POPULATION DYNAMICS, SUSTAINABLE DEVELOPMENT AND ECOLOGICAL CRISIS : A CASE STUDY OF SOUTH ASIA

Dissertation Submitted to the Jawaharlal Nehru University
in Partial Fulfilment of the Requirements
for the Award of the Degree of
MASTER OF PHILOSOPHY

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1992

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DECLARATION

Certified that the dissertation entitled POPULATION DYNAMICS, SUSTAINABLE DEVELOPMENT AND ECOLOGICAL CRISIS : A CASE STUDY OF SOUTH ASIA submitted by Mr. Ranjit Chakraborty in fulfilment of Nine Credits out of total requirements of Twenty-four credits for the award of the Degree of Master of Philosophy (M.Phil.) of this University, is his original work and may be placed before the examiners for evaluation. This dissertation has not been submitted for the award of any other Degree of this University or of any other University to the best of our knowledge.

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Dedicated to Mom and Dad

PREFACE

The scientific and technological developments of the past have brought many benefits, material and otherwise, to mankind but they have also been responsible for many serious problems. Here, in this work, attention is focused upon one, perhaps the most important of these problems in South Asian Region : the relationship between Population and Sustainable Development and Environmental Crisis. The accelerating growth in South Asian population in parallel with Economic growth has brought stresses and strains upon the Environment of such seriousness and complexity that many believe we are heading for Armageddon in which the forces of evil will lead to Doomsday.

Most of the South Asian Countries are facing almost similar problems. It is the intention in the ensuing chapters to discuss some of the numerous problems and their solution relating to Population,Sustainable Development and Ecological-Crisis.

In the first chapter various problems are discussed, in the second chapter, Population Dynamics of South Asia are analysed, third deals with the Environmental Crisis and Sustainable development. In the fourth chapter, policies related to Population Growth, Environment and Development are discussed and in final chapter, the role of Non-Government Ogranisation (NGOs) are done with some case studies on India.

I hope the reader will find this work a clearly written, logically structured and reasonable balanced treatment of the subject, which also achieves an efficient and indiscriminating review of the 'highlight' of the preceding literature.

Date :- 18th May 1992

RANJIT CHAKRABORTY

ACKNOWLEDGEMENTS

I take this opportunity to greatfully acknowledge the goodwill and valuable suggestions recieved from Prof.R.C.Sharma, my teacher, my guide, for his contribution in this venture.

I deeply acknowledge the debt to all the authors, whose works are refered in this work. I express my heart-felt thanks and gratefulness to Dr. M.Mohanty, Suresh Kumar, Manjir, Sanjay, for their active participation and help recieved throughtout the long period of preparation of this monumuental work.

I must express my heart-felt thanks and gratefulness to my parents and my brother, Biswajit and my cousin Rana for their encouragement and inspiration. I am thankful to Dr. K.K. Majumdar, for guidance, and encouragement.

Finally, once again I express my deep regards and gratefulness to Prof. R.C. Sharma for the valuable suggestion, and deserve special mention.

I am also thankful to Mr. Manoj Chhabra of M/s Sam Compucare & Graphics for typing this dissertation.

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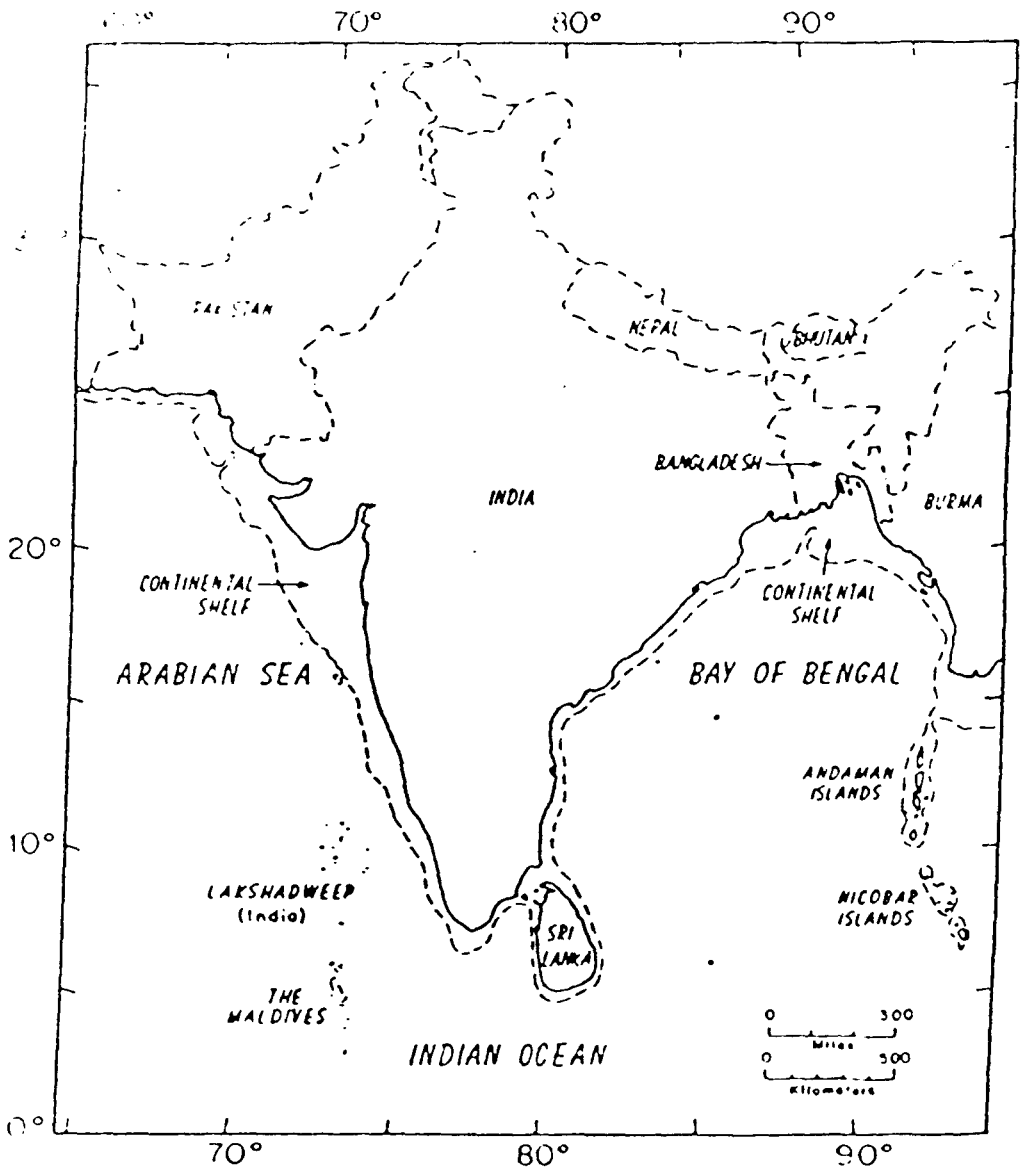

1. INDIA
2. PAKISTAN
3. NEPAL
4. BANGLADESH
5. SRI LANKA
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INTRODUCTION

Environment includes air, water and land and the interrelationship which exists among and between these basic elements and human beings, other living creatures, plants, mirco-organisms and property. Mans activity coupled with the constant interaction between the forces of nature, produce a complex network of interrelationships, which is delicately balanced and vulnerable to disturbances. Till the 1970's, environment was primarily defined in terms of pollution and its physical and biological effects. However, new perceptions and fresh insight related to development and environment have broadened the context tremendously to includes a host of problems such as floods and famines caused by overuse of land and soil, deforestation, diseases caused by unsafe water supplies and polluted air, malnutrition among the youngs and vulnerable extra ordinary pressure on natural resources caused by increasing population as environmental problems.

This new preceptions clearly links environment with development and therefore, extends the specturm of environemental dimensions to includes not only the bio-physical components, but also the Socio-cultural, Economic, Political and administrative components. Once this inter linkage is clearly understood, it is easy to deduce that for

the sustanance of a Socio-Economic- Political system, aimed at the peoples welfare, protection and conservation of envirnoment are as important as economic development and growth. So when the environment deteriorates, it is a sure sign that the quality of life is also deteriorating. Protection and improvement of environment are therefore, national imperative for sustainable development.

The traditional paradox of South Asia, that of a resource-rich region inhabited by poor people, has been given a new dismension as a result of the development strategies. South Asian countries face a heavy burden of providing health services, food resources, educational facility etc. Reducing the population growth rate, that is population planning, is not an end in itself and is not a substitute for promotion of development, but it is often an essential and necessary element in planning for economic growth and social progress. South Asian nations envirnoment and development are not seperate challenges; they are inexorably linked. Development can not subsist upon a deteriorating environmental resource base; Environment can not be protected when growth leaves out of account the costs of environmental destruction. These problems can not be treated seperately by fragmented institutions and polices. They are linked in a complex system of cause and effect.

In south Asia, the environmental stress and uneven development has increased social tensions. The distributions of power and influence within society lies at the heart of most environment and development challenges. The regional and sub-regional integration should be made a prime instrument of economic growth, environmental safety and regeneration etc. Co-operation offers a viable strategy for accelerated economic development and structural transformation among the developing countries. A reduction in the rate of growth of population in developing countries and a reduction in consumption of resources by developed countries would aim at a balance between population and resouce. Awareness of the problems faced by environment would enable people to take appropriate decisions to make the earth habitable for future generation.

1.1 Proposed study and objectives

The proposed study will give an account and reflect the South Asian countries mutual co-operation, development of the environment without degradation and promotions of awareness undertaking environment and population.

The following objectives will be taken care with regard to South Asian countires.

1. To assess the magnitude of population growth, resulting resource inbalance and environmental complexities in South Asian Region.

2 To identify the type and nature of environmental problems (Eco-crisis) owing to population pressure and the rapid process of Agricultural and Industrial development etc.

3. To see the basic dilema for the sustainable development in the process of environment-Development Syndrome.

4. To focus on the local, National movements and human cry over environmental related issues in South Aisa with reference to India.

5. To review the environmental polices and legislations under taken by the various governments in South Asian Region with a view of sustainable development, Environment and population numbers.

1.2. Soruces of data and methodology.

The country monograph, journals, articles, reports and explorations of the regions survey have been consulted. World resources, United Nations Published papers, books and reports are rich in Data for this region.

Beside these clippings from news papers relating to day to days information, officials statements and regional co-operation memorandums etc, are to be taken into the consideration with serious note. Collected data and informations will be analysed, synchronized with the help of quantitative and qualitative processes and would be

represented vividly through cartographic Techniques.

CHAPTERIZATION

In this work, chapter one begin with identifying the principal problems in the Population/Resource equation that are ubiquitious in South Asia. In this, numerous problems relating to human population and development and its impact on environment. In the later stage this chapter studies the interrelationship between populations, Environment and development in South Asia.

Chapter two deals with the population dynamics of South Asian and with the resource imbalances resulting from the growth of populations.

Chapter three focuses on environmental crisis that are arising due to the population growth and various developmental activity, and its final solution to correct these inequilibrium in South Asia. Sustainable development provides the base for an integration of environmental policies and development strategies, It seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future.

In chapter four various policies acts and regulations are studied in relations to population, Environment, Development.

Chapter five primarily focus on the role of Non-Governmental organisation in Environment, Development and populations, and their impact on South Asia with Special focus on India.

3. LITERATURE REVIEWS

It has been said there are as many opinions as there are people : certainly over the Population/Resource issues are conflicting views. There are some who think that there are already too many people on the earth, that famine and death for many millions is inevitable, and that ecological doom is impending. Both The limits to growth (1972) and A Blue print for survival (1972) set out quite clearly that there were limits to economic and demographic growth. Book Population and Resources by H. Robinson (1981) deals with topic from historical perspective to future trends and possibilities, Solution of resource and its impact on population growth.

A J Coale and E M Hover in population Growth and Economic Development in low-income Countries (1957) deals with the demographic prospects and their implications for economic development in low income countries like India.

Several books are also relevant in context with planning like the book by Navin. E Joshi, Planning and Technology in Developing Nations (1984) deals with the

technology and planned method in over comming the regional disbalance in ecomnomic growth and development. M. Blomstrom, B. Hettna in Development theory in Transition (1984) deals with various thought regargding development from keynes to dependency school.

Related to Eco-development by R.Riddell (1981), nicely elaborated various aspects of environmental sound development process and causes and consequence of badly induced developmental aspects in developed as well as in underdeveloped regions of the world. In An introduction to our earth and environment by J. Singh and D.N. Singh (1988) deals with various environmental issues, and hazards and seclected solutions for them. Population, Resources, Environment : issues in Human Ecology by Elrlich P, Ehrlich A. H (1972) deals with the inter action, and interplay of the three factor in Human biosphere.

In South Asia : Stability and Regional Co-operation by M.S Agwani(ed) (1983). Deals with various measures and remedies and co-operation in various areas in South Asia. Dr T.P. Bhats Co-operation for Economic Development underlines the advantages and benefits regarding regional deteriorating environment development factor are discussed.

Studies in Environment and development by Dr. R.B Singh (1988) has finely underlines the various factors that lead to eco-disaster and gave an alternative strategy for an

integrated approach for environment and development.

Philip. M. Hauser (ed) book on World population and Development (1979) has underlined the various challenges and bright aspect of population growth and overall development of the Nation. Ecology 2000, changing face of the Earth by Sir Edmund Hillary (ed) (1984) deals with the environmental problems in relation to food, hunger, poverty etc in various location of the globe and its consequence on environment. Environmental Resources: The crisis of development by H.S.Mathur (ed) (1988) deals with the factors and aspects of development that leads to eco-disaster.

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G.S Sharmas, Environment, man and nature (1989) deals with the interaction of the intricate web of man and environment and over all outcome of it.

The population crisis and the use of world resource by S. Mudd (ed) (1984) deals with the population growth and its impact on National resource and later effects it produces. The Economics of development : problems and policies by M. MeQueen (1971) deals with the policies and prospects in relation to the ever increasing population growth on one hand and fast developmental works on the other.

Population Transition in South Asia by Ashish Bose, M.K premi (ed) (1992) deals with the demographic data in the form of series of papers on vital rates, female labour force etc in South Aisa. This provides a valuable source of population dynamics for SAARC Countries.

In South Asian journal, works of A.Hussain, Sustainable development and Regional co-operation (vol no 3, 1988) deals with the South Asian comparative analysis on development, environmental degradation and population growth. It also highlights the role of co-operation among them to elevate effects of mismanaged programmes. In

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In Indian Journal of Regional Science, R.N. Bhattacharya's, The Development and Environment : A Perspective for hill region (Vol XXII, No.1, 1991) deals with the environmental aspects of hill regions with emphasis on economic and developmental activity.

