



# Personal Carbon Credit and Human Footprints: The Bonkey Ball Effects to the Environment

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**Abstract.** The advent of a Human Being as creation of Nature, it took a long time to make this Earth habitable but with a very small passage of time, the Humans made this earth inhabitable by emitting carbon dioxide and other elements. During the last few years or decades, across the Globe there is a Climatic Change and the Scientists have suggested that the main cause of the Climatic Change is the increasing level of Carbon dioxide in the Environment. What does the Carbon dioxide does?

## 1. Introduction

The main cause of pollution was found by the scientists as emission of Carbon dioxide. Carbon dioxide works as a Green house Gas in the Environment. This means it prevents the heat or Light received from the Sun. The Green House Gas effect is the main cause of increase in the temperature of the Mother Nature i.e. Earth in the present situation. In the summer the temperature is unexpectedly high, unexpected rain in the summer, winter is too cold than expectation, drought, floods have increased. The impact of these changes has affected not only the Human Beings and animals but also plants trees and every creature, who is surviving on the earth.

The Main cause of increase of carbon dioxide is:

- Electricity
- Food
- Deforestation
- Industrial Production

Carbon Footprint is one of the measuring tools to evaluate the overall impact of Green House Gas Emission in the Environment and it is a Measuring tool to evaluate the total emission of Green House Gas in the Environment. The solution to this problem is the reduction of Carbon footprint of an individual. In other words Carbon footprint is the Total Value of Carbon dioxide and their Green House gases which are emitted during the whole Life Cycle or during the whole production process. The Life cycle here is termed as “from the Birth of an Individual to his Death. The Average Life Expectancy considered here is 70 Years.

**Concept of Carbon credit and the contribution of an individual to the Mother Nature:** What is Carbon Credit? With the passage of time we have progressed a lot and also emitted carbon and harmful gases erroneously. This has resulted into global warming. A Carbon Credit is a generic term for any tradable certificate or permit representing the right to emit one ton of carbon dioxide or the mass of another greenhouse gas with a carbon dioxide equivalent (ECO<sub>2e</sub>) equivalent to one ton of carbon dioxide.<sup>24</sup> The countries who signed this agreement, agreed to reduce the carbon emission and other gases like carbon dioxide, methane, nitrous oxide etc. to the level of early 1990s. Even the developed European countries said that they will also bring down the level in the period 2008 to 2012 based on different norms for their companies and factories. This forced the countries to come together and sign an agreement named as Kyoto Protocol. The combustion of fuels produces carbon dioxide which results in greenhouse gases resulting in Global warming. This environmental problem of global warming is the root cause of global panic on the earth. The right to pollute the environment became a commodity of trading and people are earning huge amount of money for last few decades. This devil, however, is now turning into a product that helps people, countries, consultants, traders, corporations and even farmers earn billions of rupees. This was an unimaginable trading opportunity not more than a decade ago. The carbon footprint estimates the total of greenhouse gas emissions caused directly and indirectly by an individual's for e.g. Someone is driving a car which leads to emission of green house gases. Carbon footprint is a part of the ecological footprint. All of us at some or the other time has left our footprints on the earth. The footprints on the sea sand are washed away by the sea, likewise some of the footprints are washed away by the Mother Nature and hence the negative impact is washed away automatically by the Nature. However there are certain footprints which remain forever as the Footprints of Neil Armstrong on the Moon which may remain for millions of years. This is due to the absence of atmosphere on the Moon. A similar effect can be seen now on the earth that the impression (many times negative) created due to the wrong doings of Human is becoming birth marks, rather non-washable footprints! The concept of Carbon credit when viewed from an individual's point of view, it gives rise to a new concept of Personal Carbon Credit. It is a new concept with reference to individual's contribution towards affecting the environment in a negative way. However the experts of carbon credit have included the carbon emission namely Greenhouse gases into tradable form. This concept of dealing in the carbon credit is termed here as Micro Carbon Credit Trading.

**Concept of Micro Carbon Credit:** Traditional carbon credits are purchased by GHG emitters to offset the difference between their actual emissions and their allowable limit under a cap and trade type GHB reduction program or to produce

real additional and verifiable GHG reductions. These carbon projects are typically large in scale and include reforestation, fuel switching and biogas projects.

