A CHRISTIAN RESPONSE TO ECOLOGICAL CRISIS
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One of the reasons for the present ecological crisis is greed. It is greed that causes people to exploit resources. And the over-exploitation of resources is causing imbalances in nature. As Mahatma Gandhi said: “The earth provides enough to satisfy everyone’s need, but not everyone’s greed.”

We believe that environmental problems are more spiritual than technological. And we believe that God calls us now to confess and repent of attitudes which devalue creation. Forgetting that “the earth is the Lord’s,” we have often simply used creation, while forgetting our responsibility to care for it.

**The Aim**

Our aim is to keep this beautiful world beautiful, and not to turn it into a wasteland.

**Our Covenants**

In the Bible there are covenants and laws and statutes to be observed if the earth and its inhabitants are to experience oneness and harmony. And the most important covenant is between God and humanity. We are God’s gardeners, and when we forget this, then not...
How We Can Help

Here are some of the ways in which we in the Church of South India can help.

* We can learn to eat lower on the food chain: reducing the animal products in our diet is perhaps the single most-effective step we can make.
* We can practice energy conservation: let us use less heat, less light, less air conditioning.
* We can plant trees.
* We can change our driving habits.
* We can influence the government.
* We can develop our thoughts on eco-spirituality.
* We can participate in recycling.
* We can volunteer in local cleanup programmes.
* We can join environmental groups.
* And as church leaders and church members we can take a leadership role in persuading others to do the same.
* And perhaps most important of all, we can evaluate our own lifestyles, our desires, our aims, and our relationships with creation. We can help lead others to think about what is most important in their own lives: what do they really value?

A Parable for the Environment

There was a wise man, a hermit in the Himalayas, and people used to go to him to find answers. One day a little boy thought of an idea for tricking the hermit. “I’m going to get a small bird and hold it in my hand,” he told his friends in the village. “And I will say: is it dead or is it alive? And if he says it is dead then I will release it, and if he says it is alive, then I will crush it.”

So the boy went to see the wise man, and he did what he had boasted. But the hermit looked into his eyes and could see what he was planning.

“It will be,” said the wise man, “what you want it to be.”

And this story illustrates what we can do about the environment. It will be what we want it to be. If we can have a vision and communicate it to others, then we will have a powerful role in transmitting a sense of reverence for this world.
The global warming was the focus of the course. In the discussions, I found myself raising at every point the justice perspective. This I feel is the role of third world scholars. But the justice concerns should be discussed in relation to other issues that are considered for constructing a discourse on environmental ethics.

This article will discuss the following issues that reappear in our debates on ecology:

1. The relation between ecology and technology
2. Ethical issues especially the right of non-human nature
3. The Bible and Ecology: especially the problem of the anthropocentric orientation of the Bible.

These are by no means new issues; but new questions and concerns have been raised in recent discussions. The new insights we gain from them are helpful in giving a firm foundation to our commitment to the life of the earth. It is our hope that the discussions on these issues will help us to draw some implications for our theology and spirituality.

Ecology and Technology

Larry Rasmussen, in his admirable volume ‘Earth Community, Earth Ethics’ draws our attention to three revolutions that have drastically changed human–nature relationship. They are Agricultural, especially the intensive form of cultivation for large-scale production and Industrial and Informational. The crucial factor in all these revolutions is the technology used. The nature of technology has an impact on the character of the work humans do. The pressure on environment also varies according to the kind of technology that is used. Perhaps the industrial revolution brought about a situation where earth’s resources are exploited and manipulated to such an extent that the life of the earth itself is in great peril. ‘To earth, industrialization looks more and more like a succession of more complex and environmentally disruptive and damaging ways to meet the needs and wants of one particular, inordinately aggressive species’ The industrial culture is based on particular mind-set or an assumption that aggressive domination over nature is the absolute right of the human species and earth has limitless resources for human use. Science and technology are tools for further exploitation. We need not repeat the discussions on the ecological damage, in most cases irreparable, of the industrial revolution. But we note that industrial era paradigm for development consists of the following elements:

‘expectation of unlimited material progress and ever growing consumption; faith in science and technology to solve all problems; goals of efficiency, growth, and productivity; mastery of nature; and competition and individualism’.

This paradigm has led to ‘environmental degradation, resource depletion, loss of meaningful work roles, inequitable distribution, and ineffective control of technology.’

Further it paved the way for the ‘rule of corporations’ over the world creating not only a global economic order but also a culture. “The emphasis is to overrule all local interests and local culture, to give way to the larger global good that free market exchange creates.” Korten gives a summary of the ideal world of global dreamers.

“The world’s money, technology, and markets are controlled and managed by gigantic global corporations:

A common consumer culture unifies all people in a shred quest for material gratification;

There is perfect global competition among workers and localities to offer their services to investors at the most advantageous terms; (One may be reminded of the competition for outsourcing among third world countries)

Corporations are free to act solely on the basis of profitability without regard to national or local consequences;

Relations, both individual and corporate, are defined entirely by the market;
technological solution for our ills. The IT culture has heightened this sense of optimism. But the optimists overlook the fact that “the solution to one problem often creates new problems”. The other typology is expressed in the phrase “Technology it self is the culprit” The “pessimists say that technology is inherently destructive of both environmental and human values”. But a third typology holds the view that “technology is neither inherently good nor inherently but an ambiguous instrument of power whose consequences depend on its social context”. He argues for a redirection of technology. The discussion arose in the context of the Industrial culture. But with modification it can apply to the new technology. In other words how can the new technology, the border less and powerful as it is, can be accountable to ethical guidelines, especially as they relate to the ecology? Here ethical is used in a foundational sense. It is the responsibility to the “Other.” In this case the “Other” is the Earth. This is an area where political action and community participation in development becomes crucial. In fact technology is power; who controls technology becomes a crucial question.

We seem to hear this question from many of Gabreille’s writings on technology and culture. The new technology has not obliterated our ethical concern rather a heightened awareness of the questions, who controls it and for what purpose, become urgent. The other question that looms large is, what kind of development is envisaged? The concept of sustainability is suggested as the goal. I have dealt with this concern in one of the pervious articles. The important point raised in the current discussions is that sustainability should not be reduced to merely a strategy of development but it incorporates a vision of alternate consciousness and life style. It presupposes a renewed relationship between humans and human and nature. A participatory society that assumes responsibility for one another and for earth alone is sustainable. (Santana 14)

The right of non-human nature

The perspective that the Earth and every form of life have intrinsic worth/value is an ethic currently developing and debated within ecological discourse. The classical discussion on rights is solely related to human. The assumption is that only creatures with consciousness and reason can be aware of their rights. The non-human world exist for human and they have no innate right.

Aristotle’s view is typical of Western intellectual tradition. “If nature makes nothing without some end in view,” he argues, “nothing to no purpose, it must be that nature has made all of them (animals and plants) for the sake of man”. Using teleological mode of ethical reasoning he asserts that by nature animals are human slaves. His reasoning is that if they were not that they would ‘refuse’, but since they do not, it is natural to enslave them. Incidentally the same argument is used to justify the existence of human slaves! He writes,

“Therefore whenever there is the same wide discrepancy between human beings as there is between soul and body or between man and beast, then those whose condition is such that their function is the use of the other bodies and nothing better can be expected of them, those, I say are slaves by nature.”

Slaves are tools and none other than a piece of property. Only those who posses reason, have rights. You have to have consciousness, awareness, reasoning capacity for assuming your rights. Those who do not posses are there to be exploited and manipulated. By this logic the babies, mentally – disabled and aged who lost reasoning power have no rights. What is surprising is that Aquinas followed the same logic. He says

Dumb animals and plants are devoid of the life of reason whereby to set themselves in motion; they are moved, as it were by another, by a kind of natural impulse, a sign of which is that they are naturally enslaved and accommodated to the uses of others.
effective voices by theologians. Bonhoeffer is the first among protestant theologians who have reflected on human rights. As he was fighting the gross violation of human rights by Nazi regime, it was but natural from him to reflect on this issue. Rasmussen helps us to see how Bonhoeffer’s discourse is set within the ambience of his commitment to creation. He was critical of the some of the trends in Protestant theology that devalues creation with its preoccupation with otherworldliness. Bonhoeffer sees bodily integrity as “foundation of all natural rights without exception”, “The living human body is always the person himself/herself. Rape, exploitation, torture, and arbitrary confinement of the human body are serious violations of the right which is given with the creation of the humankind” (Cited in Rasmussen 309). For him human right is grounded in creation itself and the rights of natural life are “the reflected splendour of the glory of God’s creation”. Further Bonhoeffer argues that “the essential point of human existence is its bond with mother earth, its being as body.” Christian understanding of the rights of the non-human world is, to borrow a term from Linzey, is “Theos –Rights”. Creation exists for God. All living and non-living things do not exist for man, as it has been affirmed in modern, especially Western thought, but they exist for God. James Gustafson has made this point clearly “If God is “for man”, he may not be for man as the chief end of creation. The chief end of God may not be the salvation of man”. “human beings, given their power and place in earth’s present reality and their nature as self-conscious moral creatures, may inevitably be the measures of all things. But the measure itself is that we “relate to all things in a manner appropriate to their relations to God”. The “good” all things are more than their good for us, and our own interests are relative to larger wholes than those of immediate human welfare. “This requires...a moral and emotional nervous system that opens out beyond a strict anthropocentric circumference”. Gustafson in a recent discussion further affirms,

“What is finally indisputable, I think, that human other forms of life are dependent upon forces we do not create and cannot fully control, forces that bring us into being and sustain us and life around us, but forces that also limit and destroy us and determine the destiny of the cosmos. This dependence- a matter of fact, no matter how it is interpreted- evokes a sense of the sublime, or for some us a sense of the divine”.

