Population and Society
Prof. A. K Sharma
Department of Humanities and Social Sciences
Indian institute of Technology, Kanpur

Lecture No. # 37

Total Environment Impact and Beliefs

Friends this is our third meeting on environmental issues, in the first lecture on environment, I first tried to explain the meaning of studying relationship between population and environment. In sociology particularly, I said that we can make a distinction between two types of sociologies.

Sociologies of environment and environmental sociologies, for sociologies of environment environmental variables are the dependent variables and structural variables are independent variables. So, they explain differences in environmental beliefs, action, movements on the basis of social structure, history and biographical situations of the participants. Environmental sociology takes a Ducamian view of social sciences and it says that environment factor like other factors, ecological factors are a major determinant of collective consciousness, social representations of people.

And studying social representations of environment is dependent variable, by taking ecological conditions as independent variables. Your studying environmental sociology, then in the second lecture talked about differences in the perceptions on environmental issues, between developed and developing countries refer to fail a Kyoto protocol and failures of some subsequent conferences on development even failure to implement and Kyoto protocol.

And hope of some new agreements or new conferences, workshops and protocols are giving us in, which are to happen one in this month, in this year only and the possibilities of future, protocols and workshops. The main problem is that the developed countries, which have already attained a certain level of development and which cannot live without having further development or who just cannot think of de development or reducing the standard of living, for them it becomes extremely difficult to curtail emission of pollutants in the environment.

Because to reduce the amount of pollutants in the environment, then they will have to produce less they will have to produce less on manufacturing and agricultural sector, which they are not ready to do so. And the problem of developing countries is that, they are saying that if you compare the amount of pollutants released in the environment, then as compare to the developed countries their per capita emission is nothing.

And also because in less developed countries there is a rising aspiration a hunger for more; and more development and all political parties in democratic, developing countries are putting a goal of catching up with the western countries before their people, it becomes difficult for them to commit.

To lower emissions of carbon di oxide or sulphur di oxide or chloro floro carbon, they think that developed countries are sort of compelling less developed countries to reduce their emissions unjustly. That since they are polluting much more than the less developed countries; the primary responsibility of reducing pollutant emissions lies with the developed country that is the major difference between the two.

Now, today we will look into this issue of environmental impact a bit more and before closure this is the third and last lecture on population and environment. So, I would also like to include in our discussion a little bit about environmental beliefs; ultimately it is beliefs which get actualized in the form of environmental movements.

So, in order to study rise and fall, success and failure or effectiveness or impact of social social movements focusing on the issue of environment, it becomes important for us sociologists to study beliefs regarding environmental issues.

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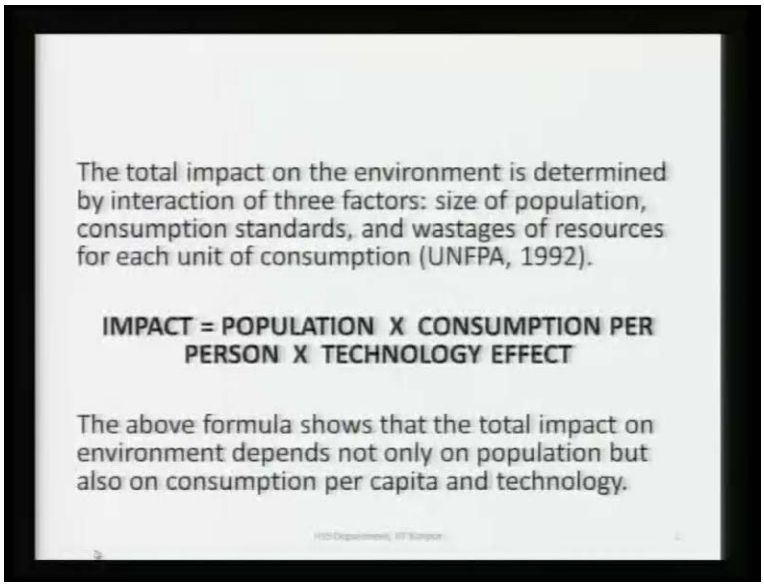

Now, in this context, let me begin with this equation, UNFPA 1992 state of award document gave an equation, which makes the complex issues involved in environmental impact very clear. According to this the total impact on the environment is not a simple function of population, there are many more things in addition to population, which affect the environmental impact. The total impact on the environment is determined by interaction of three factors.

What are these factors? These factors are size of population, conjunction standards and wastages of resources for each unit of conjunction. Today in place of wastage of resources you can say, impact environmental impact for each unit of conjunction.

So, that means, in the equation impact equal to population population one variable, conjunction (()) for another variable at technology effect as the third variable. The formula shows that the total impact on the environment depends not only on population, but, also on conjunction, per capita and technology.

That also means that there can be several synergistic links between or interactions between population, conjunction and technology. Image in the other factors remain it is same and our population is growing at rate 1.5 percent per year.

Then it means environmental impact is also increasing at the rate of 1.5 percent but, if along with population our material standard sorry standard of living or conjunction per

person is also rising. And suppose that is rising at 2 percent, then the impact on the environment will be much higher than 1.5 percent.

