CHAPTER: 2
THEORETICAL FRAMEWORK & REVIEW OF LITERATURE
2.1: Theoretical Framework

2.1. a: Indian Environmentalism

Indian Environmentalism, broadly speaking Indian environmental movement can be divided into three categories. It has material, political and ideological contexts. The material context has been provided by the ongoing struggle over natural resources which have got in opposition the social groups who have largely profited from the indiscriminate use of land, water and other earth resources, and group of people, like fishermen, landless poor, pastoral nomads, small peasants whose livelihood depend on the logical use of these resources. Indian experiences show that the problem lies at the root of developmental process initiated in India. While natural resources like water and forests were being used to produce energy and commodities (Gadgil and Guha, 1995) for the well to do, the poorer section were left to bear the economic, social and environmental cost of economic development whether in the form of the declining availability of resources of physical displacement, (Gadgil and Guha, 1995).

The political contexts of Indian environmental movement have tried to act against these material problems. Their modus operandi has comprised three distinct yet interconnected set of initiatives.

Firstly, they tried to stop ecologically destructive practices by organizing socially and materially depraved groups. Secondly, they tried to develop public consciousness through media and especially by organizing walking groups and eco- development camps and thirdly they have tried to go for ecological rehabilitation by planting trees, rain water
conservation and soil conservation to restore degraded village ecosystems and thereby
enhancing availability of life indicators of the depraved villagers.

Ideologically speaking, Indian environmental movement is a multicoloured umbrella. There are three distinct different ideological shades governing environmental movement in India since independence.

First among them are the Gandhians who have made it a point to view ecological degradation and social conflicts as, above all a moral problem (Gadgil and Guha, 1995). These crusading Gandhians believe that uniqueness of Indian value system lies in its ability to wear a badge of indifference in the face of economic and material opportunities. Therefore they talk about returning to a pre material and pre colonial village life style where humans would be again in the lap of nature, where money would be the least important denomination of human exchange and nature would be given back its predominant position. They talk about Gandhi’s “Ramrajya” (Gadgil and Guha, 1995) and taking it literally instead of metaphorically, try to inspire people by rejecting material world view as it encourages wasteful life styles. In this regard, crusading Gandhians frequently cite Hindu scriptures as exemplifying a traditional reverence for nature and life forms.

The crusading Gandhians propagate a traditional and non-modern ways of life and are scathing in their attack on Indian intelligentsia who they found to be in the grip of rational thought and economic growth syndrome. They believe environmental degradation is a direct outcome of the fact that we are going away from nature and only a complete rejection of consumerist life style can save us from wasteful explanation of natural resources.

On the other end of ideological spectrum stand the ecological Marxists. They believe it is the unjust economic process and denials of equal access to resources that are largely at the root of exploitation of natural resources. The rich exploit the common property resources for their profit while poor do so to survive. For them the problem is more at
politic and economic levels rather than question of values and therefore the creation of economically just society is a logical precondition of special and ecological harmony. When they put their ideological orientation to practice, they organise poor for collective action in an effort to restore the pattern of equal distribution of wealth, including ecological one, while including various Naxalite and radical Christian groupings, Ecological Marxists in the Indian context are perhaps most closely identified with People's Science Movements (PSMs)- the best known of which is the KSSP- whose initial concern with taking science to the people has been widened to include environmental protection, Ram Chandra Guha(1995) feels that Ecological Marxists can be distinguished from Gandhians in two significant respects, their unremitting hostility to tradition (and corresponding faith in modernity and modern science) and in their relatively greater emphasis on confrontational movements.

Between these two extreme shreds of polarity, one can find the Appropriate Technology Group (Gadgil and Guha, 1995). This is the set of environmentalists who are though ideologically closer to crusading Gandhians, are in favour of using appropriate technology to sustain both development and environment. ‘Less strident than the crusading Gandhians in its opposition to industrial society, this strand of environmental movement strives for a working synthesis of agriculture and industry, big and small units, and western and eastern technological traditions. In its political emphasis on constructive work, it is closer to Gandhians tradition and has done pioneering work on generation & diffusion of resource conserving, labour intensive and socially liberating technologies while in its ambivalent attitude towards religion and criticism of traditional social hierarchies it is quite close to western socialism’.

These three set of ideologies of environmentalism have at one point or the other been used in certain movements and they are not used as stationary and inherently contradictory concepts by the ideologues. But the followers of these three distinctly different perspectives have used different patterns of putting their ideas into practice. While
Appropriate Technologists have prepared to work on a microscale—a group of contiguous villages at best—to demonstrate the viability of an alternative model of economic development, on the other hands Gandhians have a tendency to think globally and act globally. The Marxists groups have tended to keep the activities limited to a intermediate range, may be a district or sometimes a state.

Their ideological differences have influenced their areas of activism too. While Gandhians’ dislike of industry and urban centres have forced them to opt for rural society, Appropriate Technologists, while accepting that some degree of industrialization was inevitable, in reality tried to find some technologies appropriate for the village folk. It is only the Ecological Marxists who have tried to focus on the industries and talked about industrial pollution and safety of the worker.

While these three ideologies have more or less dominated the scene, there are two more important functional ideologies operating in tandem so far as eco-activism in India is concerned. Foremost among them is that the stand called Wilderness Protection (Gadgil and Guha, 1995) which steadfastly has been talking about the erosion of not only wild lands, but also wild animals, especially Big Cats. Earlier they were thoroughly pre-occupied with Big Cats, but now over the years they have started talking about ‘species equality’ in pursuit of more extensive systems of parks and sanctuaries and a total ban on human activity in protected area.

The next and final strand in environment movement is Scientific Conservation, a la, land and water degradation.

Though neither wilderness protection nor scientific conservation have been popular movements, both have been influential in persuading the Government to go for Wildlife Protection Act 1972 (modified in 1991), the Forest Conservation Act of 1980 and Environment Protection Act 1986. Since they have less to do with radical approaches in relation with basic subsistence methods, they have been labeled as elitists but their contribution to protection of environment in India cannot be overlooked.

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2.1.b: Theoretical Background of Western Environmental Movements

Across the continents, environment movement has been launched for a host of reasons, from sustenance of environment to according natural resource equal status to that of human beings. The whole range of movements gathered a theoretical mass around it in the passage of time. Looked at, they refer to five significant traits, each having well defined postulate for running the movement. These five distinctly laid out traits are Deep Ecology, Social Ecology, Eco –Socialism, Post Modernist Ecological thought & Eco Feminism.

Deep Ecology:- The idea of Deep Ecology has Arne Ness as its most significant propagator. Deep Ecologists are quite sure about their ideas and they are ruthless in their approach to save environment even at the cost of human beings.

The idea of Deep ecologists about ecosystem and the position of natural resources in the ecosystem are based on four tenets. They claim that human and non-human both are having an intrinsic value. The idea of nature as a ‘resource’ (Hay, P and Haward, M, 1988) is ‘an essential and hitherto unquestioned axiom of western history and the economic and technological system woven into that history’(ibid). As a result, this idea of intrinsic quality has challenged the existing notion of humans only having the rational value.

“The impulse to defend the existential rights of wilderness in precedence over human use rights has led to a spirited challenge to the most fundamental tenet of western civilization, the belief that rights are strictly human categories, and that countervailing principle exists to bar humanity from behaving in any way it deems fit towards the non-human world’(ibid).

They also argue that all being have same value: that there is no “higher” and “lower” life forms in nature’(Matthews1988:10).
Their third line of argument is question of ‘interconnectedness’ (Eckersley, 1992). ‘According to this picture of reality, the world is an intrinsically dynamic, interconnected web of relations in which there are no absolute discrete entities and no absolute dividing lines between the living and the non-living, the animate and inanimate or the human and the nonhuman’ (ibid).

