

Who Lives if Earth Dies

Arun Bakshi*

Free Lancer and Academic Consultant, India
arbakshi@ud.edu.sa

Abstract

Change takes time to be first understood and accepted. Also, as we know necessity is the mother of invention thus the necessity to save our Mother Earth has started its role to draw the attention of us to invent some new ways to save it, if we and our coming generations have to survive with peace and happiness. Scientists and technologists are trying to invent new ways to save the natural resources available on the earth. The medical science is trying to invent medicines and methodologies to cure diseases, which are directly or indirectly emerged as a consequence of urbanization, modernization and industrialization. Being a teacher, generally I try to make my students understand that to find an optimal solution one must understand the problem in its entirety. Therefore if we give due consideration to understand and define the problem, it becomes easier to find and implement the best possible solutions. As an intelligent fool can make things more complex and difficulty to resolve, knowingly or unknowingly, we have also applied the same course of action to handle and deal with the century's one of the biggest threats and a challenge, Global Warming. To save mother earth, we should take some initiatives at grass root level. As we are already trying to find the cure for the problems caused by the global warming and other environment related issues, let us try to work on some preventive measures against futuristic environment related problems.

Keywords: Forest, Glaciers, Global Warming, Pollution

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1. Introduction

Global warming is a matter of concern for all of us whether it is melting of glaciers, tsunamis, earth quakes etc. is a warning for us to be sensitive for the mother earth. Here I am trying to highlight some initiatives, which I feel can play very important role to handle present environmental problems effectively.

Government make laws for citizens to full fill some criteria to get No Objection Certificates/Licenses etc. from the civil agencies and law enforcement agencies. For example the guidelines to design and build houses and to get pollution under control certificate etc. In the same manner we can make some laws to make people more concerned and responsible for the global warming related issues also by introducing a green parameter (requirement) to be fulfilled before getting such licenses or permissions. The aim to educate a child is to make him a responsible, insightful and well behaved human being. As a teacher my focus is on my students-tomorrow's citizens, teachers, bureaucrats, politicians, environmentalists, administrative officers' etc. and I find a major part of solution to such problems is related with growing minds of our children.

2. Rays of Hope

2.1 Best Utilization of Student's Power

General Proficiency (GP) subjects can be linked with environmental practices and not with environmental studies. Some universities are having subjects like general proficiency, which covers components like assignments, project work, presentations or some skills enhancement components, on the basis of which the students are awarded grades/marks. The syllabus of GP is also not uniform because of flexibility to select the evaluation components as mentioned above. I feel the academic proficiency is having other opportunities to make improvements. For example, in general UG and PG courses, for example, Bachelor of Computer Applications (BCA) and Master of Computer Applications (MCA) are having on an average 30 to 35 subject, covering theory and practical aspects of academic syllabus and GP is a separate subject apart from these 30 to 35 theory and practical subjects. This practice is applicable for many other UG/PG courses also.

Personally, I feel, it may not be a very good idea to again grill them in GP to work on academic projects only, which they are otherwise doing in their class room practices. Generally, GP being an open ended subject, no fixed syllabus is there for GP. Thus institutions and faculty members take GP class as per their own defined curriculum.

We should design a syllabus with more emphasis on application part of learning through practical oriented approach to create awareness to take some remedial actions to stop irresponsible behavior towards Planet Earth. A better approach can be 90% practical and 10% theory.

This should be more of a recreational activity than an academic exercise. We can get many benefits from this exercise, like

- a) The students will realize the meaning and need of Green Revolution OR Green Revolution-II
- b) While performing Green activities, students will understand about the need and significance of Green Earth.
- c) As practice makes us perfect, thus a practical which is recreational in nature and repetitive in nature will surely make the students emotionally, socially and ethically concerned with the problem and they will support the mission to Save Earth whole heartedly.
- d) It can be a small beginning to make Earth a Green Plant.