Philosophical and theological base for a clearer understanding of the ethical standing of the non-human world will deepen our commitment to it. A wanton destruction of life in the world and callous disregard earth’s resources is a violation of the inherent and God given right to them. This awareness is essential for an ecologically sensitive life.

Certainly the discussion on values cannot be isolated from the context in which it is raised; they are shaped by particular contextualised questions and struggles of all oppressed groups. The struggles of the marginalized and the struggle of the earth are inter-related. To deepen this struggle clarity on the rights of all, including the subjugated earth and people is important.

**The Earth and the Bible**

We will now turn to another crucial issue that has been discussed: The Bible and ecology. Earlier there has been a discussion on the thesis of Lyn White who maintained that the roots of environmental crisis could be traced to the Christianity, especially the Biblical command to human to have dominion over earth and all creatures in it. Our attention is now turned to the problematic use of the Bible and a possible reading of the Bible from the perspective of Earth. I find the book, Readings From The Perspective Of Earth, ed, Norman Habel, a significant publication. It has brought together mostly Australian scholars to reflect on the question of Biblical hermeneutics from earth perspective. This land- mark publication should deserve the attention of all who are committed to develop ecological ethics from a Christian perspective.
The book gives examples of the study of several passages making use of the guidelines given by the eco-justice principles. Interpretation on one of the key text, Gen. 1.26-28 is a case in point. Normally it is interpreted as the basis for stewardship- humans as stewards ruling on behalf of God. The image of stewardship comes from the feudal background. God as an absentee landlord put humans in charge of his property. In our interpretation we tend to assume God as ruler, again a feudal legacy, humans are rulers of the earth. But the principle of custodianship changes the mode of relationship. Custodianship is a mutual partnership. Earth and Earth community have, in spite of the assumed rulership of humanity, been the custodians of human beings. Earth has provided food, shelter, beauty and many other riches to sustain the body and the spirit of humanity. In return humans have assumed these riches as their right rather than the contribution of their partners in the Earth community”. The important challenge is to read the bible with the eyes of the subjugated earth. The meaning of the text is enriched by this perception of eco-justice. Certainly, this requires a new commitment to the earth and her future. From that commitment we should be prepared to look critically at the text and the biblical interpretation that is accepted as ‘normative’. What we consider normative is often a culture bound reading. For this reason the earth bible project asks us to make certain commitments before we begin to interpret the text. These commitments are expressed thus:

- to “acknowledge, before reading the biblical text, that as Western interpreters we are heirs to a long anthropocentric, patriarchal and androcentric approach to reading the text that has devalued Earth and that continues to influence the way we read the text,

- to recognize Earth as a subject in the text with which we seek to relate empathetically rather than as a topic to be analysed rationally;

- to take up the cause of justice for Earth to ascertain whether the Earth and the Earth community are oppressed, silenced or liberated in the biblical text;

- to develop techniques of reading the text to discern and retrieve alternate traditions where the voice of the Earth community has been suppressed.”

In the above commitments the use of ‘Earth community” is important for our perspective, for we are assuming that it is not only the biotic community but also the poor and marginalized who live in solidarity with the earth. The cry of the poor and the cry of the earth are inseparable.

Some Theological Hesitations

In the development of theology and church, one may identify an anti-ecological stance to them

Boff has identified following anti-ecological accents in Christian theology and in Church life:

1. Patriarchy. Male values are preferred in the Church. Women and earth are ignored as if the experience of them has no consequence whatsoever for theological reflection. Theological reflection almost exclusively is based on male experience where earth is subjugated by human greed.

2. Anthropocentricism in the interpretation of Biblical texts and the development of theology. For example, Boff points out that there are two accounts of creation in Genesis. The first narrative says ‘Let us make man (man and woman) in our image, after our likeness; and let them have dominion…Be fruitful and multiply and fill the earth and subdue it; have dominion over the fish of the sea…’(Gen. 1:26, 28). “The original meaning” says Boff “of the text is this: The human being, man or woman, is a representation of God in creation, his son or daughter, helping carry out God’s creation work. The terms ‘dominion’ and ‘subdue’ are to be understood in this sense and not in any despotic sense.’ But the
positive attitude to the earth-bound realities. They further argue that these positive insights should form the ‘core of an ecologically sensitive theology. Going beyond anthropocentrism, we need to start with creation and see humans as part of it.

Boff observes,

“But certain positive elements act as a counterbalance to these negative trends: the affirmation of matter by virtue of the mystery of the incarnation; the sacraments, especially the sacrament of the eucharist; the resurrection as a transfiguration of the world, of matter, and of the human body; the discovery of the sacramental nature of the cosmos, receiving the very blessing of God; the mystery of creation, which makes all living creatures brothers and sisters; and the mysticism of brotherhood and sisterhood of St. Francis, St. Clare, and their followers.”

And again, “we should see creation as an expression of God’s joy, as dance of God’s love, as the mirror of both God and all created things”.

This is the new paradigm of theology that helps us construct a new paradigm for ecumenism. As mentioned, it is different from ‘wider ecumenism’. Boff’s suggestion is to reconceive God as an ‘ecological God’. He takes Trinity as the Christian understanding of God and not necessarily monotheism. Trinity presupposes community. Trinity becomes the paradigm for society. Boff writes,

“The universe is a reproduction of this diversity and of this union. The world, indeed, is complex, diverse, one, united, interrelated, because it is a reflection of the Trinity. God invades every being, enters into every relationship, erupts into every ecosystem”.

The Trinitarian understanding has helped Boff to formulate a new way of articulating God reality. He would differ from Toynbee that Christian concept of God, a monotheist God, should be replaced by pantheism, seeing God in everything. Boff has made a beautiful suggestion that Christian concept is panentheism and not pantheism.

Whereas pantheism maintains that everything is God, panentheism starts from ‘the distinction between God and creature, yet always maintains the relation between them. He writes,

“The one is not the other. Each of them has his/her/its own relative autonomy yet is always related. Not everything is God, but God is in everything, as we might deduce from the etymology of the word pantheism. God flows through all things; God is present in everything and makes of all reality a temple. And then, vice versa, everything is in God. We are only through God, we move only through God because we are always in God, for indeed: “It is in him that we live and move and have our being” (Acts 17:28)

This Trinitarian understanding of God interpreted ecologically is the basis of a new paradigm for ecumenism.

A new understanding of the God experience is, for Boff, crucial for an altered ecological consciousness. In a recent article he says about two distinct but interrelated ways of experiencing God. The first he describes as the ‘Personal Path of Communion with God, Who is all’; this is the way of the West. God is perceived as the absolute “Thou”, a fundamental alterity, an insurmountable opposite. The basic characteristic of this path is love. But this tradition, points out Boff, entails a risk: the feeling of exclusivity; the attitude that others do not have the truth, an attitude that is at the root of crusades and religious warfare. The other path, which is Eastern, is the ‘Path of Communion with the All, which is God’. “Everything meets in the One, diverse and dynamic. This final unity is the result of a process of identification with that which is different, of action that creates identity with what is different.” “God” is the word that translates the experience of the unified all. In this way of experiencing God also there is risk. “The mystical experience runs the risk of being transformed in to mysticism, which at times becomes mixed with the business interest of gurus or supposed spiritual masters who accumulate influence and wealth” Boff argues that these ways are not opposed
to see the deeper insights in the Bible for a life of wholeness and interconnectedness within the entire creation of God. At a recent seminar held at the Ecumenical Christian Centre, Bangalore on *The Use and Abuse of the Bible* in the context of the birth centennial of Dr. William Barclay, the above reality was noted with great concern. The participants of the seminar affirmed the following:

a. The Bible: We affirm that while the text of the Bible can be manipulated, the Word of God cannot be misused or abused. This is because we distinguish between the Word of God and the biblical text. We acknowledge that the biblical text emerged as God-inspired faith communities responded and witnessed to the Word of God from various socio-political and religio-cultural contexts. We seek to recover the Word of God from the biblical text though, in view of the evident difficulties of this enterprise, we do this humbly and reverentially.

b. Hermeneutical Mission: We admit that the biblical text is not only a God-inspired response and witness to the Word of God, but is inadvertently also a political, historical, ideological, social and even gender-biased collection of texts. As a result, we recognize that the Bible has been used to oppress the subalterns such as Women, Dalits, Tribals and other socially ostracized communities. We look to liberate the Bible from these oppressive tendencies. We do not reject the text but employ liberative re-readings of the text to encourage the emancipation and empowerment of the oppressed.

c. Hermeneutical Key: We uphold the need for a life-affirming motif to better understand the meaning of the Bible. We reject biblical abuse through literalism and biblicism, while encouraging the recovery of more metaphoric and contextual meanings. Most importantly, however, we recognize the need for ‘Christic sensitivity’ in our readings of the text especially as guides to our liberative and contextual readings.

d. Hermeneutical Methodology: We acknowledge and even laud the multiplicity of readings of the biblical text and encourage an interdisciplinary hermeneutical process. We recognize the value of various hermeneutical methodologies, but also look to incorporate a more integrated approach that includes the careful study of the text in its historical-cultural contexts.

e. We feel the need to integrate the findings of the Conference with Christian institutions and lay people in a language that is clear and meaningful. In this regard, we look forward to the development of a ‘People’s Bible Commentary’ in the near future.

Thus there is a general awareness being created through seminars such as the above on the need to make Biblical Interpretation liberative and life-affirming.