Lastly they also put across the fact that the place in earth is finite and it has already got too many people for the earth to accommodate. ‘The flourishing of human life and culture is compatible with a substantial decrease of the human population. the flourishing of non-human life requires such a decrease’ (Sessions and Naess, 1983).

Following these arguments, Deep ecologists reach quite close to Malthusian idea of coercive population Control, if required. To Deep ecologists then, human beings are not the unambiguous end or sole purpose of evolutionary progress but just another species existing on planet earth.

Social Ecology:- Social Ecologists believe that nature has to be freed from social structuration. Social ecologists bear close resemblance to anarchist tradition as they strongly oppose all political values associated with state, liberals and Marxists. Social ecologists stress the importance of human social organization, advocate maximum individual autonomy and envisage society as a series of decentralized local communities, each strongly connected to a specific “bio – region.”

Doyle and McEachern (1998), argue that the ‘fashionable catchwords of ecology normally reserved for describing healthy situation like non–human, interconnectedness, diversity, symbiosis, stability, flexibility and organism are seen as equally applicable to the anarchist vision of human societies’.

Social Ecologists, led by Murray Bookchin, are opposed to all sorts of domination; social, political & cultural and believe that both the end and the means are equally important. For them, any movement should begin at the grass roots and should
be non institutional in nature bearing once again a close resemblance to anarchist tradition. Murray Bookchin himself mentions, “If the foregoing attempts to mesh ecological and anarchist principles are even achieved in practice, social life, would yield a sensitive development of human and national diversity, falling together into a half balanced, harmonious unity..... freed from an oppressive routine, from paralyzing repressions and insecurities, from the burdens of toil and false needs, from the trammels of authority and irrational compulsion, the individual would finally be in a position, for the first time in history, to fully realize his potentialities as a member of the human community and the natural world” (1980: 187-94).

There are two additional but significant elements to Bookchin’s thesis; he contends that domination and hierarchies are the two things that have separated mankind from nature. He believes that hierarchy is responsible for ‘domination within human societies and between humans and non-humans nature, (Doyle and McEachern, 1998). He believes that hierarchy is a social construct and has been infused in our conception of nature. ‘The domination of nature first arose within society as part of its institutionalization into gerontocracies that placed the young in varying degrees of servitude to the old and patriarchies that placed women in varying degrees of servitude to men-not in any endeavour to control nature or natural forces.’ (ibid,: 32) His position is that the separation between nature and human society will abolish once these hierarchies and domination are removed from human society.

Bookchin differentiates from the Eco-Centrists also in the sense that his theory is essentially anthropocentric and places humans at upper strata of evolutionary model as he believes that humans are ‘nature rendered self-conscious’ (ibid).

**Eco-Socialism:** Eco Socialism, in a nutshell revolves around Marx’s economic theory. It argues that environmental degradation or, rather the exploitation of natural resources has to be sourced to designs in the society to own means of production, for natural resources are after all resources and exploitation cannot be stopped until and unless the control over the means of production changed.
‘Eco – socialism is anthropocentric (though not in the capitalist technocratic sense) and humanist. It rejects the bioethics and nature mystification, any anti-humanism that these may spawn. Thus alienation from nature is separation from part of ourselves. It can be overcome by reappropriating collective control over our relationship with nature, via common ownership by the means of production. For production is at the centre of our relationship with nature, even if it is not the whole of that relationship. Eco socialism defines ‘the environment and environmental issues widely, to include the concerns of most people. They are urban based, so their environmental problems include street violence, vehicle pollution and accidents, inner city decay, lack of social services, loss of community and access to countryside, health and safety at work and, most important, unemployment and poverty (Pepper, 1993: 232-4).’

The difference being between the social ecology and eco – socialists, more popularly known as the Green – Greens and the Red – Greens is their approach to the solution of the problems. While Red – Greens believe that it is the control over the means of production which has to be changed, the Green – Greens believe that hierarchies and domination have to be abolished since they exist even in classless societies. But both are opposed to Deep ecologists in the sense that they carry a predominantly anthropocentric view and believe as argued by Doyle and McEachern (1998), should move from social justice to ecology, and not vice versa, and secondly they oppose the Deep ecology notion of repressive cutting down in numbers of human kind to save the environment.

*Ecological Post – Modernism:* There has been a steady flow of thought within the environment critique which has completely rejected the grand eulogies about modernism. This set of people believe that the so called Enlightenment Project has
failed, and its tendencies to rationalize things has unduly placed humans at the highest ring of social order and consequently nature has been made to serve human kind in its progress towards enlightenment. Technology and the whole project of modernity have given birth to as many problems as it has solved and these critics argue that efforts of modernity now have turned a full circle and has begun to deliver increasingly negative consequence. So these critics advocate a decentralized system, instead of centralised and homogenised sameness and come quite closer to Post-Structuralists and post modernist views of the academic. Post–modernists, Doyle and McEachern,(ibid) argue, stresses on the importance of ‘locality and difference’. ‘Post– modernists and Post - sructuralists would, on the whole, be skeptical of claims about ‘essential nature’. Nature itself would be seen as a social construct and the relations between humans and nature would be capable of almost infinite variety.

Though they have been severely criticised as being close to Deep Ecologists and arguing against the progress of civilization, there is a significant difference between Deep ecologists and Eco-Post modernists in their conceptions of nature. While Deep ecologists impose an intrinsic value on nature putting it on a transcendental plane, Eco-Post modernists view nature merely as a social construct treating other values, intrinsic or otherwise merely as human pretension’.

**Eco – Feminism:-** Another important trend in environmental movement has been Eco – Feminism, or to equate nations exploitation with that of woman across generations, in every society. Feminism movement, like environmental movement, has got significant and different perspectives within the movement. Caroline Merchant(1992) has brought into focus the similarities as she argues, ‘Liberal, cultural, social and socialist feminism have all been concerned with improving the human/nature relationship and each has contributed to an Eco Feminist perspective in different ways. Liberal feminism is
consistent with the objectives of reform environmentalism to alter human relations with nature from within existing structure of governance through the passage of new laws and regulation. Cultural Eco Feminism analyzes environmental problems from within its critique of patriarchy and offers alternatives that could liberate both woman and nature’.

Eco Feminism, especially, the social Eco-Feminists are quite close to Book Chin’s observation on hierarchy, and are quite lethal in their attack on patriarchy. ‘Social Eco Feminism advocates the liberation of woman through overturning economic and social hierarchies that turn all aspects of life into a market society that today even invades the womb. So this brand of feminism, unlike Eco-Socialism which stresses on production decries reproduction ‘which is central to the concept of a just, sustainable world’. (ibid,:195)

But within the Eco-Feminist movement as a whole, there has been a continuous debate between essentialist and constructionist perspective. Essentialists believe that women are close to nature, and this innate quality has to be taken into account, nurtured and celebrated, while the constructionists believe that this is another ploy of patriarchy to subjugate women, to dominate, since subjugation is a social construct and social factors are more important in shaping up gender based inequalities.

