the steady decay of the local Indian trade and industry
1913	7.47%		Establishment of India's New Industrial Policy and the magnified role of state intervention through provision of capital through state-aided, state supervised industrial banks or directly. Domestic markets for factory made products created through protectionist measures, to raise purchasing power of the masses. Proliferation of formal economic associations like local chambers of commerce, trade associations and groups of industrialists.
1940	5.9%		Shortage of technologists for the modern industrial infrastructure led to vast expansion of factory oriented technical training, and skilled artisans were trained through a reformed apprenticeship system to respond to needs of modern industries.
1950	4.17%	Republic of India	
1990	4.05%		In the time frame from 1900 to 1990, the rural artisans not allowed any mention in the

			Industrial Policies, and victims of India's new orientation towards modern industries, slowly slipped to a compensatory position of "Cottage Industries" based on small remaining sentiments towards Swadeshi goods.

(Contents of the last column "Historical and Economic Events" are referred from "The Government of India's New Industrial Policy, 1900-1925: Formation and Failure" by Dr. Clive Dewey, University of Leicester)

What Caused This?

It is a topic for contemplation- How a country, so rooted in its traditional culture of local production, could have been such a significant par-taker in the world GDP share? And due to what reasons, has its productivity reduced to a meagre 3.36% of the World GDP, despite the humongous capital support and resource (over)utilisation freedom granted to modern industries by the government?

With the advent of the Industrial Revolution, India witnessed a massive, country wide structural transformation. This impacted the core fibre of its previously existing vibrant local and as well as export economy. The abruptness with which the local economic and social structures were dismembered methodically during the British colonial era, and the swift aggression with which a mechanistic and alien, resource heavy Industrial order was inflicted upon the people of India, is an event in history that the country never really recovered from.

These structural transformations are as follows:

1. **Transition of the Governance Model From a Localised Form of Self Governing, Self Sufficient Towns and Villages to a Centralised National, Interventionist Governance System:**

   The days of India's economic glory prevailed under a system of governance which was localised in structure and allowed all human settlements of small (villages) or big (towns and cities) scale to function as autonomous, self governing entities.

   The King's work was to maintain law and order, protect from enemies and provide patronage to the highest of human endeavours like academics and learned men and women, arts, crafts and sciences, and was no more than these demarcations unless specifically requested to step in to resolve conflicts. **The Indian Monarchy's role was more of a protector, patron and facilitator, and hardly ever interventionist in the daily on-goings of culture and commerce among civilians.**

   The village in India has been considered as the basic unit of local – self administration since the Vedic times (Prof. Apte, 1973). **Villages were mostly prosperous, consisting of numerous professional guilds.** Every village had a minimum of a cluster of 18 types of local industries, which fulfilled all the requirements of the inhabitants. These villages were administered by the 'grampals' who were the elders in the villages and there were no state interferences in their

activities**. The villages were free from central control**. The grampals and other village officials were appointed by the community and were accountable to them (Banerjee, I 985). The village communities were self- sufficient, self reliant and independent. Sir Charles Metcalfe has called these autonomous Indian village communities '"the little republics". **These local governments flourished in ancient Indian villages, and were not the creations of a central government, but they had an independent origin.** They were the most democratic institutions in the world. (www.shodhganga.com)

Thus, the researchers and historians have shown **the fact that in ancient India, there flourished a well-settled, well-organized and more or less highly developed system of local government**. The central government did not bother itself about the local affairs. It had guaranteed perfect autonomy to them (Bhatnagar, S, I 978). 'In ancient India, though the society was running by monarchical regimes, yet the democratic values were respected by the kings and the whole governmental process was based on the assent and dissent of the masses' (Mishra, S. N. 1980).

With the passage of time, India came under the regime of sultans of Delhi and later under the Mughal Emperors. The Sultanate of Delhi was a militarist, feudal state which vested all legislative, judicial, executive and administrative powers in the hands of the Sultan. "The Mughal rulers, were an urban people whose feudalistic attitude wants for larger finances for the state, made them to centralize the administration. **The Mughal rulers introduced a new land policy which brought the provinces, districts and villages under the charge of the centrally appointed subedars, zamindars , muqaddarns and patwaris.**" (Malviya, H. D., 1956).

With the advent of the British in India, the self-contained village communities and Panchayats, in their core essence and function, thereof, disappeared. **This reign of foreign invaders and colonial rule brought the entire country under central control.** The local self governance systems were re-inserted by the British after the Sepoy Mutiny in 1857, when they suffered heavy losses and realised it won't be possible to maintain rule over the entire country without devolving some degree of power to the locals.

The nature of decentralised layers that one sees in the current government's structure, although having retained the shell of the Panchayat system, no longer function as autonomous, interdependent units. So, **the decentralised seeming current government structure, is more a collection of "de-concentrated" versions of the Centre, and performs the role of carrying out the implementation of policies and development model propagated by the Central government**, without having true autonomy.

2. Manipulation of Pricing, first by the British and later by the Industrial Development Model Adopted by India:

From having specialised industries of high quality, value added products like textiles-cotton, muslin and silk, metal industries, stone carving, marble work, shipbuilding,

handicrafts, paper making, tannery, perfumery**, India was forced to stoop down to being a raw materials supplier at prices fixed by the British of products like raw cotton and indigo for the newly established textile mills and various factories in Britain. India also became a plantation region for commodities like tea, coffee, and rubber** with very low wages for the thousands of workers employed. It was forced to import the factory made products from Britain at higher-than-market prices to support the industrialisation taking place there. **These actions of the British rulers, which totally fractured the pre-existing, prosperous local industry based economy in India, have been widely discussed among historians and economists as the "De-Industrialisation of India by the British".**

The very first Industrial policy formulated in India by the Industrial Commission between 1900 and 1925, aimed to establish a more effective and centralised way to rule over the country and have communication and transportation systems for control and transport of its natural resources to feed the industries. Lord Montague wrote to Lord Chelmsford in 1921 "Lord Chetwynd tells me the best way of developing Bihar, whose riches he says are almost incalculble, is to promote a Bihar Development Corporation which would have a concession to develop railways, forests, mines and everything."

India's Industrial development groundwork rests on the assumption that the order in which different industries developed in the course of the British Industrial Revolution, provided a universal model of industrialisation for India to adopt. It assumed this was the order of establishing an Industrial system:
1) Creating a strong iron and steel industry was the first prerequisite of industrial growth, followed by
2) Engineering and machinery tools,
3) Subsequently followed by developing lesser industries of varied lighter goods which used chemicals and non ferrous metals.

This needed cheap power which, according to the Commission was hydel power, and also electrical equipment. This heavy, resource intensive model, totally alien to India and the way Indians lived, that stands on a plethora of hidden manipulators and support systems, numerous subsidies for industrialised products, which render locally made products incapable to compete price-wise, forms the spine of the development policies of India, to this day.

3. <u>The Transformation of the Commons into Commodities</u>:

"**For centuries, vital natural resources like land, water and forests had been controlled and used collectively by village communities thus ensuring a sustainable use of these renewable resources**. Colonial domination systematically transformed the common vital resources into commodities for generating profits and growth of revenues.

A characteristic of the Indian civilization has been its sensitivity to natural ecosystems. Vital renewable natural resources like vegetation, soil and water were

managed and utilised according to well defined social norms that respected the known ecological processes. The indigenous modes of natural resources utilisation were sensitive to the limits to which these resources could be used. **There were useful social norms for environmentally safe resource utilisation and people protested against the destructive use of resources even by kings.**

A major change in the utilisation of natural resources of India was introduced by the British who linked the resources of this country with the direct and large nonlocal demands of Western Europe." ("Ecology and the Politics of Survival", Vandana Shiva).

This development put a cost to the raw materials the artisans had access to, which continued to escalate with time. Artisans find it difficult to buy quality raw materials at a price they can afford to pay. In the absence of local/community raw material banks, the local artisans are forced to rely on local traders who provide them raw materials against orders, at high prices, or switch to non-traditional raw materials.(Varinder Singh Jawanda, Founder, Trendybharat)

Change in the Direction of Life From the Root: From a Spiritually Oriented to a Consumerist Culture

"Have you ever seen a child running after a butterfly? The more the child tries to catch this colourful creation of nature, the further it flies away. Tired of trying again and again, when the child finally gives up, suddenly the butterfly just comes out of nowhere and gently settles down on the child's palm. The nature of happiness is like this butterfly. The more you chase it with your vain attempts, the further it goes. But the more you steady yourself and the fervour to find it settles down, it may just appear at your doorstep.