In The Science of the Total environment, T.O. Riocardans, The New environmentalism and sustainable

development (Vol 108, No. 1/2, Oct.1991, p. 5-15) deals with the new approaches and methods in sustaining environment and development are taken care of.

In relation to politics, that play an important role in planning implementation and networks, book by W.H. Wriggins and J.F. Guyot, Population, Politics and Future of Southern Asia (1974) is of noteworthy. In this author has tried to generate politics in favour with future of this region. Similarly, T.S. Epsteine's, The Politics of Population (South Asia Journal, Vol.8, No.2, p. 143-7, 1975) again deals with the population with the heterogenity of politics and demographic Trends, cleavages in the society and inequality in the capital factor.

CHAPTER : ONE

SOUTH ASIA'S CONCERN : THE DANGEROUS DIMENSION

1. INTRODUCTION

2. STATEMENT OF THE PROBLEM

2.1. Population as number and resource
2.2. Quantity verses Quality in Population
2.3. Nutritional status and Fertility
2.4. Women Development and Education
2.5. Land Reforms and Development
2.6. Economic Growth and Development

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1. INTRODUCTION

The most distinguishing feature of the present times is that man has become the architect of his future. The unprecedented increase in population and the even greater increased in the scale and intensity of human activity, which have occured largely in this century, have been brought about by the growing Mastery of Science and its application. This has produced prosperity, standards of life and expanded opportunities beyond what earlier generations could have imagined. But these developments have damaged and deteriorated the Ecological systems and caused widespread destruction of the natural resource base on which human life and well-being depend.

The benefits of the dramatic developments have accrued largely to the minority of the world's people which live in the highly industrialised countries, who are also to blame for much of the damage and the risks they have given rise to the future of humans. The majority of the people living in the less developed countries share the costs and the risks of these changes, which, however, remain remote from their immediate concerns and priorities. For these prople, at early stages of Economic Developments, see the changes as the only means of achieving their expectations and aspirations for a better life. And, many continue to live in a state of dire and debilitating poverty the day by day where in

imperatives of survival drive them to exploitative practices, which destory the very resource base on which their future depends.

2. STATEMENT OF THE PROBLEM

The importance of the study of population in context of developing countries like ours is well known.

The unfortunate part about the South Asian population and development planning is that instead of treating population as a potential resource, it is treated as a source of unemployment and poverty with the result from being an asset, it becomes a liability.

Policies of the state are largely responsible for this state of affairs. They have resorted to population restriction measures with a vengeance as though population is the Villian of the piece. And such a lop-sided emphasis on Family Planning measures coupled with the unscrupulous method followed in their implementation have produced undesirable results. A deeper analysis of the issue would reveal that population playing a dual role in process of development and environment.

In fact population increase or what is called over population is reckoned as such only in the context of Stagnant production or under production. Population is thus a relative term and not an absolute term. If population is a demographic entity, then production is an Economic Entity. Both are however assciated. When appropriate measures are

undertaken by the state as in China, Japan, Singapore, Taiwan etc., substantial production increase takes place and that checkmates population growth. As a consequence it may become under population. Therefore over population or under population in demographic sphere is determined by under-production or over production in Economic sphere. In essence reproduction (Demography) and production (Economics) are negatively correlated. When one entity is more, the other is bound to be less and vice-versa.

In developing countries, poverty and Environmental degradation are caught up in a "Catch 22" cycle of cause and effect. Breakthrough and breaking the cycle will require improved infrastructure, health care, education, fair and stabilized commodity prices and above all large scientific and financial investments by developed nations. The war, hunger, disease, illiteracy, political instability, regional imbalances and Enviromental degradation all are directly related to runaway population growth and rising inequality in the society and sprawls of poverty. In such an explosive situation where reproduction is more than productions, the offshot is the distruction of the environment and the Ecosystem. Rapid population growth in South Asian Countries reduces investments in raising the quality of life, threatens the balance between the populations and the national resources, enhances serious management problems of the

resources resulting to permanent environment damage. Setting right the environment would be a arduous and protracted affair even if the imbalance between reproductions and production is corrected by suitable state policies and programmes is due course. This is for the simple reason that environmental degradation could have been caused in a brief time span but rebuilding the environment would take a long time, for it need lots of education, persuasion and investments.

The Environmental problems which we see today is no doubt, directly or indirectly related to and with the root cause - the poverty phenomena. Problems like deforestation, soil Erosion, floods, landlides, drought, slums, air and water pollution are all directly or indirectly related to the poverty phenomena. In developing country like of this region, environmental crisis and poverty are inseperable. In South Asia, the rural poor largely depends directly or indirectly on agriculture and therefore on the environment for their income and livelyhood. As a result, environmental problems are inextricably limited with the problems of growing population and regional unequal development.

Very closely associated with poverty phenomena is widespread regional economic disparity, has been proved conducive to disrupt the ecological balance. Thus in order to have a sound system of development, utmost care is

needed for Homogenous sustainable development, without destroying our fragile environmental quality and biotic resources.

In the case of South Asian Region population dynamics and development plays a key role in the national as well as international politics. Differential rates of population growth in combination with differential rates of Technological growth contributed to interregional competition and sometimes to conflict, increase in military investments etc.

2.1. Population as Number and Resource

One of the greatest feature about population is, that it represents both a number as well as a resource. Till now Demographic planners have bothered about the number part of the population and went on a fruitless path,and development planners have never bothered about the resource part of the population and went equally on a rootless path. They have gone about planning the capitalist way supported by borrowed capaital with result the number part of population swelled while the resources part of the population languished and remained largely untrapped leading to all knids of Economic and Sociological problems. For the past over 200 years, scholars and policy makers have been debating the questions of the relationship between population and development

Controversies have raged about the future of the world because of increasing populations and depleting resources.

If the human resources are utilized in a proper way, then the other aspects of related development will follow as has happened in many South East Asian Nations. The intensity of human activity has accelerated much more dramatically than population growth, Industiral production has grown more than a hundred fold.

Even so, the population scientists have continued to a relentless campain expanding large amount of scarce funds and human energies and yet not able to break the ice. It is because the solutions to the problem lies elsewhere. For the poor, children means economic propositions. The marginal cost of rearing an aditional child is near zero as all the family members share the same accommodation, food, clothings etc. however much inadequate they may be. These problems of inadequacy are not the problems to them though they mean too much for us. A curious thing is that the eligible couples belonging to this poverty-stricken strata are largely untouched by the population planning measures.

2.2. Quantity Verses Quality in Population.

The population planning strategy designed and put through hitherto has produced a reality where populations of high quality is getting reduced and correspondingly populations of poor quality is being increased.

2.2 Nutritional Status and Fertility

It is empirically observed that women of poor nutritional status are found to have more number of children. In other words such women have high fertility status. It only supports the view that poverty is the breeding ground for population explosion.

On the other hand, the women of high nutritional status by and large do not have big families. Such well to do women becomes infertile after one or two children due to strong nutritional levels. Hence the need for economic development of poor families so that some extra nutritional dose is given to their women.

2.4. Women Development and Education

Literacy rates and per capita income levels are positively associated. All developed countries have 100 percent literary. A literate population will be enabled to participate in worthwhile productive generation and use environmental judiciously. Government efforts in promoting literacy are not that effective or fruitful. Governments seems to be less aware of the harm done to the country by the neglect of primary education. Presence of large scale illiteracy is worse than a natural calamity.

The best contraceptives for this is to educate the women, future mother of their child, which will help to

generate a literate society. "Female education is the best strategy to combat over population in developing countries".[1] It is urgent to set up a fund for female education from the world bank funds would be politically possible and would have enormous effect.

In the poorest countries like of this region, where many families struggle to pay for food, effective modern contraceptives are a luxury item.[2]

It has been pointed out that for the success of the programme depends on a variety of factors, such as female literary, status of women in the given social milieu, marriage age of women, infant mortality rate, awareness about mother and child health care and to large extent, the quality of delivery system of family welfare services in the states who carry out programme.[3] Besides the deterrent disincentive policies, it is essential that we pay attentions to two important aspects. Firstly, it is almost impossible to achieve a break through in Birth control unless the status of women is raised. One of the most important ingredient here is in female education. The directive principles of state policy had called for provision for compulsory universal education up to the age of 14 by 1960. Thirty years after, this has not been achieved even for males. In cae of females, the positon is really bad, only 39 percent of females in India as a whole in 1991[4]. In

countries like Sri lanka and Maldives this sector have been emphasised and greater number of females are educated.

2.5 Land Reforms and Development

Dr. Cherten Bowles in his book, "Making of a just Society" published on the basis of a research study of developed and developing countries has stated that Japan's phenominal post war development was attributed to effective implementations of land reform and cent percent literacy. Ownership rights enabled the peasent families to put their souls on better farming operations and produced maxmimum per unit of land. In India, though more than 66 land ceiling legislations were enacted by states, very few got arable lands. Hence agricultural development, maximising employment and income has not taken place. Apart from this shifting cultivation practiced by Hill Tribal societies is again responsible for deforestation, soil erosion etc. "Jhumming has been exerting a negative impact on the land and fragile ecology of the North Eastern Tribal belt and blotting out of water sources on hill tops".[5]

2.6 Economic Growth and Development

The mere fact that poverty continues unabated is a sufficent proof that economic development has not taken place or seeped to the grass level. Economic planning practised hitherto resulted in certain growth but not in development.

Growth also took place in a limited sector and that too in a limited scale affecting only the top 15 to 20 percent of the Indian Economy. These sectors constitute the resourceful minority which have attracted all development resources released by the plan processes leaving the resource less/asset less majority high and dry. This is the sad commentary of Indian Developmental Planning producing growth for a few and not development for all.

Growth based on unequal social structures and dictated by principles of low Economic costs and high profits for each farm has heavily depleted the South Asian stocks of non-renewable resource such as oil, coal, minerals, plants, fishers and eroded much valuable top soil and genetic diversity and contaminated air, water and soil.

Development assistance to the "have not" is linked to ecology, but the Montreal protocol illustrated that the west is interested in maintaining the Status quo when it comes to their "consumerist" way of life "But this lifestyle requires inputs from the Third world, which cannot be regenerated or replaced".[6]

But even this growth, according to a world bank report (1988) has substantially slowed down in the developing countries. The investment have fallen to levels where even minimum replacement needs can no longer be met in important sectors of their economics. The debts are growing, the

severity surpassed that of the great depression. The basic problem of the poverty and growth in the developing countries of South Asia can be stated simply, The growth is not suitably raching the poor and the poor ones are not significantly contributing to growth and development.

Indian planners have adopted the capital intensive technique using more of scarce capital and less of abundent labour as was in vogue in Western Countries. It was forgotten by the chairborne Economists that the Western Countries have followed what was dictated by their resource endowment. Our country has follwed what they have followd and not as dictated of our resource endowment. The direct outcome of this is mass scale unemployment of the labour resource and large scale borrowing of capital externally and internally.

3. POPULATION AND DEVELOPMENT

It looks as though something is basically obsessing the framers of the family planning , welfare policy. The funny things is that they admit that what ever economic growth is taking place in the country has been cancelled by population growth. "This veritable avalanche of people threatens to sweep away a significant part of the achievements of Modern India".[7]

It shows by implications that they subtly accept the failure of the policy followed till now and also openly

accept that if the rate of economic growth is more than that of the population growth, then the population problem is resolved.

Agricultural development and modernization has built an advantages of automatic development of agriculture based industries. Similarly small scale industrial sector could boost up and maximise employment creation and income generation resulting in poverty eradiction.

The UNO in its book on "Measures for the Development of underdeveloped countries" has rightly stated that development is the resultant factor of a happy wedlock between unused and underused man power resources on one hand and unexploited and under-exploited natural resources on the other hand. The UNO also defines under-development as the co-existence to a greater or lesser degree of unused and underused man power resources and unexploited, under-exploited natural resources. A quick look at our scene would reveal that dry lands constituting about 75% of arable land is mostly under utilized and to certain extent it is unutilized. To the same extent man power resources are also either unused or underused. If both are brought together, the by-product would be development. This is real development and its coroallary would be the automatic options for small family.

4. POPULATION AND RESOURCE

The subject of Population and Resources in one form or another is widely debated. The accelerating growth in population running in parallel with Economic growth has brought stresses and strains upon the regional environment of such seriousness and complexity that many belive we are heading for Armageddon in which the forces of evil - man's overfecundity, greed, selfishness and destructiveness - will lead to doomsday.

In the case of South Asian Countries, natural resources are unevenly distributed and are fast depleting because of the fast growth of population. Country like India, cannot afford the present rate of growth of 2 percent per year in its population. Already, there is tremendous pressure on the resources for providing even the basic needs such as food, housing, education, health etc., to the country's existing population. If present rate of growth is not checked, the demand for even the basic facilities and services would far outstrip their supply and there would be a serious impact on our socio-politico-economic development, the quality of life both in the rural and urban areas and on the Environment. All ready the big cities are heading for an enviromental disaster due to their very high growth rate resulting in congestion and pollution. Population control must become Indias top priority, just as in the economic shpere and

natural resources management.

Scarcity of key materials, especially minerals, could feasibly lead to two development having dangerous political repercussions and social unrest. The burgeoning population is imposing an increasing burden on the limited and continually degrading natural resource base.

5. POPULATION AND ENVIRONMENT

Population concerns are among the most complex and controversial issues. There is however, little disagreement that rapid population growth not only negates the gains of development but it is also seriouly undermining the habitability of this region. Population growth is seriously threating the delicate balance between human and their environment. Much of the environment degradation is the result of the desperate search of the poor and the landless for such basic needs as fuel, food and water. Economic problem and widespread poverty are major consequence of rapid population growth. "Human impact on the bio-sphere is the product of the number of the people multiplied by how much energy and raw materials each persons uses or wastes. [8] The growing evidence of deforestation, Industrial pollutions, greenhouse effect, acid rain, ozone depletion, etc., are the direct consequences of human interference with the nature and development. In order to resolve the population, environment conflict, a major shift in our attitude and development

prioritities is needed. Ecodevelopment through ecolising economy by respecting natural laws and processes needs to be designed to promote green development on sustainable basis.

6. SOUTH ASIA'S MAJOR CHALLENGE : POVERTY

Poverty in Rural South Aisa remains the most formidable challenge to development, especially in low-income regions where the world's poor is concentrated. Economic growth was once regarded as the principle instrument for reducing poverty, but the trickle-down theory has not been found to work in large areas of rural asia., where highly unequal distribution of land and other assets , declining land-man ratio, lack of growth in productivity and a large increase in the number of rural households dependent on agricultural labour as major source of income have worsened the situation of the landless poor. In Bangladesh, the percentage of rural population below poverty line increased substantially. In Nepal indirect evidence shows that the poverty level has increased. Similarly, in Sri Lanka, the percentage of population below poverty line increased substantially from about 18 to about 26 in rural areas between 1973 and 1987. Thus growth and social change must, therefore, go together and direct attentions be given to the removal of poverty. Greater equality is a precondition for lifting a society out of poverty.