Vandana Shiva(1994) attacks the essentialists as she finds an explanation of the success of globalization of western models of development and advanced capitalism in colonialism and patriarchy. For her, development was thus reduced to a continuation of the process of colonization; it became an extension of the project of wealth creation in modern western patriarchy’s economic vision, which was based on the exploitation or exclusion of women (of the west and the non-west), on the exploitation and deregulation of nature, and on the exploitation and erosion of other cultures.
Her position on this particular type of oppression also qualifies as an explanation for the participation of women and other subjugated cultures in different parts of the world against so called modernizations and development in different parts of the Third World countries. She feels that they are struggling for liberation from development just as they earlier struggled for liberation from colonialism’ (Ibid, 273 ; Mies and Shiva. 1993)

2.1. c: Poverty- Environment –Development :

The relationship between poverty and environment has been in focus for quite some time now. Poverty has been accused as a hindrance to development and the debate in fact is multi dimensional. Environment is a common property resource which is accessible to all. When there are no individual rights over common resources, there might be a case of over exploitation of resources which in turn would make it difficult to regenerate the resources. When a farmer is allowed to graze the soil for its animals or to get underground water without any concern for others, it might lead to erosion of the value of the property because of infertility or soil erosion. This leads to degeneration of future value of the resources and it is called intertemporal externality. And this has prompted the proponents of industrialization to impose individual rights on common property resources to reduce poverty through arguably more skillful use of environment. The argument is that only individual rights over common property resources can save environment.

There are some obvious problem with poverty when it comes to protecting the environment. There is three times more dependence on forested lands in low income countries than in high income countries. The forest land is growing at 0.5 percent in rich countries in a year while growth rate is 0.1 percent in poor countries (Poverty and Environment), International Bank for Reconstruction and Development/ The World Bank.
2008. It has been found that access to improved water and sanitation results in 18 times less child mortality rates in high income countries than in low income countries. In addition to these there are enough data provided by World Bank(2006b) to establish rank correlation between poverty and environment. (see figure. 2.1.)

So there has been a sustained debate to introduce development as a panacea to cure all problems as it would lift people out of a state of dependence on common property

Source: Figure 2.1: International Bank for Reconstruction and Development/ The World Bank. (2008)' Poverty and Environment, Understanding Linkages at the Household Level. Washington DC.
resources. One of the compelling arguments of dominant discourse on development is to introduce individual rights over common property resources to use natural resources as a capital for industrialization and also to retain its future value.

A study by Barrett (1998) reveals the link between household income and assets. (figure 2.2.) A household usually has assets like human, biophysical, constructed and environmental capital. In case of an exogenous shock like natural calamity, the households can return to these assets and hope to survive further.

The problem with the argument of development at the cost of rights of common people over natural resources is that by World Bank’s statistics, nearly half of world’s population lived on less than $2 a day and 31% people in South Asia alone lived below $1 a day poverty line in 2002. It has been found common property resources, i.e. environment acts as an insurer against natural calamities or famine when these people living below poverty line slid further into poverty (International Bank for Reconstruction and Development/ The World Bank, 2008) (see figure 2.3)

**Commons as a Source of Insurance**

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<tr>
<th>Study</th>
<th>Resource-Rich Areas</th>
<th>Resource-Poor/ Low-Access Areas</th>
<th>Average</th>
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<tr>
<td>Jodha (1986)</td>
<td>44</td>
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<td>Cavendish (2000)</td>
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<td>Vedeld and others (2004)</td>
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<td>Chettri-Khattti (forthcoming)</td>
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*Note: in most (but not all) cases, “poor” refers to the poorest 20 percent and “rich” to the richest 20 percent of households. Definitional differences make comparisons across studies very difficult.*

* a. Data reported are from multiple earlier studies.

* b. Nontimber forest product (NTFP) income only.

Figure: 2.3

There are additional dimensions to the debate. The idea that common property resources must be privatized to use it for development to improve the lot of commons and also to save it from erosion and for maintaining its future value is infructuous for several reasons. It is a fact that environmental Kuznets curve (figure 2.4) has been able to show that if there is a growth in income, the dependence on environment is reduced and its conditions will improve.

Source: Figure 2.3: International Bank for Reconstruction and Development/ The World Bank, (2008) Poverty and Environment, Understanding Linkages at the Household Level, Washington DC.
But the Kuznets's curve was evolved on the basis of a few air and water pollutants and is not applicable to all societies and more importantly there may be huge depletion of natural resources on account of rapid industrialization which would be difficult.

In addition to that, several studies have found that one billion people of higher strata and one billion people living in the lowest rung of income ladder in the world are the worst offenders in terms of destroying the environment. The Barrett model also apprehends that the households who are unable to withstand exogenous shocks, the best possible option for them to maintain minimal economic activity based on common property resources. Such households may not be able to take advantage of eco-tourism or industrialization because they are simply not prepared for it.

The proposition that poor are a threat to environmental resources and private rights over common property resources is the only way to improve environment fails to take into account some ethical consideration and social phenomena also. There have been examples that almost every traditional society has certain social norms which is closely related to their Eco-ethics. Certain societies like Nagas in the Northeastern part of India forbids cutting off trees in close proximity to villages as this would bring diseases. Across the globe there are examples in traditional societies that the ‘relation between ecology and morality has a deep structure in their life world as this relation is not merely a conjunction of two alien concepts, instead it is based on a philosophy of life that straightway precludes
any form of anonymity towards nature, community and the world conceived’ (Goutam Biswas, 2007). The indiscriminate imposition of conservation laws on forest land has actually turned the issue of conservation a statist and bureaucratic affair without taking into consideration the larger social dynamics of taking the world view of traditional societies in relation with nature. "The Indian state, in common with many other countries goes about the business of conservation in highly wasteful and inefficient manner. On top of this conservation is practiced in a simply wrong headed fashion. The science of ecology has no broad generalizations that can be applied to make detailed management decisions at the field level. Rather such management is best based on long range, locally specific observation on behaviour of particular eco-system, adjusting human interventions in light of the observed effects. The state apparatus has little such information available, and most conservation prescriptions therefore tend to be arbitrary, and often result in wholly undesired consequences” (Madhav Gadgil, 1988).

The idea of development and later on sustainable development as prescribed by Brundtland Commission can thus be accepted as an apology on behalf of indiscriminate industrialization by the Western countries. The dominant discourse of development as a route to abolish poverty and thereby decreasing pressure on environment sounds hollow because several studies have revealed that both poor and rich are equally responsible for decimation of natural resources; and developmental programmes so far have done more harm to environment than the poverty related subsistence living based on common property resources. In some parts of Kenya, more trees and better soil management has been found compared to 1920s (Rupkatha Mukherjee,2007) implying that poor people use renewable energies in a more efficient way and farmers in Philippines are known to have come together to save rain forest.

2.1.d: The Recent Trends of Environmental Movements:

In 1949, Aldo Leopold (1887-1948) published *A Sand County Almanac* – often regarded as the most influential book on conservation ever written. He believed humans should
extend to nature the same ethical sense of responsibility that we extend to each other. Whether we can or should expand the ethical circle to encompass nature is a subject of continuing debate. But it wasn’t until the 1960s that concern for the environment was galvanized into an organized force. Many would agree that the milestone marking the birth of the environmental movement was Rachel Carson’s 1962 book *Silent Spring*.

Carson, a nature lover and former marine biologist, told of how chemicals like pesticides and insecticides, used on farms, forests and gardens were contaminating the environment. Wildlife was being poisoned, she said. The insect life was dying (and not just the pest species) which meant no food for the birds. No birds, no bird song = a silent spring. People were in grave danger too. She described in detail how the chemicals, like the insecticide DDT, enter the food chain and accumulate in the fatty tissues of animals, humans included, resulting in higher risks cancer.

Despite media criticism and attempts by the chemical industry to ban the book, many reputable scientists backed her up and her work was validated. President John F Kennedy ordered an investigation into the issues highlighted in the book. Carson was found to be correct – DDT was banned, and the effects of other chemicals were scrutinized.

