

# 4 G for Sustainable Development

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**Abstract**—UN Climate Change Conference in Paris 2015 set the 2030 Agenda for Sustainable Development. According to that our countries need to green their economies and adapt to climate change. In Indian mythology, by the animal/ bird vehicles, the gods give the message that respect the wild life and save it. Else the ever-increasing disasters will destroy the human civilization. Therefore, it is our duty to save the fauna and flora to ensure the safety of mankind and sustainable development.

The Earth's average surface temperature increased 1.3 degrees Fahrenheit over the past century, and is projected by the Intergovernmental Panel on Climate Change to increase by an additional 3.2 to 7.2 degrees over the 21st century. These seemingly slight changes in temperature could have profound implications for life on the planet.

Ganeshji (the elephant god) says - it is very important that every little animal like a small bee within the ecosystem has a vital role in the well-being of this only living planet. If one species is removed from any chain, it can have significant cascading effects throughout the rest of the chain. Every species is a crucial worker in the factory of nature. Nature, which provides food, clean water and air is essential for human well being.

Indra Dev says - freshwater resources (Ganga) are fundamental for maintaining human/animal health, agricultural production and economic activity as well as all critical ecosystem functions. As populations and economies grow, new constraints on water resources are appearing, raising questions about limits to water availability. The problem of severe droughts is not new to farmers and to the world and there are many current distressful examples in India and the world over.

Saving Gaaya (Cow) for Sustainable Agriculture is as essential as saving water and other precious resources. 70% of the population in India lives in rural areas, engaged in agrarian economy with agriculture and allied sectors employing 51% of the total.

Earth must be protected from the so called development and deforestation, while food and energy had to be produced sustainably. Clean energy efforts with active support of Gauri (female – the better half world) will Make in India clean energy and save India. Gauri says – the world cannot be a happy place with ignoring better half of the world population.

My recent research and research on Indian culture and mythology prove that with 4-G (Ganeshji, Ganga, Gaaya-mother cow and Gauri), we can achieve the goal of Sustainable Development and high happiness index for all living beings !

## 1. INTRODUCTION

The human impact on climate has greatly increased over the past hundred years. We have been releasing vast amounts of climate-relevant gases into the atmosphere. This has changed the radiation balance of the atmosphere and led to global warming. In addition to carbon dioxide, these gases include methane, nitrous oxide, halogenated fluorocarbons, per fluorinated hydrocarbons, and sulphur hexafluoride.

Carbon dioxide atmospheric levels have risen to almost 390 parts per million (ppm) today as compared to the pre-industrial value of 280 ppm. With this increase, the temperature has also risen during the twentieth century. That is pressing the climate to change. Humans are destroying the land, air and marine environment not only through pollution but also through greed. Over-Population + GREED + lavish lifestyles of men has resulted in a highly destructive climate everywhere which is irreversible and making development unsustainable.

**बदले ना मौसम, चाहे बदले दुनिया सारी!**  
वाशिंगटन/बर्लिन, 17 मार्च (एजेंसी)

कहीं बेमौसम वर्षा, कहीं हिमपात और कहीं गर्मी। क्या मौसम बदल रहा है? दुनिया के वैज्ञानिक इसी आशंका से चिंतित हैं। जर्मनी के बर्लिन में जारी एक बैठक में इस बात पर विचार किया जा रहा है कि जलवायु परिवर्तन को कैसे रोका जाए।

**क्यों है चिंता**  
आर्कटिक में बर्फ तेजी से पिघल रही है। इसके बेहद कम हो जाने से दुनिया भर के देशों में जलवायु परिवर्तन की गति और तेज हो जाने की आशंका। हिमालयी हिमनद भी तेजी से पिघले तो भारतीय उपमहाद्वीप में गुरिक्तले बढ़ेंगी।

**तापमान में तेज वृद्धि का खतरा**  
यूनिवर्सिटी ऑफ कोलाडाडो के सीसू बॉटिडर्स नेशनल रिसोर्स एंड्रयु डाटा सेंटर में वरिष्ठ वैज्ञानिक मार्क सेरेजा के साइंस पत्रिका के ताजा अंक में प्रकाशित एक लेख में कहा है कि आर्कटिक क्षेत्र का तापमान 2 डिग्री फॉरेनहाइट से बढ़कर 7 डिग्री फॉरेनहाइट पर पहुँच गया है। वहाँ बर्फ की मोचूदगी वाला क्षेत्र सालाना 38000 वर्ग मील की दर से कम हो रहा है।

