HEALTH, SAFETY, ENVIRONMENT AND CLIMATE

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ABSTRACT

Sustainable development in energy sector means progress in society, keeping in mind, survival of all by containing the negative retrospective effect on life, health, sustainability it all depend on our life style, habit, basic needs and desires.

Do we contain our needs and think about wastage of resources and management of resources with efficient upgraded modern technology. The answer is if we look at the aspiration of everybody to conquer s Mars and Moon and a mass wealth .do they think for living simple healthy life of safety in clean environment, pure climate and atmosphere. On the other side, are we fallows environmental laws, conventions and guide lines or all these remain in books, papers and up to discussion or seminar only. If we are really sincere about sustainability, health, safety, environment and climate then we have to go beyond it, means contain our needs and desire, educate masses specially poor and down trodden, contract the expansion and growth of population, but practically in real term we think for material growth, prosperity, comforts, enjoyment and quench our greed's of amassing wealth, rather living simple life. Which is against the principle of sustainability, that is why we see and experience earthquake, tsunami, flood, eruption of volcanoes because we keep on disturbing the balance of earth, when earth balance its credit with debit then we think for sustainability but soon we forget and keep on disbalancing again, earth repeat the same process again but how long . This equation of balance and disbalance will continue.

Keywords: *Health, Safety, security, Environment.*

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INTRODUCTION

Development and environment work against one another. The development includes enhancement of knowledge, creation of physical assets and infrastructures through rapid industrializations all have direct bearing effect on the surrounding environment and climates which affects our lives. The one who take the benefits of the developments and one who unable to take benefits both are affected through this. The climate is changing very fastly if we study the past track of hundred years the average temperature is arisen by 2 degree Celsius, the many area on earth are drought prone and affected by flood as well as tsunami. All this is result of rapid industrialization and developments which is emitting tons of Carbons and Green house gases. Per-capita emissions are a country's total emissions divided by its population. Per-capita emissions in the industrialized countries are typically as much as ten times the average in developing countries. This is one reason industrialized countries accepted responsibility for leading climate change efforts in the Kyoto negotiations. In Kyoto, the countries that took on quantified commitments for the first period (2008–12) corresponded roughly to those with per-capita emissions in 1990 of two tonnes of carbon or higher. In 2005, the top-20 emitters comprised 80% of total GHG emissions (PBL, 2010. See also the notes in the following section on the top-ten emitters in 2005). Countries with a Kyoto target made up 20% of total GHG emissions.

Another way of measuring GHG emissions is to measure the total emissions that have accumulated in the atmosphere over time (IEA, 2007,) over a long time period; cumulative emissions provide an indication of a country's total contribution to GHG concentrations in the atmosphere. Over the 1900-2005 periods, the US was the world's largest cumulative emitter of energy-related CO_2 emissions, and accounted for 30% of total cumulative emissions (IEA, 2007,). The second largest emitter was the EU, at 23%; the third largest was China, at 8%; fourth was Japan, at 4%; fifth was India, at 2%. The rest of the world accounted for 33% of global, cumulative, energy-related CO_2 emissions.

TOP-TEN EMITTERS

What follows is a ranking of the world's top ten emitters of GHGs for 2005 (MNP, 2007). The first figure is the country's or region's emissions as a percentage of the global total. The second figure is the country's/region's per-capita emissions, in units of tons of GHG per-capita:

S.No	Countries Name	Region's emissions as a percentage (1st figure)	Region's per-capita emissions(units in Tons) (2nd Figure)
1	China	17%	5.8
2	United States	16%	24.1
3	European Union	11%	10.6
4	Indonesia	6%	12.9
5	India	5%	2.1
6	Russia	5%	14.9
7	Brazil	4%	10.0
8	Japan	3%	10.6
9	Canada	2%	2.1
10	Maxico	2%	6.4