A. Recent Trends in Biblical Interpretation

In the past, the focus in the interpretation of the Bible in particular the Hebrew Bible had been the employment of Historical Critical methodology raising questions on sources, history etc. Several books had been written employing the historical critical methodology. The emphasis has been very much to penetrate behind the final text in order to reconstruct its origins and development. It enquired how the textual units achieved their final forms and seeks to trace the entire process by which the units came into being. However, in the recent times, new approaches to the interpretation of the Bible have been proposed.

1. Contextual Readings of the Bible

Gerald West’s models of reading the Bible in context are worthy of note.¹

a. *Reading behind the text* focuses on the historical and sociological context from which the text comes. An important advantage of reading behind the text is that it situates the text in a real life context, whereby the social, political economic, religious and cultural dimensions of a text are known. Thus affirms and develops the community’s understanding that God is at work in history and society. Another advantage is that such an approach minimizes
way of reading the Bible can either be liberative and transformative or domineering and oppressive. So it is necessary that all readers of the Bible undertake that task with a sense of critique. To be critical readers of the Bible means that we question and study the Bible rather than just accept and repeat what others have told us about the Bible. This way we try to discover and recover the true meaning of God’s message for us today;

c. a commitment to individual and social transformation. This is not merely a slogan, but a real commitment to work for social transformation of the marginalized and the afflicted. The contextual reading of the Bible offers a new way of seeing reality from the perspective of God’s project of liberation. The poor and oppressed come to see themselves as active subjects in God’s project of liberation rather than as passive objects of fate.

A contextual reading of the Bible as proposed above will free the reader from colonial aggression based on prejudiced notions and will enable the reader to relate the text to the context of the reader and thereby find the text as a vehicle of liberation for both the human and the non human part of God’s creation to experience a life in all its fullness.

2. Post Modernism

Postmodernism advocates that the truth is socially constructed, plural and inaccessible to universal reason. They argue that truth is made rather than found. Michel Foucault, one of the significant postmodern advocates has argued that all claims to truth are constructed to serve those in power and therefore the intellectuals need to deconstruct truth claims in order to liberate the society. For them, what has been understood and affirmed as truth is nothing more than a convenient structure of thought to oppress the powerless. Truth is not universal because every culture establishes its own truth. Postmodernists believe all truth is socially constructed and therefore subjective and therefore all presentations of objective, universal and absolute truth claims need to be rejected. So, all grand accounts of truth, meaning and existence which are regarded as “metanarrative” claim far more than they can give. These metanarratives which present universal truth are oppressive and therefore are to be resisted and rejected. To the postmodernists, if the metanarrative is to be rejected, then the great texts behind the metanarratives should also be rejected. Postmodernism asserts the fallacy of ascribing meaning to a text, or even to the author. The reader establishes the meaning of the text, and no controls limit the meaning of the reading. The late literary deconstructionist Jacques Derrida describes this move in terms of the “death of the author” and the “death of the text” 3. The text must be deconstructed in order to get rid of the author and let the text live as a liberating word. Meaning of the text is created by the reader in the process of reading. According to them, texts reveal oppressive intentions on the part of the author, and so must be deconstructed. The authority of the text lies not in the text but on the reader.

The Postmodern approach to the Biblical text would definitely bring in a feeling of unease among the readers/interpreters as it is again a radical departure to the traditional reading/interpretation of the Bible. However, their observations such as the authority of the text lies on the reader and not on the text; that the truth is not universal but plural and socially constructed and that the texts become tools of oppression etc. are worthy of note and deserve discussion as part of our hermeneutical endeavor.

3. Non Foundationalism

Every religion has got certain foundations which we call fundamentals. All our religious pursuits are expected to be in conformity with these foundations. The core tenets of the philosophy of Foundationalism are: idea of a basic dichotomy between the subjective and the objective; the conception of Knowledge as being a correct representation of what is objective; the conviction that human reason can completely free itself of bias, prejudice, and tradition; the ideal of a universal method by which we can first secure firm foundations of knowledge and then build the edifice of a Universal
b. Second, the principle of Critical Theological Imagination

The application of Critical Theological Imagination is very clearly reflected in the number of categories of needy people that are included in the list by Jesus. There is power in theological imagination and this should play a vital role in our biblical interpretation process. In this process of Critical Theological Imagination, new areas of God’s revelation and activity become visible. Other categories of people who are otherwise left out of theological imagination come to the forefront and the centre of God’s activity. People who are shattered and are battling for survival due to abortion, euthanasia, reproduction, human genetics etc. need our understanding and compassion. People who are physically and mentally challenged need our understanding and care. The Transgender need our love. The nature and the earth which have been badly treated and degraded need our attention. The Transgender need our love. The nature and the earth which have been badly treated and degraded need our attention. The challenge here is to **go beyond and apply critical imagination** to bring the other who and which have been seriously deprived of a life in all its fullness to the centre of God’s concern and let God handle them as God would and not as we do with our prejudices and distorted norms and notions. The nature and the earth which are part of God’s creation need to be seen as central to God’s love and concern.

c. Third, the principle of Looking through the Eyes of the other

Throughout the drama, Jesus never asserts himself and expects others to fit into his assessment. Rather Jesus identifies with the hungry, the thirsty, the sick and the like and looks through their eyes to the problems which surround them. This principle is very important in biblical interpretation, space to look through the eyes of the other. Normally in biblical interpretation, the whole exercise starts from a set conclusion as to the meaning of the text and everything that would follow has to fit into that conclusion. This way of reading the Bible or interpreting the text may not be helpful always. Issues of grave concern cannot be dealt with in this fashion. This way of reading the text could reflect arrogance instead of compassion, which is the thrust of the biblical records and of the mission of Jesus. We need to look through the eyes of the other. It is in dialogue with the other biblical interpretation should take place. We need to look through the eyes of the suffering, the marginalized, the physically and mentally challenged, the ones affected with the HIV AIDS and the like. A similar approach has to be taken in our attitude towards earth. Once this happens, we cannot but thank God for the beauty of nature and the earth and thereby commit ourselves to taking care of the God given gift of nature and the earth.

God is beyond the Bible and we need to discover God as God is. Bishop Richard Harries, one of the leading Bishops in the Church of England had written a book entitled “God outside the Box”. In this book, he pleads with the reader to release God from the boxes we have chained God in. For this, we need to have a greater understanding of God and of the Scripture. We should safeguard ourselves from committing Bibliolatry, i.e. worshipping the Bible than worshipping the God of the Bible. Once we recognize this fact, then it gives us tremendous room to draw insights and resources from the other to deepen our discussions on issues related to life – the eco concerns.

**Conclusion**

To conclude, one anecdote from South Africa comes to my mind. *When the white man came to our country he had the Bible and we had the land. The white man said to us “let us pray”. After the prayer, the white man had the land and we had the Bible*. This anecdote points to the central position that the Bible occupies in the process of oppression and exploitation. It also reflects the paradox of the oppressor and the oppressed sharing the same Bible and the same faith. However, what is remarkable about this anecdote is that Desmond Tutu responded to it after one of its telling by stating, “And we got the better deal. This response captures something of the reality of the Bible everywhere: it plays an important role in the lives of many, particularly the poor and the
What did Jesus teach about ecology? Have the Gospels anything to say about ecology and environment? How does one talk about ecological vision of Jesus, as ecological crisis of modern times is a recent development aided by scientific revolution and growth of science and technology? Could we talk about an ecological vision without also an ecological crisis? Was ecological crisis at all a problem in the agrarian Palestine where Jesus carried out his ministry? If at all Jesus had an ecological interest, how do we get back to Jesus’ own concern through the varying perspectives of the Gospel writers? Have not their concerns been determined by the interests of their own communities and limited to their salvation from sin? Even if we were able to trace within the Gospels what may be called a core eco-vision, how shall we identify them? What are the special characteristics of this vision of Jesus? How relevant are Jesus’ teachings on nature and environment in an age of escalating ecological crisis? These are no easy questions. Yet we know that the teachings of Jesus on ecology, if there are any, is very important, since many—not least the Christians, even today, are guided by Jesus in the practice of their spirituality and faith experience. It is important for us, therefore, to look at the issue of ecology from the accounts of the Gospels which testify to the life and witness of Jesus.

What we shall attempt here is not an exhaustive treatment of Jesus’ teachings on ecology but some soundings in the Gospel accounts which may give us a glimpse into what may have been Jesus’ own perspective on the issue. This we may do by looking at the role of environment in Jesus’ personal formation, the use of ecological images in his teachings, and the ecological connections of Jesus’ mission engagement. We look at the Gospels as finished products with some attention on the general socio-cultural context of Jesus ministry, leaving aside questions of authenticity and literary developments.

A. Role of Environment in the Personal Formation of Jesus

People of ancient times almost considered environment as sacred in their relationship towards it. They viewed it with reverence as they were dependent on it for survival. Jesus and the people of his time were no different. It is not surprising, then, that the Gospel writers present the Jesus event, as narrated by them, in an environmentally friendly setting. The stable, the sea, the desert, mountains, plains, plants and flowers have all served as the context of Jesus’ personal formation. His teaching images derived from them and his mission engagements had an ecological ring to them.

Prior to the birth of Jesus the prophets spoke about ‘the day of the Lord’ as one of universal peace. “For out of Zion shall go forth instruction and the word of the Lord from Jerusalem.” Peoples “shall beat their swords into ploughshares and their spears into pruning hooks; nation shall not lift up sword against nation, neither shall they learn war any more” (Is. 2:2-4). Prophet Isaiah envisaged a Davidic king who would come in the future, “a Prince of Peace”, endowed with God’s spirit and wisdom, in whose reign the poor will be judged with justice and the wolf will live with the lamb (Is. 9:6ff., 11:1f.).