**तो प्यासी रह जाएगी दुनिया**  
दूसरी ओर वर्ल्ड वाटर कौंसिल के आंकड़ों पर गौर करें तो आज दुनिया में 1.1 अरब लोग स्वच्छ पेयजल से वंचित हैं। वर्ष 2025 तक लगभग 3.5 अरब लोग ऐसे स्थानों पर रह रहे होंगे जहाँ पानी या तो बेहद कम होगा। दूसरी ओर, जलवायु में हो रहे परिवर्तनों के कारण दुनिया में आज उपलब्ध जल वर्ष 2050 तक लगभग आधा रह जाएगा।

Present human-induced changes/variability in climate show a very disturbing trend. Climate variability affects virtually all natural systems and human activities. Direct impacts of climate include such vital areas as agriculture, air, water quantity and quality, ecosystems and human health. It is to be noted that long after the stabilization of carbon dioxide levels, the climate will still further continue to change because of its inertia.

If the warming is strong, the Greenland ice sheet could completely melt within this millennium and disappear into the ocean. In an extreme scenario, sea level could rise by more than a metre per century, regionally it may be even more.

Under pressure from climate change, water problems, food crisis, energy problems, species extinction, overfishing problems will aggravate. The laws of the land and sea face numerous challenges. There is ongoing tension between the life and freedom of the other species and men.

Therefore, after identification of causes and processes of climate change, climatic hazards over short-term (e.g. untimely flooding, drought) and long-term (e.g. ozone hole) should be controlled, mitigated carefully and on a planned, continuous basis.

We need to improve and protect the environment very carefully through utmost understanding and responsibility. The Earth needs an international, thorough and long-lasting approach to solve its climate change problems. We need to focus on 4G for sustainable development in the above disturbing scenario.

## 2. THE PROBLEM

8 crore people are getting added to the world every year and some of the problems include shortage of resources, war and conflict, overcrowding, health issues and problems in survival of other species of the ecosystem.

Earth has lost half of its wildlife in the past 40 years, says WWF. Species across land, rivers and seas decimated as humans kill for food in unsustainable numbers and destroy habitats. The number of animals living on the land has fallen by 40% since 1970.

From forest elephants in central Africa, where poaching rates now exceed birth rates, to the Hoolock gibbon in Bangladesh and European snakes like the meadow and asp vipers, destruction of habitat has seen populations tumble.

Overexploited stocks, unemployed farmers / fishermen, short-sighted structural policy – it is impossible to ignore that farm / fisheries management has failed in many respects. Our aim should be to conserve plant / animal/ fish species and ecosystems and take account of the social dimension.

Because of the scale at which resources on land are being depleted, mining in the ocean depths is becoming more

intense. It will further worsen the situation with rising pollution levels.



Humans are destroying the land, air and marine environment not only through pollution, but also through greed. Global climate change has caused a gradual rise in the Earth's average temperatures, resulting into frequent crop failures.



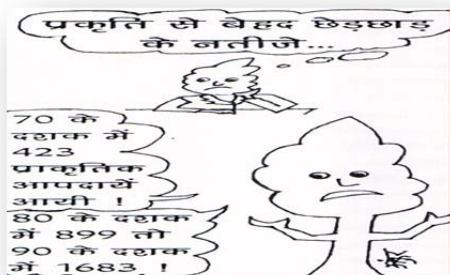
Many of the Earth's ecosystems are nearing critical tipping points of depletion or irreversible change, pushed by high population growth, high pollution and wasteful lifestyles.

The story of the liquid of life i.e. water is not less alarming. On the one hand, the planet's little, fresh water is very unevenly distributed while on the other hand, many of our most important aquifers are being over-pumped, rivers, lakes over-used or polluted, causing widespread declines in over ground, groundwater levels.

Many major rivers no longer reach the sea in most years. On the other hand, our consumption and production patterns are becoming highly unsustainable. By 2050, if current consumption and production patterns remain the same and with a rising population expected to reach 9.6 billion, **we will need 3 planets to sustain our ways of living and consumption.**



In the coming years the rate of glacial melting will probably accelerate. Sea-level rise will become more rapid. Scientists anticipate that if greenhouse gas emissions continue unchecked, the sea level could rise by as much as 5 metres by the year 2300.



That will be a catastrophe for the only living planet and its inhabitants.