- These values are for the GHG emissions from fossil fuel use and cement production. Calculations are for carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) and gases containing fluorine (the F-gases HFCs, PFCs and SF_6).
- These estimates are subject to large uncertainties regarding CO_2 emissions from deforestation; and the per country emissions of other GHGs (e.g., methane). There are also other large uncertainties which mean that small differences between countries are not significant. CO_2 emissions from the decay of remaining biomass after biomass burning/deforestation are not included.
- Excluding underground fires.
- Including an estimate of 2000 million tonnes CO_2 from peat fires and decomposition of peat soils after draining. However, the uncertainty range is very large.
- Industrialised countries: official country data reported to UNFCCC

Apart from this many hazards chemicals are used which is effecting the life of common man aggressively no doubt the member countries of Kyoto Protocol agreements are taking pains to reduce the level of emission of carbon in fact the carbon emission has been legalised, Carbon trading permissible, the ground realties of reducing Carbon is not materialised the level carbon emission is increasing day by day due to the stress of development and rising population of the world. Till date there are so many conventions and agreements have been taken place throughout the world and these are in following orders:

- Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, Aarhus, 1998
- Alpine Convention together with its nine protocols
- ASEAN Agreement on Transboundary Haze Pollution
- Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR), Canberra, 1980.
    - Agreed Measures for the Conservation of Antarctic Fauna and Flora
    - Convention for the Conservation of Antarctic Seals
    - Convention for the Conservation of Antarctic Marine Living Resources
    - Protocol on Environmental Protection to the Antarctic Treaty
- Anti-Ballistic Missile Treaty (ABM Treaty) (ABMT)
- Asia-Pacific Partnership on Clean Development and Climate
- Barcelona Convention for the Protection and Development of the Marine Environment and Coastal Region of the Mediterranean Sea
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 1989.
- Biological Weapons Convention (Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological [Biological] and Toxin Weapons and on their Destruction) (BWC)
- Bonn Agreement (environment)
- Carpathian Convention Framework Convention on the Protection and Sustainable Development of the Carpathians
- Cartagena Protocol on Bio safety
- Chemical Weapons Convention
- China Australia Migratory Bird Agreement
- CITES Convention on the International Trade in Endangered Species of Wild Flora and Fauna
- Climate Change Agreement
- Comprehensive Test Ban Treaty (CTBT)
- Convention for the Conservation of Antarctic Seals
- Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, Abidjan, 1981.
- Convention for the Protection and Development of the Marine Environment and Coastal Region of the Mediterranean Sea Barcelona Convention, Barcelona, 1976.

- Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Cartagena de India's, 1983.
- Convention for the Protection of the Marine Environment and Coastal Area of the South-east Pacific, Lima, 1981.
- Convention for the Protection of the Marine Environment of the North-east Atlantic OSPAR Convention, Paris, 1992.
- Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Nouméa, 1986.
- Convention of the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, Nairobi, 1985.
- Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters Aarhus Convention, Aarhus, 1998
- Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (Assistance Convention), Vienna, 1986.
- Convention on Biological Diversity (CBD), Nairobi, 1992.
- Convention on Certain Conventional Weapons
- Convention on Civil Liability for Damage Caused during Carriage of Dangerous Goods by Road, Rail, and Inland Navigation Vessels (CRTD), Geneva, 1989.
- Convention on Cluster Munitions
- Convention on Early Notification of a Nuclear Accident (Notification Convention), Vienna, 1986.
- Convention on Fishing and Conservation of Living Resources of the High Seas
- Convention on Long-Range Trans boundary Air Pollution
- Convention for the Protection of the Marine Environment of the North-east Atlantic OSPAR Convention, Paris, 1992.
- Convention on Nuclear Safety, Vienna, 1994.
- Vienna Convention on Civil Liability for Nuclear Damage, Vienna, 1963.
- Convention on the Conservation of European Wildlife and Natural Habitats
- Convention on the Conservation of Migratory Species of Wild Animals, (CMS), Bonn, 1979.
- Convention on the International Trade in Endangered Species of Wild Flora and Fauna, (CITES), Washington DC, 1973.
- Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter

- Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques
- Convention on the Protection and Use of Transboundary Watercourses and International Lakes (ECE Watr Convention), Helsinki, 1992.
- Convention on the Transboundary Effects of Industrial Accidents, Helsinki, 1992.
- Convention on Wetlands of International Importance Especially As Waterfowl Habitat
- Convention to Combat Desertification (CCD), Paris, 1994.
- Convention on the Protection of the Black Sea against Pollution, Bucharest, 1992.
- Convention on the Protection of the Marine Environment of the Baltic Sea Area 1992 Helsinki Convention, Helsinki, 1992.
- Conventions within the UNEP Regional Seas Programme
- Convention on the ban of the Import into Africa and the Control of Transboundary Movements and Management of Hazardous Wastes within Africa, Bamako, 1991.
    - EMEP Protocol
    - Nitrogen Oxide Protocol
    - Volatile Organic Compounds Protocol
    - Sulphur Emissions Reduction Protocols 1985 and 1994
    - Heavy Metals Protocol
    - POP Air Pollution Protocol
    - Multi-effect Protocol (Gothenburg protocol) [5]
- Directive on the legal protection of biotechnological inventions
- Energy Community (Energy Community South East Europe Treaty) (ECSEE)
- Espoo Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, 1991.
- European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways (AND), Geneva, 2000.
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), Geneva, 1957.
- FAO International Code of Conduct on the distribution and use of Pesticides, Rome, 1985.
- FAO International Undertaking on Plant Genetic Resources, Rome, 1983.
- Framework Convention on Climate Change (UNFCCC), New York, 1992.

- Geneva Protocol (Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare)
- International Convention for the Prevention of Pollution from Ships
- International Convention for the Conservation of Atlantic Tunas (ICCAT), Rio de Janeiro, 1966.
- International Convention for the Regulation of Whaling (ICRW), Washington, 1946.
- International Treaty on Plant Genetic Resources for Food and Agriculture
- International Tropical Timber Agreement, 1983 (expired)
- International Tropical Timber Agreement, (ITTA), Geneva, 1994.
- Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution, Kuwait, 1978.
- Regional Convention for the Conservation of the Red Sea and the Gulf of Aden Environment, Jeddah, 1982.
- Kyoto Protocol - greenhouse gas emission reductions
- Migratory Bird Treaty Act of 1918
- Montreal Protocol on Substances That Deplete the Ozone Layer, Montreal, 1989.
- North American Agreement on Environmental Cooperation
- Protocol on Environmental Protection to the Antarctic Treaty
- Putrajaya Declaration of Regional Cooperation for the Sustainable Development of the Seas of East Asia, Malaysia, 2003.
- Ramsar Convention Convention on Wetlands of International Importance, especially as Waterfowl Habitat, Ramsar, 1971.
- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Rotterdam, 1998.
- Stockholm Convention Stockholm Convention on Persistent Organic Pollutants Stockholm, 2001.
- Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Under Water
- Comprehensive Test Ban Treaty 1996
- United Nations Convention on the Law of the Sea
- United Nations Convention to Combat Desertification
- United Nations Framework Convention on Climate Change
- Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985, including the Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal 1987.

- Vienna Convention on Civil Liability for Nuclear Damage, Vienna, 1963.
- Waigani Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region, Waigani, 1995.
- Western Regional Climate Action Initiative

Fact is this that these convections and meet remains up to the ceremonial levels and violation and emission of rules continue unstoppably the developed country agree to pay billion of $ and supply of technology to other country for climate related study and project as par the commitment of UNFCCC (United nation Forum work Convections on climate change) and industrialized country have to contain the emission of gases and carbon but these countries are fail to comply up to the expected stranded then start negotiation of reduction in convention after convention the most recent was Berlin G 77 meet there after in coupon Hagen in IPCC meet (inter governmental penal on climate change).

Now the rules are flexible and compliance is monitor with commitments and penalties for non compliance is executed this is beginning but not satisfactory there are lot many things to do and miles to go head.

EFFECT OF CARBON EMISSION

Rising temperature and climate change as seen in many part of world in shape of global warming due to green house effect extreme cold condition, cloud bursting, reduction of forestry cover, expansion of desertification and tsunami.

ENVIRONMENT AND DEVELOPMENT

Physical environment is the part of a big natural process system that consists of various subsystems as atmosphere, hydrosphere, lithosphere and biosphere that are uniquely interactive in nature. These various subsystems are closely inter-linked through their own natural processes. According to Odum (1971) and Trunk et al. (1978) Dynamic equilibrium can be achieved naturally, but the time frame of the whole process depends on the magnitude of the disturbance. Dynamic equilibrium in nature cannot be achieved if the change is too big to handle.