Generally, the number of students in a class (per semester) is around 60 per batch per course. We can have clear idea about the total strength on the basis of batches running in an academic semester. If a student plants a tree and the health of the tree will ensure his/her marks in the GP. For the whole semester a student will take care of the tree and will collect all the knowledge to make sure the tree grows with time. Good health of tree means good marks. This will surely ignite a trigger among students to be good in parenting also. This exercise will also inculcate the parenting attitude among students. We can give awards to acknowledge their contribution for Green Revolution-II. As we encourage, academic performances, sports performances then why not environmental performances also which are very important in the present and future context. Some trophies, certificates, mementoes can also be given to best performers to promote healthy Green Spirit.

To promote such efforts the environmental and civic agencies can also be involved as to provide plants for free or at a very nominal price, which can be a price at par like the cost of a project file, cost of plastic cover, cost of printing etc.

Here the cycle will start in the reverse order. Instead of killing (cutting) trees for making above mentioned project material we have started to give birth to trees to breathe more fresh air and also to live a healthy life.

We know from past experiences, that the revolutions which were initiated by people have set historical examples to learn from them in future. A common man's association with a mission ensures the success by many folds and at a great speed.

2.2 Make Laws to Build Houses Approximately

Eight Feet above the Ground

The area of earth which is covered by floor (concrete) of houses or covered by such kind of coverings becomes infertile i.e. cannot be used to grow plants etc. Say a house built in an area of 100 yards will make 100 yards of land infertile and will cause the removal of 100 yards of greenery otherwise. We can make a law to get house map passed by the municipal corporations only if the house is constructed 8 feet above the ground on concrete pillars only. The permission will be given to make plinth beams only on the base (ground). This will help to use about 90% of the soil/land for planting plants or **bonsai plants** (Japanese plants which are small in size) or medicinal plants good for environment. The municipal corporations or concerned public and private sector institutions can make guide lines to make use of such available area (90%) in support of Green Revolution-II.

Now a days people have already started making use of fertile lands to make residential and industrial apartments, which was used for growing crops etc. As laws are made to build the maximum number of floors in a building, similar approach can be implemented for the coverage of maximum ground area also.

Before it is too late we must take some preventive measures to make future constructions geo friendly.

To live we need green and not concrete jungles. In support of Green Revolution-II, Horticulture/ Agriculture department can also help to do some planning for the houses which are already built. They can suggest the better ways of plantation with respect to the surroundings and the available space of the house.

As especially during summer, the concerned Govt. agencies of some countries fix some guidelines to stop spreading of diseases like dengue, malaria like cleaning of water coolers etc. Against violations of such guidelines provision of fine and/or imprisonment are also there.

Why not to take Green Revolution-II under such regulations especially for the utilization of fertile land for the construction of residential and commercial buildings?

The Possible Policies/Measures to be considered for the already Constructed Houses/Buildings

- a) Some time period should be given to the owners to implement new guidelines.
- b) The admission of child in an educational institution should also be affected by the contribution of family towards the Green Revolution-II.
- c) Parents have to implant at least one tree in the vicinity of their house with respect to the surroundings and the architecture of the house as an exercise as the part of the admission process of their child. If the surrounding and architecture of the house supports environment friendly big trees e.g. mango it is fine else other small trees can be the best option.

- d) If plantation is not possible then near by parks or road sides which do not come under the extension plans of the civic agencies can also be a good choice.
- e) The focus should be to plant environment friendly trees/plants especially to plant trees which contribute more for the oxygen generation.
- f) The permission for the extension of houses can also be associated with Green Revolution-II.
- g) For educational institutions like schools, colleges or universities the minimum number of trees must be fixed in the vicinity of the school as the guide lines are made for the infra-structural needs of such institutions.
- h) The factories which are generating toxicants must also be covered under the Green Revolution-II, by making it compulsory to plant as well as to look after their growth until unless they become self-reliant.

2.3 Create First and then use

The people who are using wood/trees for business purpose like timber merchants have to balance the ratio of trees used in business and trees planted and grown. Some plan must be designed for the time period of ever five years. Big business house in the trading of timber should be taken under the plans for developing some areas like jungles in the coming 5 to 10 years to get renewal of their business licenses. Similar guide lines should be designed for the other related business houses also. As, in India, around 87 % students are studying in private institutions, making education sector a promising contributor for the Green Earth movement¹, if the renewal of affiliations for the courses of such institutions are also considered an integral part of the Green Earth movements .