Because, population is increasing and conjunction per person is also increasing and there is a multiplicative relationship between them. So, due to this multiplicative synergistic relationship impact on the environment will be much more if both population and standard of living are rising.

And simultaneously if we are using such a technology which has much more adverse impact on environment as compared to the traditional technology. Then again the impact on the environment will be much more.

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We will come to this point in the next slide, we will come to this. But there may also be compensating effects of population, conjunction, per person and technology, means if we are able to evolve a green technology. If we are able to evolve a technology, which makes our resource use usage much more efficient from the same resources, we can take much more energy from the same crude oil or from the same biomass, we can obtain more energy by using more recent technology.

Then that will offset the effect of population growth and rising conjunction, per person it is also possible that population is raising and per capita income is also rising. But, we are using battery technology, more green technology; a technology which is saving of resources and which pollutes less. And in that case the overall impact is either absent or it is much less than in absence of this technology there would be.

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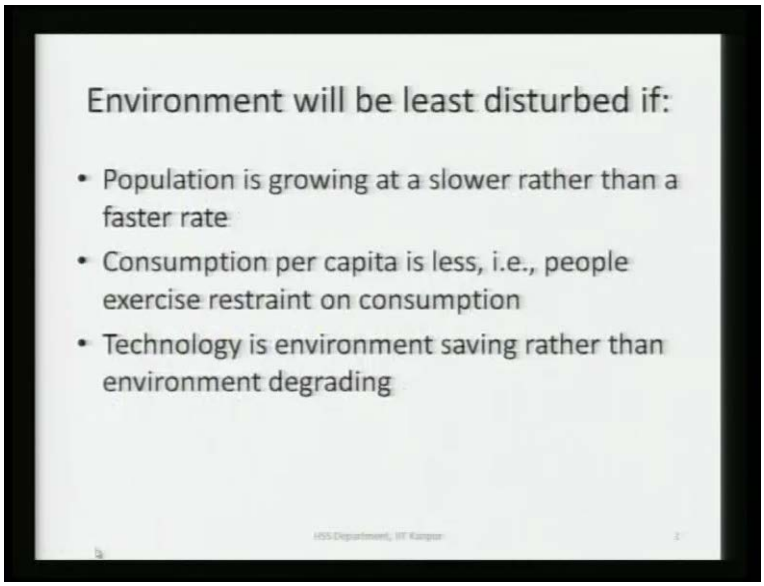

So, there are three factors not one, now environment will be least disturbed a pop; that means, if you want to reduce the impact on the environment, then there are three ways. One that the population growth should be low; Obviously, environment will be least disturbed a population is growing at slower, rather than the faster rate; second conjunction per capita is less that is people exercise (( )) on conjunction.

Remember Gandhiji's concept of voluntary poverty, if you decide to remain poor, if we decide not to raise our standard of living further. If we decide not to raise our per capita income further, not to use more food, more items contributed by polluting industries, then also environmental impact is less. And technology if it is environment saving rather than degrading that can also help us in emulating the situation with respect to climate change or environmental degradation, other factors remaining same and environment will be most degraded if population is growing at a fast rate.

Conjunction per capita is uncontrolled, means conjunction per capita is also rising fast and technologies environment degrading rather than environment saving. As far as the position of less developed countries, today is concerned it has the bad effect on the environment, because of all these three factors.

In less developed countries the population is rising fast, there is rising aspirations for higher standards of living and per capita income is rising. In most countries using the old

technology, which is mat be because that is less capital intensive and that is more readily available to them.

So, their using a technology, which is much more environment degrading, so because of the combined effects of all of them, there is environmental problem in less developed countries, but as we have seen in the last lecture, that environment problems are not confined to countries they are global.

To take a local example, if there is a environmental if there is a problem of water pollution in Kanpur, because of (()) located in Kanpur and now, it is not creating a bad environment in Kanpur only; the Ganges up to Gangasagar know Allahabad, Varanasi, Patna; Ganga is polluted for all the cities which fall on banks of Ganga subsequently.

Whether (( )) are permitted to pollute Ganga or not is not a subject matter of Kanpur municipal corporation only Allahabad and Varanasi and Patna are equally they should be equally concerned because, the quality of drinking water, the quality of irrigation, the quality of vegetables, the quality of industrial produce. In all those areas through which the river ganges passes will be affected, so, it is impacts are global.

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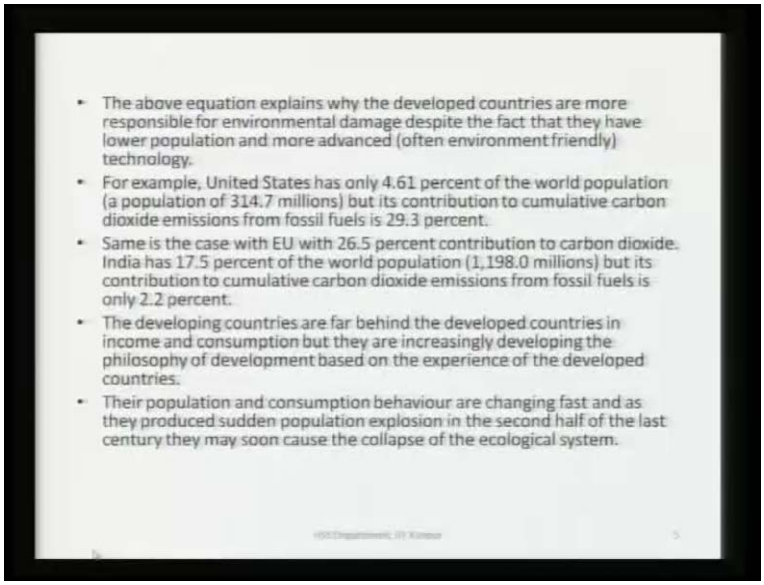

Now the question regarding pollutants differences in the pollution, in different parts of the world will have some data.