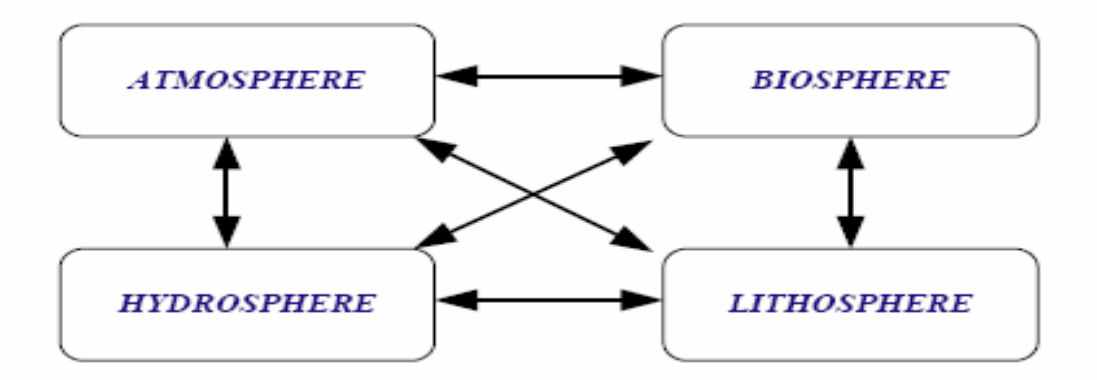

Figure1: Components within a physical environment

ENVIRONMENTAL DEGRADATION

Development will always cause changes to the physical environment. Under natural condition changes can be absorbed by the physical environment through interactions of the various components to attain a dynamic equilibrium state. Actually the physical environment is capable of absorbing impact as long as it does not exceed its optimum level. If the optimum is exceeded the physical equilibrium will start to deteriorate. Interaction between each of physical subsystems is important to human beings as they are part of physical environment. Each and every component of physical environment is capable of fulfilling various human needs.

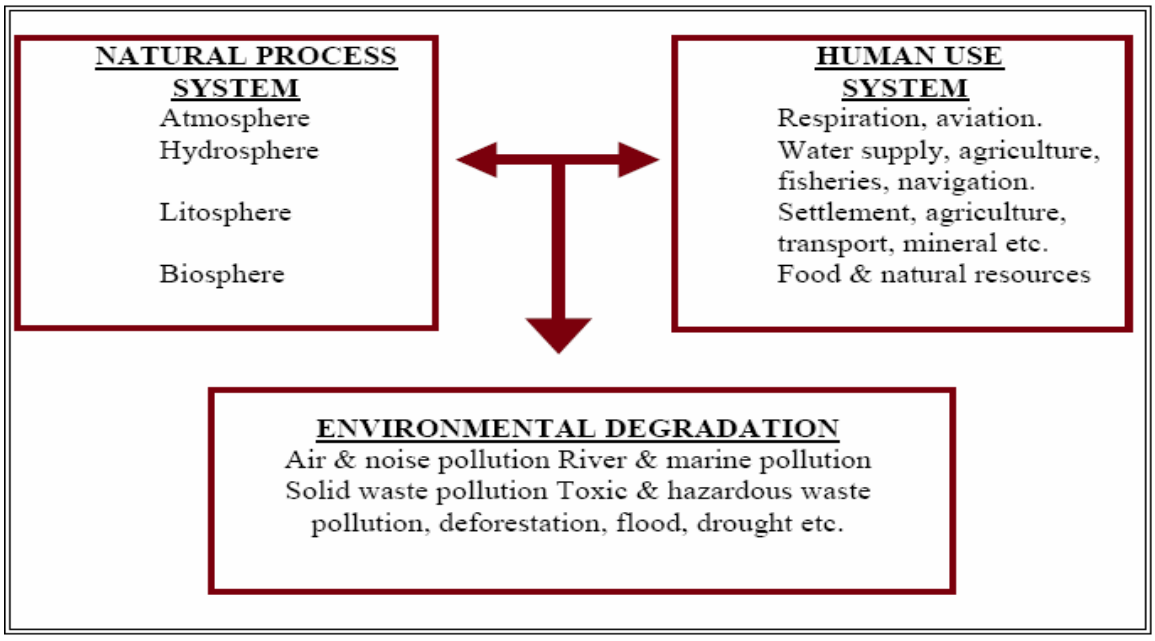

Figure 2: Environmental degradation resulting from interaction between human use system and natural process system