Thus we see that man has highly disturbed the mother nature due to uncaring (wrong) technology, waste full lifestyles. What will happen if we do not care & prevent misuse of our F.E.W. Resources (Food, Energy, Water resources) ? The Environmental Crises, Food Crisis, Energy Crisis, Water Crisis will become more severe and more frequent.

Cost of not Caring the Mother (Earth) and the Mighty Himalaya will result into more severe and more frequent KAWAS (Barmer), KEDARNATH, KASHMIR (twice), KISAAN (suicides..) like destructions. Many such Development – Environmental Problems will crop up.

On the other hand, the booming illegal trade in wildlife products is eroding Earth's precious biodiversity, robbing us of our natural heritage and pushing whole species towards extinction.



Vanishing species will ensure vanished humanity. Millions of different organisms as a whole help to maintain mother earth's overall health.

### 3. THE SOLUTION

We have the 4-G (*Ganeshji, Ganga, Gaaya*-mother cow and *Gauri*) solution to tackle the above problems.

#### 3.1 Ganeshaji (The Elephant God) -

**Ganeshaji**, the first remembered and revered God says - we need to teach children that every animal, all nature and people has the right to life, thus we can instill a respect and appreciation of nature in children.



Teaching kids about wildlife conservation will ensure that our beautiful planet and country and its matchless wildlife will be preserved for future generations.

**Ganeshaji** (The Elephant God) further says animals and plants are very important in an ecosystem.

Ganeshaji also says 'Avoid all wastage & make aware the whole society to do so from today itself - so that all get sufficient food, water and shelter'.

Each animal plays a role to help keep the balance in nature. Animals that feed primarily on plants bring about a balance in the plant world. Certain plant species that can be harmful to the growth of other organism may be the favorite food of a particular animal.



### 3.2 Gangaa (Water) – the elixir of life -

Today, water has been ignored globally as the engine for green growth. All rivers including Ganga turned into huge sewers ! That's why Modi Mission – Swachha



Bharat Abhiyan, Clean Ganga Mission have been launched. It is to be noted that climate change has been mainly due to men.



Water is the prime need for the survival of all living things, whether it belongs to flora kingdom or fauna kingdom and industrial development. The demand on water for domestic, commercial, industrial and agricultural purposes is increasing significantly in the recent past.

The situation is exacerbated by the growing population and urbanization, thereby there is a very high pressure on limited water resources. Less than 3% of the world's water is fresh (drinkable). Of which 2.5% is frozen in the Antarctica, Arctic and glaciers. Humanity must, therefore, rely on just 0.5% for all of ecosystem's and man's fresh water needs. The planet's little fresh water is very unevenly distributed.

#### Per capita water availability in India :

1947	6008 cubic metres / year
1951	5177 cubic metres / year
2001	1820 cubic metres / year
2025	1340 cubic metres / year
2050	1140 cubic metres / year

For sustainability of human civilization, man has to manage his water. Water is the precious nectar around which the human civilization has developed. He has to seriously manage his wastewater, which is making the rivers, cities etc. a real hell on this earth. Therefore, integrated water resource management is the need of the hour.



There are many facets of the water maladies e.g. water and energy are intricately connected. Producing energy uses and pollutes large amounts of water. Likewise, providing and using water requires large amounts of energy.

On the other hand, agriculture uses approximately 70% of the world's freshwater supply. Agricultural water use is under growing pressure as demands for water increase; competition among cities, farmers and the environment.



1.3 billion ton food is wasted every year! Almost 1 billion people are undernourished. Another 1 billion sleep hungry.

**पड़ोसी...**

**पाक पर बाढ़ का कहर**

पाकिस्तान, पख्तूनख्वा प्रांत में बाढ़ की वजह से 43 लोगों की मौत हो गई और 40 अन्य घायल हो गए, जबकि कई लापत हैं। प्रांतीय राष्ट्रीय आपदा प्रबंधन प्रशासन ने कहा कि बाढ़ से चित्तल जिला सर्वाधिक प्रभावित है, यहाँ 31 लोगों की मौत हो गई।



Objective of Rajasthan “MUKHYA MANTRI JAL SWAWALAMBAN ABHIYAN” is to make people self-reliant on water front.

**3.3 Gaaya (Cow) & National Mission on Sustainable Agriculture :**

Saving Gaaya (Cow) for Sustainable Agriculture is essential. 70% of the population in India lives in rural areas, engaged in agrarian economy with agriculture and allied sectors employing 51% of the total. Without rural development, India cannot optimally realise its growth potential and claim its place in the world. We should save Gaaya (cow/govansha) and of course all fauna and flora for averting soil health problems, resulting in many serious problems of mother earth. Thus we need to add culture in our agriculture with Gaaya.