The questions facing us as a civilisation- the questions of violence and exploitation, the environment and pollution, poverty and unemployment, lies and fraud- all these questions are creations of mankind. They have arisen due to us having turned in the wrong direction in the search for happiness. **The Industrial Revolution that took place in England is a demarcation line in human history after which depletion and scarcity of resources started occurring in all spheres of life.**

There is a vast difference in the lifestyles pre and post the Industrial Revolution era. The period before and the period after it, is as different as gold and iron. Life in the period before the Industrial Revolution, in the 17th and 18th century, the world over was largely influenced by Eastern culture. But **after the eruption of the lifestyle post the Industrial Revolution in the West, the limitations in its root thought process for acquiring happiness started taking over the human psyche.**

"The more the commodities, the more the happiness" was the new equation established by the novel philosophy of "have-more-ism". As a result, the homes of all the worshippers of this philosophy started becoming venues for collecting and gathering of all kinds of new

household items and furniture. This new equation which spread the belief that the more things one has, like- the T.V., video, fridge, Maruti, Mercedes- the greater their level of happiness will be. It turned a decided blind eye towards the complete opposite reality of this matter.

If this equation were true, then all the families living in Walkeshwar with all the ultra-modern facilities available to them should be experiencing a continuous, heavenly bliss. Its corollary should also prove to be true- that the tribal communities living in the deep jungles of Bastar, with the regular apparel of a loin cloth, should be experiencing an acute misery and depression. This is not the truth, and we all know it.

Often, individuals devouring big helpings of ice cream, sitting in their centrally air-conditioned offices are burning in the fire of their emotional upheavals and are unable to fall asleep on their expensive Dunlop mattresses without a dose or two of sleeping pills. Contrary to that, a poor villager from the interior regions of Kathiawad, Gujarat, who probably has nothing to his name except his mud hut and his daily food of Bajri rotis, falls fast asleep as soon as he lies down on his bedding made of some cloth and rags. “Things and facilities equal happiness” – if this equation was true, then examples like the above should not exist. But if it is not true.....then why would we not use our intellect to look for an answer in other directions?

If you establish a new “principle”, like- “sand contains oil”- then the obvious progression of your work will be to first acquire ownership of all the available sand in the world and then create complicated technologies and infrastructure to fulfil this giant task of extracting oil from it. Similarly, establishing a new principle of happiness which first increases your needs and desires, and then provides things and materials to satisfy them can only accomplish one thing in reality- cruel exploitation and excessive utilisation of resources of the earth, water, fire, wind, and the plant and animal kingdom.

Man, somehow, has come to believe that he is the prime authority on this earth, and that the whole of the natural world exists for his use. An inference of this kind existing in the current human psychology has developed an ego in him which has made life for other creatures, from micro organisms to the largest mammals, pure poison. Vinoba Bhaave, an advocate of non-violence and a human rights activist, was once ask a question, which must have arisen from an ego of such sort. He was asked- “The cow gives milk and bulls are useful in agricultural. One can understand why they must have been created as they come in use. But what about wild animals like lions and tigers? They have no particular use. Why must God have created them?” Vinobaji gave a biting reply to this question saying, “They have been put on this earth to save people from the delusion that everything on this earth exists to serve man.”

The search for the place called Happiness has to be conducted within the human mind. It does not exist in material things. The Eastern way of life had been constructed on the foundation of the belief system that happiness lies in values like- satisfaction, mindful and necessary consumption and respect for every living being and life form. Our current condition is like the Musk Deer. We are running around senselessly in search of that which exists within us and is right under our nose. We are deluded and think that there is

happiness in material things. In order to gain happiness, according to this delusion, we have to make sure that we wallow on the heap of material things endlessly and that we never fall short of their supply. To fulfil the demands of this belief system we run everywhere to acquire the things we want and feel we have every right to disturb and damage the environment of every other living-being, existing in the world. What could be more violent or exploitative than this egotistical belief system?

The happiness that man is looking for and that each and every creature is looking for, from an ant to an elephant does not exist in the material world. When a particular thing simply does not exist in a particular place, its plain foolishness to keep looking for it over there." (Atul Shah, Chapter 8, "The True India: Crushed by the Modern Development Model")

Consequences of Adopting the Western Development Model Without any Consideration for Cultural Assimilation

1. India: A country in International Debt

Prior to being colonised, the beauty of India's trading system was that the international trade balance was always on India's side. Now, as per IMF figures, the following is India's net international borrowing as per 2017 figures:

S.No.	Component	External Debt (US Dollars)	Percentage Share
1	Multilateral	56,021 million	10.9%
2	Bilateral	23,371 million	4.6%
3	IMF Loans	5,666 million	1.1%
4	Export Credit	3,390 million	1.8%
5	Commercial Borrowings	196,861 million	38.3%
6	NRI Deposits	123,315 million	24.0%
7	Rupee Debt	1,205 million	0.2%
	Long Term Debt	415,829 million	81.0%
	Short Term Debt	97,609 million	19.0%
Total		**513.4 billion**	**100%**

(Multilateral debt is the money India owes to international financial institutions such as Asian Development Bank (ADB), the International Development Association (IDA), the International Bank for Reconstruction and Development (IBRD), International Fund for Agricultural Development (IFAD) and others. Bilateral debt is the money that India owes to foreign governments like Japan, Germany, France, Russia, USA and others)

2. Population Displacement

The number of people displaced by development projects in India, are among the highest in the world. **65 million people have been displaced from their homes and ancestral lands between 1950 and 2015**. Development projects, particularly dams, have always generated serious controversy in India as they have tended to be a major source of displacement-related conflicts. ("Pushed Aside: Displaced for Development", July 2016, International Displacement Monitoring Centre).

According to the Central Water Commission, over 3,300 dams have been built since independence and some 1,000 more are under construction. Another study of 54 large dams done by the Indian Institute of Public Administration concluded that the average number of people displaced by a large dam is 44,182. The fact that development projects are usually located in remote villages, hills and forests means that those displaced tend to be the indigenous people who have been the traditional agents of conservation.

Displacement has meant:
-a loss of livelihoods and a blow to the local economy where each of these displaced families played the role of fulfilling some product or service need of their village.
-loss of habitat and assets
-social disruption and disorder and
-severance from an eco-system which had sustained them.

Globalization has been another threat to indigenous communities as private conglomerates (including foreign multinationals) encroach upon rural lands, originally the domain of tribal and other indigenous communities, to build the government's desired industrial infrastructure.

Seeds of The Trend of Displacement

The trends of mass population displacement began with the British colonial rule. **Basic reason for the possibility of displacement is the Land Acquisition Act, 1894. The British Government needed to change the Indian economy to suit the needs of the British Industrial Revolution. It required raw materials like cotton and tea, and the money to fund it. So the colonialist had to turn India into a supplier of capital and raw materials for the industrialisation of Britain. In order to procure these raw materials, the British needed to acquire as much land as possible for schemes like coal mines, coffee plantations, tea estates, railways and roads.**

Efforts were made in the form of enactment of new land laws so as to transfer land to British mining and plantation companies. These efforts culminated in the form of the Land Acquisition Act (LAA), 1894. **The changes in the land laws were integral to the British Government effort in maximising its gains from countries under their rule.** The process of enacting the LAA began with the Permanent Settlement Act of 1793, in an effort to ensure regular land tax collection without the British administration spending too much on it. British handed over large tracts of land to the Zamindars, who collected land tax on their behalf. Many farmers lost their land because of it. **The effort to take control of land continued in the Assam Land Act,**

1834 whose main purpose was to get as much land as possible at a very low price for tea estates. This was followed by the Calcutta Law of 1824, which was meant to acquire land for purposes such as salt pans. Three other laws followed till the time of the enactment of the LAA. LAA remains in force even today (Upadhyay and Raman, 1998).

Since the Land Acquisition Act (LAA), 1894 enacted during the colonial period remains in place; displacement remains arbitrary even today. It allows the State to displace people without their consent and without specifying the nature of the public purpose for doing so.

A freedom fighter, **Dadabhai Naoroji (1988) estimated that 35 million people were deprived of their livelihood as a result of the British policies**. These changes turned a large number of landless agricultural labourers, mostly Dalits (Scheduled Castes) and other service groups, into cheap labour. They were deprived of their livelihood and consequently impoverished. **As a parting gift of the colonists, the partition of India saw the biggest mass migration in the world, by displacing 17 million people. Displacement has been further intensified since 1951. An unofficial study puts the number of displaced people at a minimum of 21,300,000, between 1951 to 1990 (Fernandes 1998b: 231).** Studies also show that most official figures are underestimates e.g. by official count, 100,000 people were displaced by the Hirakud dam while researchers put the figure at 180,000 (Pattanaik et al 1987).