But the real legacy of *Silent Spring* was a new public awareness that humans were damaging the environment. Previously, degradation of the planet had been the concern of just a few people – those that were bothered by the loss of wilderness. But the news had now spread that our own lives were at risk and the issues could no longer be ignored. The necessity to regulate our behavior in order to protect the environment became a widely debated notion. Modern environmentalism was born.

Environmental pressure groups, Friends of the Earth and Greenpeace were both established in 1971. They introduced flagship campaigns for threatened species like Pandas and Tigers and they informed the world of the trade in Elephant ivory, Rhino horn and Seal fur.
The year 1972 saw the first of the 10-yearly Earth Summits. Held in Stockholm, Sweden, generally considered to be the primary defining event of international environmentalism. The Earth Summit (officially called the United Nations Conference on the Human Environment) was initiated by the developed world to address the environmental effects of industrialization (113 nations attended). Sweden was concerned about acid rain. Japan was concerned about the industrial poisoning of their seas. Oil tankers spilling their cargoes were a concern worldwide.

The conference produced some successes, including the 26 principles of the Declaration of the United Nations Conference on the Human Environment, an Action Plan for the Human Environment and an Environment Fund. Another significant outcome was the establishment of UNEP (United Nations Environment Programme), designed to promote environmental practices across the globe. UNEP has coordinated the subsequent Earth Summits.

But the summit exposed a rift between the developed (First World) and the developing (Third World). The issue that caused this was that supposedly the developed world’s exploitation of natural resources in a way that not only degraded the environment, but also perpetuated the unequal distribution of wealth. This social (economic) divide remains in place today and has arguably widened.

During the 1970s, philosophers joined the debate and a new branch of ethics was born – environmental philosophy. Uptill now, barring the scribbling of a few maverick writers, it was taken as read that we were concerned about caring for the Earth for self-interested purposes. What’s bad for the Earth was bad for us too. But now, some philosophers were calling for other values in nature to be recognized. Yes, they said, a healthy planet is good for humans, but wildlife has its own value too – a value that exists independently of its value to humans. This ethical conundrum surfaces with almost every environmental decision we face. Do we protect nature for our sake or for its sake?
The year 1982 was Earth Summit time again. But the Cold War was at its height, the world was distracted, and the meeting, held in Nairobi, Kenya, was considered ineffective.

But the problems didn’t stop accumulating. And more voices had joined the clamour. Astronomers complained of light pollution, making it difficult to observe the night sky. Surfers protested against raw sewage being piped into the seas they played in. Marine biologist talked about the noise pollution threat from motor craft to the sonar navigation of whales and dolphins.

Many of these concerns had an effect only on a minority, and hence were easier to ignore. However, when we heard of the hole in the ozone layer, and how we were all going to die from skin cancer we promptly stopped using CFCs in our deodorants and other canister sprays.

In 1983, the UN General Assembly created the UN World Commission on Environment and Development. It appointed Dr. Gro Harlem Brundtland, the first woman prime minister of Norway, as chairperson. Four years later, she published the Brundtland Report, and coined the term ‘sustainable development’. The Report combines environmental and economic considerations, and famously defines sustainability as: ‘Development which meets the needs of the present without compromising the ability of future generations to meet their own needs’. “Sustainability” became the buzzword. But a controversial aspect of the Brundtland Report is its pro-economic growth recommendation to countries to avoid environmental disasters: “If large parts of the developing world are to avert economic, social and environmental catastrophes, it is essential that global economic growth be revitalized. In practical terms, it means more rapid economic growth in both industrial and developing countries”.(Brundtland 1987:89) The report has been found to be objectionable to many as it appears to have strengthened the arguments of economic growth model and more importantly upholds an androcentric as well as the anthropocentric bias of the developmental discourse. The solutions to the crisis are seen by them to lie within the range of measures that contributed to the environmental
crisis in the first place: more economic growth to pay for environmental recovery, more funds for environmental projects, more technology, and altogether better and more management of the environment. (Braidotti et al. 1994:4). Sachs, W (1992), points out that this is the same tactic that was used in the early 1970s, when the magic that was promised by the trickle-down economic model failed to help the weaker section of the society. A new term “equitable development” was used then to make development more humane without necessarily changing the structural anchors of the failed model. Though Brundtland talked about sustainable development, but continued economic growth, alongside higher levels of consumption, is viewed by many as unsustainable. (Melkote, Steeves. 2001) Therefore, to many critics of the dominant ecocratic discourse, the bias in the Brundtland Report is to sustain the present development process by putting limits on nature through scientific management techniques (Esteva 1992; Sachs (ibid;).

In the 90s, Earth Summit occurred in Rio, Brazil, in 1992. It emphasized how the planet’s environmental problems are linked to the economy and to social justice issues. The world leaders agreed to combat global warming, protect biodiversity and stop using dangerous poisons.

But Global Warming was the major issue at Rio. Carbon dioxide gas, released from burning fossil fuels like petrol (gasoline and diesel), coal, oil and gas, was causing the planet to heat up. The resulting melting of ice caps and rising sea levels threatened the whole world. The Kyoto Protocol, introduced at Rio, required signatories to cut carbon dioxide emissions by 5% between 2008 and 2012. Many nations signed up to it, but some developed countries were putting their short-term interests first. Countries with an economy that rests on the oil trade, like the US and Saudi Arabia, were concerned how the agreement would cost them. The US, in particular, refused to commit to anything too binding on the carbon emissions front. Moreover, developing countries like China and India were exempted from most of the Kyoto deadlines and yet they are growing at
exceptional rates, using dirty coal and cow dung as fuel, and are now the fastest growing consumers of fossil fuels as prosperity brings automobiles on the scene.

Eco-tourism was being proposed as a great new way to save the world. The potential being high – in 2006 close to 1 billion people travelled to another country (one tenth of the world’s population). But some argued that the damage done by tourism outweigh the benefits. They encourage the development of new resorts in wild places, the over development of fragile beaches in particular and increase the amount of aviation fuel burned. Yet sometimes both humans and wildlife do get a good deal.

In August 2002, 65,000 politicians, numerous NGOs (non-government organizations), and planeloads of media flew in to Johannesburg, South Africa to review the situation. Five areas were identified by the UN for particular attention – water and sanitation, energy, health, agriculture and biodiversity. Previous summits had been dominated by the European Union and the US, but now the developing countries are becoming more vocal demanding their interests be given greater consideration.

There were some achievements; a commitment to halve the number of people in the world who lack basic sanitation by 2015; to halt the loss of fish and forests stocks; and to reduce the agricultural and energy subsidies in the West.

But environmentalists, claiming corporate interests hijacked the event, have roundly condemned this Summit. They say that the US, Japan and the oil companies once again discouraged the promotion of renewable energy sources, like wind and solar power, in order to favour their own economic interests.

These days, more and more people accept the fact that many environmental problems are caused by man, and that the environment needs to be protected, by us and from us. But just as the first spokespeople found 150 years ago, we don’t all agree on what it needs protecting for. Should the environment be protected because it’s a source of energy, food and materials? Or should it be protected because it has value in its own right?

Ideally we can and must find room on the planet for both.
2.2 Operational Definition:

2.2.a: Environmental News: Environmental stories in the past have been defined as “news items relating to mankind’s unintentional disruption of the ecological system” (Atwater et al., 1985) and also as an “elusive hazards” (Wilkinson and Patterson, 1991). Webster (1979) defines the environment, as “the complex of climatic, edaphic, and biotic factors that act upon an organism or an ecological community and ultimately determine its form and survival.”