The (( )) expressed by the developed countries are more responsible for environmental damage, despite the fact that they have lower population more advanced technology. We know that as far as the population of the developed countries is concerned, that is hardly 20 percent, 80 percent of population lives in the developing country. And not only that the rate of growth of population in the developed countries is also almost 0, so they are not growing, that way there should not be any additional impact on environment due to population growth.

Also they are using better technology but, they are also producing more pollutants, more emissions Carbon di oxide, chloro forms Chloro carbons and so on. Damaging the ozone layer more than the less developed countries because in that equation along with population and technology you also have the factor of development. Energy used per capita, per capita income, per capita cars, per capita refrigerators, per capita facilities of malls developed. (()) of 3.47 millions nearly one third of the population of India but, it is contribution to cumulative Carbon di oxide emission from fossil fuels is 29.3 percent.

So, America which has only 4.61 percent of the world population is contributing to 29.3 percent in terms of just one pollutant. And that is carbon di oxide emission, same is the case with the European Union with 26.5 percent contribution to carbon di oxide.

India has 17.5 percent of the world population, 1198.0 million, but it is contribution to cumulative carbon di oxide emission from fossil fuels is only 2.2 percent. So, despite the fact the population of India is much bigger and the rate of growth of India's population is also much higher than that in the European union or in the united states India's contribution to emissions is much less.

The developing countries are far behind the developed countries in income and conjunction but, they are increasingly developing the philosophy of development based on the experience of the developed countries; that means, they will also be polluting our global environment much more in the future. Where population and conjunction behavior are changing fast and as they produce sudden population explosion in the same second half of the last century.

They may soon cause the collapse of the ecological system from. So, from one perspective looked at from the perspective of the developed countries, the environmental

problems are more because of less developed countries. Here population is rising fast, they are facing population explosion, there is revolution of rising aspiration.

Revolution of rising aspiration is that people want more and more of material success material wealth. And the technology that they are using, they are using the old technology if the Tannery, that are there in Kanpur, if such tannery are located in United States either they will be using the best technology which is not, so polluting of the rivers or they will not be given license. In the United States they will not be given license for using old technology or not using green technology, not using technology that that prevents them to pollute the river.

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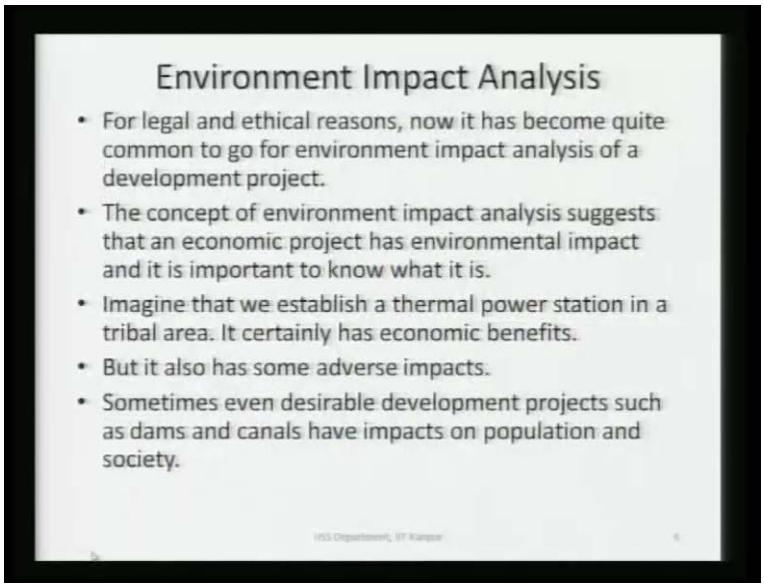

Environment impact analysis and therefore, you see in economics today, whenever new industrial units are established, whenever new projects are established; the government of India has made it mandatory according to environmental laws to have environmental impact analysis.

We are also running economics courses on environment impact analysis for legal and ethical reasons; there is a law environmental law now and also ethical reasons, moral, social, ethical, global it has become quite common to go for environment impact analysis of a development project.

Different projects contribute to environment impact differently like, there is not much environment impact of a software company; as compared to a manufacturing plant. A chemical plant is much more polluting the environment as compared to a software company.

But that is the direct impact, there may be indirect effects if the software company generates more money if more people get more money. And they raise their standard of living and this raise is demand for industrial products manufacturing products more, they want better textile, they want more electric gadget. They use more of energy, they use more of gas or coal or anything, which is polluting of environment, then indirect effect of the software company, can be much more. So, in environment impact analysis, we look for both direct and indirect cause indirect pollutants, direct effects developments projects, indirect effects of development projects.