The birth of Jesus took place in a manger, on a mattress made of hay, and in the company of the domesticated animals. The stars in the sky sparkled at his birth (Mt. 2:2, 10) as witnessed by the Magi who made their journey to Herod’s palace. The choir of the angelic hosts sang the joy of heaven (Lk. 2:8-12). The shepherds who kept watch
the people experienced the presence of God in the form of pillars of cloud and fire (Ex. 13:17-22), as the provider of manna (Ex. 16:4ff.) and water from the rock (Ex. 17:1-7; Num. 20:1-13). The desert thus became a place of intimate relation with God (cf. Hos. 2:14) and the way of God’s deliverance (Is. 40:3). The ministry of John the Baptist (Mk. 1:3, 4), Jesus’ encounter with the Father (Mk. 1:11) and the conflict with Satan took place in the desert.

While the domestic animals gave company to Jesus at his birth, it was the wild animals that gave him company during his temptation in the wilderness. This is something peculiar to Mark. The word *meta* can refer to mere physical proximity (Mt. 5:25; Jn. 9:40; 12:17), but frequently has a sense of close association in friendship, agreement or assistance in the positive sense (Mt. 12:30; Lk. 22:59; Jn. 3:2). Elsewhere in Mark’s use it signifies close, friendly association with someone (Mk. 3:14; 5:18; 14:67). Mark 1:13 therefore conveys a positive sense of association. The intimate communion with wild beasts may refer to the restoration of paradise alluded to by the prophets. (Is. 11:6-9; Hos. 2:18) Jesus who is presented as living in perfect harmony with the animal world, as he is about to begin his mission, is symbolic of its eschatological dimensions. It indicates that peace and harmony with wild animals is part of the Kingdom mission inaugurated by Jesus. It portrays a covenant of peace established between the Davidic Messiah and all God’s creatures.

At the beginning of his ministry, Jesus called the disciples who would be with him in his mission. At their call the disciples were engaged in fishing by the Sea of Galilee (Mk. 1:16-20). Jesus along with his disciples traversed the sea very frequently in his ministry in Galilee. In fact, it was from the Sea of Galilee that Jesus traveled to the surrounding villages. It is by the sea that Jesus met the crowds gathered to listen to him and taught them (Mk. 3:7ff.; 4:1). Despite its violent effect, sea is also the source of sustenance of life. The socially deprived and neglected people find a means of support for the sustenance of their life by the sea. In the preparation and engagement of Jesus in mission the sea played an essential part. Even after embarking upon the task of his mission Jesus’ personal recuperation and integration came from his association with the world of nature.

The ministry of Jesus was carried out in villages and grain fields. When he needed a period of rest from his engagement in mission, early in the morning Jesus withdrew to a deserted place, and there he prayed (Mk.1:35). He went to the hill to pray before choosing the disciples (Lk. 6:12; Mk. 3:13). Jesus taught the disciples on a mountain (Mt. 5:1). Mountains hills rose above the ground towards the heavens representing symbolically the abode of Yahweh. Moses received the tablet of stones representing the covenant of God at Mount Horeb (Ex. 19:3). Prior to Jesus’ death on the cross, at the agony and pain of the ensuing suffering and God forsakenness, Jesus spent time with his Father in the setting of nature at the Garden of Gethsemane (Mk. 14:32ff.) deriving strength for the crucial task that he was about to embark upon. When he died there was upheaval in nature: earthquake, darkening of the sun and the rending of the temple curtain (Mt. 27:45-54; Lk. 23:44-45). His body was laid to rest in a garden, though in a borrowed grave. At the resurrection of Jesus too, there was earth quake, angelic appearance and lightening (Mt. 28:1-10; Lk. 24:1-10; Mk. 16:1-8).

**B. Use of Ecological Images in the Teachings of Jesus**

For most people in early times, the basic life-support system of land, water, vegetation and animals had much to do with the practice of their faith and religion. Many of the objects of worship derived from nature on which they were dependent for survival. Jesus came preaching the kingdom of God. He said, “The time is fulfilled, the kingdom of God has come near; repent, and believe in the good news.” (Mk. 1:15) It is important for us to look at how Jesus viewed this kingdom and how he articulated it. Various pictures and images, such as, the sun and the rain (Mt. 5:45); the scorching heat and the south wind (Lk. 12:55); the clouds and the showers (Lk. 12:54); the earth and the sky (Lk. 12:56); the flashing of light (Mt. 24:27); the rock and
century A.D., in the Masoretic text and the Aramaic, *speiromenoi* refers to “soil being sown with seed.” In parabolic tradition: the wheat and the tares (Mt. 13:24, 27), its interpretation (Mt. 13:37, 38), and the grain of mustard seed (Mt. 13:32) the sower (Mk. 4:9-13) and the seed growing secretly (Mk. 4:26-29), the reference is to the seed of plants that a farmer sows in the field. The Isaianic texts emphasize the nature and efficacy of God’s Word, Philo virtue, and IV Ezra humankind and the Law, the Mishnah the literal sense, but the parables, the farmer sowing one’s seed in the field in association with nature, working for a harvest.

b. The Soil

In the Genesis account of creation, humankind was created from the dust of the ground and given the responsibility to work and keep it (Gen. 2:7,15). Rains made tilling easier (Gen. 2:7). The earth was fruitful and brought forth vegetation (Gen.1:11-13). But human sin resulted in the soil becoming unproductive (Gen. 3:5, 17, 18-19, 23 cf. Joel 1:5-12). Human labour, originally an exercise in food production and care of creation, has now become burdensome and exacting. The Psalmist (127:2) talks about the futility of hard labour in rising early morning and going to bed late. Sowing meant to be a joy and pleasure, has now become hard labour and a source of weeping (Ps. 126:5-6). Sowing is hampered by thorns and thistles (cf. Is. 28:24-25).

In the parable of the soil, four types of soil are listed: the path, the rock, the thorny ground and the good soil. The seed that fell by the *pathway* may refer to a “footpath” (NEB) often made through the field itself as a short cut for travel on which the seed was intentionally sown with the purpose of ploughing it over as soon as the sowing was over, or the “edge” of the path. The “rock” in the rocky ground is said to be the lime stone beneath the soil where owing to lack of depth in the soil, the fallen seed sprout quickly but soon withers away as the root is not deep enough. Matthew and Mark refer to it as the “stony ground” while Luke has it as the “rock.” As for the seed that fell among the thorns, the imagery brings to mind the curse of the land in Gen. 3:17,18 (cf. Is. 17:23f.). It is either land that has never been ploughed or has lain fallow for a period of time (Lev. 4:3) with the emphasis on breaking up or ploughing such fallow soil so that it may bring good yield (Prov. 13:23 cf. Hos. 10:12). The good soil is the fertile ground where the seeds when fallen, grows and brings forth a harvest. The Gospel of Thomas has the reference to 100 per cent yield (cf. Gen. 26:12) as 60 and 120 (82:12). Legrand refers to it as a “hyperbole and poetry” while White does not doubt the possibility of a 100 fold. In a dry farming context without facilities for irrigation the timely rains play a vital role for a good harvest as the Indian farmers know only too well (cf. also Is. 30:23).

c. The Harvest

After the hard labour involved in sowing and planting, the farmer expectantly wait for the day of a good harvest upon which is dependent the food supply of the family, fulfilment of social obligations, seeds for the coming year, payment of taxes and repayment of loans. In fact, the whole economy of the family depended on a good harvest. The time of harvest brings renewed joy and celebrations.

In the Old Testament, harvest is often used with reference to judgement. Literally the word *qasar* meant the reaping of a harvest (Ruth 2:3ff) and figuratively sowing and reaping the correspondence between moral action and its consequences (Pro. 22:8; Job 4:8; Sir. 7:3) in the world. In the prophets, the stress is on the eschatological action of God (Jer. 51:2, 33; Joel 3:13, 14). Philo stresses the ethical and psychological aspect (*On Dreams* II, 23) of reaping and harvest. Reaping and harvest in the LXX literally means “As long as earth endures, seed time and harvest, cold and heat, summer and winter, day and night, shall not cease” (Gen. 8:22). Figuratively, it refers to the eschatological judgement of God on the nations (Joel 4:1ff; Is. 27:11) gathering Israel and rejecting the Gentiles. Late Jewish apocalypticism uses it in the ethical sense (IV Ezra 4:28ff.; 9:17,31 cf. 4:29; 8:6). While the imagery of the threshing floor seems to refer to “harvest” (cf. 4:32, 39) in Ben Sira (6:18-19), the images of ploughing, sowing and harvest depict the process of growth and maturity.
Palestine were engaged in the task of cultivation and sowing seeds the women undertook the task of baking bread (cf. Gen. 18:6). Leaven appears 13 times in the New Testament. While these words refer to baking, metaphorically they suggest the “power of penetration or negative influence.” In the traditional Jewish understanding, the leaven is a metaphor for bad things having great effect. In the rabbinic literature, for instance, leaven was viewed as causing decay and, therefore, became a symbol of evil and corruption of human nature. Jesus speaks about the leaven of Pharisees, Sadducees and Herod (Mk. 8:15 cf also 1 Cor. 5:6; Gal. 5:9). Leaven was a fermenting agent similar to yeast and was added to a batch of bread dough, by adding an unbaked portion of dough saved from the previous batch.