For the purposes of this study, an environmental story was defined broadly to include any news story, editorial, or column that has as its primary focus some aspect of the global, national, regional, or local environment. This could be primarily a political story about the need for government action to foster clean air or water, a science story having to do with a study revealing health threats from a particular pollutant, or virtually any story one would expect an environmental beat reporter to cover. It also included a few business stories, which primarily dealt with the economic impact of pollution, and a few legal stories, which dealt mostly with prosecutions for environmental crimes or Supreme Court rulings involving environmental legal disputes.

2.2. b: Content Analysis: A content analysis methodology was employed enabling an objective, systematic, quantitative description of the content (Berelson, 1954) and assessment of the relative extent to which specified references, judgments, attitudes, or themes permitted the items (Stone, 1964). Content analysis is a standard methodology in the social sciences for studying the content of communication. Krippendorff (2004) defines it as “Content Analysis is a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the context of their use. Techniques are expected to be reliable. More specifically, research techniques should result in findings that are replicable. That is, researchers working at different points in time and perhaps under different circumstances should get the same results when applying the same technique to the same data. Replicability is the most important form of reliability”.
This method of content analysis enables the researcher to include large amount of textual information and systematically identify its properties, yet such amounts of textual information must be categorized according to a certain theoretical framework, which will inform the data analysis providing at the end a meaningful reading of content under scrutiny.

Content analysis as a research tool determines the presence of certain words or concepts within the text or set of texts. It also identifies the intentions, or communication trends of an individual, group or institution.

Here content has been defined as issues or articles published in newspapers. To conduct the content analysis of newspaper content, the content has been coded, or broken down into manageable categories on a variety of theme and then examined using one of content analysis basic methods; relation analysis.

2.3. Review of Literature:

When, how and with what effect the media cover issues in the news, and how that coverage relates to the public agenda (measured in recent years by surveys), are topics that have intrigued researchers for much of this century, beginning roughly with the publication of *Public Opinion* by Walter Lippmann (1922). Earlier it was postulated that the mass media (in those days large circulation daily newspapers, magazines, radio, and films) had a powerful and direct effect on public opinion. In the context of *The Times*, during and after World War I, the effects of propaganda were feared. In the late 1930s and early 1940s, researchers came to a different conclusion: that people tended to be more influenced by local opinion leaders than directly by the press. This is commonly referred to as the Limited Effects Model of Mass Communication.

Researchers in the late 1960s and into the 1970s, however, came up with a new formulation for the media’s power to influence public opinion. McCombs and Shaw and others began showing how mass media (large newspapers, magazines, and television) affect public
opinion by setting the public agenda, not by telling people what to think, but by influencing what issues people tend to think about or believe are important (1972). This original agenda-setting study compared issues covered by North Carolina newspapers with survey research ranking what the public felt was important during an election cycle, and found a near perfect positive rank order correlation between the two (1997).

In this dissertation, the researcher has studied when and how environmental issues are depicted in media content, using many of the same techniques, methods, models, and theories employed by other scholars in sociology and Mass Communications. Much of this research has focused on media effects on public opinion, using the agenda-setting model.

2.3. a: Review of Literature With Reference to India:

CMSENVIS, India conducted a study of leading English dailies of the country to understand their role in shaping up the public opinion and their ability to redirect readers thinking pattern on a significant issue like environmental concern. Their main objectives were to understand the frequency of environmental reporting in leading English dailies, to understand the average monthly space and to understand the frequency of these kinds of stories on the front page. Nine leading newspapers including business newspapers were scanned on daily basis for 45 days to collect information/data on different parameters so that the analysis of all the newspapers could be done on similar lines. The issues & news items selected were politics, crime, education, climate/weather, sports, entertainment, International news, environmental news, health & hygiene and business that appear mainly in these newspapers. Information on appearance of the news items on these issues and on which page number it has got the space was collected. To assess the coverage, all news items of the newspaper were measured column by column in centimeters. The advertisements space was not considered. The total space of the newspaper was also calculated in column and centimetre (cm). They found that environmental news gets the least priority as compared to other news. The coverage is
limited to only 4.35 percent in the overall comparison. Environment success stories, best practices, initiatives of communities, local movements, campaigns etc. are rarely highlighted in these dailies. It was observed that in ‘The Times of India’ maximum environment news has appeared i.e. 7.49% in the study period. Environmental issues that were reported were wildlife, water, Yamuna, bio-diversity, water management, climate change, water conservation awareness, watershed management, rain water harvesting, air pollution, government initiatives etc.

2.3. b: Review of Literature With Reference to Abroad:

In 2006, Internews’ Earth Journalism Network commissioned the Institute of Health, Environment and Development – a Hanoi-based research organization headed by Prof. Pham Huy Dung – to carry out a baseline assessment of environmental journalism in Vietnam. The goal of the study was to assess the extent to which the Vietnamese mass media reported on key environmental issues, to look at the strengths and weaknesses of such coverage and provide recommendations on how to improve such coverage. The study was designed to help inform a capacity-building project being carried out by Internews, a non-profit media development organization, and the Vietnam Forum of Environmental Journalists (VFEJ). The entire project, including the report was funded by a grant from the John D. and Catherine T. MacArthur Foundation.

In addition to carrying out interviews with representatives of some mass media organizations, the researchers collected and analyzed samples of environment-related stories produced by 30 Vietnamese journalists, from 30 different media organizations around the country. These journalists, some of whom were selected to attend environmental journalism training courses carried out in 2007, claimed to have written a total of 197 articles on environment-related issues during September and October, 2006 (accounting for about 19% of their total news output during those two months). Of
these, the researchers were able to collect 172 articles for study, the vast majority of them print and online articles.

After combing through the output of 5 of Vietnam’s representative newspapers published in September and October of 2007, the study found there were 24 print articles on climate change during the two-month period, which means on an average each newspaper produces 2-3 articles per month on the subject.

The content of Voice of Vietnam’s daily radio broadcast on “Resources and Environment” was also studied. An examination of 26 of the programs revealed that there were a total of 79 different reports on environment, of which 3 directly related to climate change. A study of Hanoi TV’s weekly “Urban Issues” program over an 8-week period revealed that there were 11 reports on the environment included in the program, but at most one of them focused directly on climate change.

The research concludes that these Vietnamese mass media organizations report on climate change as a very broad problem, on national and global scales, without linking it to any local situations or issues; most print articles on climate change are reports on conferences and on what leaders, authorities say and do about climate change. The articles are sometimes very long but the focus seems distant to ordinary people, especially farmers (at least 70% of Vietnamese people are farmers); the stories generally react to news events and comments by leading officials, particularly at UN and other international conferences; there is virtually no enterprise reporting on the topic; the stories do not generally report on any debates, differing viewpoints, or alternative perspectives regarding climate change as would stories on other types of environmental problems.

This was a cross-sectional study which includes three components: (1) Content analysis of 653 environmental print articles published by five selected print newspapers in Vietnam, 79 environmental reports broadcast by the Voice of Vietnam a radio network on its daily “Resources and Environment” program, and 11 stories aired by a television station. Hanoi
TV on its weekly “Urban Issues” program, all during the months of September and October, 2007; (2) Policy analysis through interviews with officials in the ministries in charge and analyses of legal documents on environmental journalism; and (3) Institutional analysis through interviews with representatives of seven selected media organizations on their editorial policies on climate change, their awareness and interest in the topic, and through interviews with 30 journalists from 30 newspapers throughout the country about their newspapers’ policies, settings, regarding environmental journalism, their experience, their focus in writing about the environment, and their opinions as well as their recommendations regarding environmental journalism focusing on climate change.

