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Role of Environment and Environmental Education on Global Peace- An Analytical Study

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Abstract:

Peace is the mental state of happiness. There are two types of peace Positive peace and Negative peace. When in a place there is no violence such as wars is known as Negative peace on the contrary positive peace refers to the absence of structural violence that is the systematic inequities such as gender or racial discrimination. No doubt, environment is an influencing factor for peace but not a controlling factor. If we able to find out the relationship between environment and peace then it will be easy to judge the role of environmental education on global peace. Actually we should remember that global peace and mental peace is not same things. So in broad sense it is very critical to analyze. To show the relationship between environment and global peace I have used two index Environmental Performance Index (EPI) and Environmental vulnerability Index (EVI) to show the global position of those countries in respect of environmental performance. To show the global position in respect of peace I have used Global Peace Index (GPI).

Key- words: *Environmental Performance Index, Global Peace Index, Environmental vulnerability Index' Resource management, global citizen, sustainable society, Global conflict.*

A. Introduction:

Education is a lifelong process, which takes place from the womb to the tomb. Education is a human right. It is the mirror of our modern society and essential for human emancipation and social development (Sharma, 2003). This is globally accepted that education only the way for built up the society and nation. Through the education a man able to find out the purpose of his or her life. 'The main purposes of education are to create informed, socially conscious citizens who possess a sense of responsibility to the Earth and their fellow citizens. This sense of responsibility is not limited to a concern for the environment and responsible environmental decision-making, but also extends to issues of equity, citizenship, responsibility, social justice, and compassion' (Jaspar, Jennifer Catherine., 2008, p2).

In the world every living organism includes man, animal and any species want to live in their place without disturbance. This is the ultimate goal of our society which we called peace but every time this state is being disturbed through our activity. There are so many pillars on which peace stand among these Environments is one of them. So question arises is it possible to establish peace through the environmental education? Answer may be 'NO' because through the environmental education we can build an environmentally and ecologically sound citizen but it will not solve the other problems which are also responsible for the disturbance of global peace. So we have to make

a frame work of curriculum of environmental studies in a broad sense which will cover up the other environment such as political environment, social environment, cultural environment, religious environment etc. But in this paper we only judge the environmental issues.

According to **Mahatma Gandhi** "Earth provides enough to satisfy every man's needs, but not every man's greed". The necessity of global citizenship education in higher education today, even in most of the developed countries, millions of people are suffering from lack of shelter, and health care. War and invasion are threatening millions of people around the world. The global changes as the result of earth temperature increase, millions of tons of dangerous waste material produced by industrial countries and using more than three million pounds of pesticides which has killed and harmed the wild world and water living creatures are ringing the bell and demand a world demand and effort for solving the problem (**Sachs 1995, Sanders 1997**).

B. Objectives:

Actually environment is a broad issue in the world, so if I consider the every types of environment then the discussion will be limitless and will loss the ultimate goal of this paper. So I have outlined some objectives, such as-

- i. To analysis the relationship between environment issues and global peace.
- ii. To discuss about the importance of environment safety and global controversial issues on global peace.
- iii. To measures the impact of education on global peace.
- iv. To suggest some policy measures.

C. Database and Methodology:-

In this discussion different environmental data and information collected from different journal and books. Internet is being used to overall know how. I have collected various data such as *Global Peace Index (GPI)*, *Global Terrorism Index (GTI)*, *Environmental Performance Index (EPI)* and *Environmental vulnerability Index (EVI)* from the internet and journal which I have used to compare the global position of the countries. Different Mathematical, statistical and cartographical techniques have been used for data analysis.

i. Global Peace Index (GPI) :

Global Peace Index or GPI measures the relative position of the countries in the world in respect of peacefulness which was first launched in May, 2017. This report prepared by the Institute of Economics and Peace (IEP). This report indirectly shows the global violence of the world. (**Wang, Monica, 2017**). Almost 23 indicators (**Information about indicators and methodology "2013 Global Peace Index"**) were used to prepare this index, these are as follows (Table .1)

Table.1:-Global Peace Indicators

Source: GPI by Institute of Economics and Peace (IEP)