Leaven is considered to be a vital portion of the vegetable world just as blood is of the animal world. The feast of the unleavened bread, originally associated with an agricultural celebration (cf. Josh. 5:11-12), marked the gathering of the first crop signifying a new beginning and therefore eaten afresh without any leaven from the previous harvest. But the emphasis of the parable is on the hidden transformation that is brought about by leaven as in the case of the mustard seed. While leaven is generally understood in the Old Testament and in parts of the New Testament for its negative influence, the aspect of neutrality is not to be missed. The stress in the parables of Jesus appears to be more on the positive aspect of leaven as a powerful life force (Mt. 13:33; Lk. 13:20-21). Small as it is, leaven is essential in making the loaf. The insignificant beginning of the kingdom of God contrasted to its final manifestation in greatness is the stress here as in the other growth parables.

b. Weather Signs: The Bible has several accounts where signs derived from nature bear witness to the fact of God’s dealing with humankind. The first example is that of the rainbow that God established as a sign of God’s covenant not only with humans, but also with the entire creation which he would never again destroy by flood (Gen. 9:12ff.). He promised, “As long as the earth endures, seed time and harvest, cold and heat, summer and winter, day and night shall not cease” (Gen. 8:22). “He makes his sun rise on the evil and on the good, and sends rain on the righteous and on the unrighteous”(Mt. 5:45)

The order in natural phenomenon with its regular seasons and rain are a witness to God’s dealing with nature (Deut. 11:14-17). The Psalms refer to the phenomenon in nature that bears witness to God’s ways in nature (Ps. 19:1-6; 104; 148). In 1 Enoch 2-5, the regularity of nature is invoked to reprove humankind for the lack of congruity in their behaviour. The sun, the moon, the seas, the rivers all function in their order, endlessly without a pause. There is regularity and faithfulness of the created order in performing their task without disruption. Nature serves as a “paradigm of regularity” in IV Ezra. The various natural phenomena: the forest and the sea (4:19); the furnace and the clouds (4:48-50 cf. 8:9-13); the womb and the mother (4:41-42); the sea and the city (7:3-9); base matter and precious stones (7:52-57); seed and sowing (8:14-44 cf. 9:17) are employed by the author to compare and contrast the order in nature and the unfaithfulness of human actions.

Luke 12:54-56 is a condemnation of the hypocrisy of the people in their inability to read the signs of the moral and spiritual storm that erupts even as they interpret nature’s signs of approaching storm and heat. Clouds coming from the west arising out of the Mediterranean Sea is read as laden with moisture that would result in rain. Similarly a southern wind blowing from the desert brings with it the desert heat. If it were from the southeast, it could result in dry winds and oppressive heat. In the Indian village settings even today the farmers are the best forecasters of the weather and the onset of rains, etc., that help them determine the times of various agricultural activities including ploughing, sowing, fertilizing, weeding and harvesting. The accusation against the multitude is that they were well versed in reading the signs of natural phenomena which in themselves are a witness to God’s own nature and dealing with humans and the entire created order. Yet they
preaching, his lifestyle and his commitments explicate to us the meaning of the kingdom (Lk. 4:18,19). Donald and Carroll views “Jesus” parables about a gracious God, his fellowship with outcasts and women, his healing and exorcisms, his conflicts over interpretation of law—all of these become a cumulative definition of what the kingdom of God meant.” The ministry of Jesus had a special ecological connection. The “nature miracles”: three gift or provision miracles (feeding of five thousand and four thousand; Cana wine miracle) which foreshadow the messianic feast (Is. 25:6-9; Mt. 8:11) characterized by an abundance of bread and wine; the two rescue miracles (Jesus’ calming of and walking on the sea), indicate Yahweh’s sovereignty over the sea in creation (Job 26:12-13; Ps. 74:12-15), the Exodus (Ps. 77:16-20) and the eschaton (Is. 27:1; cf. Rev. 21:1).

The mission of Jesus was directed towards predominantly ordinary people. He taught those worked on the farmland and fed the hungry. The fisher folk he called to be his disciples. The poor and the excluded ones, gentiles, the sick, lepers, widows, prostitutes, tax collectors were within the ambit of his mission. While he condemned the rich, the well-to-do, the estate owners, the Pharisees, the Sadducees and the religious leaders, he was compassionate to the women, children and gentiles. Jesus vision included an inclusive society where none is marginalized on the basis of colour, creed or gender. He envisaged a society characterized by belonging and community feeling.

Jesus healed physical ailments such as fevers (Mk. 1:30-31), gave sight to the blind (Mk. 8:22-26), restored paralyzed and withered limbs (Mk. 3:1-6), cleansed skin diseases (Lk. 5:12-16), cast out demons (Mt. 11:28; Lk. 11:20), raised the dead (Mt. 9:18-19, 23-26), and accepted tax collectors and prostitutes within his company. “They (miracles) speak to us of the gracious dealings of Christ with our sick and hungry and tormented souls, and the ancient power of Christ which they reveal is found by faith to be available still to those who but touch the hem of His garment.” Theissen evaluates the New Testament miracle stories in relation to miracles in the Greco-Roman world and is of the view that miracles served the cause of the poor providing help and serving as political critique and resistance in oppressive settings. He releases victims of psychological afflictions (Mt. 4:23-25). Jesus performed a large number of exorcisms, liberating people from the mysterious grip of “evil spirits”. Jesus relates his healing and exorcism activity to the kingdom of God: “But if it is by the finger of God that I cast out demons, then the kingdom of God has come upon you” (Lk. 11:20; Mt. 11:28). This saying climaxes a controversy with Jesus’ opponents (Lk. 12:14-23; Mt. 12:22-30; Mk. 3:22-27) who interpreted his act of power as evidence that he is in league with Satan.

Jesus’ ministry to peripheral people was motivated by compassion. The Gospels present Jesus as associating with those excluded from participation in the religious and social community of Israel. The miracles visualize the gathering of unlikely people into the new congregation. He shares table fellowship with outcast “sinners” and toll collectors (Mt. 9:10; 11:19; Mk. 2:15-17; Lk. 7:31-35; 15:1-2). The individuals portrayed as recipients of miracles: a Gerasene, a Syrophoenician, an official, women, children, the blind, lame, deaf, and dumb are socially marginal and “unclean” people, who needed ritual purification or healing. The extreme cases of blind, lame, deaf, incurable and hemorrhage are figures chosen to represent the unthinkable aspect of the new social arrangement, its difference from the prevailing models. Hengel notes, “His (Jesus’) statements about the ‘poor’ betray an obvious sympathy for the defenseless and place Jesus thoroughly within the prophetic tradition, which sided with the oppressed against the exploiters (cf. Lk. 6:20-26).” The feeding of the multitude takes place away from home, on the other side of the sea (Mk. 8:2-3; 6:35; Jn. 6:1-3) representing the crossing of the social boundaries. The miracles attest the formation of the new congregation in spite of their unconventionality.

Jesus shows an open attitude to the despised Samaritan (cf. Lk. 10:10-37; 17:11-19; Jn. 4). He freely associates with women, including
“WHERE IS YOUR SISTER/BROTHER?”
CARBON CIVILIZATION DEFILES FAITH IN GOD

Dr. M. P. Joseph

In a letter to Theologies and Cultures, Rev. Joy Rewii from Kiribati writes: “We as pastors living in the Pacific are going through serious theological and faith crisis. People come and tell us ‘you preach to us about a God who placed a rainbow as a mark of covenant with humanity promising that humanity will never be destroyed by water. How shall we believe in this God? Why is God not seeing that we are sinking? Water is rising to devour our people and nature.’” Rev. Rewii continues, “Since we have no convincing answers to offer, the only tangible possibility in front of us is to leave the profession.”

Kiribati is part of a group of small island nations in the Pacific Ocean who are threatened by the rising sea levels. Their days are numbered for reasons that are unknown to them.

According to predictions of the Intergovernmental Panel on Climate Change (IPCC), a rise of 1 meter of the sea level would place 17.5 percent of Bangladesh, 6 percent of the Netherlands, and 80 percent of Atoll Majuro of the Marshall Islands under water. Low-lying coastal zones of developed countries and small islands could also be seriously affected. 20 million environmental refugees will be moving out of Bangladesh within few years in search of little land space to live. Tuvalu is the first nation to be disappeared from the face of the earth. Already several small islands in the Pacific Ocean have submerged under water. Raising sea is making the land area of other islands smaller and smaller every day.

People in Kiribati and Tuvalu also lift their voice to God. “Why do we suffer? Is it a punishment of our sin? Is it God’s will that we suffer?” They seldom burn fossil fuels that may cause global warming. Modern industries that are dependant on the carbon-based power is absent in these islands. Without any known involvement in the activities that leads to sea level rise why these innocent need to disappear from earth so fast? Does God punishes the innocent for the sin of the rich?

Traditional explanation offered by Christian theology on sin and resumption are inadequate to address the crisis that people on these Islands face. Lusama from Tuvalu writes:

The Christian world has been operating under the strong influence of retribution theory, which states that sinners face punishment for their sins, and the righteous will be awarded with peace and prosperity. This theory is the strong force behind the fall narrative in the creation story and throughout the teachings of the Bible. We find in the flood narrative the same theory. Noah was righteous, and therefore specially favoured in the face of destruction and submersion of the whole world under the flood. Noah’s innocence earned him and his family salvation on the ark. Traditional reading of the flood narrative [Genesis 6-9] reiterates this theory that the wicked will be punished while the righteous will be saved.”