The South Asian experience leads to the conclusion that a strategy of employment led poverty alleviation has a greater probability of sucess than any other approach, at the same time, organisation of the rural poor can help to tilt the balance of political power between the poor and rich for the adoptation of effective anti-poverty strategies, employment generation has to become an integral part of the development strategy as a whole if there is to be a lasting contribution to the alleviation of poverty, both rural and urban. Human development through the expression of education and health services assume great importance for successful anti-poverty policies which are centred on redistribution of land or assets or raising of income through short-term employment programmes. This area needs special mentions as this is one of the major source of population growth in search of better and more earning and destruction of the fragile environment and retarding the developmental progress and achievements in South Asian region as a whole.

7. POPULATION, ENVIRONMENT, DEVELOPMENT : INTERRELATIONSHIP IN SOUTH ASIAN REGION

Historically, regional distortion and discrepancies have been deemed to be latent in the very process of economic growth of a country. But then, they also created an in built trend between the developed and underdeveloped areas within a country towards a progressive elongation in respect of their

developmental distances. The consequence has been that even a proportionate simultaneity of investment in these areas does not make the latter able to catch up with the progress in the former. It is time that the effects of concentrated developmental investment are cumulatively disastrous as they lead to the neglect of a variety of Regional opportunities apart from involving waste. It is therefore necessary that within the resources available, every efforts must be made to provide for balanced development in different parts of the region, so that ultimately each region becomes a growth rate and growth centres, for this the underdeveloped regions should have the concentration of innovations, investments and skills. It is only then the process of polarized growth, development will transmit growth via interlinkages and external economics of the various sectors and regions.

Today, everyone is well acquainted with the environmental problems. It we analyse the environmental problems, we find the root cause of there problems lie in poverty. Poverty, which acts as a true reflector to reveal the true image of our environmental crisis. The environmental problems which we see today are no doubt, directly or indirectly related with the root cause - the poverty phenomenon. Problems, like deforestation, soil erosion, floods, landslides, draught rise in temperature, slums, air and water pollution are all directly or indirectly related to the poverty phenomena. In developing countries, environmental problems and poverty are inseperable. The rural

poor largely depends directly or indirectly on agriculture and therefore on the environment for their income. As a result, environmental problems are inextricably linked with the problems of growing population. Thus the environmental preservation depends on complex interaction of income and population pressure that contribute to both environmental and agricultural in stability.

Deforestation is the first indicator of environmental degradation. Despite various forests development programmes, there is a growing reduction of the proportion of forest cover in various regions of the world like India etc and other less developed parts of the world. "Slum phenomena" which is a paramount indicator of "urban poverty" which is nothing but an overflow of rural poverty especially in metropolitan regions of South Asian Countries.

Very closely associated with poverty phenomena, widespread regional Economic disparity has been proved conducive to disrupt the Ecological balance. For example in India, there is vast regional economic levels of development variations. Therefore, it has always been a tendency that generally, people move from poorly developed areas to a comparatively well off regions. This type of vast economic variations had also given rise to increase in population pressure on natural and man-made resources. As a result haphazard growth of urbanization and industrialisations has taken place, which again become a major cause of air, water,noise pollution and has ultimately resulted in

disrupting the man-environment relationship.

The quality and quantity of population, strictly speaking, are not inversely related. But unfortunately, it has turned out to be the case. High fertility and rapid populations growth are considered by most demographers and economists as major obstacles to economic and social progress. It is being recognized increasingly that a moderate rate of population growth could lead to considerable improvements sooner in the economic and social conditions in most developing countries.

The relationship between population and development was one of the issues on which views were most sharply divided at the Bucharist world population conference in 1974. The Western Developed countries argued that population explosion seriously retarded development and that measures to reduce birth rates and excess population growth rates would improve the quality of life of individuals and help social and economic aspects of the development process. Many of the developing countries agreed with this view, but emphasised that population was not the sole or basic problem. Others were insistent that only rapid development and a restructuring of the international economic system could produce the social conditions necessary for lower birth rate.

The increasing affluence with its characteristic consumption-based life style is equally responsible for the problems of depleting resources and unequal development among countries. The race among the countries to achive a higher

rate of economic growth is a significant dimension of the "Resource crisis" problem. Economic growth means more consumption of resources. It has been estimated that the proportion of the Gross National Product which is absorbed by dependents (those under 15 and over 65 years) in a country is four times the population growth rate. Reducing the population growth rate, that is, population planning is not an end in itself and is not a substitute for promotion of development, but it is often an essential and necessary element in planning for economic growth and social progress. Furthermore, will only be successfull if promoted together with and reinforced by plans looking towards improvement in economic and social conditions.

The world has recently begun to realise the damages involved in the changing and complex relationship between man and his environment. Contamination of the streams and oceans, erosion of the soil, destruction of vegetation, the rise in the concentration of carbondioxide in the atmosphere, the disposal of Radio-active waste. These are the problems which have vast international implication. To deal with effects without dealing also with causes is inadequate and superficial. One of the causes of the threat to our environment is the demand made by expanding population in the developed and developing world alike. The environmental impact of population growth differs between region and between countries within region. In the less developed countries, environmental problems are far wider then those of

industrial pollution. They reflect in part the very lack of economic development which is at the root of so many problems. To the extent that the economic prospects of these countries are critically influenced by the rate of population growth, there is a clear link between population and enviromental problems.

It is not easy to distinguish with the extent to which industrial pollution, Problems of solid waste, marine pollution etc are a result of population increase, rising standard of living and growing affluence, combined with the force of technology, create a "Multiplier effect", such that even relatively modest increase in the population of industrialized Countries may have a quite disproportionate effect on the Environment as a whole.

The growing awareness of international environmental problems has brought a new dimension to population issues on a global basis, the implications of continued population growth for resource use, pollution and environmental degradation are now becoming clear.

Some third world countries have also been dragged into the mad race of substantially boosting their armaments sometimes to protect their legitimate or more understandable security interests, but sometimes also for prestige purposes and sometimes on being encouraged by arms producing countries. Many developing countries are spending a major portion of their income on defence as compared to other sector such as health, education, social services etc. It is

a terrible irony that the most dynamic and rapid transfer of highly sophisticate equipment and technoglogy from rich to poor countries has been in the machinery of death.

The question of international economic aid is increasing, being linked to the quantum of defence spending by developing countries. The first salvo was fired by the Germany which cut India's aid by 25 percent, since it considers India to be a big spender on defence. This country in 1988, spent about 3.5 percent of its GNP on defence, the spending on health and education was only 4.3 percent of its GNP.[9]

The problems of increasing population rising consumptions and huge spending on armaments, the understanding of the relationship between population and development becomes highly complex. Unless the value judgement is made as to what a developed society is, it is difficult to determine which changes are part of the development process. Alternatives, themselves range from differing political, idological or social systems.

Although the relationship between population and development is complex and not yet completely understood, the report of the state of world population 1988 says : "Increasing human demands are damaging the natural resource base - and water and air - upon which all life depends. High fettility and rapid population growth are contributing to the process. In developing countries, slower growth and more even distribution of population would help to take

pressure off agricultural land, energy sources, vital watersheds and forest areas, giving time for governments, the private sector and international community to evolve strategies for sustainable development". In the poorest areas, the "scissors effect" of poverty and increasing populations is giving away at their ability to sustain human life.[10]

Emerging from extensive studies on the fertility behaviour as well as contraceptive behaviour, there are different schools of thought debating the relationship between population and development. The influence of man upon enviroment as well as the effects of those alternatives upon human health and welfare becomes a focus of analysis and evaluation during the late 1960's. The year 1970 started with the signing of National Environmental Policy Act by the President of USA given effect to a harmony between man and Environment. This became a turning point in Ecology-Technology debate, man-environment relationship and population - Environment Development syndrome.

Simultaneously, the concept of development had undergone significant changes. The objective of Economic growth was criticised as too narrow and its linearity became untenable. It was observed that this steady process, in which the productive capacity of economy is increased over time to bring about rising levels of national income, may lead to unemployment, malnutrition,hunger,absolute poverty and socio - spatial desparities.

Development is a value laden concept with historical, philosophical and ideological dimensions. When we speak of development, we need to relfect not only on what it is that we wish to develop, and how we are to do it, but also towards what we wish the process to lead. For this reasons the question of goals arises in any discussion of fundamentals of development. Any choice of goals reflect a vision of values. These values concern the very conception of man, the place of the individual in society and the structure of society. Goals of development should not be confused with indicators of degree of development, indicators such as GNP. Indicators are intended to tell us, at least, where we are and where we might be heading, not where we should be heading. Development is concerned primarily with the well being of people. The ultimate objectives of development must be to bring about sustained improvement in the well being of the individual and bestow benefits on all.

Problems like resource depletion, population growth increasing poverty, environmental degradation and deteriorating conditions of human life indicate that man's ingenuity and ability to convert environmental resources for his own use have gone astray. The modern Technology has failed to take care of the inner limits of human society and at the same time has isolated the outer limits of the spaceship earth. It has disturbed the ecologicial equilibrium, jeoparadised the Eco-system stability and improvised the environment with regard to both physico-biotic

and socio-cultural aspects. These developments have led to the integration ofan ecological dimension to the development process. The former requires a systematic evaluation of the consequences of various programmes and development policies on the environment. As a consequence, there has been a growing awareness throughout the 1980's, that development objectives like maximising Economic growth, ensureing a fair distribution of available wealth and development benefits and minimising the negative effects of Human actions on the environment.

Equity and growth as well as the environmental conservation and development must be viewed as simultaneously and not as sequential process. Maintaining the quality of environment and improving the quality of life are inter connected.

Our common future (1987), the third mile stone in Eco-development direction, makes it amply clear that the development and Environment, each other mutually and dynamically related. The concept of sustainable development based on an integrated view of environmental policies and development stratrgies, intend to maximise the economic benefits from a ecological milieu and minimise the risks and hazards to the environment. It seeks to meet the needs and aspirations of the present with out compromising the ability to meet those of the future. Far from requiring the cessation of economic growth it recognises that the problems of poverty and underdevelopment can't be solved unless we

have a new era of growth.

The main features of Eco-development is to create a durable equilibruim between man and nature, while avoiding the errors of lawless growth. Man-environment symbiosis is now in disarray. The environment is being degraded and disrupted by the modern man knowingly and or unknowingly at an even accelerating rate. Air, water pollutions, deterioration in natural surroundings and cultural heritage, loss of wildlife and forest wealth, soil erosion and land degradation, acid rains, side effects of excessive use of pesticides, chemical disturbances in food chain, nutrients cycle, Energy flow and Heat budget are same of the products of the monstrous technoglogy. Environmental problems which are currently receiving attentions are concerned mainly with the adverse impact of Human activities. These adverse impacts damage the environmental resources and Ecological foundations of life support systems.

Population growth and Rural-Urban transfer lead to several environmental problems. Population growth, its transfer from rural to urban areas and its even increasing concentrations in Metropolitians centres and large cities have contributed in a way or the other, to environmental degradaton. Trensfer rates is another population related phenomena which generates environmental stress in source region and centres of destinations. Selectivity factor reduces the number of economically active males in rural areas, lead to an imbalanced sex and age structure, causes

labour shortages during the sowing seasons and harvesting time and after results is a lower agricultural productions in source regions and still lower levels of incomes and wages. Similarly in metropolitian centres, produces further stress and strains in an already over burdened public utility systems and leads to development of slums and squatter settlements, crimes etc. It is now realised that the objectives of environmental preservations and improvement is difficult to achive in a backward economy, where a significant proportion of the total population as well as a skewed distributional pattern of benefits of the growth oriented development strategies falsify all legal and political measures to safeguard the environment. Growth seekers and Technologists admit that development can not be sustained on a deteriorating resource base. Even renewable resources like water, soil, and forests are being depleted at a rate faster than the rate they are being restored and reinstated. An even increasing concentration of population in non-farm economic activities in metropolitian centres of the developing world is resulting an dis-economics of agglomeration and is threatning the entire life fabric and is endangering the environmental conditions and quality of life.

The environmental consveration is the most crucial aspect underlying the concept of Eco-development. Therefore, the mass problem before us is that of the conservation of national resources. The environmental - development - technology are interrelated, however, the latter in the wider

sense, of the term, has been generally blamed for rapidly depleting finite resources and environmental deteriorations as well as perpetuation of vicious cycle of poverty and resultant deprivation, more so, in developing countries of the world. The global dream of a new and just order is also raven by a spiralling population gap between North and South and what might be described as "Techological Apartheid". Rapid population growth is increaing spatial concentrations of populations and low level of economic development have rendered the process of environmental imrpovement and resource conservations much more difficult in the country. The Western mode of planning and development model and technology use has been the main culprit for environmental degrations in the developing countries where as rapid population growth is becoming the most formidable bundle in the process of national development, environmental imrpovement and conservations of natural resources. The vicious cycle of poverty, and deprivations trap and the accompanying rapid population growth need to be managed to facilitate the process of resoure conservation. It has now become a tradition, and more or less rightly so, to explain environmental degradation and resource depletion in most of the developing countries in terms of increasing human populations. Demographic variable in such circumstances becomes the most critical in any programme of environmental conservations. Certain Eco-systems need to be preserved in their original form with minimum human interference and alternations, like species etc.

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CHAPTER TWO

POPULATION GROWTH AND RESOURCE IMBALANCES WITH REFERENCE TO SOUTH ASIA.

1. INTRODUCTION

The burgeoning population is imposing increasing burden on this regions limited and continually degrading natural resource base. The number of people in a particular piece of land can support -- The carrying capacity of the land- depends on climatic factors, the inherent productivity of the land, the product it yields, and the resource demands of the population. The natural resource are under increasing strain, even though the majority of people survive at subsistance level. It will be increasingly difficult to satisfy the basic needs of a growing population even at present levels of consumption, and the situation will deteriorate progressively as percapita consumption of resource mounts. It is therefore, imperative to rein in population growth to stem the rising tide of environmental deterioration and natural Resource imbalances .

Reducing the population growth rates that is, population planning is not an end in itself and it is not a substitute for promotion of development. But it is essential and necessary element in planning for economic growth and social progress.