The proposed amendments to the 1894 Act, if carried out, are likely to generate new waves of displacement as the Act will then make it even easier for private interests to acquire land. ("Internal Displacement in India: Causes, Protection and Dilemmas", by Mahendra Lama, Forced Migration Review Journal)

3. Environmental Consequences

Intensive Industrialisation and especially the associated infrastructure and urbanisation have resulted in an accelerating increase in resource consumption. **According to a World Bank Report of 2015, on how the present economic growth model is leading to fast depletion of natural wealth and resources, "global rate of the natural wealth depletion of 45 per cent per year is the real cost of GDP-based growth**."

a) Ground Water Depletion

Increasing urbanisation and the spread of the urban development model even to small villages, the post-Green Revolution adoption of water guzzling varieties of all agricultural produce, intensified industrialisation, subsidies on electricity, water run-off tainted with chemical fertilisers and pesticides, and various industrial effluents and many more factors have greatly depleted and toxified the fresh water reserves under the surface of the earth, which we refer to as Ground Water. **Since 1960, groundwater extraction has increased by over 300%.**

This leads to reduction of water volumes in streams, wells, lakes and wetland environments, disrupted water cycles, decrease in crop production from lack of water availability. A 2015 study based on satellite observations showed that the ground water reserves in India's Upper Ganges Basin could be used up between 2040 and 2060. (www.saveearth.info).

The United Nations Educational, Scientific and Cultural Organization (UNESCO) World Water Development Report Statistics
- India is the largest extractor of groundwater in the world.
- 21 major cities of India are expected to run out of groundwater as soon as 2022, affecting around 100 million people, the think tank's new report states.
- 70% of India's water is contaminated, with the country currently ranked 120 among 122 in the water quality index. An astounding 2,00,000 people die each year due to polluted water.
- India's rate of ground water depletion increased by 23% between 2000 and 2010
- By 2030, the country's water demand is projected to be twice the available supply, implying severe water scarcity for hundreds of millions.

b) Loss of Fertility of Soils and Land Degradation

Land degradation and loss of soil fertility is largely due to modern, industrialised farming practices. As told in a Government of India Press release in December 2016, according to the Central Soil Water Conservation Research and Training Institute, Dehradun**, India is losing 5,334 million tonnes of soil every year due to soil erosion because of indiscreet and excess use of fertilisers, insecticides and pesticides. The report also conveys that, on average, 16.4 tonnes of fertile soil is lost every year per hectare in India.**

Pressures of the urban sprawl and commercial development, quarrying of stone, sand, ore and minerals, destabilising of the local ecological balances due to monoculture farming, dumping of non-biodegradable trash, soil contamination, soil erosion, soil acidification, loss of soil carbon and complex web of numerous more reason are rendering our lands unfertile with every passing month. "Conventional practices followed by farmers such as leaving the land fallow for some time to allow it to regain its lost nutrition, and appropriate crop rotation have been junked in favour of continuous cropping which has led to a decline in Soil Organic Carbon (SOC) content to 0.3-0.4 per cent in the country when it should ideally be at 1 to 1.5 per cent. (Organic matter plays a key role in maintaining soil fertility by holding nitrogen and sulphur in organic forms and

other essential nutrients such as potassium and calcium. The loss of organic matter is accelerated by frequent tillage.)"- Rajesh Agarwal, "Keeping the Soil Healthy is a Challenge", January 2018, The Hindu Business Line newspaper.

c) Pollution

Air pollution in India is a serious health issue. **Of the most polluted cities in the world, 21 out of 30 were in India in 2019**. As per a study based on 2016 data, at least 140 million people in India breathe air that is 10 times or more over the WHO safe limit and 13 of the world's 20 cities with the highest annual levels of air pollution are in India. The 51% of pollution is caused by the industrial pollution, 27% by vehicles. An estimated 163 million people out of India's population of 1.3 billion - or more than one in 10 - lack access to clean water close to their home, according to a 2018 report by WaterAid, an international water charity. As India grows and urbanizes, its water bodies are getting toxic. It's estimated that around 70% of surface water in India is unfit for consumption. Soil contamination by industrial activities including mining, smelting and manufacturing, municipal wastes, pesticides, herbicides, fertilizers used in agriculture, petroleum-derived products that are released into or break-down in the environment, fumes generated by transportation, all paint a bleak picture for future of the health of our air, water and soil standards.

d) Deforestation and Biodiversity Loss

In India, 63 football fields worth of forest land fell prey to development activities everyday between 2014 and 2017. In just 30 years, India has lost large forests to 23,716 industrial projects. According to government data, of the 14,000 sq km of forests cleared over the past three decades in India, the largest area was given to mining (4,947 sq km), followed by defence projects (1,549 sq km) and hydroelectric projects (1,351 sq km). India is losing about 1.5 million hectares of forest cover each year. **If this trend continues we may in the next 20 years or so reach to zero forest value in our country. During a period of 25 years (1951-1976) India has lost 4.1 million hectares of forest area due to large-scale deforestation due valley projects, industrial uses, road construction etc.**

The sixth national report, submitted in December 2018, lists 1) habitat fragmentation 2) overexploitation of resources 3) shrinking genetic diversity 4) invasive alien species 5) declining forest resource base 6) climate change and desertification 7) impact of development projects 8) and impact of pollution as threats to genetic diversity. "**Unfortunately, there is no emphasis on sharing benefits of biological resources with communities. I don't think any community has benefitted. Communities in India are dependent on biological resources. The government has to take this clause very seriously because extraction of biological resources will only rise,**" said Priyadarsanan Dharmarajan, a senior fellow at Ashoka Trust for Research in Ecology and Environment (ATREE).

e) The Question of Waste

As narrated in a Times of India article of July 2019, 'India's Trash Bomb', by Rahul Shrivastav, "India is getting buried under mounds of garbage as the country has been generating more than 1.50 lakh metric tonne (MT) of solid waste every day. Worse – approximately only 90 per cent (1,35,000 MT per day) of the total amount is collected waste. Nearly 15,000 MT of garbage remain exposed every day, resulting in almost 55 lakh MT of solid waste disposed in open areas each year, which leads to "severe" pollution level. According to a 2016 United Nations report, The Global E-Waste Monitor 2017, India had produced 20 lakh tonne of e-waste. Of the estimated 20 lakh tonne of e-waste, the CPCB said, only 69,414 MT of garbage was collected, dismantled and recycled between 2017 and 2018. This amounted to barely 0.7% of the total e-waste being processed. Also, in 2016-17, India generated 7.17 million tonne of "hazardous" waste, out of which 3.68 million tonne or 49.46% was recycled. Gujarat, with its huge chemical belt, contributes nearly 2.8 million MT of "hazardous" waste. Figures show that India generates nearly 26,000 MT of plastic waste on a daily basis and 94 lakh tonne trash every year." India also produced 551 MT of biomedical waste daily.

4. **Mass Proportions of Malnutrition: A Population First Stripped of their Ancestral Lands and Livelihoods, No Access to the Common Grazing Lands for Livestock nor to Natural Resources to use for their Professions; With Created Circumstances for Constant Mass Level of Displacement and Migration- Now Also Made to Survive on a Rationing System Rather Than the Fresh, Nutritious Food and Medicinal Herbs of their Own Land.**

India has the largest number of hungry people in the world. Despite whichever growth figures or progressive news we hear about our country, it has the record of being a home to one third of the world's poor. 37.2% of the population (400 million people) is officially estimated to be living in absolute poverty. ("The Hungry Nation: Food Policy and Food Politics in India", 2016).

The introduction of a system of rationing food (grains, sugar, oil, etc) in India dates back to the 1940s Bengal Famine. The **reason for citing the case of the Bengal famine is that the rationing system developed in the country in its aftermath.** "The people of Bengal are not unfamiliar to famines; two of the worst occurred in 1770 and 1866. But unlike the 1943 famine, these ones were essentially the outcomes of the natural disasters aggravated by the human greed and foolishness. **The 1943 famine stands out because it was undoubtedly a man-made debacle aggravated by the adverse nature**." (Arundhati Chaudhary, 'Understanding the Bengal Famine, 1943-44 through the British Policies in India since 1918'). The famine, which is estimated to **have caused over 3 million deaths, resulted more from the policy failures of the British**, than from a drought, according to social researchers from IIT Gandhinagar. "Policy lapses such as prioritising distribution of vital supplies to the military, civil services and others as well as stopping rice imports and not declaring Bengal famine hit were among the factors that led to the magnitude of the tragedy,

historians have maintained." (The Economic Times, March 2019,"Bengal famine of 1943 caused by British policy failure, not drought: Study").