And that also takes us to the issue of what variables should be exactly considered in measuring the environment impact. The variables measuring the environment impact may be demography, chemical they may be related to air pollution, noise pollution, chloro floro carbons, methane sulphur si oxide, so several things. Image that we established a thermal station in a tribal area, it is certainly has an economic benefits, more employment more production more employment.

And with more employment, more income this will also lead to opening of some schools, some health centers and people will benefit in education health. Infrastructure there will be more roads, better roads activity may be subsequently train. But, it also has some adverse impacts, sometimes when desirable development projects, such as dams and canals have impacts on population and society which are (()).

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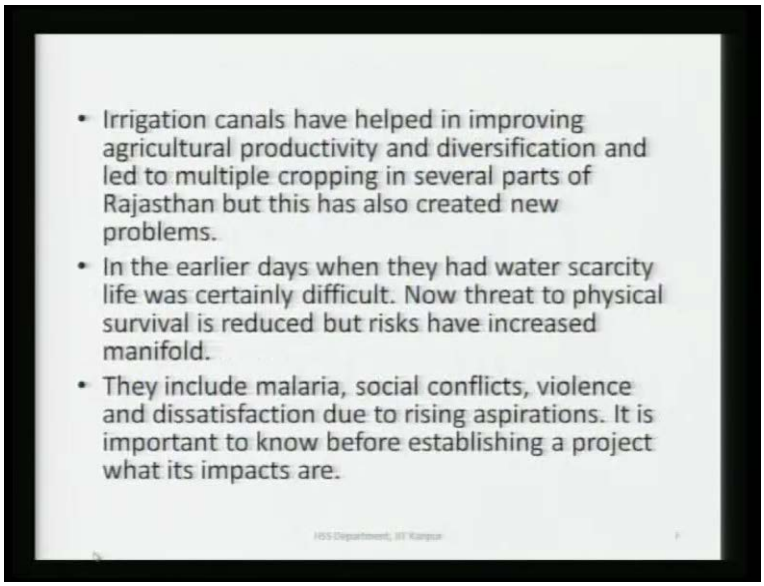

Irrigation canals have helped in improving agricultural productivity no doubt and diversification in agriculture. And lead to people cropping in several parts of the Rajasthan for example but, this has also created new problems. In the past agricultural productivity in Rajasthan was much less but, Rajasthan also did not have floods; today for agricultural productivity has increased, this is also increased the possibilities and problems of floods.

There is more of malaria, when there is no water there are no mosquitoes also but, today you have water; and you have mosquitoes, you have dengue, you have chicken guinea. And you need to spend much more money on health facility. In the earlier days when they had water scarcity, means Rajasthan life was settled was difficult. Now threat to physical survival is reduced but, risk have increased manifold. They include malaria, more money more social conflicts, more power, more conflicts, more violence and dissatisfaction due to rising aspirations.

People are not happy, when the level of income was less, when per capita income was less, when there were more people poor they were more happy. Today income has risen, material prosperity has risen but, people are more dissatisfied. So, it is important to know before establishing a project, what it is various impacts are and for that we have to decide what variables to consider.

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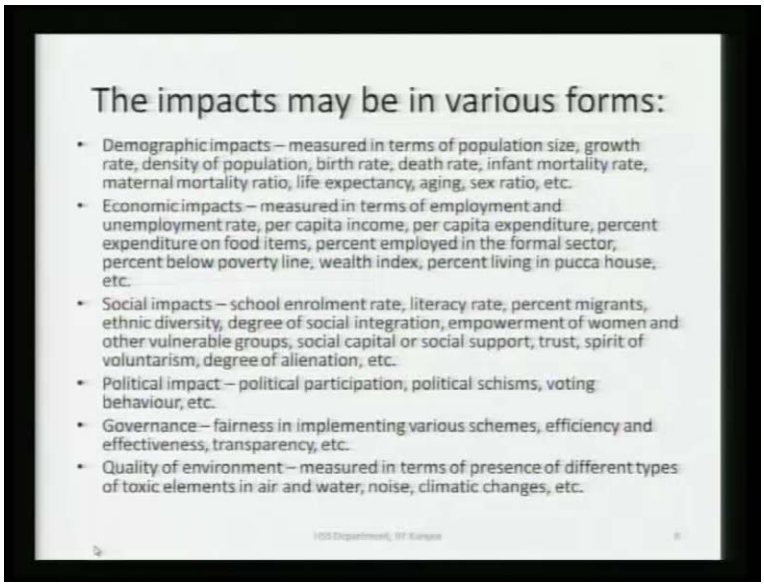

Usually in studying environmental impacts, we study demographic impacts, economic impacts, social impact, political impact, governance and quality of environment. Demographic impact in terms of population size, growth, density, birth rate, death rate, infant mortality rate, maternal mortality ratio, life expectancy aging, sex ratio you have typical demographic variables. In economic impacts we include employment and unemployment rate, per capita income, per capita expenditure, percent expenditure on food items, percent employed in the formal and informal sector, percent living below the poverty line, wealth index, percent living in the pucca house, etcetera.