2. DEMOGRAPHY OF SOUTH ASIA

The population of South Asian countries has been estimated at 1.1 billion in 1989 and constitute 21.3 precent of the total world population and 27.5 percent of

that of less developed regions. The rate of growth of populaton for South Asian countires has been estimated to be 1.90 percent per year during 1985-90.Which is lower than the corresponding figure of 1.96 precent for less developed regions. This is because India and Sri Lanka have growth rates lower than 1.96 precent even though all the other countries have higher rates of growth.

In all the countries of South Asia, population has been increasing since 1950. In Bangladesh and Pakistan, it is expected to be more than treble between 1950 and 2000. In Nepal, it took almost 60 years to double the population of 1911.

TABLE:2.1

POPULATION OF SOUTH ASIAN COUNTIRES
(In '000)

COUNTRY	1950	1980	1990	2000
BANGLADESH	42,284	88,219	115,244	145,800
BHUTAN	734	1,281	1,569	1,893
INDIA	357,561	688,856	827,152	964,072
MALDIVES	84	153	193	243
NEPAL	8,182	14,677	19,044	24,220
PAKISTAN	40,032	86,143	112,226	140,961
SRI LANKA	7,678	14,819	17,451	19,620
TOTAL	456,554	894,138	1,092,879	1,296,809

SOURCE:- World demographic estimates and projections, 1950-2025, United Nations, New York, 1988. For Nepal, from 1980 onwards estimates are taken from the population projection made by the National commission on population (Nepal). For Maldives, estimates are based on Demographic year books 1975 and 1981.

The population of South Asia grew continuously because of the faster decline in the death rates and virtually no decline in the birth rates till 1960-65. The average annual growth rate reached a record high of 2.36 percent during 1960-65 which remained constant upto 1970-75. It began to decline since then and has been estimated to be 1.90 percent during 1985-90, and 1.64 percent during 1995-2000.

Country wise ,the record high growth rate occured in Bangladesh and Bhutan during 1970-75. In India,the record high occured in the 1960's and continued throughout the period 1960-75. In Maldives, population growth rate is appraently still increasing because of the marginal decline in fertility compared to a significant decline in mortality. Fertility reached a maximum in Bangladesh during 1970-75, still the fertility level during 1985-90 is almost the same as during 1950-55. In Bhutan ,fertility level began to decline modestly from 1950-55 onwards by just 15 percent where as mortality declined by 36 percent within the last 35 years. In India, fertility began to decline from 1950-55 onwards. Fertility declined by 36 percent and mortality by 56 percent during the last 35 years. In Maldives, it seens that Fertility has not declined much that in 1978, the government expressed satisfection with the level of Fertility, Maldives government has been concerned primarily with reducing high rates of morbidity and mortality, althuogh mortality has

declined there by 57 percent during the last 35 years.

In South Asia as a whole Fertility began to decline from 1965 onwards where as mortality declined by 53 percent during the last 35 years.

2.1 Crude Birth Rates and Crude Death Rates

The crude birth rates for South Asian countries is estimated at 31.5 births per thousand population during 1985-90. This is bacause Sri Lanka and India have Crude Birth Rates lower than 29.4. The crude death rates for South Asian countries is estimated to be 12.4 deaths per thousand population during 1985-90. Sri Lanka the only country having Crude Death Rates less than 10.0.

2.2 Infant Mortality Rates (I M R)

The infant mortality rates for South Asian countries for various period are shown below:-

TABLE 2.2

INFANT MORTALITY RATES BY COUNTRIES FOR VARIOUS TIME RECORDS

COUNTRY	1950-55	1970-75	1985-90	1995-2000
BANGLADESH	180	140	119	96
BHUTAN	197	153	128	109
INDIA	190	135	99	77
NEPAL	197	153	105	78
PAKISTAN	190	140	109	88
SRI LANKA	91	56	33	24

SOURCE :- World demographic estimates, eited in Table 2.1

IMR was way high during 1950-55 in all countries except Sri Lanka. The IMR value of the South Asian Region has been estimated to be 109 during 1985-90.

2.3 LIFE EXPECTANCY

The life expectancy for South Asian Region has been estimated to be 55.6 duing 1980-90. life expectancy in Sri Lanka coresponds to the value of developed region. In most cases, life expecteancy of males is higher than females in Bangladesh, India, Sri Lanka.

TABLE 2.3

CRUDE BIRTH RATES, DEATH RATES AND ANNUAL RATES OF POPULATION GROWTH IN SOUTH ASIA FOR VARIOUS YEARS

COUNTRY	BIRTH RATES (1000 PER YEAR)			DEATH RATES (1000 PER YEAR)			POPULATION GROWTH RATES (PERCENT PER YEAR)		
	1950-55	1985-90	1995-2000	1950-55	1985-90	1995-2000	1950-55	1985-90	1995-200
BANGLADESH	40.2	41.7	34.8	24.2	15.6	12.3	1.61	2.64	2.27
BHUTAN	43.5	37.0	32.4	27.2	16.7	13.0	1.63	2.06	1.84
INDIA	44.5	28.1	23.4	25.0	10.9	8.9	2.02	1.74	1.46
MALDIVES	50.0	42.9	39.7	28.0	12.0	8.0	1.01	2.35	2.29
NEPAL	45.5	40.0	35.4	27.0	14.2	13.8	1.18	2.62	2.34
PAKISTAN	49.5	40.4	31.9	28.5	13.8	10.6	2.12	2.26	2.15
SRI LANKA	38.5	24.2	18.5	11.5	6.1	5.9	2.58	1.49	1.11

SOURCE:- World Demographic Estimates cited in Table 2.1

2.4 Median Age

The median age for the South Asian region is estimated to be 22.0 years in 1989. Median age gives an idea of fertility and mortality levels and trends. A decrease in fertility, under given mortality conditions, lowers the proportion of children, but a decrease in infant and child mortality under given fertility conditions increase it. A lower child population increases the proportions of the elderly, and, consequently the median age of the population.

2.5 Urban Population Growth

The proportion of Urban population in South Asian region is estimated to be 27.1 percent in 1989. All countries in South Asian region is less urbanized, but the rate of urbanization is higher in South Asia than in less developed region.

The urban population is expected to increase by 58 percent during 1975-2000.

The percentage of Urban population for the South Asian countries in different years is shown in Table below:

TABLE 2.4

PERCENT OF URBAN POPULATION IN DIFFERENT COUNTRIES IN VARIOUS YEARS

COUNTRY	1960	1975	1990	2000
BANGLADESH	5.15	9.12	13.63	18.26
BHUTAN	2.50	3.45	5.34	7.80
INDIA	17.95	21.47	28.00	34.33
NEPAL	3.11	4.84	9.19	14.31
PAKISTAN	22.10	26.40	31.98	37.82
SRI LANKA	17.92	22.04	21.37	24.21

SOURCE : World demographic estimates cited in Table 2.1

High fertility rates and rapid population growth are considered by most demographers and economists a major hinderance to development. South Asian countries face a heavy burden of providing health service, food resources, educational facilities and other services from revenue which could otherwise have been used to trap new resources to raise the living standards and create new employment prospects.

3. Population Growth and Resource Imbalance

With a low resource utilization base, high population growth rate, low literacy and under and unemployment, and chronic food deficit, South Asian region is languishing under high and increasing dependence on foreign aid and widespread poverty, deprivation, all leading to destruction of national resource for maintance of the livelihood and creating eco-disaster.

The per capita energy consumption in kilogram of oil equivalent in 1984 varied from low 0.16 for Nepal and 40 for Bangladesh and over 180 for India and Pakistan. In food production all the South Asian countries shows good result. For 1982-84, the average index of food production per capita, with 1974-76 as the base at 100, was 99 for Bangladesh, 91 for Nepal, 104 for Bhutan, 110 for India, 125 for Sri Lanka, but behind this good record lay the massive food aid for 1983-84, 1.2 million tonnes for Bangladesh, 7000 tonnes for Bhutan.

In South Asian countries importance of agriculture dominates the economic aspects of the population.

TABLE 2.5

RESOURCE USE AND THEIR USE IN AGRICULTURE

COUNTRY	ARABLE LAND AS % OF TOTAL LAND 1986	IRRIGATED LAND AS % OF ARABLE LAND 1986	FOREST LAND AS % OF TOTAL LAND 1986	AGRICULTURAL POPULATION PER HECTARES OF ARABLE LAND
BANGLADESH	68	23	16	8.1
BHUTAN	2	--	70	13.0
INDIA	57	26	23	2.9
MALDIVES	10	--	3	41.6
NEPAL	17	28	17	6.7
PAKISTAN	27	77	4	2.7
SRI LANKA	29	32	27	4.6

Source : World demographic Estimates and projection. Cited in Table 2.1

With rapid increase in population, this regions, Natural resources are diminishing at a faster rate. The developmental projects applied, so far has degraded the land capacity to produce, and environmental degradation i.e loss of forest cover etc. The tension and political instability generated special significance with the increasing young unemployed in South Asia, the existing scarcities, competition has intensified the destruction of the fragile balance between man and environment. The problem of desertification, pollution, loss of bio-diversity, degradation of land etc are the result of population explosion, similarly its the cause of hunger, pollution illitracy and slow economic growth. In an over all view, the resource are fast depleting due to the pressure of population and for better life standards. This region has already lost its valuable forest cover and rare species of plants. With the use of fertilizers, the land are turning to be poorer in natural fertility resulting to decling in production and the problems of its side effects.

India has enormous problem but also has an equally enormous national resource base to solve them with, but on the other hand population factor is putting much strain on its ecological aspects and life sustaining capacity. As already it has more people than its land could support.

The concept of carrying capacity connotes the potentially to suppport growing population at increasing standards of living. In South Asia, the population are so great that they are much higher than the land support system can support, this leads to deterioration of life standards, poverty and resulting to more exploitation of resource at an increasing rate. poor people look to forests as the source of revenue, resulting to destruction of national forests and environmental degradation.

The environmental problems in South Asia arise on account of their abject poverty. Inadequacy and lack of development per se are responsible for creating environmental problem, through such factors as absence of safe drinking water, poor housing, slums and squatter communities etc are of great concern. Rapid population growth and the nature of urbanization taking place in South Asia are important causes of deterioration and imbalance of the region.

Efforts to raise food production have resulted in erosion and soil infertility and derterioration of ecological chain. The depletion of mineral resource are also noticed in this region like of coal, gold, etc.

4. CONCLUSION

With the scarcity of resources in this region, it become way volatile to political instablility in nature. The social unrest leading to different channels of crisis in the

society .

In order to balance the imbalances, the prospect for sustainable development and balance between the population and resource are of urgent need in South Asian countries. New approach to development is requried to maintions a balanne between these two. Population growth has to be checked in order to solve the ecological disaster, both in rural and urban web of social-economic life.

CHAPTER THREE

ECO-CRISIS, NATURE, TYPE, MAGNITUDE OF ECOLOGICAL IMABALANCES, QUESTION OF SUSTAINABLE DEVELOPMENT WITH REFERENCE TO SOUTH ASIA

1. INTRODUCTION

2. POPULATION GROWTH AND ECO-CRISIS

2.1. Population Growth and Development

3. SOIL EROSION : MAN MADE DISASTER

3.1. Deforestation : Ecological Concern
3.2. Floods, Lakes, Rivers : Running Problem
3.3. Drought and Desertification

4. POLLUTION

4.1. Industrial Pollution
4.2. Air Pollution
4.3. Noise Pollution
4.4. Ocean and Water Pollution

5. DEPLETION OF WILDLIFE RESOURCES IN SOUTH ASIA

6. AGRICULTURE AND ENVIRONMENT

7. POWER, ENERGY AND ENVIRONMENTAL COURSE

8. SUSTAINABLE DEVELOPMENT WITH REFERENCE TO SOUTH ASIA

8.1. Concept of Sustainable Development
8.2. Sustainable Development in South Asian Environment
8.3. Sustainable Development : India

9. CONCLUSION

1. INTRODUCTION

The threat of crisis ranges in magnitude from deterioration of small eco-system to the total destruction of biosphere. The intensity of utilising the natural resources has become highest with the modern industrial development and growth-oriented strategy. The problems like resource depletion, population growth, increasing poverty, environmental degradation and deteriorating conditions of human life to convert environmental resources for use have gone hayway. The modern technology in South Asian Country has failed to take care of the inner limits of human society and at the same time has violated the outer limits of resource potential and utilization. It has disturbed the ecological equilibrium, Jeopardised the eco-system stability and improvised the environment with regard to both physico-Biotic and Socio-Cultural aspects.

Environmental problems of South Asia arises from a number of causes as stated below :

1. The growing human and animal population are making increasing demands on natural resources resulting in the exploitation of resources in an unsustainable fashion.
2. The indifference of the industries on aspects of environmental safety and protection, leading to the spread of avoidable air, water, soil pollution etc.

3. Economic growth has necessitated a corresponding expansion in Engery availability for industrial, agricultural and domestic purposes, leading to energy shotages in other areas.

4. In South Asia especially in Nepal, Bhutan, Bengladesh, the level of environmental literacy is low and thus there is a gross under valuation of the economic and ecological aspects of Biological diversity. Also, extensive damage is being done to basic life support systems; more than that caused by development activities.

5. The policies have not incorporated the environmental accounting principles with the result that many development projects have been conceived for short-term gains with out considering their long-term ecological and social impact.

6. The inability to convert the oft-repeated rhetoric of growth with equity into reality has resulted in the persistence of wide spread poverty, under-nutrition and high under-five infant mortality. Also the biomass needs of the tribals and rural people are neglected.

The micro-level causes of environmental degradation has to be identified in each Villages, Towns and Cities. However, the principal factors responsible for the sad state

of environment are, first, lack of political action, second, indifference of professional institutions concerned with technology development and dissemination in getting considerations of Ecological sustainability integrated with those relating to economics and efficiency; and third, public apathy and in action.