The Public Distribution System, as it is called, run jointly by the state governments, has 5.5 lakh shops/outlets all over India and is the largest food distribution network in the world. **A large part of India's population being poor, displaced, migrated, without homes or livelihoods, depends on this ration system**, which distributes grains like wheat, rice, sugar and fuels like kerosene. It covers 40 million families below poverty line. **The disturbing facts about the system, which could be reasons for persistence of mass levels of malnutrition, besides the primary and main reason of the people's loss of homes and livelihoods, are rogue dealers who swap grains received with inferior quality grains, malpractrices, illegal diversions of commodities, massive scope for corruption, which ultimately make the supply received by the people of almost a negligible nutritional value. A large part of India's population no longer has access to good quality or nutritious food grains.**

The Death Toll and Depression Resulting from the Current Model of Life

a) 1,51,417 people died from death in road accidents in 2018.

b) There are 2.3 lakh suicides in India every year, as per 2018 statistics.

c) As per November 2017 statistics of the British Safety Council, an International Labour Organisation, there are 48,000 workplace deaths by industrial accidents and work place hazards every year in India.

d) Between 2013 and 2016- 1092 workers died and 377 injured.

e) There are over 2000 electrocution deaths in India each year

f) According to official estimates in 2017, at least 10,000 people die of pesticide exposure in India each year.

g) As per the UK based newspaper, The Guardian, in December 2019, India tops the list for pollution linked deaths, at 25 lakh deaths every year. (Air Pollution, Water Pollution and Workplace pollution)

h) The phenomenon commonly known as "Farmer suicides in India" refers to the national catastrophe of farmers committing suicide since the 1990s, often by drinking pesticides, due to their inability to repay loans mostly taken from landlords and banks, due to crop failures, bore-well failures, loss of non-farm activities and price crashes, poor government policies and corruption in subsidies. The National Crime Bureau reports that 2,96,438 farmers committed suicide in 1995, 18,241 in 2004, 60,000 suicides in Maharashtra alone in 2014, and an average of 10 suicides a day up-till today.

i) According to a study conducted by the World Health Organisation, about 200 million people in India suffer from depression, i.e. 1 in 5 people. India has the maximum number of depressed people in the world.

Why Are We Doing This to Ourselves?

1. Illusions of Progress Due to Comparison Parameters Largely Focus on the Post Colonial Collapse of our Local Economy Instead of With our Original Economy Prevalent in the Pre Colonial Era.

2. Machines and Gadgets Dependent Lifestyles, with Aspirations of a Western Style Sophistication.

3. Changed Parameter of Measure of Income- The Amount of Cash Salary, Instead of Savings, Capital, Health and Happiness as a Measure of Income

4. Beneficial Practices Shrouded Under the Impression of "OLD" or "ANCIENT" and Practices with an Extinction Level Human and Environmental Cost prevailing successfully as they are seen as "Current, Progressive and Required"

5. Loss of Self Esteem by Loss of Land, Home and Culture: The Awe for Fairness and White Skin, and Feeling Intimidated or Constantly Outsmarted by Western People. Majority of our countrymen no longer live in the nourishing folds of the natural world, learned sages or the local, tradition culture and communities of their native lands. The race for survival and jobs forces them to succumb to such complexes.

6. Lack of knowledge of the Self: We have forgotten, as Indians, that the definition of the true Self shown to us by our culture of self realised men and women, is that of Pure Consciousness. Our stay in the mind-body complex that we associate with is simply a transient one. The true quest of life is a journey of cultivating and manifesting inner qualities and power, through a life lived within the parameters of a society built in syncronicity with cosmic laws. We cannot access this inner nature while under the onslaught of the Consumerist Culture and Psychology of Lack

7. An Impression that Technology and Advances in Technology can Solve all the Problems in this World. This Impression is Generally Held Without the Awareness of the On-Ground Reality of the Structures Required to Produce the Technology and be at the Receiving end of its Created Waste.

8. Solutions to All Economic, Social and Environmental Problems Caused by the Industrial, GDP-Centric Growth Model are Currently Also Addressed by Using the Components of the Same Model, thus, Never Really Getting to the Sphere of Solving the Problem.

    - Illiteracy is solved by building schools.

- Ill Health is solved by building hospitals and training doctors.
- Waste is dealt with by building bigger and bigger recycling factories and units instead of eliminating it with cultivation of a spiritual minimalistic consciousness.
- Failed schemes are improved upon by newer schemes.
- Livelihoods and local economies are thought to be supported through building of roads and highways.

All the solutions of this model seem to be pointing to the same direction: Build, Build and Keep Building. But just do it "Sustainably".

Until the Vehicle (The Industrial Development Model) and the Destination (GDP Growth) remain the same, which road map you use (Communism, Capitalism, Shri Manmohan Singh Government, Shri Modi Government or Shri Rajeev Gandhi Government or the Hitler Government) won't matter much, as each one with its combination of pro's and con's, sooner or later, will take us to the same destination- a trajectory of frequently occurring, multidimensional string of global crisis.

Components of this Vehicle	**Consequences**
Scale of Extraction of Natural Resources	Ministry of Environment, Forests and Climate Change's 2019 Policy Draft states that India's resource extraction of 1580 tonnes/acres is much higher than the world average of 450 tonnes/acre. Current consumption of natural resources in India is 70% above biocapacity. (The Hindu Business Line, Oct 2016)
Population Displacement	3.6 million people got displaced every year from 2006 to 2019. The year 2019 saw a record high of 5 million displaced people due to disasters. (Which can't be called 'natural' anymore due to them being induced by consequences of human activities)- International Displacement Monitoring Centre)
Build Up of Waste (Plastics, Electronic, Hazardous, Biomedical)	7 million metric tonnes of plastic generated each year in india. 550 metric tonnes of biomedical waste generated per day. 2 million tonnes of e-waste generated per year.
Contaminated Air and Depletion of Water Resources	56 percent increase in the number of hazardous-waste generating industries between 2009 and 2016-17. 22 percent increase in India's greenhouse gas emissions from 2010 to 2014. India is home to 21 of the world's 30 most polluted cities. As **India** grows and urbanizes, its **water** bodies are getting toxic. It's estimated that around 70% of surface **water** in **India** is unfit for consumption. Every day, almost 40 million litres of wastewater enters rivers and other **water** bodies with only a tiny fraction adequately treated (World Economic Forum Report, 2019)
Biodiversity loss	78 percent of the total forests in India have been destroyed

Distribution of Wealth	In the period between 2006 and 2015, ordinary workers saw their incomes rise by an average of just 2% a year while billionaire wealth rose almost six times faster.

Re-Thinking Economics

"Once I had asked my mother- "What were the very first things you did after waking up in the morning?"

She answered that in the early morning hours, they used to get up and go to the temple, after which the first household task was to soak the rice and make the dough out of the flour.

At first, I couldn't grasp the significance of prioritising tasks like soaking rice and making dough at the beginning of the day at 6 a.m. for a meal that was to be cooked at noon.

It's only later that I realised that rice soaked early in the morning became so soft by noon that it took only half the time and resources to cook than it would have otherwise taken.

A traditional "illiterate" mother, loyally following the practices like soaking rice early in the morning- taught to her by her mother, one handed down to her through the generations- could utilise the energy contained in water (hydel power) judiciously and save the quantity of cooking fuel (e.g. twigs, cow dung patties) by reducing the cooking time of the meal.

This detail of saving a small amount of fuel may seem unimportant. But in a country like India, with a population of 1.2 billion people, the reality of the sheer measure of conservation of fuel cannot be ignored. With the passing away of the last generation of elders, we have lost the knowledge of the countless number of such daily life tasks and methods of conducting work which conserved energy or used a bare minimum of it.

Now in our country, in this era of "progress", a scientific approach is defined as that which would have a massive scale of operation and outreach and would surely also have a high level of complexity and interconnected factors.

Processes which have an inherent simplicity and which are done on a small scale are defined as backward.

The carefully planned efforts of first flooding the lands of the tribals, habitats of animals and dense forests in the vicinity of large lakes to construct dams for generating hydro power, and subsequently drowning the entire country in the debt of the World Bank- surely seems a thousand times greater than reviving traditions of conservation.