These are economic impacts, social impacts, school enrollment rates, literacy, percent migrants, ethnic diversity, degree of social integration or harmony in society, empowerment of women and other vulnerable groups, (()) minorities.

Social capital or social support, trust, split of voluntarism or altruism desire to do something for society and degree of alienation, etcetera. There are political impacts, political participation, how many people have political awareness, how many people vote for parties in during election, how many of them are a part of political processes and political seeds divisions, conflicts, voting behavior, etcetera.

In governance, fearness in implementing various schemes, efficiency, effectiveness, transparence with development in our country corruption has also increased. And problems of governance have risen, transparency has reduced.

Sometimes some people say that there is a trade (()) development and corruption, if you want to bring down corruption to zero level, you cannot develop. And for development of the country you have to tolerate certain minimum amount of corruption but, not, so much as we have today.

Then quality of environment, which is majored in terms different types of toxic elements in air and water, noise, climate changes here, I think, let me also name a few pollutants. See, last time I was saying that the goal is the rise in global temperature should not exceed 2 percent.

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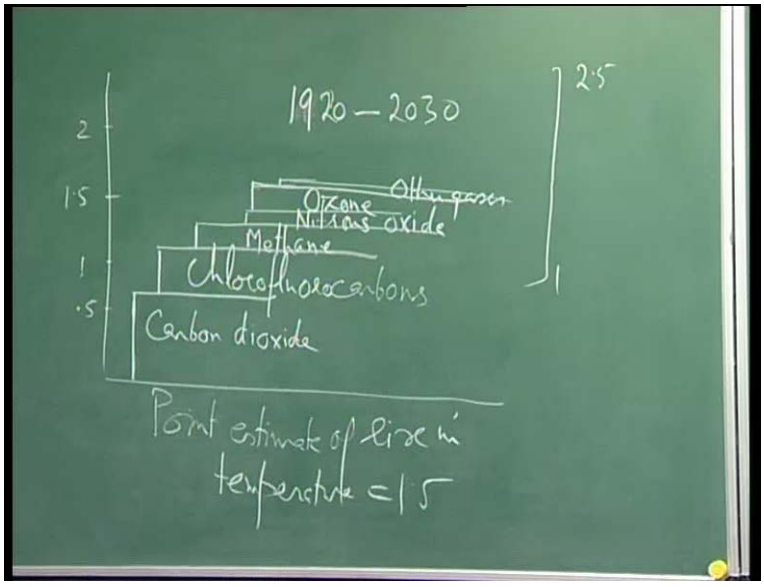

The back up would be like this there are so many, there are so, many emissions which are leading to climate change, among them the situation is something like this 0.5 contribution, this 0.5 will main the contribution rise in global temperature by 0.5 then 1, 1.5 and 2 this is the goal. That is the global temperature should not rise by more than 2 percent. So, in this respect it is said estimated, that nearly 0.7 (()), so would be the contribution of carbon di oxide, this is the biggest pollutant more the biggest pollutant of more emissions in the world is carbon di oxide.

And because of rise in carbon emission alone. there will be increase in temperature by more than 0.7 percent, then there is about 0.4 percent or so, due to chloro floro carbon, this another major pollutant. Then there is some small contribution of methane, then there is nitrous oxide, then there is ozone.

And then some rightly other gases, this is the prediction that around 1.5 percent will be increase in world temperature because of these factors. But, if you go for what we call confidence interval in statistics, this is likely to happen the point estimated around 1.5 percent.

But the confidence interval point estimated of rise in temperature is around 1.5 but, the confidence interval is up to 2.5 nearly 1 to 2.5. In the period 18 sorry in the period 1920 to 2030 (Refer Slide Time: 28:31). It is estimated that in the period 1920 to 2030, there will be a change of nearly in 2 degree of world temperature and that 2 degree is caused mainly by carbon di oxide, chloral floro carbons, methane, nitrous oxide, ozone and other gases of them; the most or the biggest pollutant is carbon di oxide.

That will lead to green house, what we call the green house effect and other pollutants will also raise temperature. The temperature rise would be slightly more than 1.5 and we want to stop it at 2 but, that confidence interval say that it can be as low as 1 percent. There is vast amount of literature on environment today in a big debate, some people are more optimistic they say that, no not more than 1 degree centigrade will rise by 2030. And there others who will say that it can be as high as 2.5 and you see at global level rise of 11.1percent can be quite significant.