2. POPULATION GROWTH AND ECO-CRISIS

In South Asia, man-environment symbiosis is now in disarray, these seven countries have relatively large population which are very youthful, higher growth rate and infant morality, lower averge life expectanacy, low literacy, lower living standards etc. In absolute number, there are wide ranging disparities in the population. In 1984, India had the largest population at 622.36 million, followed by Bangladesh at 86.02 million, Pakistan at 80.40 million, Sri Lanka 14.46 million, Nepal 13.76 million, Bhutan with 1.14 million. The population of these countries introduces quite variations in resource use and needs as between them. This rising population has resulted in dramatic increase in the consumption of national resources and threatening the non-renewable resouces. In South Asia, environmental degradation are far wider than those of industrial pollution. The contamination of water, degradation of soil fertility, negative impacts of intensive agriculture, rapid urbanization etc. leading to the ruinous state of environment. Rising

standards of living and growing affluence, combined with the force of technology, create a "multi-plier effect" such that even relatively modest increase in the population may have a quite disproportionate effect on the environment as a whole. The environmental problems which are currently receiving attention are concerned mainly with the adverse impact of human activities. These adverse impact damages the environment, resouces and ecological foundation of the life support system. The rural-urban migration and increasing concentration in metropolitan cities contributed in one way and the other to environmental degradation. "Increasing population pressure and environment degradation is worsening the siutation. There is an increase in the number and severity of natural disaster and in their economic, ecological and social impact".[1]

2.1. Population Growth and Development

Modernization is steadly transforming the nature into products. The resource squeez has lead to an even intensification of Ecological damage. Any development at the cost of environment in long-run be anti-development. The developmental activity including mining etc, are degrading the environment. These countries, today, are faced with the problems of employment generation, stabilizing the market prices and removing poverty resulting to several development

projects, which in turn, turn out to be an negative aspect of development. "The development factor often leads to regional disparity and has proved to be conducive to disrupt the ecological balance".[2]

The effluents of economic activities affect the environemnt seriously like pollution of rivers, chemcial pollution etc. Similarly the construction of dams, roadways, industrial complex etc for the development works has eroded the fragile environment and had caused several man-made disasters like flood, drought loss of Bio-diversity etc. The ecological degradation in the mountains had an distructive impacts in the plains with flood, siltation of dams and so on. "The loss of agricultural produce and human resources leading to irreplaceable losses".[3]

The environment-development-technology are inter-related, however, the later in wider sence, has been blamed for rapidly depleting finite resouces and environmental deterioration as well as perpetuation of vicious cycle of poverty, resultant deprivation.

3. SOIL EROSION : MAN MADE DISASTER

Representing the base in the biotic pyramid, soil stands as the foremost among natural resources. In south asia, the associated consequence of soil erosion created havoc including floods, drought, desertification etc leading

to imbalances in the population-environment interlinkages. Causes of soil erosion are many ranging from deforestation, intensive agriculture to constructional purposes etc. Soil erosion is one of the gravest human made disasters; a quiet crisis, not widely perceived but gradually unfolding as a monstrous phenomena. It poses a severe threat to the livelihood and food security of the people, especially those in the lower economic strata. Soil erosion due to water flow, constant high velocity of wind, and shifting cultivation are major cause for worry. It has assumed dangerous proportions in recent decades with increased population pressure and the demand for food. Increased human and livestock population in the Himalayas resulting to floods and extented droughts in the Northern plains of India. The shifting cultivation in India has resulted to the loss of 127 million hectares of land, have suffered due to soil erosion, and 40 million hectares have became degraded. In Pakistan 25% of the irrigated land has been converted into desert as a result of soil erosion, similarly 40% of land irrigated area is already affected by salinization, in India 27% and Sri lanka 23%.

3.1 Deforestation : Ecological Concern

The forest cover of South Asia, have been suffering depletion due to relentless pressure arising from the

increasing demand for fuelwood, Timber, diversions of forest land into non-forest uses, inadequacy of protection measures and the attitude of people to look upon forest as revence earning resouces.

In Pakistan out of the total of 2.5 million hectares, 1000 hectares a year are being depleted of Trees, Bangladesh, with 0.9 million hectares has a depletion rate of 0.9% per year, Sri Lanka with forested area of 1.66 million hectare, depleting at a very high rate of 3.5%. Napal, with a forest cover of 2 million hectares has the highest depletion rate in South Asia, losing 4.1% every year. In India the situation is grim, according to remote sensing satellite data revealed the shocking depletion of forest cover. "While officals insisted that trees cover 23% of the country, remote sensing put the figure at 14% only".[4] Problems of land degradation due to deforestation results to increase in rural poverty in India. "Similarly the mining activities resulting into ravines, landsides, siltation of perennial and semi-perennial riparian system".[5] With the deforestation and consequent increasing soil eorsion floods and droughts have increased in frequency. The immediate effects of deforestation on atmosphere and soil processes are dry thermals, Albedo effects causing decline in rainfall especially of the conventional type, increased of carbondixoide and consequent warming of the atmosphere. In India, the forest cover of the

North-Eastern states provides a very gloomy picture. A study by the National Council for Applied Economic Research, Commisssioned by the North-East Council, revealed that in decade between 1972 and 1982, the North-East states lost an average of 898 sq km of forest annually. Nagaland lost about 7.4 sq km every year during that period.[6]

The depletion of mangrove forest is another major concern. Destruction for the domestic use are leading to imbalances in the coastal fauna and increasing the incidence of soil erosion along the coastal margins.

The remedial measures to protect the forest cover are by the application of scientfic knowledge coupled with socio-economic considerations and forestry programmes. Introduction of social forestry schemes at various levels in this region and increasing the awareness of the poor mass in general can lead to a successful management of forest, similarly putting of the most degraded and wastelands under forest cover without allowance for their exploitation till the complementary regeneration.[7]

3.2. Flood, Lakes and Rivers : A Running Problem

Flood meaning deluge of vast land with water, are very common but pervasive hazards. There are many factors that are responsible for this, but from ecological point, large scale deforestation in the catchment area, siltation due to soil erosion etc are responsible. As per an estimate of

central water commission, about 2.5 million hectares of land in India are flood prone, affecting an average 3.1 million hectares of crop annually. In Bangladesh, the southern parts of the country are very much affected by floods every year, similarly in Maldives, coastal flooding and erosion of the embankments are of great concern.

The remedial measures of flood in South Asia, primarily relate to regulation of water flow within the channel, which requires a combination of biotic engineering and administrative approach to the problem. Emphasizing the role of vegetation, especially forests : Deforestation in catchment areas are committing ecocide and plantation as a major component of watershed management aims at reducing runoff, siltation, flood and loss of human lives.[8]

3.3. Drought and Desertification

Drought refer to the periods of dryness owing to lack or scarcity of rainfall. These are associated with the failure of the monsoonal rains, when the rainfall remains below the average, growing use of marginal lands, which as resulted in deforestation, overgrazing, soil erosion and desertification. In parts of Pakistan, India, Bangladesh are very much affected by these factors.

In India, drought and desertifications are of great extent. The desert Eco-system in the country relates to the

cold arid deserts in ladakh in Jammu and Kashmir, Lahoul and Spiti in Himachal Pradesh and the hot deserts of Rajasthan, Gujarat and Haryana besides small areasin Andhra Pradesh and Karnataka. In South Asia, the movement of sand helped by high speed winds, water logging, secondary salinisations and industrial effluents are hastening the desertification process. The degraded land constitute the most of the area. It is clear that the problem of Biotic pressure has been accentuated with the increase in the livestock population. The expance of desertification are threatning the very existance of the fragile eco-system of the surounding regions and resulting to degradation and deterioration of fertile lands.

In order to check such catastrophie, large scale dryfarming technology with reforestation of waste and degraded lands are urgently needed. It emphasises the needs for inter-disciplinary holistic (inclduing ecological) approach is needed in the imrpovement of environmental condition. Water conservation and management incorporating afforestation, horticulture and pasture development should be given due place to reduce the severity of drought character.

4. POLLUTION

Pollution has been defined as an undesirable change in physical, chemical or biological characteristics of air, water,land, that may or will harmfully affect human life and cultural assets.

4.1. Industrial Pollution

In South Asia, rapid growth of industries has resulted in increase in pollution of air, water etc. In Pakistan, industrial waste dischanged into lyari river of karachi resulted into the most polluted water system.[9] Similarly for development, much attentin was paid for industrial output and neglecting waste disposal resulting to a magnified problem.[10] Industrial pollution are the worst kind of hazards and in South Asia their management are of neglected arena.

4.2. Air Pollution

In South Asia, the resultant factor of industrial pollution is the air impurity. One of the grave concern for health care and biodiversity. In India, Pakistan the air pollution is of greater dimension because of industrial developments, energy generation and transport system. Several ailments are directly related to air pollution and when a country is poor with less infrastructural facilities these tend to become even greater.

4.3. Noise Pollution

Noise, which has been a much neglected pollutent so far is also emerging as a harmful pollutant of the atmosphere, loss of hearing, mental tension and disorder, strain

resulting is extreme cases in Nervous disorder. Not much research are done over it, but are gaining foothold in this region. In India, several legislation and acts were passed to check the pollution especially in urban centres, where man-made sources are responsible for increasing the ambient noise level. In the mountain areas, noise pollution had a grave consequence in starting landslides, avalanch etc.

4.4 Ocean And Water Pollution

Pollution in the marine environment largely arises out of economic activity. These problems, however, are confined to coastal areas, though the effects can have far reaching implication. Throughout the Indian ocean, Bay of Bengal and Arabian Sea, the question of sewage, industrial waste, and human activity has degraded the marine eco-system. A survey has shown that plankton in the Arabian sea has DDT concentration of 0.05 - 3.21 ppm (parts per million) net weight. The problem of using Radio-active as fuel in countries like India and other are affecting the flora and fauna of the upper limits of oceans. The Tourism industry of Maldives, Sri Lanka and India are facing problem of degradation of ocean and sea corals and fishes. similalry oil pollution causing further increase in pollutants. It has been found that floating Tar on the surface layer of the Arabian Sea would be about 370 Tonnes. Damges to mangrove

forests and Reefs leads to a total eco-disasters. About one-eight of the Bangladesh wetland is mangrove and one-third of the total population of the country is dependent on marine mangrove eco-system.

5. DEPLETION OF WILDLIFE RESOURCES IN SOUTH ASIA

Due to the human interference, the danger of loosing wild-life species both plants and animals at rates never witnessed before . The most important cause of species extinction is direct and indirect destruction of their natural habitat. Deforestation, shifting agriculture, urbanization and industrialization are some of the causes direct destruction, Siltation, Chemical and Solid waste pollution, and air pollution causes indirect destructions. The density of species and wildlife is necessary for the normal functioning of eco-system and the biosphere as a whole. The genetic resources in wild species contributes enormously in improvement of crop, development of new drugs and medicines and providing raw materials for industries. Lately, in South Asia, the importances of wildlife has received greater attention and aid from the developed nations and UNO wildlife fund. Conservation of these living natural resouces is therefore crucial not merely for development but for our very survival and foreign exchange earnings. In India, wildlife protection acts, the National Parks and

Resources are established but their ultimate survival depends on human hand.

6. AGRICULTURE AND ENVIRONMENT

South Asia as an overall has a considerable cultivable land potential and degree of its underutilizations can be judged from the fact that it has 25.4% of the cultivable land resources of the developing countries., but produces only 23.3% of the total cereal output of all developing countries.

Major factor leading to poor state of the agriculture and environment is that in order to feed the growing population more and more land are brought for agriculture leading to environmental degradation. In Pakistant, 25% of the fertile land has been converted to desert because of soil erosion. In India, 27% of the area is affected by erosion. In Maldives, total cultivable land available is limited, but due to population pressure, the fallow period has been shortened. In Bangladesh, due to floods and water logging, salinization, more fertile lands are lost. In Nepal, due to wrong agricultural practices, more erosion are taking place with the intensive use of fertilizes, insecticides etc, the soils are being converted to drought prone areas. As a result, the whole process of ecological cycle is being changed. The problem of shifting cultivation practiced by Tribal societies is responsible for about 5 lakh hectares of

deforestatioin in India.[11] All these factors, contribute to environmental degradation in South Asia overall.

7. POWER, ENGERY AND ENVIRONMENTAL COURSE

The importance of energy can not be over-emphasised nor can its impact on the environment ignored. The two have to be matched and balanced for optimum use of resources and feasible development. Considerable interests has been generated in recent years about the effect of hydro-electric projects, thermal power plants and nuclear power stations on their immediate neighbourhood, particularly on the environment.

The major problems that are faced in South Asia are due to the increasing demands for power and energy, resulting the mining of coal and other materials for Thermal Power, causing land degradation, deforstation during mining operatioin, soil erosion and landlips, runoff based on mine soil dumps, air pollution, disruption of aquifers and drainage portion of the area, social and economic factors such as displacement of people and their rehabilitation, health and resources of workers, Radioactive pollution from nuclear plants etc. Power development and preservation of environment and Ecology should go hand in hand and should not be at the cost of each other. Major environmental issues associated with Nuclear, Thermal and Hydro-power projects are different and needs

different approaches to solve them.

Being an overburden with population and poverty, the demand for fuelwood for energy is another cause of concern. Planners must strike a balance between increased energy use and minimal environmental costs. To meet the increasing demand, concentrated efforts have to be made to develop new approaches in conventional and non-conventional sources of energy generation. The use of solar, Tidal and goethermal sources must be trapped in order to meet the growing demands and saving the vital resources from desturction and protecting the environment from pollution and hazards.

8. SUSTAINABLE DEVELOPMENT WITH REFERENCE TO SOUTH ASIA

8.1. Concept of Sustainable Development

All development requires some resource base, and the development process profoundly alters the environment structure and simultaneously brings with it both beneficial and adverse impacts. The ulitmate objectives of development is to bring about sustainable improvement in the well being of the individual and bestow benefits on all.

The basic nature of South Asian Countries, development process is linked with growth and the plans are dominated by rates of growth. Development is equated with economic growth, Economic growth is equated with the dominance of the market, which is in the hands of a well to do minority who

represent with consumerism, so that non-market people, who are the poor and unemployed are equated with backward people, and non-market economies with backward economies and region. In contrast to this unidimensional concept of history and its accompanying growth of GNP, which serves mainly the needs of wealthy few, as against that of the poor majority, and maintains the majority of our people in conditions of poverty and the various ailments connected with poverty, this nodal and mode of development is also the destroyer of the resources. As against this concept of growth-dominated, market-oriented development, is the concept of sustainable development.

Besically, when we talk of sustainable development, the best defination is that, we, the present generations, have inherited a certain amount of ecology and environment surrounding in terms of land, water, air, biodiversity, forest resources etc, when leave it to the next generation, we should leave it at least in the same condition, if not in a better condition than what we inherited. This is th sum and substance of sustainable development, putting it in elementary terms.

The concept of sustainable development, based on an integrated view of environment policies and development strategies, intends to maximise the economic benefits from a given ecological milieu and minimise the risks and hazards to

the environment. "It seeks to meet development and aspiration of the present without compromsing the ability of future generation".[12]

The concept central to sustainable development is carrying capacity. A regions carrying capacity can be defind as the maximum rate of resource conservation and waste discharge that can be sustained indefinitely without progressively improving bio-productivity and ecological integrity.[13]

For me, the concept of sustainable development is not only development which will conserve our resources and destory and damage them, as our present development models are doing. It is equally important because it is deelopment for all and not for a few in society. Therefore, the practical application of sustainable development is, just that we must choose project which are not resource consuming, a major example of such project before us being the Sardar Sarovan Project in the Narmada Valley. Once we begin destorying resources, little can be done about it. Secondly, to build into every project the means of conserving the resources which have to be used and countering the damage and pollution to environemnt that emerges as a result of development.