EFFECTS OF ENVIRONMENTAL DEGRADATION

One of the greatest challenges facing humanity is environmental degradation, including deforestation, desertification, pollution, and climate change – an issue of increasing concern for the international community. Environmental degradation increases the vulnerability of the societies it affects and contributes to the scarcity of resources.

Climate change will lead to an increase in the intensity and frequency of weather extremes, such as heat waves, floods, droughts and tropical cyclones. The people hardest hit by climate change and environmental degradation are those living in the most vulnerable areas, including coastal communities, small island nations, Sub-Saharan Africa and Asian delta regions. It is the poorest of the poor, who lack the resources to prepare, adapt and rebuild, that are most affected.

Environmental degradation can lead to a scarcity of resources, such as water and farmable.

Extreme weather events, such as severe flooding, increase the spread of waterborne diseases, such as malaria and diarrhoea.

The effects of the major environmental problems on both health and productivity are:

a. Water pollution and water scarcity: As per the estimation of UN, more than two million deaths and billions of illnesses a year are attributable to water pollution. Water scarcity compounds these health problems. Productivity is affected by the costs of providing safe water, by constraints on economic activity caused by water shortages, and by the adverse effects of water pollution and shortages on other environmental resources such as, declining fisheries and acquifer depletion leading to irreversible compaction.

b. Air pollution: As per the estimation of UN, urban air pollution is responsible for 300,000—700,000 deaths annually and creates chronic health problems for many more people. Restrictions on vehicles and industrial activity during critical periods affect productivity, as does the effect of acid rain on forests and water bodies.

c. Solid and hazardous wastes: Diseases are spread by uncollected garbage and blocked drains; the health risks from hazardous wastes are typically more localized, but often acute. Wastes affect productivity through the pollution of groundwater resources.

d. Soil degradation: Depleted soils increase the risks of malnutrition for farmers. Productivity losses on tropical soils are estimated to be in the range of 0.5-1.5 per cent of GNP, while secondary productivity losses are due to siltation of reservoirs, transportation channels and other hydrologic investments.

e. Deforestation: Death and disease can result from the localized flooding caused by deforestation. Loss of sustainable logging potential and of erosion prevention, watershed stability and carbon sequestration provided by forests are among the productivity impacts of deforestation.

f. Loss of biodiversity: The extinction of plant and animal species will potentially affect the development of new drugs; it will reduce ecosystem adaptability and lead to the loss of genetic resources.

g. Atmospheric changes: Ozone depletion is responsible for perhaps 300,000 additional cases of skin cancer a year and 1.7 million cases of cataracts. Global warming may lead to increase in the risk of climatic natural disasters. Productivity impacts may include sea-rise damage to coastal investments, regional changes in agricultural productivity and disruption of the marine food chain.

ENVIRONMENTAL MANAGEMENT

Management of the environment involves the application of acquired knowledge about the environment with the aims of reducing, conserving or preventing further degradation. Management of the environment has to take into consideration detail measurements and observations about the environment through space and time and the social institutions involved in managing the environment.

An example of a multi-disciplinary framework in environmental management. In the figure, environmental management is surrounded by problems from every component of the natural process system as depicted by conservation of habitat and species diversity (biosphere), air pollution (atmosphere), water pollution (hydrosphere), and land pollution (lithosphere). These problems are part of the environment that requires management and can only be precisely identified through environmental science, which is important in order to have an in-depth knowledge of the physical environment components. However, environmental science alone is inadequate in a management system since environmental management requires knowledge on culture, socio-economy and its impsacts. Furthermore, there must also be environmental ethics to control human actions, concrete relationship between the federal and state authorities, the support of non-governmental organizations, the private sector and the general public.