**Carbon Trading:** The carbon and the harmful gases emitted have contributed to the greenhouse effect resulting in the global warming. This forced the countries to come together and sign an agreement named as Kyoto Protocol. Personal carbon credit is different from personal carbon trading

**Kyoto protocol suggested two ways of solving or reducing the problem of pollution:** The reduction should be measured in carbon credit unit. Since in countries like India & China, the emission of Green House Gases is less hence there is a high market of Carbon credit in these countries. To get the Carbon credit, the companies set up such projects which will reduce the element of Carbon dioxide in the air or by using Clean- development mechanism, minimum Carbon should be emitted. Under this mechanism. Tree Plantation, generation of energy from waste, waste management, water management or Reusable energy projects plants is included. Kyoto protocol: According to Kyoto protocol, 40 industrial countries were kept in a separate Developed countries list named Annex 1. Kyoto protocol has 5 main principles:

- Commitment towards the reduction of Reduction of Green House Gas emission for the Countries listed in Annexure 1 i.e. making it compulsory for the commitment of reduction of Green house gas emission.
- To facilitate the fulfillment of the Targets of the Protocol
- A Fund should be raised or created so that the developing Countries should not suffer
- Continuous Analysis of the protocol to maintain to maintain unity or uniformity
- To develop a disciplinary committee so that the protocol should be mandatory.

**Personal carbon credit:** Personal carbon credits were first introduced by My Emissions Exchange in April 2009. Personal Carbon Credit is dealt in a positive way with Concept of “Bonkey Ball”.(the ball which bounces like a monkey i.e. (Bounce + Monkey) = Bonkey Years back, in early 90’s , Cadburys the chocolate making company came with a innovative idea of wrapper return policy .This policy offered the kids to return the wrappers and in return they will get toys . The Toys to be given to the kids was based on the points which were decided on the basis size of the wrapper and amount spent on the chocolate. Centers or shops were appointed to collect such wrappers and the kids (including me) used to search for the chocolate wrapper and collect it and submit it to the shop and when we achieve a particular points, we used to get a funky ball popularly known as “Bonkey Ball”.(The ball which bounces like a monkey i.e. Bounce + Monkey ). A yoyo or sometime a Bouncing Ball (Termed as Bonkey Ball) was a fantasy for the kid and it use to give the kid enough motivation to collect the wrappers. Basically this was a sales promotion idea, but it lead to environment awareness unknowingly. The objective of this paper. To find out , whether a housing society can, as a whole avail the benefits as a special Grant of municipal taxes, if they support the environment with the help of water conservation, solar energy and other efforts to save the environment. ? Personal carbon credits are a voluntary method for individuals to directly reduce energy consumption and the resulting Green House Gas (GHG) emissions. Successful individual reductions are rewarded through lower utility costs and the value of the created personal carbon credits. Personal carbon credits were first introduced by my emissions exchange in April 2009. Some experts on carbon credit markets have called for inclusion of small scale GHG reduction projects and verification methods that are valid, appropriate and cost effective for projects of this size. Personal carbon credits address this need and credit more opportunities for GHG reductions. The personal carbon credits are based on Traditional carbon credit but on a small scale at individual level. Personal carbon credits are a voluntary method for individuals to directly reduce energy consumption and the resulting GHG emissions. Successful individual reductions are rewarded through lower utility costs and the value of the created personal carbon credits. Personal carbon trading imposes a cap or allowances on the emission of greenhouse gas emission, whereas personal carbon credit are voluntary methods for individuals to transfer energy consumption to another person for their consumption resulting in the Greenhouse gas emission. If an individual reduces the greenhouse gas effects then they are rewarded through lower utility cost and value for the personal carbon credits. The same principle can also be applied in case of throwing garbage. Let us say a particular limit is fixed for an individual to throw garbage in the garbage box and he is throwing less than the quantum permitted, he can lend his garbage box to another individual who wants to throw more garbage using that limit. This will result in a better understanding of the environment by an individual, as he knows how much he has already polluted the environment and how much is left at his disposal. The Rio+20 India Certification Program, suggests some steps to reduce the ecological footprints though walking, cycling, use of public transport, saving water, reduction of electricity, using energy efficient products and home appliances, using both sides of the paper, using canvases or jute bags, avoid plastic bags, using eco- friendly products, etc. Personal carbon credits are carbon credits created and owned by individual who reduce their Green House Gas (GHS) emissions by a real and verifiable amount. Individuals cause GHS emissions from a variety of direct and indirect activities including transportation use and home heating and cooling. Verifiable reductions in GHS emission are aggregated into 1 metric ton increments and they become personal carbon credits. Personal carbon credits follows the Save Concepts as traditional carbon credits but these projects are small in scale developed by individuals and encourage actual reduction in energy demand at the use point. They are applicable globally whenever the verification requirements can be satisfied. Personal carbon credits a new approach to GHG reduction strategies and as such there are no specific protocols existing today with the various certification standards, specifically because Personal Carbon Credits are so new.