- Shri Atul Shah, 1991, "The True India: Crushed Under the Modern Development Model"

In a CNBC News article that appeared on its website in January 2016, titled**, "Why GDP fails as a Measure of Well Being"**, some of the below details appeared, which made it apparent that thinkers and experts around the world are now looking for solutions to democratise economics and come up with participative models which represent the true picture of how humans are living.

"How should we measure changes in an economy's standard of living, or compare living standards across countries? Typically, economists use GDP per capita as a proxy for a country's standard of living, but as International Monetary Fund head Christine Lagarde, Nobel prize-winning economist Joseph Stiglitz and MIT professor Erik Brynjolfsson noted at the recently concluded World Economic Forum in Davos, Switzerland, "GDP is a poor way of assessing the health of our economies and we urgently need to find a new measure."

Using GDP as a measure of welfare has well-known problems, which are among the first things macroeconomics principles courses cover. But the point of the discussions at Davos is that in the digital age, those problems are even deeper. Standard GDP statistics miss many of technology's benefits, so we need to rethink how we measure the typical person's well-being.

The textbooks generally point out five problems with using GDP as a measure of well-being:

- **GDP counts "bads" as well as "goods." When an earthquake hits and requires rebuilding, GDP increases. When someone gets sick and money is spent on their care, it's counted as part of GDP. But nobody would argue that we're better off because of a destructive earthquake or people getting sick.**
- **GDP makes no adjustment for leisure time. Imagine two economies with identical standards of living, but in one economy the workday averages 12 hours, while in the other it's only eight. Which country would you rather live in?**
- **GDP only counts goods that pass through official, organized markets, so it misses home production and black market activity. This is a big omission, particularly in developing countries where much of what's consumed is produced at home (or obtained through barter). This also means if people begin hiring others to clean their homes instead of doing it themselves, or if they go out to dinner instead of cooking at home, GDP will appear to grow even though the total amount produced hasn't changed.**
- **GDP doesn't adjust for the distribution of goods. Again, imagine two economies, but this time one has a ruler who gets 90 percent of what's produced, and everyone else subsists -- barely -- on what's left over. In the second, the distribution is considerably more equitable. In both cases, GDP per capita will be the same, but it's clear which economy I'd rather live in.**
- **GDP isn't adjusted for pollution costs. If two economies have the same GDP per capita, but one has polluted air and water while the other doesn't, well-being will be different but GDP per capita won't capture it."**

There are countless new indices and measures being thought of at think tanks around the world to understand and develop a new model for a sustainable earth which will be more just and equitable in its construct.

According to a 2019 report published by Oxfam, UK

- The top 10% of the Indian population holds 77% of the total national wealth. 73% of the wealth generated in 2017 went to the richest 1%, while 67 million Indians who comprise the poorest half of the population saw only a 1% increase in their wealth.

- There are 119 billionaires in India. Their number has increased from only 9 in 2000 to 101 in 2017. Between 2018 and 2022, India is estimated to produce 70 new millionaires every day.

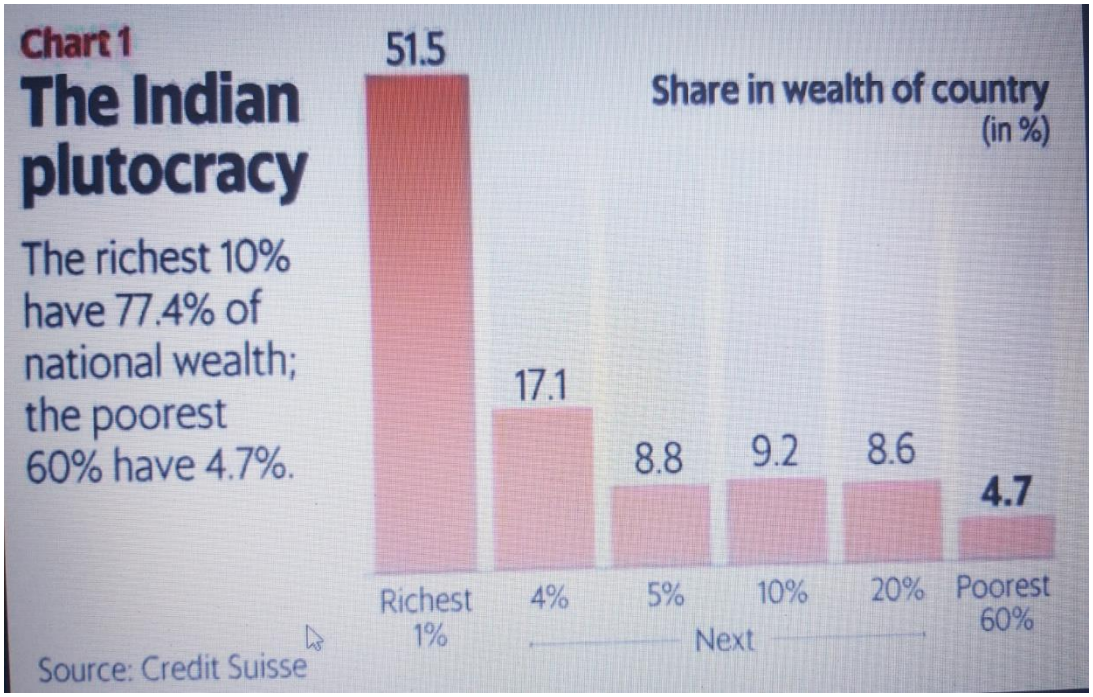
- Billionaires' fortunes increased by almost 10 times over a decade and their total wealth is higher than the entire Union budget of India for the fiscal year 2018-19, which was at INR 24422 billion.

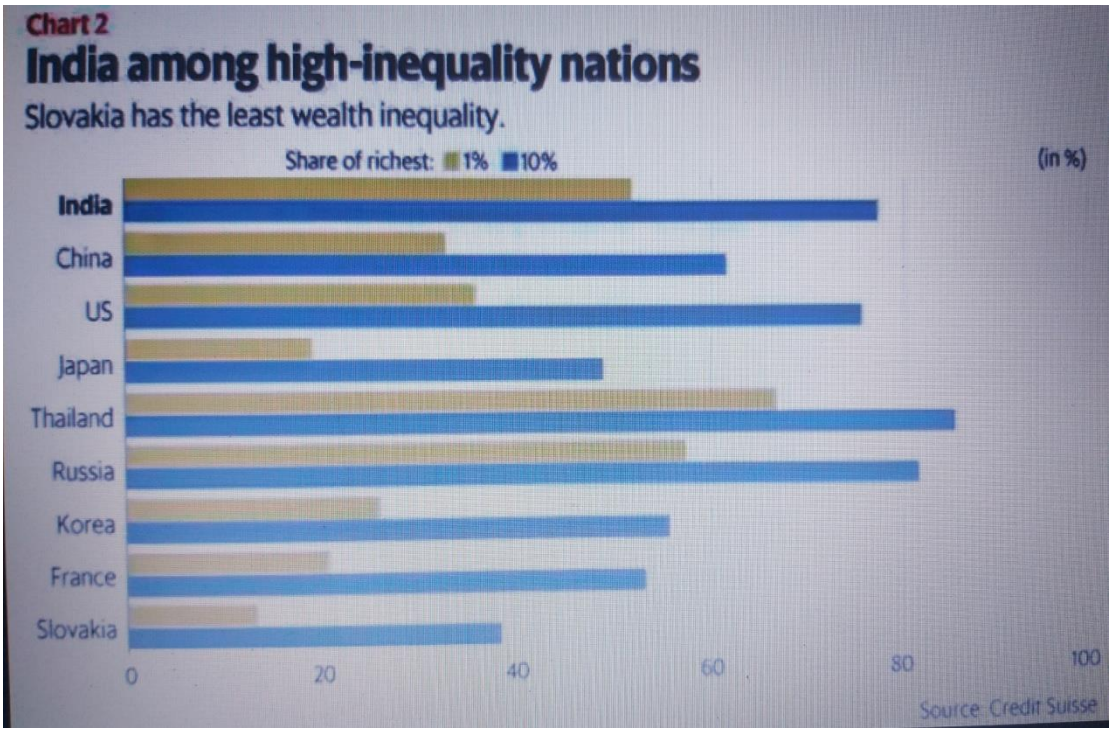
  A Business Today article, covering the details of the same above report, highlighted further details:

- "In the period between 2006 and 2015, ordinary workers saw their incomes rise by an average of just 2% a year while billionaire wealth rose almost six times faster.