2.4 Transport Industry

Transport industry is one of the biggest contributors in the global warming and environment related issues. This industry must be associated with the Green Revolution –II. Well-designed strategy is required for this industry also to minimize the negative impact of global warming and carbon emission. The size of business or number of vehicles under a unit of transporter will decide the kind of contribution and regulations to be designed for such units.

2.5 Vehicle Manufacturing and Other Companies Adding More to the Carbon Emission

As the melting of glaciers and ice of mountains is also effected by the carbon produced by the vehicle, such companies should be directed to plant and to look after the number of trees, required

to nullify the effect to carbon produced by the vehicles manufactured by them.

2.6 Online Examinations

Generally in educational institutions two internal examinations are conducted in a semester (6 months).

To calculate the consumption of papers to conduct examination per semester let us we consider a formula $T_p = 2*(S_T*S_U*A)*N*B*M$

Where

T_p = Total consumption of papers in an academic semester

S_T = Average Number of students in a class

S_U = Average Number of subjects in a semester

A = Average number of answer sheets (single sheet double sided) used by a student per subject

N = Number of courses in an educational institute in an academic semester

B = Batches running in an educational institute in an academic semester

M = Total number of educational institutions in a geographical area

Infrastructure and maintenance cost of such huge heaps of papers is also a matter of concern.

Online examinations can save such a huge amount of papers, thus the negative impact of recycling processes on environment can also be minimized. This approach can play a significant role to minimize the percentage of toxicants in the environment.

2.7 Internal Evaluation Criteria can be Associated with Green Revolution-II

In educational institutions the students are given internal assessment. There are some parameters on the basis of which the students are assessed. One of the parameters can be fixed as Green parameter with some weightage say 25% of the total internal assessment. This parameter will evaluate students on the basis of his/her contribution towards Green Revolution-II. This small initiative can bring remarkable results to protect environment.

2.8 Renewal Fee Wave off for Countributing for Green Revolution – II

Departments issuing and renewing licenses for individual or corporate can design a policy to lure people to be associated with Green Revolution –II. For example, some rebate can be given for achieving the assigned or due to self-realized targets to contribute towards Green Revolution-II.

Table 1.

Global Vehicle (Private and Commercial) production in Yr. 2012(f) (Million Units) Approx. ²	Global Co ₂ Production (Billion Ton) ⁴	Trees Required to Remove 11 Million Tons of Co ₂ OR 0.011 Billion Tons of Co ₂	Trees required to remove 44 Billion Ton of Co ₂	Total Trees On Earth (NASA Report 2005) [7]	Number of Trees Cut down Per Year [8][9]	Number of Trees Planted Per Year [10]
83.3 Million or 0.0833 Billion Units	44 Billion Ton	363.64 Billion Trees	1,454,560 Billion Trees	400 Billion	3 to 6 Billion	3,400,000,000 (Approx.)

3. Future and Supportive Analysis

Considering the worldwide automotive sector, production of private and commercial vehicles should reach 83.3 million units this year (2012), and close to 87 million units next year (2013)[Fig1]. The credit goes to emerging economies, first and foremost India and China.²

A study in Australian context, reveals that approximately one billion trees can capture more than 10 billion tonnes of carbon⁵. As per the Plant for the Planet Foundation, half million trees can sequester 5.6 million tons of carbon per year⁶. Approximately 3.5 billion grown trees will help to remove 33.9 billion tons of carbon dioxide globally generated in the year 2011 [Table 2].

The global Co₂ production is 44 Billion Tons (approx.)(Table 1) and the number of trees required for its elimination is approximately 132232.7 Billion. The plantation of such a large number of trees is a real challenge. To minimize the negative impact of such a large production of Co₂, the contribution from all segments of society like children, adults, working professionals, senior citizens will be required.

As the focus is to involve educational institutions in the green movement, referring to some of the universities in world all together shows 21,776,088 admissions¹¹.

This figure is significant, as the contribution of such a large number of students can play an important role to make environment more clean and green.

4. Issues and Challenges

a. Growth of plants with respect to time and surroundings

Plantation of trees is one aspect and corresponding growth of trees is another important issue to be taken care. Before a small seed/plant becomes a tree, it requires special attention and care for the initial period till it grows to the minimum level of self-reliance.