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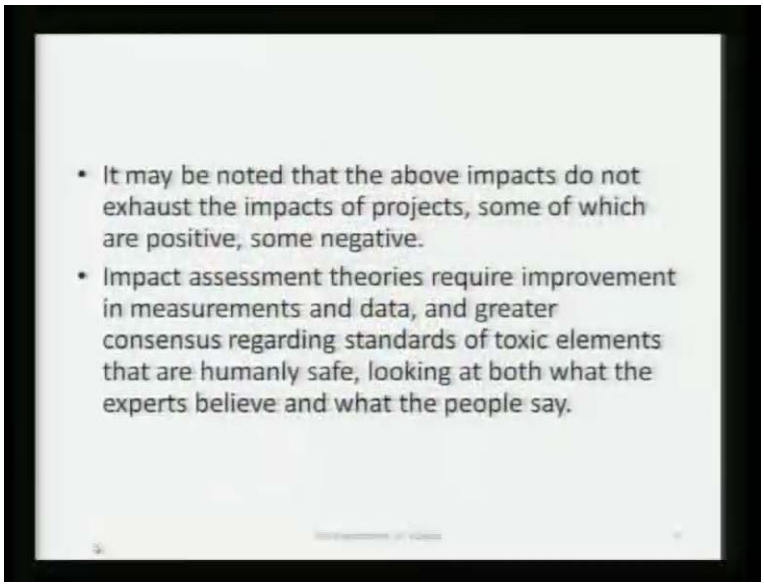

If the world temperature rises just by 0.1 percent, several of the island type of countries of the world can be submerged in the water, several small islands like Maldives

Maldives is seems to be most worried of all the islands, small countries due to the impact of rise in temperature of the world. Coming back to the issue of impacts, it may be noted that the our impacts do not exhaust the impacts of projects.

Some of these are positive, some negative you can think of many more, you can think of cultural impacts, you can think of many more impacts than just socio economic demography and environmental. Impact assessment theories require improvement in measurements and data, this is a big very challenging area may be some of you though you are not economists your sociologists. But you may find working on environment impact assessment quite challenging at your M.Phil and PhD level. And greater concerns regarding later standards of toxic elements.

We do not have standards, that how much carbon di oxide is safe how much of various types of pollutants releasing air and water are safe. There are no concerns that take us to theoretical issue in sociology of re society of all this back, that there is a politics cognitive politics of the standards. And then the complex issues of the interaction between different pollutants, may be if you have two pollutants x 1 and y x 1 and x 2, if you have two risks x 1 and x 2 and you think that in measurement m 1 of x 1 is safe measurement of m 2 of x 2 is safe.

First of all this is debate in whether, it should be m 1 or slightly more than m 1 or slightly less than m 1, industrialists will say one thing, scientists say another thing, political classes will say something else; it is a matter of law being understanding scientific findings experimental results and so, on.

But, another issue not all human beings may be affected in the same way by m 1 and m 2 amounts of x 1 and x 2, old people may be affected in one way, children in another way. And may be somebody who is already affected m one amount of x 1 for him or her, m 2 amount of x 2 is much more risky then, for one who has not suffered from m 1 amount of x 1.

So, there are complex linking it is a very challenging area, I am sure some of few will take environmental issues of this kind for your research yes you have some question.

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Yes may be this is the difference between course work and research, in teaching and research. In teaching we deal with certain specific issues and certain specific type of type of disciplinary knowledge, when we are teaching a course, we can teach a course o sociology and economics of environment and sociology of environment and in culture of environment.

In research, we deal with issues real life issues and real life issues present before us unstructured problems and may be to solve those unstructured problems; we have to take help of so, many disciplines. Now examples of unstructured problem say why the sky is blue or why does the sky appear to be blue to us. Physicist cannot answer, physicist alone cannot answer this question, chemists cannot answer this question and biologists alone cannot answer this question, it is a matter of perception.

And the movement you say perception it involves psychology perception, it involves cognitive psychology, it involves our biological genetic makeup, it involves laws of physics, laws of chemistry, laws of astro physics, so many things. So, when we are talking of environmental problems, studying environmental problems is a research issue, it is not a sociology or economic or political science.

So, in this we have to take help from, so many disciplines and how to take inputs from several disciplines, so that a real life unstructured of environment and be tackled that is the art of science of research. So, in research we deal with unstructured problems in teaching or in course work we go for structure problems and structure (())

It is very interesting cases, that when we are studying say environment or overall impact of something. Suppose we open a number of BPOs' in Kanpur, what will be it is impact some typical conventional traditional, that is my tag of economists may say that twisted impact of BPOs' must study, what will be the BPO impact on employment and unemployment.

How much employment it will create, in terms of numbers, rates, somebody may be saying in addition to employment, we can also look at income; how much income it will create and what will be the impact on conjunction pattern. But, a sociologist or an anthropologists or political scientists can say, that opening of BPO research literature shows that at several modern places of work, there is also a issue of sexual harassment at work place.

Now, before opening of the BPO's or these types of work, have been many cases of sexual harassment at work place, opening of BPO's will also introduce cases of sexual harassment at work place in Kanpur city. So, it depends and what variables we look for, somebody can say that we will be interested in studying, whether BPO will have positive impact on birth rate or negative impact or maternal mortality ratio or empowerment.

You have to make a choice, where else you have to make a choice, in any research in general in any research differs from other thing, dissemination of knowledge. In dissemination of knowledge you can be confined to some specific domain but, in research you have unstructured problem.

And you are solving a new problem for the first time and for solving this new problem for the first time, you have to take inputs from diverse fields of knowledge. So, you are right that studying that sociologists can contribute, technologists can contribute, (( )). Political sociologists can contribute that at will be the impact of opening of BPO's and malls on communal harmony in Kanpur society.