- Last year, one billionaire was created every two days. This is the biggest increase in the number of billionaires in history and a whopping 82% of all of the wealth generated between the second quarter of 2016 and the corresponding period last year went to the top 1%, according to the latest survey by Oxfam.

- There are now 2,043 dollar billionaires worldwide. The wealth of this group increased by $762 billion in just 12 months"





A number of research reports, conducted by different organisations in different countries, printing in all commonly known print media, highlighting the same statistics and situation are found.

In a World Economic Forum report of 2016, it said "The continued rise of economic inequality in India – and around the world – is not inevitable. It is the result of policy choices. Governments can start to reduce inequality by rejecting market fundamentalism, opposing the special interests of powerful elites, and changing the rules and systems that have led to where we are today. They need to implement reforms that redistribute money and power and level the playing field."

Many think tanks, governments, prestigious organisations and reknowned scholars, researchers and Nobel Laureates around the world are looking for solutions. Some of the new measures and indices, goals and projects are (ref: The Economic Times, "A Policy Shift Away From GDP Generation, and Toward Improving Development Indicators, is Long Overdue", Dec. 2019):

- The Human Development Index (HDI) – developed by Mahbub Ul Haq in 1990 (a composite index of life expectancy at birth, adult literacy rate and standard of living, and is now complemented by numerous composite indices: inequality-adjusted HDI, gender inequality index, gender development index, etc)

- Genuine Progress Indicator (GPI), takes an existing GDP data set, and adds in corrections for various social and environmental factors such as inequality, pollution costs and underemployment.

- Canada tops up its GDP figures with a per-capita sum of key elements that include natural, social and human capital.

- China created a 'green GDP' in 2006, considering environmental factors for GDP calculations. Britain surveyed happiness in addition to GDP in 2010. New Zealand adopted a 'Well-Being' Budget in May 2019

- Gross National Happiness (GNH) was formulated into a framework in 2005 by Med Jones, the Happy Planet Index, "GDP alternatives," which adjust for leisure; the "Index of Sustainable Economic Welfare," which accounts for both pollution costs and the distribution of income; and the "Genuine Progress Indicator," which "adjusts for factors such as income distribution, adds factors such as the value of household and volunteer work, and subtracts factors such as the costs of crime and pollution.

- The United Nation's "Sustainable Development Goals", "Millenium Development Goals"

- Numerous think tanks of topics like "Democratising Money", "Democratizing Economics", 'Redefining Economics"

...and many, many more.....but not complete enough to select as the model which will ensure hundreds of years of Sustainable Development, for the future generations....

This is an opportune time in the history of the contemporary world, where India holds the working knowledge of a socio-economic model which has upheld all the parameters of human progress and happiness for thousands of years.

It is the value oriented Socio-Economic Model of the Real India, remnants of it still alive, buried under layers and layers of development models, capitalist philosophies and countless vocabulary distortions.

How The World Remembers The Real India

"We owe a lot to the Indians, who taught us how to count, without which no worthwhile scientific discovery could have been made!" **- Albert Einstein (Theoretical Physicist, Germany)**

"There are some parts of the world that, once visited, get into your heart and won't go. For me, India is such a place. When I first visited, I was stunned by the richness of the land, by its lush beauty and exotic architecture, by its ability to overload the senses with the pure, concentrated intensity of its colors, smells, tastes, and sounds. It was as if all my life I had been seeing the world in black and white and, when brought face-to-face with India, experienced everything re-rendered in brilliant technicolor." **- Keith Bellows (Editor-in-chief, National Geographic Society)**

"If I were asked under what sky the human mind has most fully developed some of its choicest gifts, has most deeply pondered on the greatest problems of life, and has found solutions, I should point to India." **- Max Mueller (German Scholar)**

"India conquered and dominated China culturally for 20 centuries without ever having to send a single soldier across her border." **- Hu Shih (Former Ambassador of China to USA)**

"If there is one place on the face of earth where all the dreams of living men have found a home from the very earliest days when man began the dream of existence, it is India**!" - Romaine Rolland (French scholar)**

What Travellers Said About the India as it Used to be in its True Essence

- **Anquetil Duperron-** was the first professional French scholar of Indian culture. He had visited India and stayed there for 7 years between 1755 and 1761, and said:

  "When I entered the country of the Maharattas I thought myself in the midst of simplicity and happiness of the golden age… misery was unknown…the people were cheerful, vigorous and in high health."

- **François Bernier-** was a French physician and traveller. He visted Bengal between 1656 and 1668 CE. He writes in his book "*Travels in the Mogul Empire*" about Bengal:

  "The knowledge I have acquired about Bengal in two visits inclines me to believe that it is richer than Egypt.
  It exports in abundance cotton and silks, rice, sugar, butter.
  It produces amply for its own consumption of wheat, vegetables, grains, fowls, ducks and geese.
  It has immense herds of pigs and flocks of sheep and goats.
  Fish of every kind it has in profusion.
  From Rajmahal to the sea, is an endless number of canals, cut in bygone ages from the Ganges by immense labour for navigation and irrigation."

- **Jean – Baptiste Tavernier**- He was a French traveller and pioneer of trade with India, who visited India six times between 1640 – 1667. This is mentioned in his book "*Voyages tavernier"*

  "Even in the smallest villages, rice, flour, butter, milk, beans and other vegetables, sugar and sweetmeats, dry and liquid, can be procured in abundance…"

- **Mountstuart Elphinstone-** He was a Scottish statesman and historian, associated with the government of British India, who

later became the Governor of Bombay. This is mentioned in his book "*Elphinstone, History of India" - Volume 1*, page 12:

"All the descriptions of the parts of India visited by the Greeks give the idea of a country teeming with population and enjoying the highest degree of prosperity"

- **Christopher Colombus**- Everyone is aware of Columbus looking for India. *Why looking for India?*
  "The glory and prosperity of India spread all over the world during this period was the source of attraction for many travellers."

  - **Vasco da Gama-** from Portugal, came eastwards, in 1498, he reached Cape of Good Hope by sailing along the west coast of Africa, From his own account:[2]

    While he had brought the largest, then known ship in Portugal, the Indian ships, which had come for trade to Cape of Good Hope, the southern coast of Africa, were 10 times as large as his own ship.

  - **Marco Polo**- He was one of the earliest European travellers to India in medieval times. He visited only the Malabar region of India and describes it as, "The most prosperous of all, in the world he had seen". His description of India was mentioned in his bestseller book of 1300s, *"Travels of Marco Polo"* by Rusticiano:
    "Millions of precious gems
    Millions of gold coins
    Millions of miles of fertile country
    Millions of amazing people"

  - **Tahir Shah**-

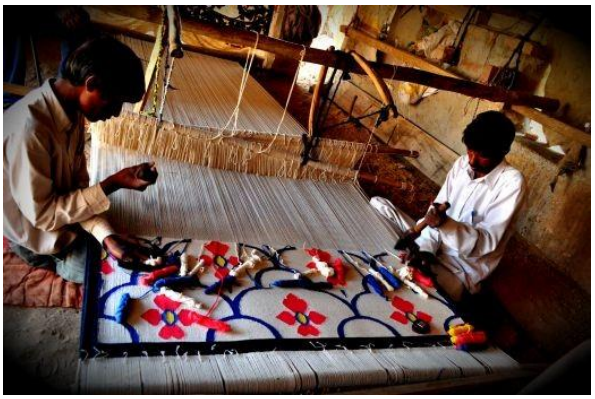
    "Time spent in India has an extraordinary effect on one. It acts as a barrier that makes the rest of the world seem unreal."

The Real India :

A Land Where Industry and Industriousness was at the Centre of Human Life, be it in a village or a city.

An “Udyog Pradhan Desh”.

A Land of Absolutely Non Polluting Industries.



Pollution is defined in the dictionary as “the process of making something physically impure or unclean, and contaminate the surrounding environment with man-made waste which has harmful and poisonous effects.” or “**Pollution** is the introduction of contaminants into the natural environment that cause adverse change”.

We would like to give this definition a wider scope and context, in order to explore what factors have degraded the standard of human life and the environment.

Life as we know it, consisting of the material world, the plant and animal kingdom and humans, is engineered of the interplay of the following aspects:

-**Human intellect** (knowledge, skills, intellectual capacity)

-**Human mind** (emotions, beliefs and value system, good qualities, bad qualities, level of sensitivity, expanse of vision, aspirations, awareness of the nature of life, faith or lack of, community centric or individualistic)

-**Human Actions** (lifestyle, life skills, level of consumption, the kinds of activities and occupations a person is immersed in to fulfill his life goals and duties)

-**Human Culture** (perspective towards how to procure what they need, perspective towards how to consume, perspective towards how to discard, re-use, give away things, perspective towards creation of new products, perspective towards behaviour towards with each other, and towards the life culture containing parameters common to all).