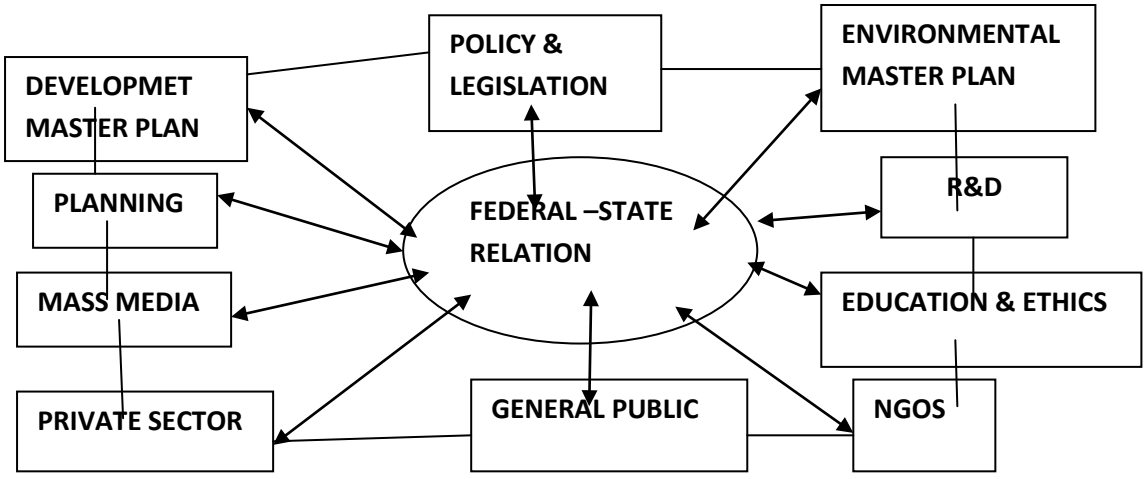

Figure 3: Environmental management framework

HOW STAINABLE DEVELOPMENT

1. **Execution of environmental Laws and convention:** Merely framing laws and organizing meets and convention are not sufficient. One has to think beyond these frame work.
2. **Social development** : Merely developing lofty tower and high structure is not sufficient unless the lower strata of society is provided alternative means of lively hood for sustenance
3. **Education and awareness:** the present level of education and mass awareness is not sufficient to cope up with the required sustainable development all efforts goes into vein.
4. **Contain needs and desire:** the environment pollution and hazardous affects in the society is arising due to raising need and desires of common man and lust amass more and more without taking it to consideration the side effects on the quality of life in the society, not only on those who desire more but on those to who contain needs also so the masses should be educated to cut their needs keeping in mind the good and bad effects of use.
5. **Containing populations:** If we want to live in pollution free environment then we have to control the growing population of those who are just burden and not contributing towards the quality of life and polluting the environment without any check as the population grow the consequential need of daily requirement will also grow which has a direct impact on the bearing of environment.

6. **Limit the greed for amassing wealth:** If all the wealth is extracted in a day and leaving nothing for future because the capacity of wealth in the earth is limited. The every extraction from the earth will disbalance the equilibrium of earth which generates environment disorder like drought, tsunami, flood in a continuous phenomenon .that is why we must extract that much only which is essential for sustenance.
7. **Simple living and sober life style:** The environment can be protected only if we live in a simple and sober life style without artificial show-off in functions, ceremony's, festivals and marriages as all these occasions are full of different types of pollutions which are very common now a days. As there is no proper check and regulation over it as well as the maximum violation is created by the elite class who carelessly involved in celebrations of special occasions more over.
8. **Promotion of Green and environment friendly technology**: No doubt we in India have a law for pollution control and to check the use of polluting technology but even then we are quit use to of using substandard, obsolete, outdated technology without carrying its side effects on the quality of life over this earth.
9. **Reward for the promoter of environment friendly efforts:** We must reward to those and keep on rewarding the good work carried for the promotion of Eco friendly system as a effort to upgrade the quality of lives over the earth.
10. **Funding of environment friendly projects**: all those proposals which have positive effect on the life of human beings and the quality of life on the earth needs to be supported and financed as a gesture of goodwill and positivity for taking society towards survival and growth under the sustainable development.