Sl. No.	Indicators	Sl. no.	Indicators
1	Number and duration of internal conflicts	13	Level of violent crime
2	Number of deaths from external organized conflict	14	Likelihood of violent demonstrations
3	Number of deaths from internal organised conflict	15	Number of jailed persons per 100,000 people
4	Number, duration, and role in external conflicts	16	Number of internal security officers and police per 100,000 people
5	Intensity of organised internal conflict	17	Military expenditure as a percentage of GDP
6	Relations with neighbouring countries	18	Number of armed-services personnel per 100,000
7	Level of perceived criminality in society	19	Volume of transfers of major conventional weapons as recipient (imports) per 100,000 people
8	Number of refugees and displaced persons as percentage of population	20	Volume of transfers of major conventional weapons as supplier (exports) per 100,000 people
9	Political instability	21	Financial contribution to UN peacekeeping missions
10	Impact of terrorism	22	Nuclear and heavy weapons capability
11	Political terror	23	Ease of access to small arms and light weapons
12	Number of homicides per 100,000 people		

ii. Global Terrorism Index(GTI) :

This is an attempt to show the rank of countries in the world according to terrorist activities. The Global Terrorism Index (GTI) is published by the Institute for Economics and Peace (IEP) which is based on data from the Global Terrorism Database (GTD) collected by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland. The GTD has codified over 150,000 cases of terrorism (**Vision of Humanity, 2013**). To prepare the score of GTI mainly four factors considered. Each of the factors is weighted differently.

Table: 2 Global Terrorism Indicators and its weight

Factors	Weight
Total number of fatalities	3
Sum of property damages measure	2
Total number of incidents	1
Total number of injuries	0.5

iii. Environmental Performance Index (EPI) :

The Environmental performance index is a composite index which shows the environmental performance by using some selective indicators. This is produced by Yale and Columbia Universities in collaboration with the World Economic Forum. Those variables were used to calculate the rank are as follows ((Table: 2)-

Table: 3 Variables for Measuring the EPI

EPI	Objective	Issue Category	Indicator
Environmental Performance Index (EPI)	Environmental Health (50%)	Health Impacts (23%)	Environmental Risk Exposure (100%)
		Air Quality (33%)	Household Air Quality (30%)
			Air Pollution - Average Exposure to PM2.5 (30%)
			Air Pollution - PM2.5 Exceedance (30%)
			Air Pollution - Average Exposure to NO2 (10%)
		Water and Sanitation (33%)	Unsafe Sanitation (50%)
	Drinking Water Quality (50%)		
	Ecosystem Vitality(50%)	Water Resources (25%)	Wastewater Treatment (100%)
		Agriculture (10%)	Nitrogen Use Efficiency (75%)
			Nitrogen Balance (25%)
		Forests (10%)	Change in Forest Cover (100%)
		Fisheries (5%)	Fish Stocks (100%)
		Biodiversity and Habitat (25%)	Terrestrial Protected Areas (National Biome Weights) (20%)
			Terrestrial Protected Areas (Global Biome Weights) (20%)
			Marine Protected Areas (20%)
			Species Protection (National) (20%)
		Climate and Energy (25%)	Species Protection (Global) (20%)
			Trend in Carbon Intensity (75%)
Trend in CO2 Emissions per KWH (25%)			

Source: Environmental Performance Index (EPI)-2016

iv. Environmental Vulnerability Index (EVI) :

The Environmental Vulnerability Index (EVI) is a measurement devised by the South Pacific Applied Geo-science Commission (SOPAC), the United Nations Environment Program and others to characterize the relative severity of various types of environmental issues suffered by 243 enumerated individual nations and other geographies (such as Antarctica). The results of the EVI are used to focus on planned solutions to negative pressures on the environment, whilst promoting sustainability. To calculate an Environmental Vulnerability Index it requires the compilation of relevant environmental vulnerability data for the 50 indicators.