“Pollution” of any of the above factors, by value system contaminants, directly impact human actions, and the human social structure, to cause disruptions and disalignment with natural cycles of the earth, as well as disable a person’s ability to connect with true principles of inner happiness.

Greed, apathy, callousness, prioritising individual desires at the cost of an equitable structure for other humans and living beings, ignorance of the most fundamental principles which align all dimensions of human life- social, economic, political- lack of consideration for all other life forms, are pollutants and contaminants which change the direction of the human intellect, emotions, actions, and cultural structures, to create a dysfunctionality.

The Core Features of the Absolutely Non Polluting Industries of India are:

- They use the natural resources available in their vicinity as the main raw materials for their work.
- They use hand crafted tools, by themselves or other artisans.
- Due to the non-electric nature of their equipment, and the non exploitative consciousness in their mind, the artisans tend to only extract the quantity of the natural resource that is required, and within bounds of nature’s cycle of regeneration on that particular resource.

- There is no use of synthetic chemicals, and so no effluents or pollution caused. Every bi-product of the production process, being natural in nature, finds use or a way of decomposing back into the natural cycle.
- The refined skill set of the artisans and craftsmen was honed through the community structure of the guild system, where they would learn their craft right from the mother's womb through genetics and throughout the course of their life from their elders and experience.
- All artisans and craftsmen conducted their industry from their own home or a space close to home.
- Due to this arrangement of living of interdependent guilds and professions, in the cluster of the 18 professions every village had, artisans and craftsmen had, not just the knowledge of their own products and raw materials, but also of ecology, other living beings and conservation, of other related crafts, basic knowledge of agriculture and water conservation, architecture, geography, medicinal herbs and home remedies, empathy and interpersonal skills and deeply embedded spiritual values.

Design and Governance Parameters of The Original Indian Domestic Economies:

- **Smarter than Smart Cities**
- **A Country Running on Auto Pilot Settings of Spiritual and Ethical Values in all Dimensions of Life**
- **An Interventionist Model of Life Values, Not the Government**

1. Economics of Sustainability and Freedom

"From an economic point of view, the central concept of wisdom is permanence. We must study an economics of permanence. Economic development is something much wider and deeper than economics, let alone econometrics. Its roots lie outside the economic sphere, in education, organisation, discipline, and beyond that, in political interdependence and a national consciousness of self reliance. It remains an unalterable truth that, just as a sound mind depends on a sound body, so the health of cities depends on the health of the rural areas. The cities, with all their wealth, are merely secondary producers, while primary production, the precondition of all economic life, takes place in the countryside. No one is really working for peace unless he is working primarily for the restoration of wisdom. An ounce of practice is generally worth more than a ton of theory." ("Small is Beautiful: Economics as if People Mattered"- by E.F.Schumacher)

As seen in the earlier sections of this report, the socio-economic structure on the basis of which the Absolutely Non Polluting Industries of India functioned, had not only the science of the natural world in its consideration, but also a robust value system of ethics and justice, and a broader definition of happiness beyond

materiality. This broader definition of happiness placed materiality in the dimension of human life in a way that it served to enhance the quality of the consciousness.

2. The Economic Cluster of 18 (Absolutely Non Polluting) Professions Present in Every Human Settlement- From the Smallest Village to the Biggest City- The Trademark Economic Model of India

Each village had at least (if not more) the primary <u>eighteen occupations</u> being practiced to make it a self-reliant unit. All of its needs were fulfilled within the geographical borders of the village itself. There were one or many families practicing their particular occupations based on the needs and size of the village and the skill sets were passed on generationally. Their livelihoods were not based on excessive production but always moved towards sufficiency. The most crucial aspect was to fulfil the needs of the village first, and then only if there were excesses, the village trader *(vanik)* would collect them and travel outside to sell.

Unlike the current times, where production and manufacturing is in the hands of a few and within the confines of a small physical area (a factory), production was truly spread out and de-concentrated throughout the land - there were communities of makers of different things and materials everywhere that relied on their immediate geographic surrounding to base their enterprises on. This economy consisted of farmers, weavers, dyers, printers, artisans of hard metals like blacksmiths and metalsmiths of various metals, artisans of soft metals like silver, gold, copper, brass, stone masons, potters and soil workers, scholars of various sciences and learned men to guide people in all spheres of life and taught in local schools, traders who traded production surpluses for valuable items not available in that region due to geographical differences in the environment of every place, traders who were also money lenders operating with the intention to balance the financial health of the area, tanners and leather workers, carpenters, vaidyas and medical men, musicians, barbers and numerous subsets and supportive crafts of these broad professional categories.

Every inhabitant of India was born into a genetic IIT, of his/her family's trade craft or art and developed his/her skill set as a natural evolution of their community life, right from the time of being in his/her mother's womb. The individual from birth is freed from the stress of:
- Housing or rent
-Profession, skills and education
-Procuring a work area and tools and equipment
-Confidence to find a good life partner for marriage
-Good health and overall development
-Food
-Living life in the natural environment with fresh air and water and a sense of well being.

The capital savings and maintenance of health, self esteem and well being increases the wealth status of the individual FAR MORE than a hefty looking salary in a city, but in the living conditions of the city, inundated with all kinds of expenses, loans and stresses.

This Socio-Economic Structure inherently is many times less resource intensive due to the stability which it lends to a family and community, in the lack of which all members will have to resort to continuous shifting of houses, jobs, essential need items time and time again

3. Hand Crafted Tools, Equipments and Technologies VS Industrial technology:

"The truth is that a large part of the costs of private enterprise has been borne by the public authorities- because they pay for the infrastructure- and that the profits of private enterprise therefore greatly overstate its achievement. The bigger the country, the greater is the need for internal 'structure' and for a decentralized approach to development. If this need is neglected there is no hope for the poor. I believe, therefore, that the best way to make contact with the essential problem is by speaking of technology: economic development in poverty stricken areas can be fruitful only on the basis of what I have called 'intermediate technology'. In the end, intermediate technology will be labour intensive and will lend itself to the use of small scale establishments" ("Small is Beautiful: Economics as if People Mattered"- by E.F.Schumacher)

The tools, equipments and technologies used by the local industrialists of the Absolute Non Polluting Industries of India were made by human effort and a frugal and need based extraction of natural resources. They are hand-made with a high level of customisation of design for optimum output of the task at hand. **The production, repair, maintenance of all equipment and tools is done within the village itself by local professionals.** There is no need of large scale energy infrastructure, workshops of branded equipments at far distances or freight transport systems for procurement, production or maintenance of tools and equipments.

Once a carpenter or a blacksmith or any artisan has his set of tools, they are maintained for 2-3 generations in the family.

4. Locally Produced by Local Non Polluting Industrialists VS Import-Export Oriented Industrialisation

"**Production from local resources for local needs is the most rational way of economic life, while dependence on imports from afar and the consequent need to produce for export to unknown and distant peoples is highly uneconomic and justifiable only in exceptional cases and on a small scale.**

Modern economics does not distinguish between renewable and non-renewable materials, as its very method is to equalise and quantify everything by means of a money price. Non renewable goods must be used only if they are indispensable, and then only with the greatest care and the most meticulous concern for conservation. To use them heedlessly or extravagantly is an act of violence, and while complete non-violence may not be attainable on this earth, there is nonetheless an ineluctable duty on main to aim at the ideal of non-violence in all he does.

As the world's resources of non renewable fuels- coal, oil and natural gas- are exceedingly unevenly distributed over the globe and undoubtedly limited in quantity, it is clear that their exploitation at an ever-increasing rate is an act of violence against nature which must almost inevitably lead to violence between men. **Before, people dismiss these ideas as nothing better than a nostalgic dream, they might wish to consider whether the path of economic development outlined by modern economics is likely to lead them to places where they really want to be**." ("Small is Beautiful: Economics as if People Mattered"- by E.F.Schumacher)

5. Access to the Commons Vs Commoditization of Land and Natural Resources

Biodiversity is a very wide concept that refers to a variety of landscapes, ecosystems, species and genes, including their different functional processes. Therefore, maintenance and conservation of biodiversity demands efforts on these four levels. As shared by sociological researcher, Victor Toledo in his article "Indigenous Peoples and Biodiversity",

1) For indigenous peoples land and in general nature, has a sacred quality which is almost absent from Western thinking. Land is revered and respected and its inalienability is reflected in virtually every indigenous cosmovision. Indigenous people do not consider the land as merely an economic resource. Under indigenous cosmovisions, nature is the primary source of life that nourishes, supports and teaches. Nature is, therefore, not only a productive source but the center of the universe, the core of culture and the origin of ethnic identity.