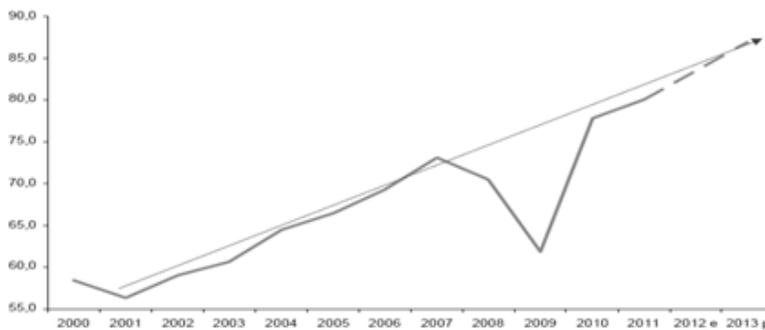
b) Possible Solutions besides issues and challenges

As the issue is related to nurturing, here the services of the volunteer nurturing experts can be taken. A win-win situation



Worldwide vehicle production growth is back on track...

Worldwide vehicle production (PCs and CVs)*, in millions of units



Year	Production (million)	Change (y/y)
2007	73.1	6%
2008	70.5	-4%
2009	61.8	-12%
2010	77.9	26%
2011	80.1	3%
2012 (f)	83.3	4%
2013 (f)	86.9	4%

*PCs: passenger cars
CVs: commercial vehicles
Sources: OICA, Euler Hermes forecasts

Worldwide automotive industry/ Research Department/ Yann Lacroix
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Figure 1. ²Source: <http://www.eulerhermes.com/mediacenter/news/-Automotive-industry-the-global-market-returns-to-cruising-speed-.aspx>