70% of the population in India lives in rural areas, engaged in agrarian economy with agriculture and allied sectors employing 51% of the total workforce but accounting for only 17% of the GDP.

Without rural development, India cannot optimally realise its growth potential and claim its place in the world. We should save cow and of course all fauna and flora for averting Climate Refugee Class Creation !



The role of Govansha has been ignored over tractor, resulting in soil health problems and many other related serious problems, therefore, we need to add culture in our agriculture. Govansha gives the right culture / solution to the village problems and thereby many of India’s problems.

**Sri Narendra Modi ji, Hon’ble Prime Minister of India said " If we have to build a nation, we should start from the villages"**



Our Hon'ble Minister **Smt. Smriti Zubin Irani** said "Institutes of higher learning must be connected to villages".

### 3.4 Gauri –

It is to be noted that a large section of climate refugee population would be women and children. Therefore, the Green and Clean economy must include **Gauri (women)** in a big way for revolutionizing a positive change in the eco-system for betterment of all.

Most of our electricity is generated in dirty fossil fuel power plants, which pump greenhouse gases into the air and contribute to disastrous climate Change resulting into frequent and furious KAWAS (Barmer), KEDARNATH, KASHMIR (twice) - KISAAN (suicides...) like destructions.

Every individual living on this planet is responsible for global warming in one way or another and must amend ways to stop this phenomenon in his/her own way. Our main objective should be to reduce greenhouse gas emissions as much as possible. It is expected to reduce carbon emissions by 40% by 2020.

**Gauri** (female – the better half world) has the tremendous power to Make in India Clean Energy and Save Energy in India.



To avoid the climate change catastrophe, there are several things we can do to solve the problem of Climate Change. One solution is to stop producing CO<sub>2</sub>. We can do this by switching from oil, coal and gas to renewable energy. Another solution is to plant more trees.

Trees absorb carbon dioxide and produce oxygen, which is not a greenhouse gas. A third solution is to use less energy and to recycle more products. Generating electricity is one of the main sources of carbon dioxide. If we use less electricity, we will produce less CO<sub>2</sub>.

Electricity can be generated from sunlight which can be substituted for non-renewable forms of energy. Photovoltaic cells can be used to convert light to electricity and can be used to charge devices such as calculators or power entire house. Solar thermal power plants are another source of energy where electricity is generated by highly pressurized steam from sunlight using power turbines.

Using wind energy reduces carbon emissions drastically, given our major objective is to reduce carbon emissions and maintains eco-balance. Construction of infrastructure required for generating wind energy is not tedious as generally believed.

Efficient use of energy includes proficient car usage, energy reduction power sources, innovated industrial strategies and developing technological solutions. Low noise refrigerators, energy efficient washing machines save significant amount of energy. Hand drying of clothes after machine washing saves considerable energy. Reducing temperatures of air conditioning system also saves huge amounts of energy over the year.

Reducing water usage in daily activities saves good amount of energy. Using public transportation such as trains and buses preserves energy. Suggest rural renewable energy strategies like using hydropower or biogas for lighting and energy purposes instead of candles or kerosene.

Similarly, hydropower or biogas can be used for communications instead of batteries. Solar cookers can be developed and used instead of burning wood for cooking to achieve over 25% efficiency. Solar PV pumps or mechanical wind pumps can be used to pump water instead of diesel pumps and generators.

Another recommendable solution is saving energy on computers by turning on the save screen mode which reduces power consumption and emissions. It might sound trivial but small amounts of saved energy add up to huge amounts at the end of the year.



All this cannot happen without actively involving *Gauri* (female – the better half world). In fact, she can better take the lead role.

#### 4. CONCLUSION

Reducing global warming and addressing related climate change problems is the responsibility of not only governments but also its citizens, of each and everyone.

We should collectively work to save our food, energy and water resources by reducing unnecessary water usage, saving electricity, using public transport, recycling plastic, bottles, paper, waste material and of course by reducing wastage of our precious, all resources.



If we make small-small positive changes right from today in the way we live, we can avoid **forced, huge** positive changes in the future. Scientists, governments and individuals must work together to overcome the great threat of climate change.



My research on recent environmental events, on Indian culture and on Indian mythology prove that with 4-G (Ganeshji, Ganga, Gaaya-mother cow and Gauri), we can achieve the goal of Sustainable Development and high happiness index for all living beings !

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