People in these islands are puzzled by these explanations since they are unable to locate how they are responsible for the cause of their tragedy. They are seeking a better explanation to comprehend the quandary that they encounter.
drinking water is a luxury of the few rich. All the ground water resources have been salinated and people cannot draw any water from ground. Agriculture is rapidly fading into a past memory since land is no more fertile. The greater damage is to the life-sustaining quantities of earth. The threat of long years of drought, as well as massive floods, the advent of new forms of diseases, and other changes indicate that the mother earth is deprived of its ability to nurture life.

The death of the life giving qualities of earth calls for serious inquiry. Environmental scientist may argue that the gravest threat to the life-giving qualities of earth has arisen from the fast growing reality of global warming. The enormous amount of energy and gas substance released in the air as a sequel of burning the fossil fuels is heating the planet.

Several human activities lead to the release of carbon dioxide and other greenhouse gases into the atmosphere. The gases in the outer atmosphere create a layer around the earth and it prevents the heat and radiation of sun bouncing back to the space and as a result the land temperature has warmed up. Burning of petroleum and other carbon substances for industries, automobiles, electricity production, and the like is the top of the list. Cement making releases greenhouse gases in the entire process of its production. Deforestation is another.

**Where is your Sister/ Brother?**

As a result, life is becoming a causality in on the earth. The reckless actions of one species among the hundreds of thousands of various creations, namely humans, cause the destruction of earth as well as other species. In a letter to the member representatives of the United Nations, President Evo Morales of Bolivia writes:

"...[O]ut of the 40,170 living species that have been studied, 16,119 are in danger of extinction. One out of eight birds could disappear forever. One out of four mammals is under threat. One out of every three reptiles could cease to exist. Eight out of ten crustaceans and three out of four insects are at risk of extinction. We are living through the sixth crisis of the extinction of living species in the history of the planet and, on this occasion, the rate of extinction is 100 times more accelerated than in geological times.

These comments were informed by the warning given by Richard Leakey, a distinguished conservationist. Leakey said the world was losing around 100,000 species every year. He said this rate of extinction, twice the estimate he gave four years ago, was imperilling the planet.

The bible is the statement of human-God relationship and it should be read as a mean to locate the appropriate relationship wanted from human community. Biblical writers offer different pointers to iterate this cardinal issue of God human relationship as the locus of Biblical literature. One of such pointers is the two profound questions that appear in the first book of the Bible. Human community is confronted by these questions every day, as it tells the kernel of God human encounters. First question is an enquiry to Adam out of a concern that humans are running away from God. God appeared to be inquiring the reasons for the alienation of people from God “Where are you?” [Gen. 3:9b]. The second question is an expression of the deep distress on the division and alienation among the human community. After Abel was murdered, God appeared to Cain and asked: “Where is your brother Abel?” [Gen. 4: 9]

The question to Cain reveals the interconnected existence of created beings. Creation reaches the comprehensive wholeness when created beings living in harmony [1s.65: 17-25]. In the absence of one of the created beings, the creation remains imperfect. Disappearance of the sister or brother leads to the total inability of nature to become whole. Creation itself has a purpose, as the Biblical narrative argues, and all that is created carries an individual worth and a divine purpose. The extinction of 100,000 species per year is a peril to humanities’ search for perfection in history, but moreover, impedes God’s purpose of creation. The question of “where is your sister/brother” is thus an extended question for which we are collectively responsible to answer.
activity is to provide to the members of the household material needs such as food, clothing, and shelter. However, the regular textbook economics comes with a functional definition: Economy involves the process of transforming the physical resources to enhance human life. In this process humans use tools to extract and process raw materials into commodities suitable for human consumption.

*Four integrated process is involved in this activity.*

1. Extraction of raw materials from a fixed resource base using tools;
2. Transforming the raw materials into commodities using physical labour as well as energy
3. Distribution of commodities under the prevailing conditions and norms of society for consumption, and
4. Return to the resource base or the formation of waste

At least a portion of what has been consumed will return to the resource base since death is a reality. Through death humans return to the earth and become a “slow meal for a million little critters.” However, the major part is the creation of waste. For every one can of stuff produced, 70 cans of waste were made in the process of production.

Conventional economists, however, often hide from the public discourse that: “humans cannot create anything out of nothing. […] The first law of thermodynamics declares that energy (or matter-energy) can neither be created nor destroyed.” However, a majority of the extracted resources from nature’s fixed resource base is turned into toxic waste, when only a small percentage returns to the resource base as renewable.

It implies that, in relation to nature, a growth-oriented economic production is a destructive process. It starts with the extraction from the fixed resource base and ends in the creation of toxic waste threatening the very existence of earth.

To conveniently conceal this destructive character of economics, human society employs a new rationality known as ‘economism’.

Economism replaced economic theories and functioned as an ideology to regulate human life. Economism holds two principles as its cardinal views:

1. For human progress, continuous and enhanced economic growth is possible and necessary.
2. Affluence is an imperative for good life.

The first claim of economism is informed by the (Newtonian) scientific notion that the earth possesses unending sources of needed resources and that science has the capability to transform them towards the satisfaction of human needs. Ideological argument of capitalism augments this claim of economism. Capitalism holds that it has an inner dynamics to generate immeasurable economic growth because capitalism in itself is the greatest engine for accelerating production and consumption that the world has ever seen. Capitalism further argues that it is undeniably desirable and unique since it posses the ability to raise the standard of living of every individual on earth.

**Politics of Modernity**

The views of science and capitalism were employed by the concept of development and modernity. It is important to note that modernity was introduced as a moral principle, and not as an economic prescription for development. Proponents of modernity suggest that for achieving prosperity, peace, and justice, modernity is the only option available for human communities. In the common discourse, modernization equals civilization. Modern and primitive was placed in the same binary opposition as found between civilized and barbarian, progress and reactionary, peace and violence, freedom and bondage, democracy and autocracy, and several other moral terms. The success of capitalism lies in its ability to make modernization as a comprehensive view for social civilization, providing nuances for all areas of life including freedom, religion, education, science, sexuality, production, consumption, and so on.

However, with the persuasive arguments of W. W Rostow, the person largely credited for popularizing the economic theories of
companies such as Nestle Corporation for consumption of these commodities.

The third and most important agenda behind modernity was to ensure the non-emergence of any serious challenge to the pattern of wealth distribution and ownership established since 1492, when Christopher Columbus mistakenly landed in the shores of America. Columbus wrote to the king of Spain: “Without doubt there are in these lands the greatest quantities of gold, for not without cause do these Indians whom I am bringing say that there are places in these isles where they dig out gold and wear it on their necks, in their ears and on their arms and legs, and the bracelets are very thick.”

Several historians attempted to compute the amount of gold amassed by Spain, and some observed that in the first 10-year period of colonialism the amount of gold Spain shipped from Latin America was three times more than the combined accumulated gold of all European nations together. The colonies paid a huge price for the exploitative relations that Europe established. Indian Prime Minister Manmohan Singh, in his Oxford Speech in 2005, iterated this observation: “As the painstaking statistical work of the Cambridge historian Angus Maddison has shown, India’s share of world income collapsed from 22.6% in 1700, almost equal to Europe’s share of 23.3% at that time, to as low as 3.8% in 1952. Indeed, at the beginning of the 20th Century, “the brightest jewel in the British Crown” was the poorest country in the world in terms of per capita income.” Modernity was an attempt to locate how this unequal appropriation of wealth could be maintained.

**Poverty and Development**

Because of its inherent nature of legitimising unequal distribution of resources and privileges, poverty was developing into a volatile level around the world. Poverty started to threaten the foundations of nation states and geo-political foundations of the post war period. Thus it became an imperative for international capitalist forces to address the issue of poverty.

In 1960’s the international capitalist forces therefore had shown a special interest in poverty alleviation; a concern that they had never shown during the time of colonial domination. Poverty was presented as a moral scandal of the independent world in their discourse and hence special programs were designed in the West to address the threat of poverty. Special funds were also established by international financial institutions and governments to create a critical sensitivity towards the issue of poverty. Poverty was perceived as a sin, and a curse for human society. The United Nations declared the age of sixties as a decade of development to fight poverty; almost all the church organizations around the world endorsed the agenda of development as a theological mandate to be addressed with urgency.

Ideology of development provided a simple explanation for the reasons of poverty. People are poor because they are underdeveloped. The poor lack skills, lack capital, and they lack power. Their GNP and per-capita level is miserably low. While “civilized modern countries” maintain a high per-capita income and a high level of GNP, the poor uncivilized people have nothing to show in the economic graph. The need therefore, as the development ideology argued, is to help increase the GNP (the sum total of production and consumption) of the poor masses. Churches, ecumenical organizations, and aid agencies devised special initiatives to enable poor masses to participate in the global market to increase their income level and also to end their marginalization. Development ideology also observed that the alienation of local economies from global market forces will retard economic growth and therefore special efforts should be taken to link markets globally. Moreover, since market is the foundation for economic activities, all sections of society should be brought into the mediating space of the market. The simple argument was that poverty could be eradicated only by increasing participation of the people in the market forces to hasten their sum total of production and consumption.

Poverty and development assumed a special place within the discourse of Churches and ecumenical bodies. It is true that ecumenical
CHRISTIAN RESPONSE TO CLIMATE CHANGE

Rev. Asir Ebenezer

“Slowing – and reversing – these threats (that of Climate Change) are the defining challenge of our age” said Ban Ki Moon, the Secretary General of the United Nations when he released the Fourth Assessment Synthesis Report of the UN Intergovernmental Panel on Climate Change (IPCC) headed by Dr. Rajendra Pachauri. This is a timely reminder to something to which the World has not woken up yet.