Table 2. ⁴Source: <http://edgar.jrc.ec.europa.eu/CO2REPORT2012.pdf>

Table A1.2
Trends in CO₂ emissions per region/country, 1990–2011 (unit: billion tonnes of CO₂)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
USA	4.99	4.96	5.04	5.18	5.26	5.26	5.44	5.58	5.65	5.69	5.87	5.75	5.83	5.87	5.94	5.94	5.84	5.91	5.74	5.33	5.53	5.42
EU27	4.32	4.27	4.12	4.04	4.02	4.08	4.15	4.06	4.07	4.01	4.06	4.13	4.11	4.22	4.23	4.19	4.21	4.15	4.09	3.79	3.91	3.79
EU15	3.33	3.36	3.29	3.22	3.23	3.27	3.34	3.28	3.32	3.29	3.33	3.39	3.47	3.47	3.43	3.43	3.37	3.32	3.32	3.07	3.16	3.02
- France	0.39	0.42	0.41	0.39	0.38	0.39	0.40	0.39	0.42	0.41	0.41	0.42	0.41	0.42	0.41	0.41	0.40	0.39	0.40	0.38	0.38	0.36
- Germany	1.02	0.99	0.94	0.93	0.92	0.92	0.94	0.91	0.90	0.87	0.87	0.89	0.87	0.88	0.88	0.85	0.86	0.84	0.86	0.80	0.84	0.81
- Italy	0.48	0.42	0.42	0.42	0.41	0.44	0.42	0.42	0.43	0.43	0.46	0.46	0.47	0.48	0.48	0.48	0.49	0.47	0.46	0.41	0.42	0.41
- Spain	0.23	0.24	0.25	0.23	0.24	0.25	0.24	0.26	0.27	0.29	0.31	0.31	0.33	0.33	0.35	0.36	0.35	0.37	0.33	0.30	0.29	0.30
- United Kingdom	0.59	0.60	0.58	0.56	0.56	0.56	0.57	0.55	0.55	0.54	0.55	0.56	0.55	0.56	0.55	0.55	0.56	0.54	0.53	0.49	0.50	0.47
- Netherlands	0.16	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.17	0.17	0.17	0.16	0.17	0.16
EU12 (new Members States)	1.00	0.91	0.83	0.81	0.79	0.81	0.80	0.78	0.75	0.71	0.73	0.72	0.75	0.76	0.76	0.76	0.78	0.78	0.77	0.72	0.75	0.76
- Poland	0.31	0.31	0.30	0.31	0.31	0.32	0.30	0.30	0.29	0.28	0.29	0.28	0.28	0.29	0.31	0.31	0.32	0.32	0.32	0.31	0.34	0.35
Japan	1.16	1.17	1.18	1.18	1.23	1.25	1.26	1.26	1.22	1.26	1.28	1.26	1.30	1.31	1.31	1.32	1.30	1.33	1.25	1.18	1.26	1.24
Other Annex II	0.83	0.85	0.85	0.85	0.87	0.89	0.92	0.96	0.99	1.01	1.03	1.03	1.05	1.08	1.10	1.12	1.11	1.15	1.14	1.10	1.07	1.11
- Australia	0.27	0.28	0.28	0.28	0.29	0.30	0.31	0.33	0.35	0.36	0.36	0.37	0.38	0.40	0.41	0.42	0.42	0.44	0.44	0.44	0.40	0.43
- Canada	0.45	0.44	0.45	0.45	0.47	0.48	0.49	0.51	0.52	0.53	0.55	0.54	0.55	0.57	0.57	0.57	0.55	0.59	0.57	0.53	0.54	0.56
Russian Federation	2.44	2.30	2.08	2.00	1.76	1.75	1.72	1.59	1.57	1.62	1.66	1.67	1.66	1.72	1.73	1.72	1.79	1.81	1.80	1.74	1.78	1.83
Other Annex I-EIT*	1.62	1.53	1.35	1.19	1.02	0.97	0.89	0.87	0.87	0.85	0.85	0.86	0.89	0.93	0.93	0.89	0.92	0.97	0.99	0.89	0.92	0.97
- Ukraine	0.77	0.71	0.63	0.55	0.45	0.45	0.39	0.38	0.36	0.36	0.35	0.35	0.35	0.38	0.36	0.34	0.33	0.35	0.34	0.28	0.30	0.32
China	2.51	2.65	2.78	3.02	3.19	3.52	3.62	3.59	3.65	3.57	3.56	3.64	3.90	4.50	5.28	5.85	6.51	7.01	7.79	8.27	8.90	9.70
- cement production in China	0.09	0.11	0.13	0.16	0.18	0.20	0.21	0.21	0.22	0.24	0.24	0.27	0.29	0.34	0.38	0.42	0.48	0.53	0.54	0.64	0.73	0.82
Other large DC***	1.83	1.91	1.99	2.03	2.15	2.24	2.35	2.46	2.53	2.60	2.69	2.72	2.81	2.91	3.09	3.20	3.37	3.56	3.54	3.70	3.93	4.10
- India	0.66	0.70	0.74	0.76	0.81	0.87	0.92	0.96	0.97	1.03	1.06	1.08	1.12	1.15	1.24	1.29	1.38	1.48	1.56	1.75	1.86	1.97
- Brazil	0.22	0.23	0.23	0.24	0.25	0.27	0.29	0.31	0.32	0.33	0.35	0.35	0.35	0.34	0.36	0.37	0.37	0.39	0.41	0.39	0.44	0.45
- Mexico	0.31	0.32	0.32	0.32	0.34	0.33	0.34	0.35	0.38	0.37	0.38	0.38	0.39	0.40	0.42	0.44	0.45	0.45	0.44	0.44	0.44	0.45
- Iran	0.21	0.23	0.24	0.24	0.27	0.28	0.29	0.30	0.31	0.32	0.34	0.35	0.37	0.40	0.43	0.45	0.48	0.51	0.37	0.38	0.40	0.41
- Saudi Arabia	0.17	0.17	0.19	0.20	0.21	0.21	0.23	0.23	0.24	0.25	0.26	0.27	0.28	0.30	0.31	0.32	0.34	0.36	0.38	0.40	0.43	0.46
- South Africa	0.27	0.26	0.27	0.27	0.27	0.29	0.30	0.31	0.32	0.30	0.31	0.29	0.31	0.34	0.36	0.36	0.37	0.37	0.35	0.35	0.36	0.36
Other non-Annex I****	2.31	2.42	2.51	2.65	2.76	2.94	3.13	3.27	3.26	3.38	3.53	3.60	3.69	3.81	4.03	4.17	4.31	4.47	4.30	4.34	4.65	4.75
- Asian tigers**	0.71	0.79	0.84	0.92	0.99	1.07	1.17	1.24	1.17	1.25	1.31	1.36	1.41	1.46	1.53	1.57	1.61	1.65	1.68	1.68	1.81	1.84
- South Korea**	0.25	0.28	0.30	0.33	0.37	0.40	0.43	0.45	0.39	0.42	0.45	0.46	0.48	0.49	0.51	0.50	0.51	0.52	0.54	0.54	0.59	0.61
- Indonesia**	0.16	0.17	0.18	0.19	0.20	0.21	0.23	0.26	0.28	0.29	0.32	0.32	0.33	0.35	0.36	0.38	0.40	0.41	0.44	0.49	0.49	0.49
- Taiwan**	0.13	0.14	0.14	0.16	0.16	0.17	0.18	0.19	0.21	0.22	0.23	0.24	0.25	0.25	0.26	0.27	0.28	0.28	0.27	0.26	0.27	0.27
- Thailand**	0.09	0.10	0.11	0.13	0.14	0.16	0.18	0.18	0.17	0.17	0.17	0.18	0.19	0.20	0.22	0.23	0.23	0.22	0.23	0.22	0.23	0.23
International transport	0.66	0.66	0.69	0.68	0.69	0.72	0.73	0.76	0.77	0.82	0.83	0.80	0.84	0.85	0.93	0.95	1.00	1.05	1.04	1.07	1.04	1.04
Total	22.7	22.7	22.6	22.8	22.9	25.6	24.2	24.4	24.6	24.8	25.4	25.4	26.1	27.2	28.5	29.3	30.3	31.4	31.7	31.3	33.0	33.9