## 2. Micro carbon trading: An introduction

A scheme was thought of where an adult individual would be allotted emission credit based on equal per capita basis, within national carbon budgets, the individual can then surrender these credits when buying fuel or electricity. The individual who want to use more than the limit permitted, can purchase additional credit limit from those who use less than the limit

permitted. This results in creation of profit for those who emit less. Carbon is being traded not only at internationally but also at Personal level also. The micro Carbon trading has gained much importance in the recent times. The carbon trading at individual level is being talked about. The right to pollute the environment concept is replacing the duty to protect the environment. However the human existence on the earth is only possible when we all together make an afford to save the environment, but instead of saving our own space, we have developed a new idea of selling our own Right to someone else, who is polluting the environment speedily. The matter of concern is whether it is a noble idea to sell the environment to someone else? Is it a License which is required and is now being sold to someone else who is polluting the environment at his own whims and fancies? The micro carbon trading tries to fight with global warming by way of putting a cost on the air pollution. The tradable carbon credit created by the International treaty (Kyoto protocol) aiming to lower down the global greenhouse gas levels, specifying the limits as country specific. The carbon trading based on carbon market is the fastest growing market. It also helps in providing fiscal intensities and environmental conservation.

**Personal carbon credit which are created and traded by individuals:** The concept of Carbon credit when viewed from an individual's point of view, it gives rise to a new concept of Personal Carbon Credit. It is a new concept with reference to individual's contribution towards affecting the environment in a negative way. However the experts of carbon credit have included the carbon emission namely Greenhouse gases into tradable form.

**What is Carbon Footprint:** To evaluate the impact of an individual's activities on the Environment, the Scientists have made the Principles of Carbon footprint. Almost all the activities which an Individual does or almost all the facilities which an individual uses, emit Carbon dioxide (CO<sub>2</sub>) Before the Industrial Revolution, the generation or production of Carbon dioxide by the Human Activities were soaked or absorbed by the Trees, Plants, forest and these trees plants forest would absorb carbon dioxide and emit oxygen in the atmosphere and would store carbon inside them. However after the industrial revolution, the need to use energy increased and the Fuel requirement increased stupendously. Along with population explosion, the Need theory became the Greed Theory and to fulfill the Basic requirement for an Individual, the forests were cut –down to a Great extent (these forests used to absorb carbon dioxide). Today the situation is so worst that the quantum of the Carbon dioxide which was emitted in the air is much more than the Trees left to absorb them.

**Carbon Footprint:** Carbon footprints mean emission of Carbon dioxide by an Institute, Person or Factory. In other words emission of carbon dioxide or Green House Gases. The name of Carbon footprint has derived from Ecological Footprint discussion. It is a part of Ecological footprint. Moreover this is a part of Life Cycle Assessment (LCA). Carbon footprint is the most developed of the footprint methods. It is a measure of the direct and indirect greenhouse gas emission caused by a defined population, system, or activity, carbon footprints can be calculated by taking an inventory of six greenhouse gases identified in the Kyoto Protocol: Carbon dioxide, methane nitrous oxide, sulfur hexafluoride per fluorocarbons and hydro fluorocarbons. The footprint methodologies tries to estimate the life-cycle environmental impacts, similarly the Green Balance Sheet of An individual is also an attempt to find out the impact of an individual on the environment termed as Green Assets and Green Liabilities, over the Life span of an individual. The Concept of Footprint if Termed as Liability of An Individual then it can answer many questions relating to the Green Liabilities which an individual creates during his whole Life Cycle and the contribution can be termed as Green Assets. For calculating the carbon footprint of an individual, we conducted a survey based on questionnaire, consisting of questions relating to personal hygiene and daily usages of environmental resources. The Basis of Calculation of a Person, Institution or thing's Carbon footprint is the calculation of emission of Green House Gases by them. Possibly the main reason of Carbon footprint is the intention or wish of a Human Being to travel. Similarly the Household electricity is also one of the cases of Carbon footprint. According to some of the Scientist, almost all the activities of the Human Being are the cause & result of the creation of Carbon Credit.