8.2. Sustainable Development in South Asian Environment

The traditional paradox of South Asia, that of a

resource rich region inhabited by poor people has given a new dimension as a result of the development strategies persuaded. The particular form of economic growth initiated by post colonial elites in this region is such that very resource potential which could have been harnesed to overcome poverty is instead being rapidly eroded. As can be seen that this resource potential is not only being underutilised, but is being rapidly eroded as the result of ill conceived development strategies. In the past few decades, have in fact seen unprecedented deteriorations in the environment, there have been continuing conflicts, assumed and real, between ecology and development, the profit maximization principle and consumers supemacy, has produced a system of production which is highly centralised and pollutant in nature. What is required is a positive approach to environmental issues, based on controlled consumerism and the consequent reduced emphasis on commoditisation. What is important is the extent to which compromises can be made between short-term interests and long-term benefits.

In South Asian Nations, the concentration of industries and resultant urbanisation have brought with them problems relating to sanitations, housing, congestion, transportation, health care, driniking water pollution etc. to mention a few. In addition to industries development projects like irrigation, thermal power generation etc. were also said to

be responsible for deteriorating environment. The population pressure even pointed out as one of the main reasons for deforestation and the resultant environmental degradation. Conversion of forest lands into agricultural and habitation land was highlighted in this regard with irrigation land use pattern has undergone undersirable changes. The impact of population and economic activity has already weakened the natural resource base of many countries and poses increasing risks to the prospects of sustainable development. Poverty as one of the major factors adding to environmental degradation The poverty motivates people to resort to any means of livelihood and nature has often been the victim of such means. It is felt that poverty is one of the greatest pollutants. Population explosion was considered as a major factor intensifying the problem of poverty. Sustainable development does not imply cessation of economic growth, rather it requires a recognition that the problem of poverty and underdevelopment and related environmental problem cannot be solved without vigorous economic growth. Sustainable development will require changes in current level and pattern of growth however to make them less resource and energy intensive and maximum equitable, effective governmental policies related are to be made more effective.

The role of non-governmental organization and private individuals was felt important in bringing about awareness

among people about the need to maintain healthy environment. The services of private bodies though costlier, would be a more effective and would be an efficient substitute for government machinery. Plantation programmes should be allowed to be handled by these non-governmental bodies. The role played by social forestry in the past were appreciated and schemes to encourage it further were called for. A check on deforestation was considered essential in addition to afforestation measures.

With the increasing depletion of natural resources and degradation of the environment in South Asia, what is required is a decentralization on administrative, economic and political power, through the creation of an effective grass root organization. Sustainable development and effective democracy requires organizing the local community to participate in the mutli-functional tasks of formulating and implementing such projects as income generations, health, education, soil preservation water management etc. The very term sustainable development suggest a location-specific development plan, similarly strategies should be adopted accordingly.

Development has to be accepted as the end purpose of all planning, now the doctrine of sustainable development points to the posibilities of turning the development around not only to repair the damage caused, but also to lay the

basis for holistic development of the economy.

While talking of sustainable development projects for poverty alleviation, one may even consider making a departure from the traditional economic analysis and consider efficiency analysis using an additional cuurency of energy to determine ecologic efficiency too. Then it should be possible to reconcile economic and ecologic efficiency to arrive at the right strategy for development. There is a feeling that the right strategy for development is not without some cost. There will be depletion of resources and some damages to the environment. However, it is also felt that there is enormous scope for economizing on the use of resources, and reducing the potential damage to the environment due to developmental projects. In case of South Asia, the choice of technique of production is considered very important and it is felt that there should be energy saving, less capital intensive and less input using modes of productions.

Development must be accompanied by safeguard to the environment. The importance of education is again an imporant factor for eco-development. The present magnitude of resource flows to the development of education and health is considerd meagre. The emphasis still appears to have been on industrialization and other development projects. It is felt that no development can be sustainable unless, at least

the existing resources are preserved and environment unaffected. Sustainable development by its very implication is tailored to a given situations. People's participations in this activity needs an additional channel of communications - a micro communication system where two way interaction between the communicator and the receiver is to be nurtured, and development through non-governmental groups and scientific community. In the final analysis environmental consideration cannot be divorced from socio-economic and socio-political realities and the prevailing value system related to growth and developemnt, what is needed in a developing society is a different flavour to ecology based on a link between natural and social sciences.

8.3 Sustainable Development : India

The consumption pattern of the rich, the gross economic inequalities, ecological unsustainable exploitation of natural resources, lack of efforts in the sustainable management of the national resouces, poor technology, mounting pressure of population and the political and social indifference to the problems of poverty and pollution are threatening a happy common future, which modern science and technology have brought with in the realms of possibility.

Regarding, the sustainable development in India, requires a strong government action and peoples

participations. The loss of valuable land for agriculture etc. deforestation, pollution, urbanization effects, energy sources, poverty, population explosion, etc. to name a few, requires a sound and healthy management policies and alternative sources of natural resouces. In energy area, India is rich in sunshine all around the year, long coast line etc for the generation of energy like from solar, wind, thermal, biogas, tidal. Implementing employment genration projects less capital intensive to reduce poverty, eco-development plans,based on agroforestry systems, social forestry programmes, animal husbandary, diversified economic activities with introduction of high technology of low magnitude and emphasis on rural based units, have all to be integrated into a rural developmental strategy without such an approach, the rural poor are bound to increase the pressure on natural resources and leading to eco-disaster. Apparently this is what is happening in all the national parks. Similarly the economic benefits arising out of tourism development should first percolate to the immidiate surrounding rather than benefiting the urban elite alone, Such an approach would contribute to the peoples participations in nature reserve and management.

Specially-designed packages and low-level technology should form the basis for development for the tribal and hill regions of India, taking into account the micro-climate and

socio-economic and the socio-cultural condition and traditions. Perhaps there are no simple solution for such diverse problems of environmental degradaton, solution to environmental problems and issues within the same sector many differ according to situations. The cost-benefit analysis done in monetary terms determines the decision-making process, it should be expanded to include a whole range of effects of a project.

9. CONCLUSION

The environmental crisis that are present in South Asia is not uncontrolable. There are positive indications that we can check/control and mitigate the environmental disaster in South Asian Nations.

1. By restoring the productivity of the eco-systems and by conserving genetic resources and the bio-diversity.
2. By effecting better land use pattern.
3. By checking the growth of the population of human beings and of livestock.
4. By developing mechanism to control pollution and deterioration of environment.
5. By insisting on assessing the environmental impact of development projects to ensure harmonisation of environment with development.

6. By undertaking environmental research.

7. And finally by promoting awareness about all these issues among the people.

The search for right answers must go on relentlessly. Efforts should be made to draw upon the wisdom and experience of the people at grassroot level, by taking into account the time tested modes of sustainable development which has been known to our rural people through the millennia.

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CHAPTER FOUR

ENVIRONMENT, POPULATION AND DEVELOPMENT POLOICES : AN INTEGRATED APPROCH

Natural selection mearly means that the organism best equipped with instincts or characteristics that are the most useful for survival, are those that have survived. Policies are the distinctive prerogative of man's intelligence and his ability to organize his life, not merely to survive, but also to live better, policy is an overarching concept and the population policy consists of both the formulation of and articulation by the government of some population objective or a set of objective that maximize the public welfare and levels of living. It involves the commitment and manipulation of resource in pursuit of these objectives. Population polices are measures and programmes designed to contribute to the achivement of economic, social, demographic, political and other collective goals through affecting demographic variable, its demographic distribution and characteristics.

Thus population policy is not purely an instrument of fertility regulation, but it also implies affecting population size by net migration, or by changing certain demographic characteristics.

In South Asia, the greatest obstacles to the establishment of population policy is the fact that very few countries are ready to adopt national policies and the serious obstacles to the formulation and implementation is the varied Nationalism, Racism. Ideologies and perhaps most

of all, the sheer inertia of traditionalism. Above all the term population policy is ideally limited to political decisions.

In Bangladesh, the family planning programme had attained little success, despite government recognizes population as the primary Socio-Economic problem of the country. Maternal health care and Education was launched, In Nepal, Bhutan, Pakistan the policies adopted are of less dimension. In Sri lanka, where policies are more dynamic and multi-dimensional. In India, the population policy are enacted through five year plan and introducing education, birth control measures, health care facilities, contraceptive methods etc. In the developmental strateges, the role of population planning has been integrated as integral component of socio-economic development. Guidance corroborate that socio-economic development including improvement of health education, and nutritional standards leads to a decline in birth rates. The interrelationship between demographic and socio-economic factor in development are the highlight of Indian population policy and programmes. Redistribution of resource to reduce rural inequalities and intervention strategies to improve standard of living of rural population formed two central themes of all planning and programme development effort. On the development front, a series of programme were launched from time to time. In India,

several programme were launched to eradicate social inequlity, population growth, but the success had been slow. Recently, the new apporach with regards to integration of population and development policies were adopted at various levels.

1. Population programmes, should be integrated to the extent possible with associated programme relating social and Eco-development.
2. To make such integration possible suitable coordinating mechanism should be located as close to the centre of power as possible, this would ensure that economic growth social development and the full utilization of human resource become naturally supportive.
3. Interactive interrelationship between population and development must be explored at the grassroots level.
4. Planning should pursue a larger and long terms perspective, which the demographic momentum warrents, and measures relating to population policies must be built into planning process.
5. Population planning should encourage actions in the order to the development sectors, that are relevant to population change.
6. Planning should pay greater attentions to such component of social development as education, employment oriented Vocational Training, improvement in the status of women,

social welfare, rural reconstruction and health and family planning. In this contect , it is possible to identify, specific sectors of development in which programme can be evolved which would influence fertility even in short run, such as adult education and the promotion of employment opportunities for women.

Develpment has to be accepted as the end purpose of all planning, the growth oriented strategies has side-tracked issues relating to population factor rather it should be interpreted to mean as manned development with soical justice. Planned developpment should take into account all the interlinkages involved in the process of development incorporating issues relating to poverty alleviation employment generation, provision of basic needs, equitable distribution of income etc, having a direct bearing on the welfare of the poor people.

Environment includes air, water and land and the interrelationship which exists among and between these basic elements and human population. Modern development and human activities coupled with constant interaction between the force of nature, produce a complex network of inter-relationship, which is delicately balance and vulnerable to disturbances. The degradation of environment leads to several disastrous consequence. protection and improvement are therefore, national imperatives for sustainable

development. This has been recognised in indian constitution and legal provisions governing environment. The basic foundation for environmental legislations as well as state policy relating to environment in india is enshrined in our constitution. Article 48A of the constitutions enjoins the state to take measures to protect and improve the environment and to safeguard the forests and wildlife of the country. Likewise, Article 51A (g), under the provision relating to the fundamental duties specified in the constitution, makes it a fundamental duty of every citzen to protect and improve the natural environment including forest, lakes, rivers, wildlife and to have ecological compassion. The preceding two decades have witnessed the enactment of a number of legislation directly related to the environment. Important among these are the wildlife (Protection) act 1972, the forest (conservation) act 1980, the water (prevention and control of pollution) act 1974, the air (prevention and control of pollution) act 1981, the environment (protection) act 1986 (act of 26 of 1986), the public liability insurance act 1991 and so on.

The government has enacted the environment (protection) act, 1986 to provide a single focus for environmental issuses in the country and to plug loopholes in the existing Acts. This act has been brought into force from 19 November 1986. its salient features are -(a) Conferring powers on central

government to : (i) Take all necessary measure for protecting quality of environment ; (ii) Coordinate actions of states, officers as other authorites under this act or under any other law related to the objects of this act; (iii) Plan and execute a nation wide programme for prevention control and abatement of environmental pollution; (iv) lay down standards for discharge of environmental pollutants; (v) Enpower any person to enter, inspect, take samples and test; (vi) Establish or recognise environmental laboratories; (vii) appoint or recognise gevernment analysts; (viii) Lay down standard for quality of environment; (ix) restrict areas in which any industries, operations or processes may be carried out or shall be carried out, subject to certain safeguards; (x) lay down safegurad for prevention of accidents and take remedial measures in case of such accidents; (xi) lay down procedures and safegurads for handling hazardous substances; (xii) constitute an authority or authorities for exercising powers; (xiii) issue direction to any person, officers or authority including the power to direct closure, prohibition or regulation of any industry, operations or process or stoppage or regulation of supply of electricity, water or any other service; (xiv) require any person officer,state government or authority to furnish any prescribed information and (xv) delegate powers to any officer of a state or authority, b). it confers powers on persons to complain to

courts regarding any violation of the provisions of the Act, after a notice of 60 days to prescribed authorites; c) The act makes it obligatory for the person incharge of a place to inform the prescribed authorites regarding any accidental discharge or apprehended discharge of any pollutant in excess of prescribed standards. Authorities on receipt of such information or otherwise shall take remedial measurers to prevent or mitigate pollution caused by such accidents and expenses incurred by the authorities in respect of remedial measures are recoverable with interest from the polluter; d) it prescribe stringent penalties for violation of the provision of the act. No distinction is shown between goverment department and other companies, and e) jurisdiction of civil court is barred under the act. Government has taken several steps to provide legal and institutional basis for implmentation of the Act. These include issues of rules, notification of standards, action regarding environmental laboratories, strengthening of state departments of environment and pollution control boards, delegation of powers, identification of agencies for carrying out various activities of hazardous chemical management and setting up of environment protection council in states. The Central Ganga Authority (CGA) was set up in 1985 to oversee implementation of Action Plan drawn up for cleaning polluted stretches of the Ganga.

National Eco-development Board was set up in 1981, basically to demonstrate feasibility of economic development without ecological imbalance, planning and implementing programmes to arrest further damage to degraded eco-systems, undertaking programmes for their speedy restoration and sensitising youth on importance of conservation. Eco-development task forces have been deployed for Eco-restoration through afforestation and soil conservation schemes. A network of Biolgoical resources has been set up for long term protection and conservation of biological diversity i.e, Nilgiri Bioshpere Resource in Kerala, Karnataka and Tamil Nadu (1986), Nanda Devi in Uttar Pradesh (1988), Sunderbans in West Bengal (1989). National wildlife action plan adopted in 1983 provides the framework of strategy as well as programmes for wildlife conservation. At present, protected area network compries 69 national parks and 398 sancturies covering four percent of th total geographical area of the country. Considering importance of wet lands, measures have been initiated for their conservation and management. Steps are being taken to commence scientific and application-oriented search study on their productivity. So far 16 wet lands have been identified for preparation of management action plan like Kolleru in Andhra Pradesh, Bhoj in Madhya Pradesh, Samber and Pichola in Rajasthan. National Wastelands Developemnt Board (NWDB) was

established in May 1985, with primary objective of undertaking wastelands development. First four years of 7th plan, the coverage of 71.6 lakh hectare of land under it, with its importance, Government decided to raise wastelands development programme to the level of a technology mission and National Technology missions on wastelands development was launched on 5th Oct. 1989 with main objectives to check land degradation, put wastelands to sustainable use,regeneration of degarded forests, promote farm foresty, restore ecological balance.