The seven mass media organizations targeted for research were selected because they are prestigious with very large scopes of coverage, large audiences and good influence in terms of political implications and experience in environmental journalism. The selection was based on geographical representation as well as accessibility to the audio-visual records. For print media, five newspapers were selected with the criteria that each of them is representative of different groups. They are Labor newspaper (Lao Dong), Youth newspaper (Tuoi Tre), People newspaper (Nhan Dan), New Hanoi newspaper (Hanoi moi), and Dong Nai newspaper from the South. Lao Dong is a national daily newspaper from the North, managed by the Vietnam General Laborers Union, and is among the newspapers with the highest circulation (up to 350,000 copies) in the country. It targets all laborers. Tuoi Tre is a national daily newspaper from the South, and is among the newspapers with the highest circulation in the country (up to 400,000 copies). It targets the younger generation, and is managed by Ho Chi Minh City’s Ho Chi Minh Young Communists Union. Nhan Dan is the mouthpiece of Vietnam’s Communist Party (managed by the Politburo of the Vietnam Communist Party). Hanoi moi is a representative of local newspapers in the North and it is the mouthpiece of the capital city, run by the Hanoi Communist Committee. Dong Nai is a representative of local newspapers in the South, and is run by the Dong Nai Communist Committee. Hanoi Television is in the capital city and is managed by the Hanoi People’s Committee. The
Voice of Vietnam (VOV) is the national radio network. For audio-visual data, the research
team had to rely on the two stations to provide all available archived records of September
and October 2007. The team requested copies of the VOV’s daily program on “Resources
and the Environment”, but received only 26 of the 61 programs aired during the two-
month period. The 26 programs contained 79 separate reports (or “segments”) which
were analyzed for their climate change content. Similarly, the research team requested
copies of TV’s weekly “Urban Issues” program, which often covers environmental issues.
It received 8 of the 9 programs aired during September and October, 2007 and analyzed
the 11 environmental reports contained therein. The research team found print data much
easier to collect, examining all the environmental articles produced by the 5 newspapers
studied.

The study of environmental coverage in the Vietnamese mass media during September
and October, 2007, indicates that although climate change is sometimes mentioned as a
topic, it is rarely a focus of coverage. Only 3 VOV reports and 24 print articles reported
directly on climate change. All these reports were general and discussed the topic on a
global scale. Seventeen of the 24 print pieces were about UN and APEC conferences’
deliberations on climate change. In other words, they were largely reactive news stories
as opposed to enterprise pieces. Three stories were about climate change’s direct effects
on very broad scales with only one from one radio story about such effects in Vietnam.
Four stories included discussions about solutions to climate change. One radio segment
was about the UN IPCC report on climate change. None of the stories discussed climate
change profoundly and professionally, looked at vulnerability, or ways to prevent climate
change or adapt to it in Vietnam. None of the reports related climate change to local
issues, local situations and local responses.

Almost all the newspapers covered climate change in an indirect way. but even here
coverage was more limited than it could have been. There were many articles about
natural disasters, mostly about floods, storms and spring waters. Climate change is thought
to affect these events, but no journalists linked the disasters with climate change. Most
articles reflected how people coped with the disasters, but the solutions covered are temporary and come in the form of emergency response. Very few discussions were on sustainable solutions to floods, spring waters and storms. Articles’ contents focused on three main aims: (1) most of them reported on how people handled the onset of the floods, and coped during and after the disasters, how they used resources, supported each other, survived through floods and floods’ impacts, etc. (2) A smaller number of articles on flood topics described how much people had to suffer in floods and outcomes of floods; they reported on losses, damages, the cost of these disasters and problems caused by them; and (3) A certain number of articles were produced to inform people of incoming floods, warn people of danger, problems, risks, etc. Hanoi TV’s “Urban Issues” program did not have a broadcast on natural disasters during the two-month study period, although other news and scientific programs are likely to have covered such events.

Regarding the quality of articles on climate change, regardless whether they tackled the topic directly or indirectly, the standard was judged to be acceptable for the target audiences (mostly the general public) for 23 of the 24 print articles. 22 of the 24 articles had clear sources of information, and were written in standard structures (21 of 24 print items). The indicators of quality that need improving include: explanations of scientific knowledge were limited (only 8 of 24 print articles on climate change satisfied this indicator); and few different viewpoints were reflected (only 11 of 24 print articles showed different stances/viewpoints for the topic). More than half of the print articles on climate change used from 60 to 90% of foreign terminology for climate change jargons (13/24). A bit fewer of them used Vietnamese terminology (11 of 24 print articles). For audio broadcasts, all three climate change were of good quality. However, one limitation is that none of them reflected different viewpoints.

Lee Wilkins, University of Missouri School of Journalism, Columbia, Missouri 65205, USA, did a research on coverage of print media coverage on Green House Effects named “Between facts and values: Print media coverage of the greenhouse effect, 1987-1990”. Using as a baseline, Herbert Gans’ work on values in the news, his qualitative study of US
print media coverage of the Greenhouse effect between 1987 and 1990 asserts there are at least three additional values that help frame news of the greenhouse effect: progress, the institutionalization of knowledge, and innocence. These values replicate in some crucial ways the values of the scientific community doing research on the greenhouse effect. However, the impact of these values tends to de-emphasize a view of the future and the role of ethical value choices in covering this story, both of which are essential to public understanding of the issue.

Gail E Kennedy, Lisa A Bero, University of California, San Francisco, did research on print media coverage of passive smoking. They did content analysis of some newspapers and magazines and found that print media coverage of passive smoking research has increased over time and has been fairly prominent. Print news media articles can shape public opinion, influence policymakers, and influence the direction of scientific research, (Pg- 51–54) thus the increasing coverage of passive smoking research may have contributed to growing public interest in this issue. Even after strong scientific evidence existed supporting an association between passive smoking and disease, newspapers and magazine coverage continued to construct the conduct of research on passive smoking as controversial.

James Shanahan and Katherine McMcomas in their article Telling Stories About Global Climate Change, Measuring the Impact of Narratives on Issue Cycles had tried to show that a theory of cyclical patterns in media coverage of environmental issues must account for more than intrinsic qualities of the issues themselves: Narrative factors must be considered. A content analysis of The New York Times and The Washington Post stories from 1980 to 1995 shows how media construct narratives about global warming and how these narratives may influence attention cycles. Empirically, the frequency of newspaper coverage shows cyclical attention to global warming. The content analysis further reveals that implied danger and consequences of global warming gain more prominence on the upswing of newspaper attention, whereas controversy among scientists receives greater attention in the maintenance phase. The economics of dealing
with global warming also receive greater attention during the maintenance and downside of the attention cycle. The discussion offers a narrative explanation and suggests the outcome of the “master story” of global climate change may discourage future attention to global warming.

An empirical content analysis of a decade of coverage of climate change in five national newspapers in the US is presented by Craig Trumbo in his article *Constructing climate change: Claims and frames in US news coverage of an environmental issue*. The analysis is based on the perspective, drawn from social problems theory, that the content of news discourse can be understood in terms of claims-making and framing. Climate change is also discussed in terms of Downs’ issue - attention cycle, a five-stage model describing the rise and fall of social attention to important issues. Climate change, as a news story, is described as exhibiting three phases that are related to the sources quoted and the frames presented in the news coverage. Results of the analysis show that scientists tend to be associated with frames emphasizing problems and causes, while politicians and special interests tend to be associated with frames emphasizing judgments and remedies. Results also show how scientists declined as news sources as the issue became increasingly politicized.