Table:4 Variables for Measuring the EVI

INDICATORS		
1. High Winds	2. Borders	3. Pesticides
4. Dry Periods	5. Ecosystem Imbalance	6. Productivity Over-fishing
7. Wet Periods	8. Migrations	9. Fishing Effort
10. Hot Periods	11. Endemics	12. Renewable Water
13. Cold Periods	14. Introductions	15. SO ₂ Emissions
16. Sea Temperatures	17. Endangered	18. Waste Treatment
19. Volcanoes	20. Extinctions	21. Industry
22. Earthquakes	23. Vegetation Cover	24. Spills
25. Tsunamis	26. Loss Of Cover	27. Mining
28. Slides	29. Habitat fragmentation	30. Sanitation
31. Land Area	32. Degradation	33. Vehicles
34. Country Dispersion	35. Terrestrial Reserves	36. Population
37. Isolation	38. Marine Reserves	39. Population Growth
40. Relief	41. Intensive Farming	42. Tourists
43. Lowlands	44. Environmental Openness	45. Conflicts
46. Coastal Settlements	47. Biotechnology	48. Fertilizers
49. Environmental Agreements		

Source: Report of Environmental Vulnerability Index, 2013

D. Discussion:

a. Rank of Top Ten Countries in Respect of GPI, GTI, EPI and EVI Value:

Following tables shows the name of top ten rank countries in the world in respect of some selected index. Among all these indicators, Global Terrorism Index is a negative index in which lower value of rank implies poor performance of those countries. But incase of GPI, EPI and EVI rank of higher value implies low performance.

Table: 5 Global Peace Index

Countries	Scores	Rank(2017)
Iceland	2541	1
New Zealand	1.241	2
Portugal	1.258	3
Austria	1.265	4
Denmark	1.337	5
Czech Republic	1.363	6
Slovenia	1.364	7
Canada	1.371	8
Switzerland	1.373	9
Ireland	1.408	10

Source: Report of Global peace Index,2017

Table-7: Environmental Vulnerability Index (EVI) Rank

Country	Rank	Index
French Guiana	1	174
Western Sahara	2	175
Botswana	3	181
Central African Republic	4	193
Namibia	5	200
Zimbabwe	6	200
Guyana	7	207
Mongolia	8	208
Niger	9	208
Djibouti	10	210

Source: Environmental Vulnerability Index (EVI)- 2013

Table-6: GTI Rank

Countries	Score	Rank
Iraq	10	1
Afghanistan	9.	2
Nigeria	9.009	3
Syria	8.621	4
Pakistan	8.4	5
Yemen	7.877	6
Somalia	7.654	7
India	7.534	8
Turkey	7	9
Libya	7.256	10

Source: Global Terrorism Index

Table-8 : Environmental Performance Index (EPI)

Country	EPI score	Environmental Health (40% weight)	Ecosystem Vitality (60% weight)	Rank
Switzerland	87.42	93.57	83.32	1
France	83.95	95.71	76.11	2
Denmark	81.60	98.20	70.53	3
Malta	80.90	93.80	72.30	4
Sweden	80.51	94.41	71.24	5
United Kingdom	79.89	96.03	69.13	6
Luxembourg	79.12	95.07	68.48	7
Austria	78.97	86.38	74.03	8
Ireland	78.77	95.92	67.34	9
Finland	78.64	99.35	64.83	10

Source: Environmental Performance Index (EPI)-2018

b. Comparative Analysis and find out a relationship with Global Peace:

From the above tables if I only extract the rank and keep side by side we have seen that though Iceland ranked 120 in respect of Environmental Vulnerability Index yet secure 1st position in GPI and EPI . If we give our attention on Portugal we see that though this country ranked 26 and 163 in respect of EPI and EVI respectively yet it is peaceful in comparing with other countries which ranked well in EVI or EPI such as Switzerland, Ireland, U.S.A, etc.