The National Natural Resource Management System has been established for an accurate and updated inventory of bio-resources such as land, water, forests, minerals resources, ocean etc. It has identified 37 projects for management of resources by integrating conventional services and remote sensing techniques.

Forests are a renewable source and contribute substantially to economic development. They have a major role in enhancing quality of environment. India is one of the few countries which has a forest policy since 1894. It was revised in 1952 and again in 1988. Main plank of the revised forest policy 1988 is protection, conservation and development of forests.

Besides these environmental legislations, it is interesting to note that the basic criminal laws of India,

namely, the criminal procedure code, 1898 as revised in 1973 and the Indian Panel Code of 1860 as well as some of the mercantile laws like the marchant shipping act, 1958 have also sought to regulate environment albeit in a limited way. Sections 133 and 144 of the criminal procedure code enpower the state organs to instantly prevent any injury or nuisance to public safety and public interest following from actions causing pollution which the authorities concerned identify.

Despite of all measures, Indian environmental laws suffer from many loopholdes, inaction. There exist over 200 central and state laws that deal with environmental protection but so far, the approach has been to curb specific type of, rather than a comprehensive approach to environmental conservation. unfortunately, the legislation ignores the high degree of preparedness that is required for minimising the effects of natural disasters and the relief that should be taken in the event of such disasters. Besides, a major drawback in the ligislation is that it vests too much power in the central government which can lead to situation where political decisions can take precedence over conservation. The legislation does not also lay down provisions for preventing other types of environmental degradation caused by factors such as deforestation and unrestrained and unplanned growth. Nor does it provide for an environmental impact analysis to be made before a large

"developmental" projects, like a dam or nuclear power plant, is sanctioned by the government.

At this point of time, when India is poised on the threshold of major industrial growth, it is time for a comprehensive legislation that will fulfill its policy of sustainable development. Environment control should be entrusted to an independent, specialised body with constitutional status.

The heart of the matter is that, we in SAARC, need both development and environment. The development have to be integrated with the ecological dimension and it requires systematic evaluation of the consequences of various programmes and developmental policies on the environment. Equity and growth as well as environmental conservations and development must be viewed as simultanous and not as sequential process. Maintaining the equality of environment and improving the quality of life are interconnected. The time has come for economic planning and environmental protection to have identical protection, to have identical goals, viz, sustainable development, which, therefore must become deeply integrated in the planning process. The centralised planning has failed to percolate full to the grass roots, essentially, the village society and economy are bio-mass based and for the amelioration of the conditions of the rural poor, there is need to enhance the productivity

of biomass on a location-specific but holistic basis. We need an agricultural-silvi-postoral model of development for the villages.

Environment and development are not seperate challenges, they are inexorably linked. Development can not subsist upon deteriorating environmental resource base, the environment cannot be protected when growth leaves out of account the costs of environmental destruction. These problems cannot be treated seperately by fragmented instituions and policies. They are linked in a complex system of cause and effect. Economy is not just about the production of wealth and ecology is not just about the protection of nature ; they are both equally relevant for improving the lot of human kind. Environmental and economic problems are linked to many social and political factor, environmental stress and uneven development can increase social tension. The distribution of power and influence within society lies at the heart of most environment and development. The new development strategy should not only aim at economic growth but also at an equitable distribution of the income it produces because rural poverty is not a production problem but distribution problem. The environmental problems in India are also the out come of conditions of poverty and underdevelopment, as also of the negative effects of certain development programmes, badly

planned and badly executed. The damage being done to the environment because of the large size of population and its current growth rate necessitates urgent remedial measures. To meet the rising aspirations, a rapid development is crucial. The environment, the energy and the economy with technology determines the process and nature of development. For balanced growth, the environment-development stratgies should be promoted with the eco-development schemes. The process of conservations and development are not only interlinked, they seem to be mutually beneficial. An economic-ecological approach to development ensures an optimum utilization of physico-biotic resources, rational distribution of economic benefits and risk hazards to the environment.

Isolation sustains poverty, powerlessness contributes to poverty through exploitation by the powerful. Thus in order to have sound development, attempt should be made to strengthen local institutions and to facilitate mass participation in the planning and development process. Devolution of authority, decentralisation of development administration and decision making, grass root initiative in programme planning, an appropriate technology based on endogenous skills and local resources, special programmes for identified target groups and weaker sections, as well as equal access and at times, Preferential treatment to

marginal farmers, small land holders and landless labouress can ensure growth with redistribution of development benefits. It is not only desirable but essential to put the "last man" first in the development process.

The proposed integrated strategy of eco-development with policy instruments related to growth with redistribution, environmental management and improvement, technology transformation, conservation of energy resources, employment maximisation, gradual neutralisation of forces of polarisation through mass participation, equal access to services and local institution building, local self reliance, acceleration of the process of spatial spread and trickle down through a pattern of concentration, will enable to achieve the goals of sustainable development.

In the past, leaders of the South Asia nation have often underlined the need for economic cooperation, but nothing much has been achieved in practice. Some cooperation on a bilateral level does exist but offers limited scope for development. Regional cooperation makes sense, because member countries share the same, or similar, eco-systems in many cases for instance, India, Pakistan, Bhutan, Nepal share the vast Himalayan eco-systems; Thar desert is shared by India and Pakistan; the vast alluvial flood plains of the Ganga and Brahmaputra cut across India and Bangladesh; and India, Pakistan, Bangladesh, Sri Lanka, and Maldives posses

long coastlines, and population growth, poverty, inequality. Regional and sub-regional integration should be made a prime instrument of economic growth, cooperation offers a viable strategy for accelerated economic development and structurual transformations. It has been proved that economic gains will be more if there is proper cooperations. Development strategies of the South Asian Countries do not take into account the simple fact that whole area in the sub-continent remain under-developed because of lack of cooperation. Some of the areas in which regional cooperation could occur for the environment, development and population are :

(i) Joint effort at reforestation of watersheds and treatment of industrial, urban effluents wastes etc.

(ii) Sharing Bio-Saline research and technical know how on controlling desertification, pollution.

(iii) Engaging in Joint Project for development of Himalayan resources.

(iv) Exchange of information and expertise for planning appropriate and comprehensive land and water use programmes. For common ecological regimes such as arid, mountainous flood prone and coastal regions. A joint study on traditional water harvesting systems.

(v) Technological transfer for renewable energy system, pollution control and hazardous waste management, networking of environmental information systems

including a computer data base for the region; interaction between environmental non-governmental organisations.

Most member countries have weak disaster planning and management systems, increasing population pressure and degradation, worsening the situation. Regional cooperation and development of modern technology, and eradicating poverty through systematic approach will be beneficial for this region. Developing a cooperative strategy for rescue, relief and rehabilitation are urgently needed. It is then only the problem of environment, development and population imbalances can be checked as these in together severely undermining the development process in South Asian Countries.

If we do not read the writing on the walls, we may have to take underdevelopment, population problems, poverty, environmental loss etc. as a part of life. The integration of all these factors coupled with regional cooperation is the only solution to our hopes for better world of living.

CHAPTER FIVE

ROLE OF NON-GOVERNMENTAL ORGANISATION AND THEIR IMPACT, CURRENT TRENDS AND FUTURE PROSPECTS

1. INTRODUCTION

The number of Voluntary agencies, Community groups, Academic societies and corporate entities (non-governmental organisation - NGOs) involved in work that may be termed environmental, development, population has increased considerably in the last few years. The 1989 directory of Environmental NGOs in India (ESG - WWF) lists 908. Voluntary efforts for rural and urban development were first initiated by individuals and organisation including christian missionaries and other religious bodies during the middle of 19th century. Earlier the role of voluntary ogranisation was largely confined to relief measure for the victimes of war and natural calamities, rehabilitation work among orphans, widows and untouchables in India. However, over the years there was a shift in approach from relief to multi-sectoral approach for area development, environment protection etc. by the voluntary ogranisations.

At present it has been recognised that despite limited resources, these ogranisations have contributed much in development work. Moreover, this has become possible largely because of their understanding of local needs, their capacity to involve local people, their desire to experiment with new programmes, strategies and approaches for development without incurring large expanditures. The planning commission in India has involved the voluntary organisation in the seventh

five year plan for planning and implementation of various development programmes.

The voluntary groups actively engaged in environment issues in India today is larger than in any third world country. Their perspective not merely embraces an understanding of the human impact on nature but sees this impact as arising out of the complex web of social and political relationship between human beings. The increase in the interest of micro-ogranisations such as these probably has stemmed out of the failure of established macro-organisations (political parties, trade unions etc.) and the government to do anything about the growing poverty, inequality, landlessness, unemloyment and centralisation of power, and to bring about positive developmental and participative trends within society.

These organisations are non-political, in the sense that they do not participate in electoral processes. But most such groups do have a political perspective of society and its growth, which is sometimes clearly articulated, but most often not.

2. PROFILE OF THE ORGANISATION

The organisations are broadly divided into four categories :

1.	**Voluntary :**	These are registered societies according to Societies Registration Act of 1860 and also of 1961.
2.	**Government :**	These are government sponsored ogranisations, directly managed and financed by government.
3.	**Semi Government :**	These are autonomous bodies functioning under rules and regulations framed up by government.
4.	**Others :**	It includes industries, financial institutions, educational trust and public charitable trust.

3. MAJOR ACTIVITIES OF NGOs AND WHAT THEY CAN DO

NGOs give first priority to social development programmes, then economic development programmes. The logic behind it is that by adopting social development programmes peoples attitude can be changed and motivational spirit can be developed. This in turn helps the ogranisations to execute programmes in a better way. The social development activities includes education, health and sanitation, relief, slum improvement, housing etc. As stated above the programme has to be given community orientations from its image of government programme. Unfortunately, people feel that this programme is of the government and for the government, it is not perceived as their programme and for their own welfare. This is one reason that the motivation to accept

programme services has been lacking despite all the efforts made by the programme educational machinary. Besides this basic change in the orientation to the programme for which voluntary organisation are very much adopted because of thier good image and credibility.

4. DEGREE OF CURRENT INVOLVEMENT OF NGOs

The potential contribution of voluntary ogranisation has been recognised right from the first five year plan of Independence India. This collaboration remained marginal untill the fifth plan, which included a specific programme for the promotion of voluntary schemes and social action progrmmes, through the provision of financial assistance through the states and directly to NGOs.

In health and family welfare sector, governments increasing recognition of the potential benefits of NGOs involvement is clearly reflected in the National Health Policy (1982). The seventh five year plan and the revised strategy further highlighted the strategy of greater involvement of NGOs. In the environmental sphere, the involvement has been of great importance and there it has been of great success. Voluntary organisation and movements for the protection of trees in the Himalayan region, protest against big dams etc. are being carried out and creating awareness among the people.

5. ROLE OF NON-GOVERNMENTAL ORGANISATION IN INDIA

The role of NGOs in Indian context is varied and are providing useful medium for generating awareness among the masses in rural as well as in urban areas. The NGOs are doing for the people what the government cannot do for them, telling them how the environment is being destroyed, who is destorying it, and what can be done about it. There is a major difference in the perspective between voluntary and governmental educational efforts; the government agencies usually end up blaming the poor for environmental degradation while voluntary agencies stress the over consumption by the elite and the government policies, and exhort the people to appreciate alternative development processes. Environmental awareness helps in creating conservation consciousness. The NGOs are the best devices for creating an awareness among the people from all sections. Voluntary agencies and organisations have developed a clout and have begun to influence governmental policies, such as closing of cement factories in the Doon Valley and the National perspective plan for woman's development, publications of "Shram Shakti" a document of the National commission of self employed women, ceating awareness of th effects of big dams like Narmada Valley Project, Theri etc. and their associated degradation of the environment, displacement of people especially tribal ones. Spreading the message is not just wholesale

broadcasting the alarming facts and figures; it is using selective information to educate specific groups of people. Environmental problems cannot be solved by looking at only technological solutions, consideration must also be given to the social and economic factors that lead to them. Environmental problems will repeat themselves unless their causes are identified and programmes designed to resolve them. It is evident that there can be no hope of finding workable solution to environmental problems until awareness is created to enable people all walks of life to comphrehend the fundamental interaction between humans and their environment.

5.1. Non-Governmental Organisation and Environmental movement

The role of Non-Government Organisation (NGOs) in promoting environmental awareness and generating movement in promotion environmental sustainability are of great importance for this region as a whole. The Environmental education by NGOs has assumed great importance is recent times because many of the environmental issues are global in nature, and require the understanding and cooperation of all the people. Several science popularistion organisation have helped in emphasing the need for environmental protection through innovative methods. The Bageeya Vigyan Parishad, West Bengal, The Assam Science Soceity, The Bigyan Prachar

Samithy, Orissa Working for Popularisation of science in regional languages since pre-indpendence days and more recently the Kerala Sastra Sahitya Parishad (KSSP), The Maharastra Association for Cultivation of Science, The Karnataka Rajya Vigayana Parishad etc. have created awareness among people about various environmental issues and problems through popular literature, propagating "science through art", where in street plays, and folk dances on environmental issues are popularised. Government organisation such as CSWCRTs, the forage and fodder Research Institute, the Indian Institute of Forest Management, the state agricultural and forest departments and universities and several other oganisations extend their research and training facilities to the voluntary sector as well.

The media have played a vital role in educating the peoples role, in educating the people about environmental issues and associated problems.

The environmental awareness movement has been strengthened by these NGOs, which have awakened the nation. The chipko movement and Kerala Sastra Sahitya Parishad campaign against the silent valley project are example of the public awareness and actions. Environmental awareness is esentially a feeling for the wonder of the creations, the complexity of the web of life and the inter-relationship among human beings, animals, plants, and lower organisms and

how man's survival depends on his being able to live in harmony with the nature, such awareness is crucial for the survival of man, not only this, NGOs are helping and providing actions oriented strategy for implementation of conserving environment and taking lead role in movements and bringing notice of every one all over. Environment problems cannot be solved by looking at only technolgical solutions consideration must also be given to the social and economic factors that lead to them. Environmental problems will repeat themselves unless their causes are identified and programmes designed to resolve them. It is evident that there can be no hope of finding workable solutions to environmental problems untill awareness is created to enable people from all walks of life to comphrehend the fundamental interaction between human and their environment.