Julia B. Corbett and Jessica L. Durfee of University of Utah did an exploratory study *Testing Public (Un)Certainty of Science, Media Representations of Global Warming* which tried to examine whether readers’ assessments of the certainty of scientific findings depend on characteristics of news stories. An experimental design tested whether adding controversy and/or context to a news story about global warming influenced readers’ perceptions of its certainty. Respondents (N = 209) were randomly assigned to read one treatment and answer a questionnaire. Overall, there was a significant difference in readers’ assessment of the certainty of global warming across treatments (F = 12.59, p = .00). The context treatment produced the highest level of certainty about global warming and differed significantly from the control treatment (with neither context nor controversy) and from
the controversy treatment. Control and controversy treatments resulted in the lowest levels of certainty. There was an interaction effect between treatment and environmental ideology upon certainty (F = 1.64, p = .03) and a correlation between environmental ideology and prior certainty about global warming (r = .35, p = .01), suggesting that those with pro environmental ideology were less swayed by the treatments.

The amount of coverage accorded to an environmental risk topic is unrelated to the seriousness of the risk in health terms. Instead, it relies on traditional journalistic criteria like timeliness and human interest.

The observation that journalism focuses more on big controversies than on big health risks is neither novel nor debatable. There is a niche for public-service features about smoking, seat belts or radon, but in the absence of a news peg these perennials are bound to get less attention than a hot local Superfund fight. Journalists are in the news business, not the education business or the health protection business.

For example, Peter M. Sandman did a content analysis of network evening news coverage from January 1984 to February 1986. Using the Vanderbilt University Television News Index and Abstracts rather than the coverage itself, he identified 564 environmental risk stories, 1.7% of the total air time in the evening newscasts. During the same period, networks ran only 57 stories about tobacco and an astounding 482 stories about airplane safety and accidents. Based on number of fatalities, there should be 26.5 minutes of tobacco coverage for every second of airplane accident coverage. Instead, the ratio was 7:1 in the wrong direction. Acute environmental accidents like Bhopal received plentiful coverage (and deserved it); chronic environmental problems like asbestos contamination received much less, typically requiring an “acute” news peg (new and timely information) on which to base the story. Geographical proximity was also a major factor. During the study period, Alabama, Louisiana, Mississippi and West Virginia had about the same number of oil spills as California, Massachusetts, New York and Texas. Yet almost three times as many spill stories were reported from the latter states (where the networks have bureaus and many viewers) than from the former (where they do not).
Seriousness (or “consequence”) is only one of a host of traditional journalistic criteria for newsworthiness. Most others — timeliness, proximity, prominence, human interest, drama, visual appeal, etc. make a big controversy intrinsically newsworthy even if it is not a serious health threat.

He has used “hazard” and “outrage” to refer, respectively, to technical and non technical (a composite of such factors as control, fairness, familiarity, trust, dread and responsiveness) seriousness of a risk. In these terms, the mass media are in the outrage business: They don’t create it, as clients sometimes suppose, but they amplify it.

Within individual risk stories, most of the coverage isn’t about the risk. It is about blame, fear, anger and other non technical issues — about “outrage,” not “hazard.”

In 1985, he asked the editors of New Jersey’s 26 daily newspapers to send his team of researchers their best environmental risk news stories from the previous year. The 248 stories that were submitted were content analyzed for risk information. 68% of the paragraphs had no risk information at all. Another 15% dealt with whether the potentially risky substance was present or absent, and only 17% of the paragraphs dealt with whether the substance was risky or not. A panel of one environmental reporter, one activist, one industry spokesperson and one technical expert was convened to assess the stories more subjectively. The panelists, who disagreed about most things, emphatically agreed that environmental risk information was scanty in these stories. Technical content was especially lacking. What risk information was provided came mostly in the form of opinions, not evidence.

Many factors contribute to the scarcity of technical risk information in risk stories, among them the relative inaccessibility of technical sources and the “technophobia” of many reporters, editors and audiences. It is easier, more comfortable and more productive to cover environmental politics than environmental risk.
When technical information about risk is provided in news stories, it has little, if any impact on the audience. Getting technical information into the media isn’t only difficult; it is also close to useless.

Technical information might be expected to reassure people that the experts are on top of the situation; or it might frighten them with all those polysyllabic words and scary possibilities; best of all, it might reassure them when the hazard was low and frighten them when it was high. Instead, it simply doesn’t matter — or, at least, we have yet to find a way to make it matter. In their focus on outrage rather than hazard, journalists are at one with their audience.

Alarming content about risk is more common than reassuring content or intermediate content — except, perhaps, in crisis situations, when the impulse to prevent panic seems to moderate the coverage.

Environmental activists commit the same distortion, with less reason. A recent booklet in the debunking of environmentalist claims, led by Keith Schneider of The New York Times, has triggered endless teeth-gnashing about an “anti-environmental backlash” among activists and environmental journalists (groups whose values and concerns are surprisingly similar). Of course credulously reassuring news stories are no more admirable than credulously alarming ones — and they are more dangerous. But they are also scarcer.

A case study analysis of newspaper coverage of dioxin contamination at an abandoned factory in New York, New Jersey found that “alarming” and “reassuring” are not really characteristics of the coverage itself; they are characteristics of the interaction between the coverage and the audience.

Another study asked students to respond to hypothetical news stories about a chlordane spill. Once again, the amount of technical data in the stories had no effect on resulting risk perceptions. The tone of the stories — predominantly alarming, balanced, or predominantly reassuring — mattered more. Alarming stories yielded alarmed readers.
Reassuring stories yielded reassured readers, however, only if they were asked to assume that they lived near the site of the spill and faced practical, immediate decisions such as whether to evacuate. Subjects who were asked to assess pesticide risks in a more generalized way were alarmed by both the alarming and the reassuring story; the intermediate, balanced story produced the most positive responses. Apparently one-sidedly reassuring risk information is likely to strike readers as incredible and therefore produce a boomerang effect - unless they face a decision about what to do, in which case their response may be much less skeptical.

Reporters lean most heavily on official sources. They use more predictably opinionated sources - industry and experts on the “safe” side, activists and citizens on the “risky” side - when they need them.

Government is the number one source of environmental risk news. This was especially clear in the New Jersey content analysis discussed earlier. When unattributed paragraphs are eliminated, government officials accounted for 57% of all paragraphs in the New Jersey study. Industry spokespersons, by contrast, accounted for 15% of the attributed paragraphs; citizens accounted for 7%, advocacy groups for 6% and experts for 6%. On network television, government officials still led, but by much less. They were 29% of the on-air sources. When the networks used only one source for a story, that source was a government official 72% of the time. Two-source stories most typically paired government and industry, citizens and industry, or citizens and government. Activists and experts turned up most often in stories with three or more sources.

Different types of sources reliably provide reporters with different types of content. In the New Jersey study, for example, experts and individual citizens were likeliest to address the riskiness issue; industry and government tended to talk about other things. Not surprisingly, activist groups were the likeliest to assert risk; they did so 33 times as often as they denied it. Industry sources, on the other extreme, denied risk 5 times as often as they asserted it. Although the competition for journalistic attention is tougher
for sources seeking to reassure than for those seeking to alarm, coverage depends even more on a different distinction: skillful sources versus inept ones.

In a variety of ways, most journalists are naturally more allied with their alarming sources than their reassuring ones. This is not mostly because reporters are anti-establishment activists in disguise. It is more because reporters are interested in their careers, and a scary story is intrinsically more interesting, more important, “better” by journalistic standards than a calming one.

The main effect of the “natural antagonism” between journalists and reassuring sources is on the source side of the dialogue. Industry spokespersons and technical experts stereotype journalists far more negatively than vice versa. They anticipate much worse treatment than they get; imagine mistreatment when it didn’t happen and provoke mistreatment by acting defensive or demanding. Ultimately, this may be the biggest reason why the reassuring side of the risk debate gets inadequate coverage — even bigger than the journalist’s natural affinity for bad news: The sources of alarming information tend to be cooperative and canny, while the sources of reassuring information are mostly lousy sources. They can, and should, learn to do better.