The scientist had given us ten years before which we should turn this world around. It will soon be gone, and then the process will be irreversible. The time therefore is now.

I congratulate the Church of South India, a forerunner in many an important issue, and her leaders today for having taken the lead in addressing the issue of Climate Change. I wish to extend a word of appreciation to Dr. Matthew Koshy who has spearheaded this movement both in the Society, and more so within the Church. I pray God that this initiative will bear fruit and that, under God, we will be able to find a way out of this crisis situation.

In this presentation on “the Christian response to Climate Change” I propose to set the issue in perspective, discuss some of the initiatives, address the challenges, and propose certain avenues with which to address the issue as believers in the Christian Religious / Faith Tradition as also participants in its Mission. During the course of this presentation I shall also introduce you to at least a portion of the gamut of information available on the topic, both with regard to the issue per se and its configurations, as also with regard to the interventions that are proposed and attempted by different fora.

The Issue

The most common manifestation of the issue is the rise in temperature across the Globe. Associated with this unprecedented change is the melting of glaciers, mountain floods, increase in sea-levels causing inundation of vast tracts of lowlands and low-lying islands, dropping water-levels in rivers, reduction in food production, increase in diseases, . . . the list goes on.

It is commonly understood that the Green House Gases or the GHGs are the major factors in the rise of temperature. Carbon dioxide, Methane, and nitrous oxide in that order are said to contribute to 60, 20 and 6 per cent to global warming.

It is noted especially in the four reports of the IPCC that human beings are responsible for the present crisis. David G. Hall man in Globalisation and Climate Change (WCC Document) clarifies the issue. He says, “The industrialised nations, representing 20% of the world’s population, account for nearly 90% of annual GHG emissions over the last century, largely through the burning of fossil fuels (coal, oil, gas)”.

Estimates vary on the impact of this devastating change. Christian Aid in ‘time for action on Climate Change’ prepared as an introductory note for the Christian Aid Week 11-17 May 2008 suggests that,

Even if we are able to stabilise CO2 emission, global average temperatures are still likely to rise by at least 2C by 2050. If this is the
or on account of climate change itself. Some even offered legal assistance to fight out their plight.

Agencies funding Intervention projects have also taken the lead to integrate the issue of climate change in the interventions of their partners. Christian Aid took up this issue in this year’s Christian Aid week 11 – 17 May 2008. They had prepared liturgy and prayers, and also provided Biblical Reflection on the subject that Churches over could use.

Governments of countries have responded in multifarious way. The Government of India has recently adopted a National Action Plan on Climate Change. In his intervention at Major Economies Meeting on Climate Change our Honourable Prime Minister Shri Manmohan Singh said “India is determined that even as we pursue our economic growth and development, our per capita emissions will not go beyond those of the developed countries”. He went on to add “this convergence idea is also a challenge to the developed countries”, indicating that quicker they reduce their emissions the greater the incentive for India to follow. The Government of Cambodia has addressed this issue by orienting its National Tourism policy toward a climate change perspective.

Together these governments have addressed the challenge through several international fora. The Earth Summit 1992, The Conference of Parties to the United Nations Framework Convention on Climate Change, the Kyoto protocol (adopted on 11th December 1997), the Bali Road map (2007), the two years of preparation to culminate in Copenhagen meeting of the CoP (2009) regarding the action to be taken after the Kyoto protocol’s period ends in 2012 are important landmarks in the responses to the issue of Climate change.

It is important to note that there has been a movement in the nature of the responses from 1993, to reduction in GHGs to 5% of 1990 level before 2008-2012 (Kyoto), to carbon credit method (Bonn Conference), to linking addressing climate change to trade (WTO meeting Doha), and now to focus on Adaptation.

Churches and Ecumenical Agencies have also responded differently. Today’s meeting is one such response. The Arcot Lutheran Church and the Ecumenical Christian Centre are organising a joint seminar next month trying to understand Global Warming, Global Water Crisis and Global Public Goods. In my own diocese in Chennai we have attempted several measures to address issues relating to Ecology. We have even had an International Conference much like the one organised in Madhya Kerala Diocease recently.

In June 2008 the Lutheran World Federation conducted its council in Tanzania on the theme Melting Snow on Mount Kilimanjaro: A witness of a suffering creation, to draw the attention of the Global Lutheran Communion to the issue of Clime Change.

The World Council of Churches have been motivating Churches in the Communion to address Climate Change. In 1992 with the UN Rio Earth Summit a working group on Climate Change was formed. This group has been guiding ecumenical interventions ever since. The following quote from the WCC document Ecumenical Earth will give in a nutshell what the ecumenical response has been.

The ecumenical activity on climate change has encompassed ethical and theological reflection on key issues resource development, translation and distribution; advocacy at the International and national levels including sustained presence at the United Nations negotiations on climate change; regional support for projects primarily in countries of the economic South, and solidarity and accompaniment with churches in areas already experiencing the impact of human induced climate change, e.g. the Pacific Region.

The document identifies (1) Preventing the Kyoto Protocol from collapsing, (2) developing a framework for the period beyond 2012, (3) increasing focus on adaptation to the impact of climate change, (4) transformation of the prevailing economic model, and (5) identifying new horizons for the witness and role of the Churches as the challenges and perspectives for the work ahead.
preparation in order that one is not found wanting when the crisis tries to overtake us. Can the Church gear her machinery to gird the people to face the situation, especially in areas where it is needed. One of the foci of the Global ecumenical community is to “accompany communities affected by climate change both through ministries of solidarity and presence as well as through practical support of community based initiatives for adaptation projects and renewable energy systems”. I must underline here that in preparing we need to learn from “the rich, community oriented and simple lifestyles of indigenous and marginalized communities . . . (and the) contribution these communities, with their low carbon economies, deliver to the stabilisation of the Climate”

Pragmatism is the other word that comes to my mind when I think of Christianity or the Church and Climate Change. Church is challenged to be a microcosm of the new heaven and the new earth. It can and needs to show the way. If our congregations and her members stand up to this issue and respond in concrete ways, both within the membership and through campaign in the locality, we can take the issue head-on. Energy, Consumerism, CO2 absorbents and land development, etc are some ways we can make a difference. We can make a policy on Climate change and mainstream it in all our programs and projects. Stop the Global Warming website can give us a lot of insights on this.

No Christian response can end without this word – Prayer. We normally tend to overlook it. But I drew inspiration from the words of Sir John Houghton who became the Chairperson of the IPCC’s first scientific assessment. In his address to the National Association of Evangelicals in Washington DC in March 2005, commenting on why he presses on with the issue of climate change, he said:

... I am optimistic for three reasons. First, I have experienced the commitment of the world scientific community ... in painstakingly and honestly working together to understand the problem and assessing what needs to be done. Secondly, I believe the necessary technology is available for achieving satisfactory solutions. My third reason is that I believe God is committed to his creation ... What is more I believe that we do not do this on our own but in partnership with him – a partnership that is presented so beautifully in the early chapters of Genesis where we read that God walked with Adam and Eve in the garden in the cool of the day (italics mine)

I believe we can learn from this and create awareness through challenging people to pray, commune with the creator to keep the world as a garden and cool!

Conclusion

Let me conclude with the pledge of the faith community participants during the United Nations Climate Change Conference, 4 December 2005. We could make it our own, too

1 We hear the call of the Earth
2 We believe that caring for life on Earth is a spiritual commitment.
3 People and other species have the right to life unthreatened by human greed and destructiveness
4 Pollution, particularly from the energy-intensive wealthy industrialised countries is warming the atmosphere. A warmer atmosphere is leading to major climate changes. The poor and vulnerable in the world and future generations will suffer the most
5 We commit ourselves to help reduce the threat of climate change through actions in our own lives, pressure on governments and industries and standing in solidarity with those most affected by climate change.
6 We pray for spiritual support in responding to the call of the Earth
So be it, God!
and living beings. Among these the first component, atmosphere characterizes climate (see definition as given above).

Various external factors influence the internal dynamics of the Climate Systems and these include natural phenomena such as volcanic eruptions and solar radiations, as well as human-induced changes in atmospheric composition. The entire climate system gets the power and energy from the Sun. The radiation balance of the Earth may get modified by three fundamental ways: 1) by changing the incoming solar radiation; 2) by changing the fraction of solar radiation that is reflected (called ‘albedo’); and 3) by altering the long wave radiation from Earth back towards space (e.g., by changing greenhouse gas concentrations). Climate, in turn, responds directly to such changes, as well as indirectly, through a variety of feedback mechanisms.

What is IPCC (Intergovernmental Panel on Climate Change)?

The WMO (World Meteorological Organisation) and the United Nations Environment Programme (UNEP) established the IPCC in 1988. The role of IPCC is to assess scientific, technical and socioeconomic information relevant for understanding the risk of human induced climate change. It does not directly support new research or monitor climate-related data. However, the IPCC process of synthesis and assessment has often encouraged scientific research leading to new findings. The IPCC has three Working Groups and a Task Force. Working Group I (WGI) assesses the scientific aspects of the climate system and climate change, while Working Groups II (WGII) and III (WGIII) assess the vulnerability and adaptation of socioeconomic and natural systems to climate change, and the mitigation options for limiting greenhouse gas emissions, respectively.

IPCC in its study uses four story lines on the basis of which all predictive assessments are carried out through various models. In simple terms, the four storylines combine two sets of divergent tendencies: one set varying between strong economic values and strong environmental values, the other set between increasing globalization and increasing regionalization. The storylines are summarized as follows (Nakicenovic et al., 2000):

A1 storyline and scenario family: a future world of very rapid economic growth, global population that peaks in mid-century and declines thereafter, and rapid introduction of new and more efficient technologies.