GO GREEN FOR LIFE OF HEALTH AND SUSTAINABILITY

We've identified six major forces—what we call the six Cs—that are pushing clean tech into the mainstream and driving the rapid growth, expansion, and economic necessity of clean tech across the globe: climate, costs, capital, competition, China, and consumers. **Costs**: Perhaps the most powerful force driving today's clean-tech growth is simple economics. As a medium to long term trend, clean-energy costs are falling as the costs of fossil fuel energy, despite the drop in the price of oil in the second half of 2008, are going up. The future of clean tech is going to be, in many ways, about scaling up manufacturing and driving down costs. Recent advances in core technology and manufacturing processes have

significantly improved performance, reliability, scalability, and cost of clean energy sources, primarily solar and wind.

By contrast, in conventional fossil-fuel power such as coal and natural gas (which together provide approximately 60% of the world's electricity), the generating technologies are mature, stable, and already widely deployed—so their technology costs are relatively steady and predictable. What determines the price of conventional power is the cost of fuel—and the price of fossil fuels, while certainly experiencing directional gyrations as we've seen in the past year, has nearly always moved in the same general direction over the long term: up. With solar, wind, small-scale hydroelectric, geothermal, and even the nascent technology of ocean tide and wave generated electricity; the price-determining formula is just the opposite. There is no cost of "fuel"—the sun, the breeze, the heat of the earth, the tides and waves arrive free of charge daily.

Climate: Alarm is growing about the climate-change consequences caused by our continued dependence on carbon-intensive, greenhouse gas (GHG)–emitting energy and transportation sources, and manufacturing processes. The United Nations' Intergovernmental Panel on Climate Change warned in 2007 that global GHG emissions must be in decline by 2015 to avert disastrous "runaway" climate change. And with insurance giants such as Swiss Re and Munich Re thinking twice about climate impact on the issuance of their policies (try getting an insurance policy for an oil rig in the Gulf of Mexico), the climate issue is coming front and centre for companies, governments, and individuals.

This is driving clean-tech investment and deployment and becoming an increasingly important factor in assessing investment risk factors. Global companies from DuPont to Wal-Mart are investing heavily to promote energy efficiency and clean tech in their operations to reduce their GHG contributions. "As an investor, do you believe that we're going to take climate change seriously in terms of legislation?" asks Mark Trexler, president of Trexler Climate + Energy Services, a firm in Portland, Oregon, that advises companies and utilities on carbon-reduction strategies. "To completely ignore it, in terms of investment decisions, would be a terrible thing."

Consumers: Rising energy prices, polluted ecosystems, and growing awareness of climate change and the geopolitical costs associated with fossil fuels are driving a shift in consumer attitudes and consumer demand for clean-tech products and services. That's forcing companies that sell to consumers – from appliance makers to auto manufacturers to Wal-Mart – to produce and sell cleaner, more efficient products and to market them aggressively.

Who is driving this demand and growth, which is also evidenced by the steady expansion of the LOHAS (Life of Health and Sustainability) demographic sector? Both early adopters, who installed the first solar PV system in their neighbourhood or purchased an early-model Toyota Prius, and mainstream customers, who are installing high-efficiency water heaters, buying higher-mileage cars, insulating their homes with recycled denim, and demanding efficient Energy Star appliances and windows.

These 21st century consumer preferences don't seem to be slowed by the dramatic drop in gasoline prices that began in the fall of 2008. A Consumer Federation of America survey in February 2009 found that 76 percent of U.S. adults were still concerned about high gas prices and an equal number worried about American dependence on oil from the Middle East. **Capital**: An unprecedented influx of capital is changing the clean-tech landscape, with billions of dollars, Euros, yen, and Yuan pouring in from a myriad of public and private sector sources. Since the 1970s, investments in clean technology have moved from primarily government research and development (R&D) projects to major multinationals, well-heeled venture capitalists, and savvy individual investors.