* Including other countries of the former Soviet Union and Turkey.
 ** Asian tigers = Indonesia, Singapore, Malaysia, Thailand, South Korea and Taiwan.
 *** Other large developing countries = Brazil, Mexico, South Africa, Saudi Arabia, India and Iran.
 **** Remaining developing countries.

can be designed where the capable senior citizens interested to contribute for the well fare of environment and society on local basis can become a great help. It will help them to be an important and valuable asset for the society and it will also help them to be in the main stream of life. Some policy to recognize such efforts can play an important role.

c) Areas for plantation of trees by corporate houses Corporate Houses will require massive area as per their manufacturing capacity to balance the ratio of plantation of trees and corresponding production capacity. The challenge is to arrange such huge areas. The solution can be the plantation in small areas as per the availability in the town or locality. The total plantation can be the total of such small areas or the total number of planted trees in such small areas.

d) Changing the attitude of people towards environment
 It is not easy to change the mindset of people. Society takes time to adopt changes. Also, it is always good to take some initiatives for the benefit of society and environment. Rome cannot be built in a day. But small beginning and efforts are the stepping stones for the big changes.

5. Undisputable Facts and Evidences

Throughout history the Earth's climate has changed. Intergovernmental panel on climate change also states that the scientific evidence for warming of the climate system is unequivocal. There have been seven cycles of glacial advance and retreat in last 650,000 years [Table 3]. Around seven thousand years ago with the abrupt end of ice age the beginning of modern climate era and human civilization happened.

The present warming trend is proceeding at such an unprecedented rate as compared to the last 1300 years is of particulate significance being most of it is very likely as human-induced¹².

Technological advancements and Earth-orbiting satellite have helped scientists to study the big picture and to collect different types of information about our planet and its climate globally. The signals of changing climate are revealed by the studies of huge climate data collected through such advancements.

a) By the mid of 19th century the heat-trapping nature of CO₂ and other gases was demonstrated¹². The scientific bases of

many instruments flown by National Aeronautics and Space Administration are based upon the ability of CO₂ other gases to affect the transfer of infrared energy through atmosphere. Undoubtedly global warming is also affected by the increased levels of greenhouse gases.