Table-9: ‘EPI’ Rank, GPI Rank & ‘EVI’ Rank

Countries	GPI Rank(2017) [Out of 163]	EPI Rank(2018) [Out of 180]	EVI (2013) [Out of 234]	GTI (2017) [Out of 163]
Iceland	1	1	112	120
New Zealand	2	17	101	103
Portugal	3	26	163	134
Austria	4	8	203	89
Denmark	5	3	176	90
Czech Republic	6	33	138	83
Slovenia	7	34	196	134
Canada	8	25	43	66
Switzerland	9	1	180	112
Ireland	10	9	144	64
U.S.A	114	27	115	32
India	137	177	216	8

Source: Environmental Performance Index (EPI)-2018& Global Peace Index,2017

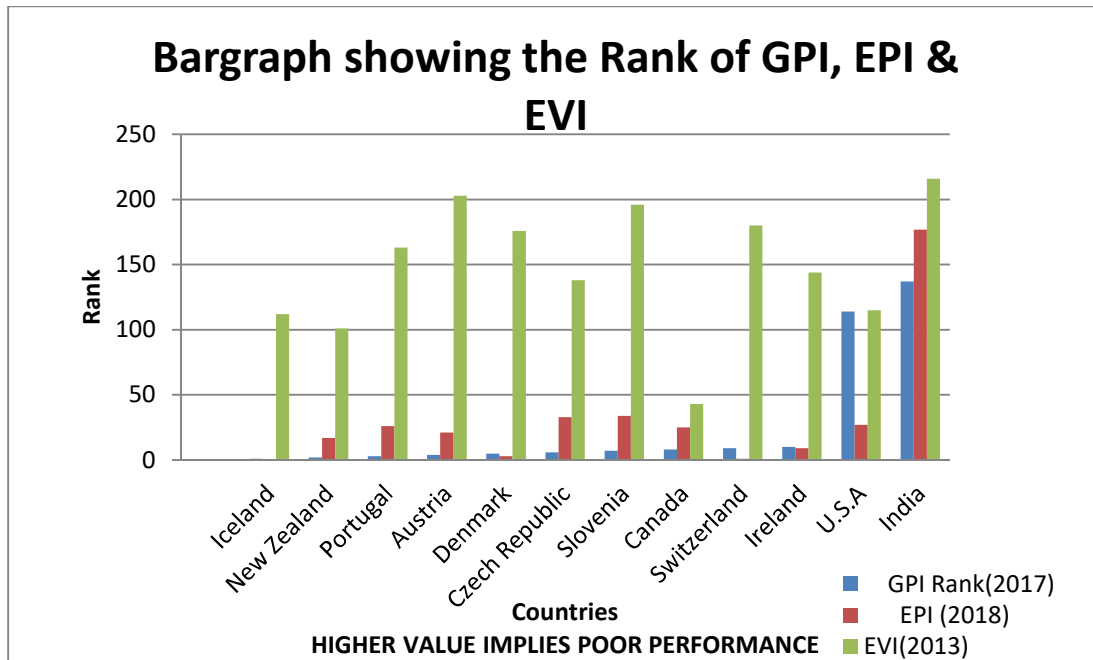


Fig.1

From this discussion it is clear that there is no vast relationship between the environmental conditions of a nation with their peacefulness. Peace of a country dependent not only on the environment but dependent on various other factors which can be say as a pillar of peace such as Low Level Corruption, high level human capital, good relation with neighbor nation, well functioning government, equitable resource distribution etc. There are many countries whose all factors including environmental condition are well condition but there is no peace due to terrorism activities.

Table-9: GPI Rank & ‘GTI’ Rank

Countries	GPI Rank (2017) [Out of 163]	GTI Rank (2017) [Out of 163]	EPI Rank(2018) [Out of 180]
Iceland	1	120	1
New Zealand	2	103	17
Portugal	3	134	26
Austria	4	89	8
Denmark	5	90	3
Czech Republic	6	83	33
Slovenia	7	134	34
Canada	8	66	25
Switzerland	9	112	1
Ireland	10	64	9
U.S.A	114	32	27
India	137	8	177