General Electric, the world's largest diversified manufacturer, plans to invest up to $1.5 billion a year in clean-tech R&D by 2010 as part of its "Ecomagination" business strategy. Spain-based energy giants Iberdrola and Acciona are both poised to spend billions of dollars building out their clean-energy portfolios, primarily wind power, over the coming years. Toyota reportedly spends some $8 billion annually in R&D, much of it for hybrid and fuel-cell development. Sanyo, the fourth largest solar cell manufacturer in the world behind Sharp, Q-Cells, and Kyocera, has said it will invest $350 million over 5 years to expand its solar operations as well.

The trend is significant. In 2008, despite its fourth-quarter downturn, venture capital investments in clean tech (in North America, Europe, China, and India) grew 38% to $8.4 billion, according to research firm The Cleantech Group in San Francisco. **China**; Clean tech is being driven by the inexorable demands being placed on the earth not only by mature economies but also China, India, Brazil, Russia, and other rapidly developing nations. Their expanding energy needs are driving major growth in clean-energy, transportation, building, and water-delivery technologies.

China is emblematic of the resource-constraint issues facing our planet; China will not be able to sustain its growth if it doesn't widely embrace clean technology. The Chinese government is starting to understand this and in 2006 committed to investing more than $200 billion over 15 years to meet nationally mandated targets for clean energy. China is planning

to have 60 gigawatts of renewable energy (not including large hydroelectric) by 2010 and 120 GW by 2020.

Competition: This refers to competition among cities, regions, and nations to attract and grow clean tech as a core industry for job creation and economic development. Thrust into the national spotlight in the past year with the focus on "green jobs" as a major component of U.S. economic recovery, clean tech as a development tool is gaining significant traction. Whether promoting the retraining of laid-off steelworkers to build wind turbines or employing inner-city job seekers to weatherize homes in their neighbourhoods, more governments are seeking (and seeing) the benefits of clean tech-focused development efforts.

These powerful global forces—the six Cs—have put clean tech onto centre stage and awakened a diverse range of stakeholders across the world. From Beijing to Berlin, from San Francisco to Bangalore, the clean tech revolution is well under way. It will determine which regions lead and prosper and which regions are left drowning in their own effluents, choking on their own emissions, and struggling to compete in a world that is leaner, greener, and less reliant on fossil fuels.

We believe the choice for investors, companies, governments, and individuals is simple, especially as we seek a dramatic transition out of our current financial crisis. Be part of one of the greatest business and economic shifts in recorded human history, or become extinct like the dinosaurs whose fossils fuelled the last great industrial revolution.

CONCLUSION

If we want to sustain ourselves then we have to protect environment and go for sustainable development by containing our needs and desires putting check on growing populations by educating the poor's and down trodden for the protection of environment. The environment protection depend on the life of health and sustainability that is why we have to go green rather than offending the environment rules and laws. The government agencies need to be strict and vigilant about the violation of environment rules. Youth can play the vital roles in protection and promotion of environment consciousness among the different segment of societies. The town planning and industrial developments must be environment friendly. Bearing in mind the long term impact on the life of common man for the sustenance and survival of biodiversity. The NGOs can play key role in educating the masses about the negative impact of development and growth of polluting industries and rising population. The environment education needs to be promoted beyond the curriculum of syllabi with practical and meaningful approach for the survival of all. The management of resources within the

means and scope of needs rather than false and illusive living style. Lastly we should be more practical and close about the realities of life health, safety, environment and climate. If the climate is neat and clean the environment will be pure and human friendly by which we will safe and healthy. Health of today is the safety of tomorrow, precaution in today is the protection for future. Which we can achieve through the sustainable development and active and agile management of existing resources keeping in mind the needs of coming generations. The capacity and strength of existing planet earth is limited if we manage over needs in the lights of existing circumstantial environment then we will be certainly look forward for the better future. In simple if our planet earth is not safe then we all be on the dangerous note of destruction and If the nature and earth become violent then neither offender nor the conservator will survive, there will be no question no answer, no officer no sub-ordinate, no student no teacher, no king no slave, no raja no wazir, no agitation no pollution, no poor no rich. All will equal and flat without any structure. As if the fire broke in forest the fire will burn more live trees then dead wood.

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