You can argue or the experience may show, that with the opening of more malls and more BPO's and more inter ethnic inter religious associations, communal riots (( )) will reduce or they may also be reasons; because of which opening of these malls and can lead to more alienation among certain religious communities.

And so, creating the possibility of riots sometime, so it depends. Now towards the end let us also talk a little bit about environment beliefs, why because ultimately, we are interested in environmental action, at the global level, at the national level, at the regional level we are interested in action.

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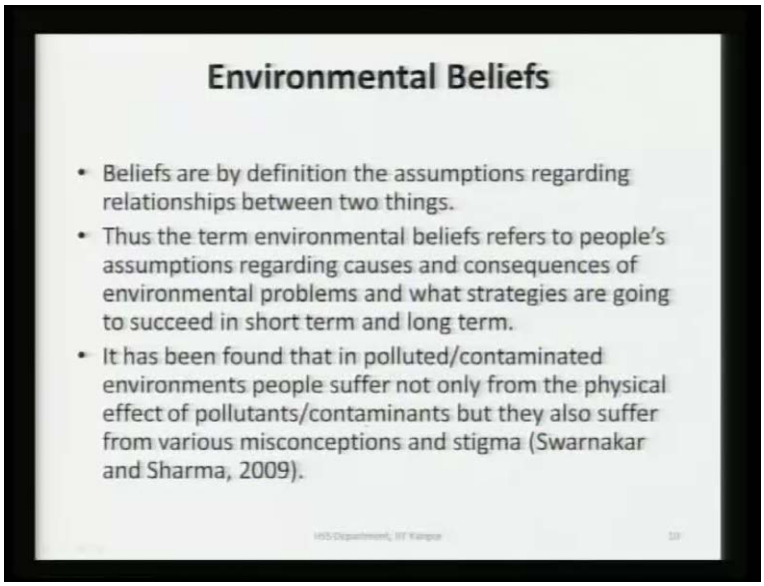

And for action, we need to create lobbies, we need to create mobilization, we need to create movements. We know as the sociologists that people are mobilize not on the basis of objective or on the knowledge of objective facts but, knowledge as it gets translated into their belief systems.

So, we have to look at people's environmental beliefs, there are still many people who say, that environmental issues are non sense even when the world population was only one billion, people used to say that we have reached a critical dimension. And if population growth increases further, there will be problem, there will be devastation catastrophe (( )).

And this earth will not be able to survive more population, then we had two, we have three, now we have nearly seven. So, some people think, that the environmental bogies are useless, this is one extreme and there are others, who think that no its time to act. If nothing substantial is done during the coming decade or two decades then this planet will become unlivable for human beings.

Ultimately what you do you do on the basis of your beliefs, your assumptions, your world view, your perspective, so we have to talk a little bit about beliefs. Beliefs are by definition assumptions, regarding relationships between two things, we use similar terms on beliefs attitudes and values. Values are standards, attitudes are evaluation of

something, attitudes involve favorable or unfavorable attitudes, evaluation. And belief is basically your assumption regarding relationship between two things.

This may be a belief that further growth of your population, will lead to catastrophic situation in the world; further growth of population in India can produce catastrophic situation for world population.

So, this is your assumption regarding two variables, growth of population in India and catastrophic situation in the world. Thus the environmental beliefs refer to people's assumptions regarding causes and consequences of environmental problems and what strategies going to succeed in the short term and long term.

It has been found that in polluted, contaminated environment people suffer not only from physical effects of pollutants or contaminants that they also suffer from various misconceptions and stigma.

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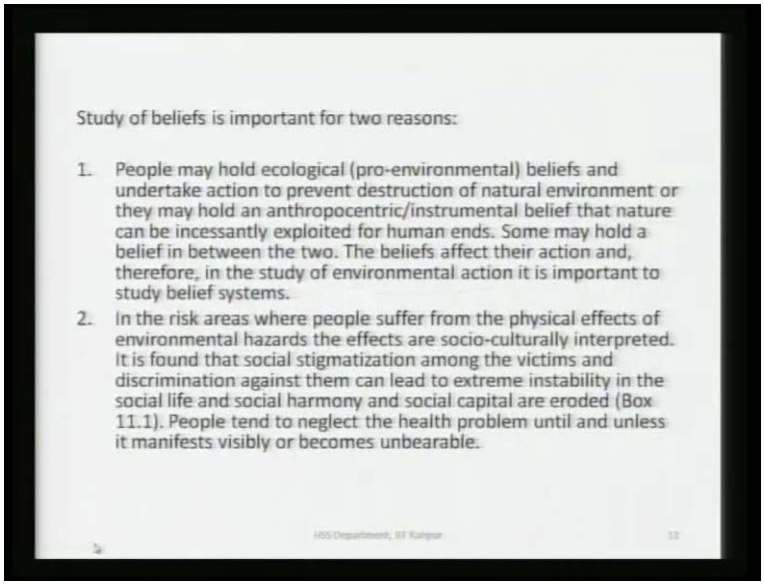

So, it is important to study beliefs for several reasons, that people may hold ecological beliefs, pro environmental belief, that is something has to be done to maintain environment. And then they take action to prevent destruction of natural environment or they may hold an anthroprosentric or instrumental belief, that nature can be inscently exploited for human needs.