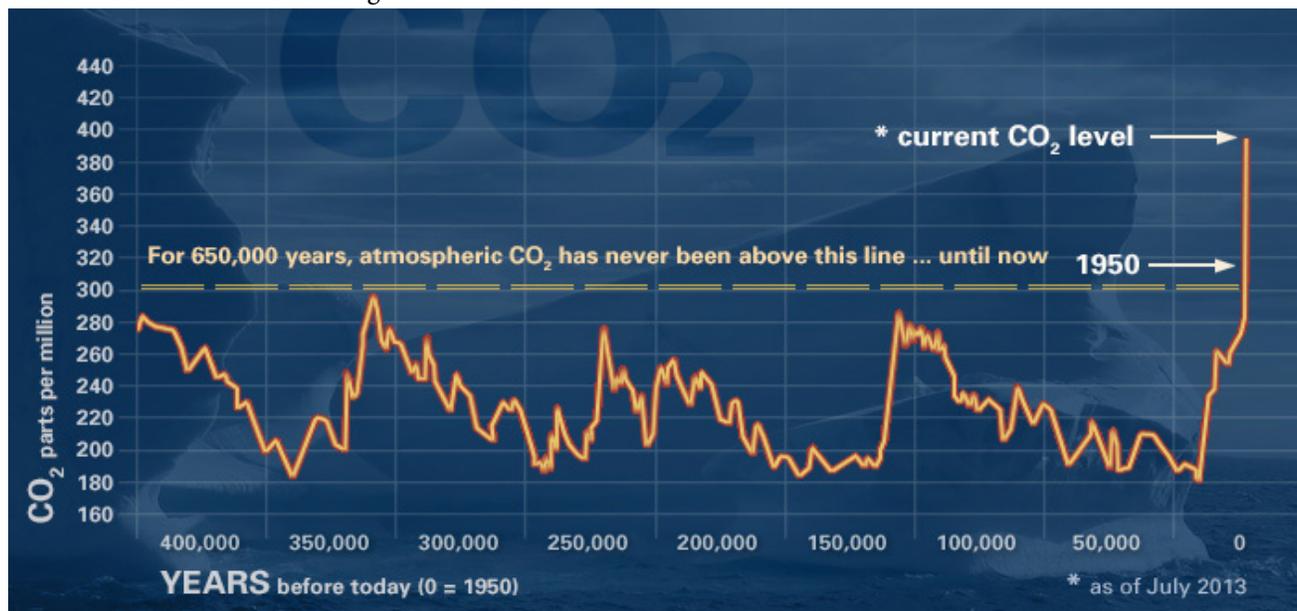
- b) Changes in Earth's orbit, in the solar output and in greenhouse gas levels affect the Earth's climate as evident from the ice cores drawn from Greenland, Antarctica, and tropical mountain glaciers. Also in geological references the past large changes in climate have happened not in millions or even thousands but very quickly in tens of years¹².
- c) Sea level rise: In the last century the rise of global sea level was about 17 centimeters (6.7 inches). However, the rate is nearly doubled in the last decade as that of the last century¹². Also, the republic of Maldives is vulnerable to sea level rise.
- d) Global temperature rise: As evident from the three major global surface temperature reconstructions the Earth has warmed since 1880¹². Major warming happened since 1970s whereas the twenty warmest years occurred since 1981 with all ten of the warmest years occurring in the last 12 years¹². Although 2000s observed a solar output decline which resulted in an unusually deep solar minimum in 2007-2009, but surface temperatures continues to go up¹².
- e) Warming oceans: The much of the increased heat is absorbed by the oceans, with the top 700 meters of ocean showing warming of 0.302 degrees Fahrenheit since 1969¹².
- f) Shrinking ice sheets: The Greenland and Antarctic ice sheets have decreased in mass. The mass of Antarctic and Greenland ice sheets have decreased. As per the data from National Aeronautics and Space Administration's Gravity Recovery and Climate Experiment show Greenland lost 150 to 250 cubic kilometers (36 to 60 cubic miles) of ice per year between years 2002 and 2006. Also Antarctica lost about 152 cubic kilometers (36 cubic miles) of ice between years 2002 and 2005.
- g) Declining Arctic sea ice: Over the last several decades, Arctic sea ice has declined rapidly in extent and thickness¹².
- h) Glacial retreat: Around the world almost everywhere including Himalayas, Alps, Rockies, Alaska, Africa and Andes glacial retreat is happening¹².
- i) Extreme events: Since 1950, in United States, the record high temperature events have been increasing, while the record low temperature events have been decreasing. Increased numbers of intense rainfall events have also been witnessed in United States¹².
- j) Ocean acidification: Because of the increase in the emission of CO₂ in the atmosphere by humans, about 30% increase in the acidity of surface ocean water has been observed since the beginning of the Industrial Revolution¹². Also, the upper layers of the oceans is absorbing CO₂ at the increasing rate of two billion tons per year¹².