While awarding the 1988 Indira Gandhi Paryavaran Puraskar to the Kerala Sastra Sahitya Parishad (KSSP), the citation read : " The Parishad has rendered significant service to the cause of environmental protection through scientfic analysis of environmental issues and through spreading awareness of these issues among the masses".

5.1.1. Case Study : Kerala Sastra Sahitya Parishad In India

The Kerala Sastra Sahitya Parishad (KSSP) is not wholly on environmental NGO. But one of its main activities is

environmental education. KSSPs involvement in environmental issues began in the early half of the 1970s when some of the activities took part in investigating the pollution problems in and around the city of Kochi. They became members of a working group on environmental pollution, sponsored by cochin science association. In the second half of the 1970s, the KSSP gradually got involved in environmental issues especially of silent valley, and the proposed hydroelectric project there. KSSP strengthened its programme of non-formal education by introducing the now famous "Kala Jatha" using the folk art medium, exhibitions, wayside meetings, slide shows and demonstration. The campaign to save silent valley turned out to be a public education programme in many respect. KSSPs awareness programmes were designed to include a multipronged approach. In the campaign to save the silent valley, the KSSP faught to save forests not for their aesthetic or pure ecological value but for preserving a gene pool with its socio-economic implications. The use of folk and tribal art forms have been most successful in spreading the message, compared to lectures, demonstration or exbibitions even among educated people.

In 1986, the KSSP formally disassociated itself from the social forestry programme in Kerala, which by then had been converted into a world bank sponsored programme. The KSSP published a detailed critique of the scheme. It pointed

out that the implementation of the scheme would be disastrous for the natural forests. The KSSP also questioned the advisability of introducing exotic species of trees such as eucalyptus and acacia on a massive scale. This started a public debate on the issue and the state has to abandon efforts of planting eucalysptus in new areas. One of the lessons the KSSP learned from these campaigns, was that there was difference between academic knowledge and people's day-to-day experience used as topics for awareness programmes. In the case of the campaign against pollution of chaliyar, the local people were already aware of he toxic effects of pollutions and all that the KSSP had to do was to give a scientific basis for their observation as a result of which their struggle found a strong basis and they won their case. The second lesson that the KSSP learned was that when you damn a dam, you have to start by suggesting alternatives. It did exactly that which, in fact, convinced the people that the benefits supposed to be comming out of the dam could also be available by alternative means and by sparing the forests.

6. NON-GOVERNMENTAL ORGANISATIONS AND POPULATION, FAMILY PLANNING WELFARE PROGRAMME

A great potential exists of increasing involvement of NGOs in family welfare programme and educating people about cause and consequence of increasing family etc. Recent government documents reiterated its faith in NGOs as

potential partners for promoting small family norms and complementing government efforts to achieve national population goals. Accordingly it has been suggested that, "The programme has to be progessively debureaucratized and NGOs structure will have to be promoted to provide leadership for the programme. The programme would have to be escalated into a genuine peoples movement." While this is true that participation of NGOs in the programme has still remained limited, recent initiatives of government to involve them in the National Programme has started bearing results. According to an estimate, currently about 300 voluntary organisation are receiving assistance from the government for health and family welfare activities.

In India, among the various NGOs, Family Planning Associations of India (FPAI) is one of the pioneer organisations which has played a crucial role in initiating and promoting planned parenthood in the country. Over the period, FPAI, has experimented a number of innovative approaches to evoke community participations in the programme, community based distribution programme, social marketing, integrated rural family welfare programme are some of the examples of different approaches experimented by the association in various parts of the country to develop alternative strategies for delivering family planning services at the doorstep of people.

6.1. Case Study : The Varanasi Community based Distribution Project

This project was launched by FPAI in collaboration with the Department of preventive and social medicine of Banaras Hindu University in 1979. The main concern was to test the community based distribution approach in accelerating the acceptance of family economically backward with high fertility, high infant mortality and very low level of contraception. Apart from generating money through social marketing the project was able to generate certain financial support, the woman development activities and other rural development work promoted by the workers include skill development leading to their participation in income generating activities, promotion of smokeless chulha, bio-gas, road repair etc. This project has promoted family planning methods such as IUD and sterlisation, provided primary health care with special emphasis on services for mothers and children. The project also underlines the usefullness of integrating delivery of family planning services with developmental activities particularly development of women.

The project thus demonstrates, that acceptance of family planning could be accelerated at a much higher pace by integrating it with overall community development and encouraging peoples participation in the programme.

6.2. Family Planning in Organised Sector

The importance of organised sector as special segment of population for the promotion of family planning has been well recognised. Its several characteristics such as relatively better socio-economic condition of employes their concentration in a small working area and availability of health infrastrcture which could be readily used for implementing family welfare programme, making them unique and highly conducive for the acceptance of family planning. Further its potential for multiplier effect in urban informal sector and in rural areas from where workers migrate for organised employment but without losing their rural roots also makes it a special group. The employers of both public and private sectors have responded to the need of promoting family planning and small family size among its workers. Today in most of the industries, particularly the large one, population education and family planning services are provided as a routine welfare measures of the company. Major industries taken this initiatives are like the Tata Group of industries, also embarked on family planning programme around 1950. Alembie chamicals (1956), India Oil Cooperation (Gujarat refinery 1964) and so on. .PA

7. MAJOR PROBLEMS FACED BY NGOs

Three major weakness of NGOs are :

(a) lack of technical manpower,
(b) lack of technical knowledge and
(c) lack of fund.

It is reported that there is need to strengthen their, training/motivational activities as there lies their strength and lack of proper coordination from government agencies as a stumbling block of developmental activities of volunatry organisation. It could be done by a) providing more infrastrctural support, b) training their manpower to undertake this work systematically, and c) improving communications and extension of skills of their workers. Very large majority NGOs have expressed need for technical support in order to be efficient in their operations. The areas where technical support are needed were, a) Development of programme ideas b) preparation of proposals for funding c) help/advice in effective implementation d) training of their manpower and e) orientation in monitoring and evaluation of their own programme.

It may be noted that quite a bit collaboration exists in the health and family welfare programme. The major disadvantages in collaborating with the government is because of delayed processing of grant applications, resulting NGOs lost interest in the collaboration, lengthy procedures and too much paper work, too much interference, affecting the

flexibility and innovativeness of NGOs.

In order to overcome all these problems, solution lies in simplification of procedures for funding and release of grants, decentralisation in the release of grants so that even small NGO, could be involved, organising training and changing perception of government functionaries towards NGOs.

8. FUTURE PLANS AND PROSPECTS

While analysing the future plans/programmes of the organisations engaged in rural and urban development it has been found that priority has been set up by most of the organisations in the following order :

(i) Health and medical care
(ii) Adult Education
(iii) Agricultural development projects
(iv) Mother and child care
(v) Self employment programme
(vi) Entrepreneurship development
(vii) Environmental education
(viii) Environmental safety and promotion
(ix) Regional cooperation on Environment and Development programme

Barring a few which are unable to prioritise the development schemes because of uncertainity about the availability of fund. It is evident that most of the NGOs plans are in line with the policies of the government such as Health for all in 2000 AD, National Adult Education Programme to remove illiteracy, intensive Agricultural Development Programme, Watershed Management Development, Family Welfare

and Self Employment Programme etc. and thus need to be encourged and supported.

In the long run, however, Indias best hope for cleaner and safer environment may be less with the government then with citizen groups all over the country. These voluantary organisation and agencies ranges from rural grassroots organisations to association of highly trained professionals, often government employes, who devote their leisure time to the issues of social concern. Such organistion have gained considerable politcal legitimacy in recent years and their role as adjunct policy implementors may well be formally recognised.

To date, these organisation have achieved the most notable results in their effort to protect the environment and spreading awareness among the peoples. A new awareness of litigation strategies among Indian voluntary organisation is matched by a greater openness among the judiciary toward public interest cases, including cases that affect the environment and quality of life. Even with firm backing from the courts, there are practical limits on what these NGOs can be expected to accomplish in the field of Environment policy and decision making processes.

New thrust would include involvement of panchayats, private medical practitioners and local leaders to take these processes right down to the grassroots level. In the recent

years South Asian Non-Government Organisations are keenly involved in cooperating with each other on the safety and smooth operation for Environment and population Programmes. These NGOs group and agencies in South Asian Countries could play a very usefull role in promoting regional cooperation. Frequent interaction between industrial and commercial bodies, academicians and scientists, artists and creative writers, cultural and expert organisation would generate a climate of understanding among the people of South Asia.

To Sum up, a great potential exists of increasing involvement of NGOs in Environment, Population, Development Programme. Once they get involved, the programme will have community orientation which is a pre-requisite for the success of the programme. Such groups ordinarily enjoys local support and knowledge about the local needs, plus given Indias vast linguistic and cultural variations, few are in position to organise on a national scale over issues that cut across geographic regions and variations.

An important role which NGOs could effectively play is to test various alternative strategies for family welfare, creating awareness, environmental safety etc. in different setting and provide to the government feasible model to be implemented on a larger scale. Presently in India, unfortunately, except a few cases, most of the NGOs activities are in isolation without proper monitoring and

evaluation. There is a need of undertaking cost benefit analysis of the programmes so that a proper assessment of the projects as compared to existing governmental programme could be made. The distribution of funds and speedy procedures from the government would help the various NGOs in smooth operation.

Representatives of NGOs from Pakistan, Nepal, India, Banglsdesh, Maldives, Sri Lanka and Bhutan expressed the need for the creations of new levers of powers, that will allow local communities the freedom to decide on ways to protect their habitat, rather than a mechanism in which decision making is donor-weighted.

The efforts done by the NGOs remained on experimental level or have been implemented in only small pockets with some impact at National level. For upscaling of their experiences a joint effort both by governmental agencies and NGOs right from the begining is crucial. An initiation is required from both the sides. The sooner the better for the country.

CHAPTER : SIX

CONCLUSION : ISSUES AND PROSPECTS

The environmental crisis that we are facing is not uncontrollable. There are positive indications that we can check/control and mitigate the environmental destruction in south Asia. In Principle, we are all in agreement that environment conservation and development must both be given high priority. However in practice, there are still many gaps in our knowledge, many intangible and unknown qualities which can only be fulfilled through sustained effects. The search for right answers must go on relentlessly.

Rapid population growth in South Asia has created gigantic problems which are manifested in political, social, economic and psychological undulation that are frequently occuring all over the Region. The low income groups who have larger families and constitute the majority of the population gererally become the victim of all the upheavals. Not only this, but the basic unit of the society, the family, in a majority of cases, faces in innumerable conditions of material and cultural deprivation and therefore fails to fulfill its obligations to help the new generation in acquiring the qualities necessary for leading a good life. This results in the retardation of not only the welfare of the family but also of the momentum of development of a nation as a whole. The need for controlling the population explosion in South Asian countries is greater now, than ever before. As a result of this, the rate of economic development

and the rate of growth of populations, what ever gains are made from development projects will be neutralised by the increased demands from the population. There are two areas where immidiate action is needed. One pertains to contain further population growth and other is how to economically use the existing number of population. In India, an increasing population produces a wide variety of impediments to development. Lack of success in the family planning front has been a major concern in the recent years. Planners must plan for a population, they cannot plan the size of pupulation, it contain essential truth, although over the long run, planners can certainly influence the size of population. A dent on the rural birth rate can be made if a four fold strategy is adopted namely (1) Special Programme for female education with the help of voluntary agencies (2) Strict enforcement of the preventions of child marriage and acts and educating parents (3) Massive support to the Health Guide Scheme in order to realise the goal of health for all by 2000 AD, and propagation of family planning by doing the much needed health work in Rural areas.

Development is a value laden concept, with hostorical, philosophical and ideogical dimension. When we speak of development, we need to reflect not only on what it is that we wish to develop, and how we are to do it but towards what we wish the process to lead. There was a feeling that

development is not with out some cost. There will be depletion of resources, and some damage to the environment. There appears to be a trade off between development and environment. Need for a radical restrcturing of planning, incorporating some of the Gandhian elements, were stressed. The choices of technique of Production was considered very important, and it was felt that there should be energy saving, less capital intensive and less input using modes of production. Development must be accompanied by safe guards to environment.

In the final analysis, environmental consideration connot be divorced from socio-Economic and socio-political realities and the prevailing value system related to growth and development. In South Asia,need for regional cooperation are one of the important factor for better utilisation of natural resources and development. Development strategies of the South Asia do not take into account the simple fact that whole area in the sub-continent remains underdeveloped because of lack of cooperation.

Some of the areas in which Regional cooperation could place and the environment, population, development towards sustainability, the following recommendation are of great importance from my personal views :-

1. Population Programme should be integrated to the extent possible with associated programme relating to social and Eco-development.

2. Interactive interrelationship between population and development must be explored at the grass root level.
3. Joint efforts at reforestation of water sheds, and the treatment of industrial and urban effluents waste could help to reduce soil erosion, natural hazards and toxicaty of Rivers.
4. By restoring the productivity of the ecosystem and by conserving genetic resources and bio-diversity.
5. By effecting a better land use.
6. By developing mechanism to control pollution and check deterioration of environment.
7. Sharing of Bio-Saline research ad techniqcal know how on controlling deforestation and desertification of soils, and safe industrial Technology.
8. Sharing of information on water flows of rivers especially for flood forecasting.
9. Engaging in Joint Project for the development of Himalayan resources and preservation of Environment especilly the fragile eco-system of the Himalayas.
10. By insisting an assessing the environment impact of developmental projects to ensure harmonisation of environment with development.
11. By undertaking environment Research.

12. Sharing of information generated at the grass root level on Traditional Knowledge systems for sustainable interaction with nature.
13. Planning should pay greater attentions to such component of social development as education, employment oriented vocational training, improvement in the status of women social welfare, rural reconstruction etc. It is possible to identify specific scetor of development in which programmes can be involved which would influence fertility, even in short run.
14. Above all by promoting awareness about all these issues among the people and the role of non-governmental organisation should be enlarged, encouraged and supported.

In principle, we are all is agreement that environment conservation and sustianable development must both be given high priority. However in practice, there are still many gaps in our knowledge, many intangible and unknown qualities which can only be fulfilled through sustained efforts by all the countries. The search for right answers must go an relentlessly.

Efforts should be made to draw upon the wisdom and experiences of our people at grass-roots level by taking into account time tested modes of sustainable development which have been known to our rural people through the millennia.

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