### 3. Human Footprint or Carbon Footprint

The Concept of Personal Carbon Credit and Human Footprints have certain Impact or Impression on the Environment. The impact or the impression of human activities on the earth due to the individual's existence can be understood as Human Footprints. If these Human Footprints results into emission of carbon and affects the Mother Nature to a certain level, then that impression of Human footprint can also be termed as Carbon footprint. This gives rise to the concept of Personal Carbon Credit. The impact or the impression of human activities on the earth due to the individual's existence can be understood as Human Footprints. If these human footprints results into emission of carbon and affects the Mother Nature to a certain level, then that impression of Human footprint can also be termed as Carbon footprint. Carbon Footprint is considered as the developed version of the footprint, as it measure directly and indirectly the effect of greenhouse gases by a defined population, system, activity etc. Each of these greenhouse gases can be expressed in terms of the single unit indicator, carbon dioxide equivalents (CO<sub>2</sub>) or in normalized terms (e.g. CO<sub>2</sub> per sales dollar, land area or production unit). CO<sub>2</sub> is calculated by multiplying the emissions of each greenhouse gas by their respective 100 year global warming potential. The footprint methodologies tries to estimate the Life-Cycle environmental impacts, similarly the Green Balance Sheet of An individual is also an attempt to find out the impact of an individual on the environment termed as Green Assets and Green Liabilities, over the Life span of an individual assumed here as 70 years. The Concept of Footprint if Termed as Liability of An Individual then it can answer many questions relating to the Green Liabilities which an individual creates during his whole Life Cycle.

**Certain facts about the carbon footprints of an Individual:** "A single mature tree can absorb carbon dioxide at a rate of 48 lbs. /year and release enough back into the atmosphere to support 2 human beings – according to the sources-Mcaliney, Mike. Arguments for land conservation.

- On an average a city dweller emits 4 Ton Carbon dioxide in 1 year
- Hence if his average Life Span is 70 years then in 70 years, he will emit 280 tons of Carbon dioxide.

- 1 Tree absorbs 1 ton Carbon dioxide in its Life span
- Hence to absorb 280 tons of carbon dioxide, an individual should plant 280 trees.

#### 4. Conclusion

Measure to Reduce Carbon Footprint: How we can reduce this Carbon footprint or what we can do? There are many ways in which this Carbon footprint can be reduced. Some of them are:

- Less emission of Carbon dioxide by the Human Activities or Reduction I emission of Carbon dioxide in the air
- Rational utilization of things
- Recycling
- Use of Public transport
- Walk as far as possible
- Use Recycled products
- Use locally produced goods

The second way to reduce carbon dioxide is to absorb it. Tree plantation is the best way and effective way to reduce carbon footprints. How many trees are needed to provide enough oxygen for one person? Trees release oxygen when they use energy from sunlight to make glucose from carbon dioxide and water. Like all plants, trees also use oxygen when they split glucose back down to release energy to power their metabolisms. Averaged over a 24 hour period they produce more oxygen than they use up, otherwise there would be no net gain in growth.

#### Reference

- [1]. [http://www.proz.com/kudoz/english\\_to\\_hindi/environment\\_ecology/3355954\\_carbon\\_foot](http://www.proz.com/kudoz/english_to_hindi/environment_ecology/3355954_carbon_foot)
- [2]. Rio +20 Pg 31
- [3]. <http://selvainternational.org/microcarbontrading.html>
- [4]. <http://humanorigins.si.edu/human-characteristics/change>
- [5]. <http://inhabitat.com/7-biggest-threats-to-the-environment-why-we-still-need-earth-day/>
- [6]. [Wikipaid.org/wiki/personal\\_carbon\\_credits](https://en.wikipedia.org/wiki/personal_carbon_credits)
- [7]. <http://www.rediff.com/money/2008/feb/05interl.htm>
- [8]. <http://hindi.indiawaterportal.org/node/25850>
- [9]. Rio +20 Certification Programme on Carbon footprint