6. General Solutions

The area required for the plantation of trees by business houses is a matter of concern. One of the options can be the coastal areas as they are the primary victims of natural calamities like tsunami etc. This will also help to reduce

the impact of tidal waves before it enters the main cities. Also the areas like **hills, forests, deserts, river banks can be taken**

Table 3. Source¹²: climate.nasa.gov/evidence



into considerations. Soil erosion and landslides prone areas can also be covered under Green Revolution –II.

7. Some Approaches

- a) Media can play very important role to spread awareness for issues that are effecting environment adversely. More programs or advertisements should be designed to make positive impact on the mind of people to have concern for the earth and life on the earth.
- b) Before the final degree/Convocation every passing student has to plant a tree.
- c) The vehicles are adding more to the global warming/pollution. Thus to get a new license or to renew a license at least one tree has to be planted and for the next renewal the growth of that tree should be taken into consideration.
- d) Passports should also be renewed / issued by one tree one passport taking in to consideration the house architecture.
- e) Public parks can be taken in to consideration to implement such regulations to plant trees under the guidance of park authorities.
- f) Promotions can be linked with Green Revolution-II. Promotion in jobs will be effective when a tree will be planted by the beneficiary.
- g) Rebate in the income tax can be associated with Green Revolution-II. Some percentage of exemption can be given for planting a minimum number of trees.
- h) Employment opportunities in public and private sectors can be linked with plantation of trees and promotion. Appraisal can also be considered for the successful growth of the tree.
- i) In judiciary, some welfare schemes should be there for prisoners considering their contribution for Green Revolution-II.
- j) People have to plant a tree and to look after it for the purchase of every vehicle to compensate for the pollution added by the vehicle.
- k) The farm houses can be associated with Green Revolution-II by fixing number of trees as a must with respect to the size of the farm house, by the government agencies.
- l) The students who have used all changes to reappear in exams can be associated with Green Revolution-II to get mercy chances.
- m) Green Revolution-II will also have positive impact on White Revolution. Plantation of trees will provide more healthy and green food for animals also. This will help them to become more productive.

8. Benefits: Long and Short Term

- n) It will help students to learn about parenting. This will help them to become more responsible and sensitive for life and society.

- o) Parents (by the business related government regulations) and children (by the schools guidelines) will work together for the same cause. This will definitely make an encouraging movement to help Green Revolution-II. Further, the awareness from children to parents and vice versa will give them a common platform to work together thus make better parent child relationship. This will add to the social and personal growth of a family.
- p) It is difficult to make a “Green Dream” a reality, until unless we all understand the necessity of a Green Earth and contribute wholeheartedly to protect the environment and Earth.

9. The Role of Environmentalists and Scientists

The scientists and professionals working in the field of ecology should do research to produce the kind of plants/trees which will help more to minimize the effect of pollutants in the environment and to help to minimize the global warming.

The tender minds of children are like blank memory pads, which are very sensitive for the surroundings and literature to teach them. Whatever they learn or feel t makes a long lasting impact in their mind.

If we get success to realize the need, importance and significance of their role to make eco-balance, half of the battle is already won. But, the methodology to make them emotionally, socially and personally concerned for Mother Earth must be practical oriented and not mere theoretical and bookish. To achieve this goal, we have to work and design teaching and learning models, with more emphasis on practical approach.

10. Conclusion

We are never late to do good things. The contribution at the individual level can play a pivotal role to deal with the issue of global warming. Government agencies at National and International level must give due consideration for the futuristic world, full of life and not full of fright. Before earth becomes living hell lets together dwell a habit to do a bit for ourselves, our children and for future generations.

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