In general, in the opinion of Peter M. Sandman, four biases prevail, both in media risk coverage and in readers’ and viewers’ responses: (1) alarm over reassurance, (2) extremes over the middle, (3) opinions over data, and (4) outrage over hazard.

There isn’t much a source can do to adapt to the first bias. The other three, however, can be productively deferred to.
2.4 : Profile of the Newspapers

2.4.a: The Indian Express-

The Indian Express Group-

The Indian Express Group is an Indian holding and managing company which runs several national newspapers, 7 regional language dailies from 14 publication centers across India. It was founded by Ramnath Goenka in 1932 and is presently run by his adopted son, Viveck Goenka who holds the titles of Chairman and Managing Director.

In the second round of the 2008 Indian Readership Survey, the Media Research Users Council reported that The Indian Express ranks 7th in ranking of Indian English dailies by size of readership (with 1.8 million readers) and that Loksatta is the 5th most widely read Marathi daily (with 3.9 million readers).

On November 2006, The Indian Express Group signed a deal with The Economist, which included allowing The Indian Express Group to publish surveys, some reports, and various other content published in The Economist Magazine.

On December 10 2008, Sprice.com, a real-time travel search engines, became a partner with the Indian Express Group to power its travel search.

Currently, the following brands and concerns are owned by the Group:

- The Indian Express - A national daily (English)
- The Sunday Express - A news weekly
- The Financial Express - A business daily
- Loksatta - Marathi daily
- Lokprabha - Marathi weekly
- Jansatta - Hindi daily for North India

= 50 =

Other Subsidiaries:

Business Publications Division - Book publication group established in 1990

Information Technology:

Express Computer - weekly journal for enthusiasts and professionals
Express ChannelBusiness - for professionals
Express Intelligent Enterprise - for businessmen and entrepreneurs

Pharma:

Express Pharma - for professionals from pharmaceuticals industry
Express Healthcare - for professionals from healthcare industry

Travel and Hospitality:

Express Hospitality - for professionals in hospitality industry
Express TravelWorld - for corporate consumers of global travel

The Group also sponsors the “Ramnath Goenka Excellence in Journalism” awards in 14 categories which carry a cash prize of INR 100,000 in each category, except for the prize for “Journalist of the Year” which carries INR 250,000 reward. The awards were instituted on 12th April, 2006 by the then Prime Minister of India, Dr. Manmohan Singh, at a formal event in New Delhi.
2.4. b: The Times of India-

Bennett Coleman & Co. Ltd, also called The Times Group is the largest media services conglomerate in India. It has a heritage of over 150 years and is one of India’s leading media groups. The activities of The Times Group also include publishing newspapers and magazines, television broadcasting, running internet portals, creating and distributing multimedia products and music publishing and retailing. It is headed by brothers Samir and Vineet Jain.

The company offers newspapers, magazines, Internet, and electronic commerce information publication services. Its brands include The Economic Times, The Times of India, Femina, Sandhya Times, Times FM, and Filmfare. Additionally, it provides radio and television programs production and distribution, Web portals operation, and mobile value added services. Bennett, Coleman & Co. Ltd. was founded in 1838 and is based in Mumbai, India.

Its major brands include The Times of India. World’s largest English-language broadsheet daily newspaper in terms of circulation. The Economic Times, India’s largest financial daily, and the world’s second largest in terms of circulation after The Wall Street Journal. Maharashtra Times, India’s largest Marathi daily; Navbharat Times, the largest Hindi Daily in Delhi and Bombay; Mumbai Mirror India’s largest circulated compact newspaper; Pune Mirror; Bangalore Mirror, Bangalore’s first morning compact daily.

The Times of India and The Economic Times subscription number is believed to be approx 4.3 million copies daily.

**Business Subsidiaries:**

Its subsidiary companies include Times Infotainment Media Limited & Entertainment Network India Limited that together control Radio Mirchi National network of Private FM stations. Times Internet Limited which has Indiatimes portal, Times of Money - an online payments portal specializing in remitting money to India and other parts of the world.
Times Global Broadcasting Limited was a Joint Venture with Reuters but is no longer a joint venture as Reuters has exited. Times Now, a general interest news channel and ET Now, a business news channel.

Times Business Solutions runs Times Jobs, a jobs portal, SimplyMarry, a matrimonial portal, Magic Bricks, a real estate portal, Yolist, free classifieds portal, Ads2Book, online classifieds booking system for print publications, PeerPower, a top level professional networking portal.

World Wide Media is a magazine joint venture between BCCL and BBC magazines and runs Filmfare, Femina, Top Gear India, Hello, BBC Good Homes and Femina Hindi.

**Times Private Treaties**

Times Private Treaties is a barter program in which Advertisement space is bartered for equity stakes in new and established companies.

**TIML Radio Limited**

TIML Radio Limited purchased Virgin Radio (and renamed to Absolute Radio) in the United Kingdom.

**Times Syndication Service**

The syndication division of The Times of India Group, grants reprint rights for text, images, cartoons/illustrations, audio/video and microfilms drawn primarily from The Times Group publications.

**2.4.c: The Telegraph—**

The Telegraph was born on July 7, 1982. Edwin Taylor, design director of Sunday Times, London designed the newspaper, setting fresh standards in design and editing that acquired many admirers and later, followers.
Today, it is eastern India's largest circulated and most read English newspaper. The Telegraph's readership in Kolkatta itself is greater than that of all its competitors combined.

The Telegraph supplements include city news in TT Metro on all days, career opportunities in Jobs on Tuesdays, children's entertainment in Telekids on Wednesdays, education and career guidance in Careergraph on Thursdays, lifestyle, travel and general interest features on weekends with Personal TT on Saturdays, Graphiti, the colour magazine on Sundays. Moreover, the technology and knowledge section, Knowhow, now comes with the main paper.

The Telegraph has five editions that include Kolkata edition, South Bengal edition, North Bengal edition, Northeast edition (Guwahati split), Jharkhand edition (Jamshedpur, Jharkhand and Ranchi splits).

In addition to these, there are two weekly tabloids for Kolkatta's neighboring areas – Salt Lake and Howrah. The Telegraph has recently launched a school edition – a sixteen-pager with a special section, Teen TT, to connect with young minds.

T2 is the latest addition to The Telegraph stable. A snazzy, 16-page all colour tabloid which talks about fashion, food, films, television, arts, culture and everything young. This is available with The Telegraph every weekday in Calcutta.

**Total readership**: 14,08,000 (National Readership Survey 2006)

**Readership in Calcutta**: 7,46,000 (National Readership Survey 2006)

**Total circulation**: 4,84,971 (Audit Bureau of Circulations July – December '08).
Online Editions:

Online editions of The Telegraph exactly the way it was printed, one can log on to its e-paper version at http://epaper.telegraphindia.com. The Telegraph is also available on WAP-enabled phones worldwide using the link www.telegraphindia.com/wap. Shopping is easy at www.thetelegraphstore.com.

ABP Groups’s other subsidiaries:

Print Magazines:

The Group also publishes print magazines across verticals that include Businessworld, Desh, Sananda, Anandamela, AnandaLok, Unish kuri, Career, The Telegraph in Schools (TTIS).

TV Channels:

ABP’s foray into electronic media began with STAR News. Then, STAR Ananda was launched as India’s first 24-hour national Bengali news channel. And launched in June 2007, STAR Majha (My Star) is the undisputed leader in the Marathi news genre.
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