Source: Environmental Performance Index (EPI)-2018& Global Peace Index, 2017

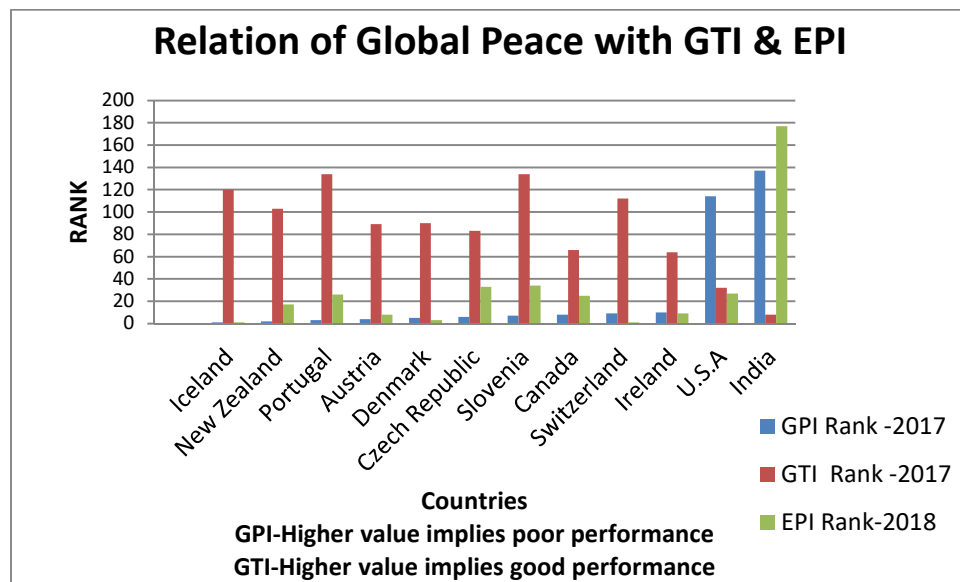


Fig. 2

From the **Table- 9** and **Fig. 2** it is clear that where the terrorism activities are more there the peace is only dream. From the above table (Table No.6) it is noticeable that those countries remained top of the Global Terrorism Index not ranked in Global Peace Index. Even Performance of America Environmentally sounded yet due to the terrorism activities where about 61 terrorist activities (68 death) happened on 2016 remained in 114 ranks in GPI. So there is a direct relationship between

GPI and GTI but there is no such type direct relationship between environmental factors and global Peace.

E. Findings:

From the above discussion some findings which I have outlined are as follows-

- i. There is no direct relationship between environment and global peace.
- ii. Not natural Environment but it can be said that unequal distribution environmental resources are responsible for global conflicts.
- iii. Natural beauty and pollution free environment cannot able to maintain the global peace if there exist the terrorism activities.
- iv. As there is no direct relationship between peace and environment so, environmental education will not solve the conflicts merely.

F. Some Environmental issues behind the global Conflicts:

Though Environmental education cannot able to maintain the internal and external peace only but there are various environmental issues in the world which are responsible for conflicts.

Unequal distribution of natural Resources and its impact on Global Peace

In the world, man-resource ratio is not equal. According to Neo-Malthusian theory Population growth is very quick but the resource is limited in the world. So there is a vast competition among the people which leads to the violent conflict among them.

i. Conflicts Over Mineral Resources:-

The United Nations Environment Programme (UNEP) has found that over the last 60 years, at least 40 percent of all internal conflicts have been linked to the exploitation of natural resources, whether high-value resources such as timber, diamonds, gold and oil, or scarce resources such as fertile land and water.

Example: Bitter disagreements over the distribution of Iraq's oil wealth among Sunni, Shia and Kurdish regions, for example, have contributed to the fragmentation of that country.

ii. Conflicts Over Water:-

Water is essential for our existence but this resource is limited which give rise many interstate and international conflicts. It is also said that if 3rd world war happen the main reason behind that war will be the water.

Example: International conflicts

Conflict over water from the Indus between India and Pakistan

Conflict over water from the Shatt-al-Arab between Iran and Iraq

National conflicts

Sharing of Cauvery water between Karnataka and Tamilnadu

Sharing of Krishna water between Karnataka and Andhra Pradesh

iii. Conflicts over Pollution :

To meet the demand of growing population excessive environmental degradation occurred. Sometimes conflict arises among the nation about the responsibility of environmental degradation. So a cold war already started among the developed and developing countries which also disturbed the global peace.