A2 storyline and scenario family: a very heterogeneous world with continuously increasing global population and regionally oriented economic growth that is more fragmented and slower than in other storylines.

B1 storyline and scenario family: a convergent world with the same global population as in the A1 storyline but with rapid changes in economic structures toward a service and information economy, with reductions in material intensity, and the introduction of clean and resource-efficient technologies.

B2 storyline and scenario family: a world in which the emphasis is on local solutions to economic, social, and environmental sustainability, with continuously increasing population (lower than A2) and intermediate economic development.

Climate change - India’s stand at national and international level:

Addressing climate change mitigation and adaptation involves many stakeholders, cuts across short and long timeframes, and requires that all development projects be assessed for their sensitivity to climate concerns. The disproportionate impact of climate change will fall on the developing world given our vulnerabilities, inadequate means and limited capacities to adapt to its effects. The urgent need for the country is to improve their quality of life. India is not in favour of slowing down the pace of development at this juncture and that would not be a wise decision as well. Around 600 million people in India do not have access to electricity. We have no choice but to rapidly expand energy use to realize our national development goals and the Millennium Development Goals. Data shows that India’s per capita emission of CO₂ is amongst the lowest in the world at around 1 ton per annum as against a world average of 4 tons. Still, India has stood by her
THE SOCIAL IMPACTS OF CLIMATE CHANGE IN SOUTH ASIA

Dr. Sujatha Byravan
Dr. Sudhir Chella Rajan

Climate change is undoubtedly the most serious environmental crisis Earth has ever witnessed. As the planet enters what many are terming the ‘Anthropocene’ period in its geological history (Crutzen and Stoermer 2000) the impacts of climate change—along with the side-by-side destruction of ecosystems associated with the relentless industrialisation of the land and oceans—will transform forever its physical and biological properties. At smaller scales of time and space societies too are expected to undergo radical and irreversible changes. Indeed, in the context of South Asia, climate change is not only the biggest environmental threat faced by the region but also the likely cause of extraordinary social and economic problems in the course of this century.

While it is virtually impossible to forecast the physical impacts of climate change with great accuracy at the regional scale, given vast uncertainties in input parameters as well as non-linearities in system dynamics, there are several added difficulties in predicting its social impacts. One has to do with ‘reflexivity’ of human agency, i.e., the ability of people and societies to shift course based on their observation of how they are changing the world around them. Another, which counteracts the tendencies of the first, has to do with fundamental problems of collective action, i.e., the disconnect between individual rationality and social welfare, which in turn confounds expectations that ‘rational’ policies will take place in time to address social problems. The only reasonable solution to these difficulties is to use scenarios—a mix of internally consistent qualitative narratives with quantitative illustrations—to tell compelling stories about what could happen to societies under different pressures in the future.

In this paper, we focus on an especially important set of social impacts resulting from climate change in South Asia, namely the displacement of vast numbers of people as a consequence mainly of sea level rise along the coasts and secondarily from drought in rural areas. We examine these impacts through the use of scenarios involving alternative assumptions about whether or not effective policies will be developed in time, given what we know now about the physical changes that are likely to take place.

2. Estimates of Climate Impacts in South Asia

According to the Intergovernmental Panel on Climate Change (IPCC), Asia will be one of the most severely affected regions of the world as a result of “business-as-usual” global warming.

Countries in temperate and tropical Asia are likely to have increased exposure to extreme events, including forest die back and increased fire risk, typhoons and tropical storms, floods and landslides, and severe vector-borne diseases. The stresses of climate change are likely to disrupt the ecology of mountain and highland systems in Asia. Glacial melt is also expected to increase under changed climate conditions. Sea level rise would cause large-scale inundation along the vast Asian coastline and recession of flat sandy beaches. The ecological stability of mangroves and coral reefs around Asia would be put at risk.

The IPCC goes on to estimate that even under its most conservative scenario, sea level in 2100 will be about 40 cm higher today, which will cause an additional 80 million coastal residents in Asia alone to be
In the three South Asian countries sharing a coast line—Bangladesh, Pakistan and India—nearly 130 million people currently live in the area of about 160 thousand square kilometres known as the Low Elevation Coastal Zone (LECZ), which comprises the coastal region that is within 10 metres above average sea level. The bulk of the region’s LECZ population (about 97%) resides in Bangladesh and India, with roughly equal numbers each. This is the result of Bangladesh being mostly in the low-lying delta region of the Ganges-Brahmaputra and India having a very long coast line with many major cities. Figures 1 and 2, respectively, show the spatial extent of the LECZ in the two countries. In Bangladesh, most of the vulnerable population (75%) is rural, whereas in India is almost equally split between both rural and urban groups.

Area of LECZ

<table>
<thead>
<tr>
<th>Country</th>
<th>Area (square km)</th>
<th>Population in LECZ</th>
<th>Urban Population in LECZ</th>
<th>Fraction of Urban Population in LECZ in Cities</th>
<th>Exceeding 5 Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>54,461</td>
<td>65,524,048</td>
<td>15,428,668</td>
<td>33%</td>
<td>6,923,916</td>
</tr>
<tr>
<td>India</td>
<td>81,805</td>
<td>63,188,208</td>
<td>31,515,286</td>
<td>58%</td>
<td>22,503,482</td>
</tr>
<tr>
<td>Pakistan</td>
<td>22,197</td>
<td>4,157,045</td>
<td>2,227,118</td>
<td>92%</td>
<td>17,467,856</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>5,536</td>
<td>2,231,097</td>
<td>961,977</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Summary of Low Elevation Coastal Zone (LECZ) Statistics for 4 Countries in South Asia (Source: sedac.ciesin.org).

The most vulnerable communities will include those having maximum exposure to the stresses as well as those with the least capacity to respond and ability to recover. The physical changes will themselves take place in abrupt, non-linear ways as thresholds are crossed. In turn, the least resilient communities (e.g., those dependent on subsistence fishing) will be the first to experience ‘tipping points’ in their life systems, so that the only livelihood option available to them will be to abandon their homes and search for better prospects elsewhere. As ever larger numbers of these people pass thresholds in terms of their ability to cope, societal tipping points will be crossed,
of employment in the largest of these cities which happen to be along the coast and are especially vulnerable to subsequent sea level rise.

4. Migration Scenarios

As indicated in the previous sections, climate change will likely trigger the mass migration of individuals and their families primarily because of livelihood loss but, in the case of sea level rise, also because of the direct loss of land and homes. While we can be reasonably certain about the broad trends in physical, social and economic changes over the next 50-100 years for different emissions trajectories, there are substantial uncertainties when we try to improve scales of spatial and temporal resolution beyond those obtained by most climate models (e.g., to square kilometres or specific months of the year). Furthermore, as we discussed earlier, there are non-linearities and threshold effects to consider when anticipating when and how much migration might occur as a result of the adverse impacts of climate change. The estimates that are made in this section should therefore be considered as being roughly indicative and by no means exact forecasts of numbers of people expected to be displaced from their homes under two different climate change scenarios.

The two scenarios we choose are first, a Business-as-Usual (BAU) scenario that results in atmospheric concentrations of CO2 that exceed 750 ppm (similar to A1 SRES scenario) by the end of the century and a Policy scenario that limits concentrations to below 450 ppm (more aggressive than B1). The BAU scenario causes average global temperatures to rise by 4-5°C while the Policy scenario limits the increase in temperature to below 2°C.

Various conservative assumptions were used to estimate the sea level rise associated with these global average temperature changes and the corresponding impacts on the residents of South Asia living in the LECZ. First, because of the uncertainty associated with the break up of land ice in the Antarctic and on Greenland, we consider three possible options for the BAU scenario, 1m, 3m and 5m of sea level rise in 2100, representing a low, medium and high estimate, respectively. For the Policy Reform scenario, we use an estimate of 0.3m sea level rise in 2100, which corresponds roughly to the mid-range of the IPCC B1 scenario.

Furthermore, we postulate that sea level rise will take place very gradually in early years, but will accelerate towards the end of the century, consistent with the understanding that various positive feedback processes will cause ice break-up and melting to gather speed only towards the middle to end of the century. We also assume that there is a similar non-linear response to rising average sea levels for communities living along the coast. For instance, at modest increases in sea level, the motivation to leave a coastal region may be relatively low, as people learn to adjust to changing physical and economic conditions. As the average sea level continues to rise, coastal inundation, saltwater intrusion and storm surges will become more intense and people will find it increasingly difficult to stay in their original homes and will look for ways to migrate inland. Figures 4 and 5 below show, respectively, how we have modelled the increase in area affected by sea level rise and the way in which people’s migration patterns are impacted. Thus, in the BAU cases, where the impacts of sea-level rise are expected to be catastrophic only in later years, we expect that coping strategies would break down quite soon in the flood zone regions, so that by 2045, the entire affected population would be forced to migrate inland, primarily to cities. In the Policy scenario, we also assume that a certain degree of adaptation is built into the framework, so that some form of evolving coastal protection is included to reduce the impacts of sea level rise.
sources at their disposal to shift occupations as the climate changes. One estimate of the rural population likely to migrate to urban areas specifically because of their double exposure to climate change and globalization. While the number of migrants identified using this method is substantially lower than in the case of sea level rise, they together constitute a significant strain on the resources of government and on urban centres.

Table 3. Regions in India that will likely experience the highest levels of out-migration due to sea level rise and drought/globalization.

Figure 5. Estimate of rural population likely to migrate to urban areas specifically because of their double exposure to climate change and globalization under BAU conditions.