2) Indigenous societies house a repertory of ecological knowledge which generally is local, collective, diachronic and holistic. In fact, since indigenous peoples possess a very long history of resource-use practice, they have generated cognitive systems on their own circumscribed natural resources which are transmitted from generation to generation. This body of knowledge is the expression of a certain personal wisdom and, at the same time, of a collective creation, it is to say, a historical and cultural synthesis turned into reality in the mind of a individual producer.

3) Indigenous knowledge is holistic because it is intricately linked to the practical needs of use and management of local ecosystems. Although indigenous knowledge is based on observations on a rather restricted geographic scale, it must provide detailed information on the whole scenery represented by the concrete landscapes where natural resources are used and managed. As a consequence, indigenous minds not only possess detailed information about species of plants, animals, fungi and some microorganisms; they also recognize types of minerals, soils, waters, snows, landforms, vegetations and landscapes.

4) Indigenous households tend to carry out production based on the principle of diversity of resources and practices. This mode of subsistence results in the maximum utilization of all the available landscapes of the surrounding environments, the recycling of materials, energy and wastes, the diversification of the products obtained from ecosystems and, especially, the integration of different practices: agriculture, gathering, forest extraction, agroforestry, fishing, hunting, small-scale cattle-raising, and handicrafts. As a result, indigenous subsistence implies the generation of a myriad of products including food, domestic and work instruments, housing materials, medicines, fuel woods, fibres, animal forage, and others.

5) Similarly, indigenous knowledge is not restricted to the structural aspects of nature, which are related to the recognition and classification (ethnotaxonomies) of elements or components of nature, it also refers to dynamics (which refers to patterns and processes), relational (linked to relationships between or among natural elements or events) and utilitarian dimensions of natural resources. As a result, it is possible to integrate a cognitive matrix for researchers which certifies the holistic character of indigenous knowledge and serves as a methodological framework to ethnoecological research.

The research accumulated in the three last decades by investigators belonging to the fields of conservation biology, linguistics, anthropology of contemporary cultures, sociologists, historians, have evolved convergently towards a shared principle: that world's biodiversity only will be effectively preserved by preserving diversity of cultures and local communities and viceversa.

In the local context of India, the issue of the grazing lands demonstrates all the above points in exactness.

-Until the recent past, each town and village had 3-4 tracts of grazing lands in its outskirts.

-Each tract is used for grazing for 3 months. The town/village maintained a system around this and made sure, that there was no grazing activity on the remaining tracts, except the one in use, for the rest of the months.

-The grass automatically grew abundantly.

- The tract on which the cattle graze automatically gets fertilised by the dung and urine of the animals. So the time that the particular land gets when left

fallow and when the grazing is switched to the next tract, becomes an appropriate time span for natural decomposition and fertilisation of the soil.

Hundreds of such indigenous practices in India, made biodiversity conservation and maintenance an automatic process of life.

6. Local Traditions of Wisdom Sharing and Knowledge Propagation

1) The role of elders, learned men and women, Sages and Saints, and the Shastras as the guiding map to greater and greater alignment with morals and life values was sacred to the common people. This culture, currently in a disrupted state due to total transition of India's education system from the Gurukulam system to the Macaulay Education system, and consequently a changed society of more consumerist values, none-the-less still exists in the hearts of people. Increasing inner qualities and purity and removing inner impurities and imbalances, adhering to the theory of Karma, was a set equation for a regular inhabitant of India. The break in this spiritual culture is no more boldly demonstrated than by the increasing number of slaughter-houses in India. India, a country traditionally rooted in the consciousness of non-violence towards all living beings, is now being deliberately transformed into a meat consuming society under the current development model, and is the second largest exporter of meat in the world, after Brazil.

2) Knowledge was shared among family members and community members in the evening time after dinner and finishing the chores of the day.

   A report of the International Council for Science (ICSU) Study Group on Science and Traditional Knowledge characterises traditional knowledge as:

   "A cumulative body of knowledge, know-how, practices and representations maintained and developed by peoples with extended histories of interaction with the natural environment. These sophisticated sets of understandings, interpretations and meanings are part and parcel of a cultural complex that encompasses language, naming and classification systems, resource use practices, ritual, spirituality and worldview."

   The conversations evolved a natural understanding of the region's geography, history, mistakes and learning from mistakes, home remedies and possible remedial actions after accidents and calamities, experiential mathematics, interpersonal stores and sharing, understanding the world, story-telling, singing and games, understanding of one's own family history and community's history.

   This culture supported not just the knowledge propagation, but also proved to be a platform for sharing of many mental and emotional stresses which

people face, like fear, dullness, depression, anxiety, which dissipated by sharing and empathy.

"The consequence of practical engagement in everyday life, and is constantly reinforced by experience and trial and error. This experience is characteristically the product of many generations of intelligent reasoning, and since its failure has immediate consequence for the lives of its practitioners its success is very often a good measure of fitness. It is, as Hunn (1993:13) neatly puts it, "tested in the rigorous laboratory of survival" ("Indigenous Knowledge Systems Explained", February 2015, The Business Herald)

The tradition of family and community life was an experiential and accurate Google for the people of India since time immemorial.

This tradition proved to be the final dimension which granted a person independence and dignity emotionally and psychologically. This psychological freedom, free from mental stresses that cloud our lives today, contributed to the overall well being of the individual.

7. The Question of Food, Nutrition, Health and Well Being

Local people and indigenous communities around the world have suffered remarkably similar consequences because of colonization, including traumas from the forced removal from their lands, and profound disruptions to social systems and cultural traditions. The impacts of colonization on traditional food systems, healthy foods, and nutrition are inextricably related to these intergenerational traumas, and contribute to nutritional health problems and a range of newer and newer versions of degenerative diseases. ("Food and Nutrition of Local Communities", 'Current Developments in Nutrition', Oxford Academic Journals).

People being given the freedom to live on their land and have support structures to earn on their land, is a panacea to so many ills, that the benefits are innumerable. Communities living on their lands have the chance to have access to fresh organic grains and produce, and also having inherent knowledge of local medicinal herbs passed down to them from their elders, have a higher propensity of not contracting so many diseases that people in cramped housing in the slums or lower middle class housing in cities, not to mention the sense of well being in a relatively more open space.

Conclusion

To end this discussion, we can take a look at the situation of the Ganga River, as a self evident symptom of the current development model.

From the Himalayas to the Bay of Bengal, the Ganga passes by 30 major cities of more than 300,000 residents and many other smaller towns. The Ganga provides municipal and industrial water for these cities. India's Central Pollution Control Board reports that three-fourths of the pollution of the river comes from the discharge of untreated municipal sewage draining from these urban centres. The Upper Ganga plain in the state of Uttar Pradesh is home to sugar factories, leather tanneries, textile industries of cotton, wool, jute

and silk, food processing industries related with rice, dal and edible oils, paper and pulp industries, heavy chemical factories, and fertilizer and rubber manufacturing units. Industrial wastewater is discharged by all these industries and contains hazardous chemicals and pathogens. Four major thermal power plants depend upon water from the Ganga. Now channelled to fewer drains, these wastewater flows are contaminating fresh water sources at a rapid and pernicious rate. There are large spillways in every city and in every industrial park that take untreated effluent to rivers and streams.

The government has established a Ganga Action Plan since 1986 to lead the way in river pollution control measure and many initiatives since then.

Our traditional wisdom would beg to differ. The Ganga is not unclean. The Ganga is clean. Our real Indian sensibilities, if still given a dignified stand, would have considered why is the Ganga polluted? What is the source of this uncleanness? Tackle that and the Ganga will automatically return to being clean. Then no action plans and extravagant boards, committees, scholars, experts, research and funds would be required. The automatic cleansing of the Ganga during the first 3 weeks of the COVID-19 lockdown is something that 30 years of planning and funding and committees could not achieve.

It leaves one wondering where a brief, self adopted lockdown to analyse the direction that all the adopted socio-economic philosophies India is currently following, would lead us?

It may just purify our life vision, sensitivity levels towards each other and the rest of the living world, and our collective consciousness.....

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