Example: (North-South Conflict)s:

Various challenges facing by the developing countries of the south is poverty, unemployment and deprivation. As a world citizen they have equal right to enjoy the all opportunities and facilities. In this situation the northern countries as well as developed nation expect same environmental standards from the developing countries. To accommodate the huge population the southern developing countries battling with different difficulties, so the cleanliness and environmental standards is a big fantasy to them. In different earth summits representatives of developing countries and developed countries involved with great debates about the responsibility of global pollution. So inspite of solution they make conflict among them.

iv. Conflicts over Development:

Some times in the name of development our planner and decision makers takes various developmental plans for immediate profits though the long term effects is dangerous. Sometimes voice of indigenous people give suppressed and great conflict arises which take a form of violent movement.

Example: Voice against Dams

In Nigeria in April 1980, police fired at people blocking roads in protest against the Bakolori dam. In 1985, 376 Maya Achi Indians, most of them women and children, were murdered in the course of clearing the area to be submerged by the Chixoy dam in Guatemala. In 1978 police killed four people when they fired at an anti- resettlement rally at Chandil dam in the state of Bihar in India.

G. Some Necessary Environmental Steps for Maintaining Global peace:

As we know there are many steps which should be taken for the maintaining global peace but here we shall discuss about the steps which are related with environment because only environmental education can not solve the all environmental issues which are responsible for breaking of global peace, these are as follows—

- I. Natural resource management:** Conflicts over natural resources are not a new phenomenon. To reduce this Community-based natural resource management is necessary which will reduce inequality within and among countries.

- II. **Regulations and Reforms:** There are various laws and regulation which are monitoring the use of natural resources in the world. Many times the rules are being violated by various countries for their own purpose. Lots of global agencies which gives their financial support for developmental works in developing countries they should monitoring the works before investment. To avoid land acquisition problems proper guidelines should be outlined by the planners or government that will ensure sustainable consumption and production patterns among all strata of society.
- III. **Ensure inclusive and quality education:** Ensure the quality education for all and promote lifelong learning which will build up consciousness among the peoples. Sustainability is not a concept but a habit, contemporary development of education system should be aimed in a way which satisfies the needs of future generation. Main elements of sustainability are Economy, Society and Environment. The education system should be structured according to the positive improvement of these three elements. Curriculum should be reformed through a massive community consultation.
- IV. **Arresting the facts behind the Environmental Depletion and Degradation:** Those activities will go against the environment that should be marked and make a clear list which are responsible for global pollution and environmental degradation. All countries in the world should be worked together in this connection.
- V. **Built up Consciousness among the peoples:** To make the environmental consciousness citizen in the world all the sectors such as educational institutions, families, NGO'S, religious organizations, media, etc. should work together for conscious building among the peoples about the environment. When one feels responsible, or feels a moral obligation for protecting the environment, he or she will think carefully about how his or her actions affect the environment. The main purposes of education are to create socially conscious citizens who possess a sense of responsibility to the Earth and their fellow citizens.

Conclusion:

From the above discussion it is being clear that there are so many reasons behind the destruction of global peace. Among these some environmental issues also plays vital role for maintaining global peace. But environmental education will not solve the problems because it is found that there are many countries in the world which are environmentally sounded but they remain in lower ranking position in respect of peace .Because global peace merely not dependent on environment but also other factors controlled the peace condition. It is also true that through the environmental education we can build environmentally and ecologically sound person which will make the global citizen in the aim of making sustainable society. So It can be said that role of environment on global peace is less important, rather environmental education can play important role for maintaining global peace through the making of global citizenship mentality.

The most useful and durable definition of peace does not prescribe **an absence of conflict**; if that were taken literally, peace would be the stuff of nightmares and totalitarian fantasy. Peace is, rather, the situation in which citizens can pursue their conflicts without damage to each other or their neighbours. Peace is therefore characterised by an ability to *handle* conflict, not to *suppress* it. (Natural resources in a conflict context, Peace is within our Power, <http://www.international-alert.org/blog/natural-resources-conflict-context>)

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