There are some people are who are move towards ecological beliefs and there are others who towards antroproscentric beliefs. Some may hold belief in between the two, the beliefs affect their action and and therefore, in the study of environmental action, it is important study belief system.

Now, in the risk areas, where people suffer from the physical effects from the environmental hazards, the effects are socio culturally interpreted. It is found that social stigmatism among the victims and discrimination against them, can lead to extreme instability in the social life and social harmony.

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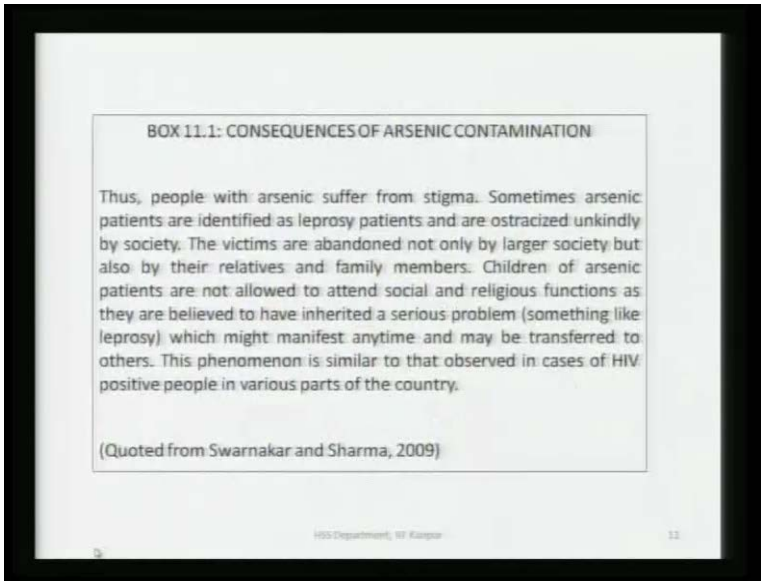

In one of our studies, in one of our PhD student work on the problem of environment beliefs (()) and north (( )) in west Bengal, this is a quote from there people with arsenic in one district there were problem of shortage of water; in another there was problem of arsenic contamination and we were comparing the two. This is the people with arsenic suffer from stigma, sometimes arsenic patients are identified as leprosy patient, because people do not have environmental understanding.

They do not have right understanding impact of poly trends like arsenic, this is if somebody suffers from arsenocosis, they take it to be a case of leprosy and our (( )) unkindly by society. The victims are abandoned not only by large society but, also by the relatives and family members, for them there is no difference between leprosy and arsenocosis, for doctors it is a result of arsenoco pollution, but for people it is.

People have not known that, that there is something called arsenic and the water contains arsenic and these are the adverse consequences. And children of arsenic patients are not allowed to attend school and religious functions as their believed to have inherited serious problem something like leprosy.

Which might manifest anytime, may be transferred to others, this phenomenon is similar to that observed in cases of HIV positive people in various parts of the country.

(())

No everywhere no such problem everywhere such problems these misconceptions are everywhere. In absence of comprehensive knowledge about something, you have misconceptions and there is no (( )) educated, there is no society, where there is no misconceptions about anything. Anything about means, we will (( )) scientific and comprehensive knowledge, we have misconceptions.

There is a stigma for example, in United States there is a stigma against MSM, because they think that MSM is the cause of HIV. So, there is this is a fear sometime, homo fever sometime it is called homophobia homophobia it is the fear that somebody is MSM. Everywhere, there are different kinds of misconceptions, you got different things are important in different context but, everywhere misconceptions about something.

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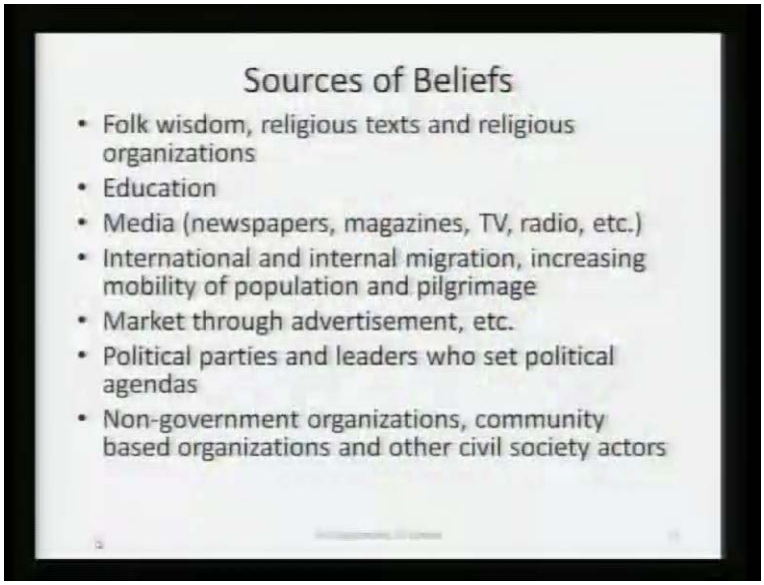

The sources of beliefs how can we change people environmental, this stigma can be, so great found in this research. That already in the social structure they make a difference between Bengal Bengal and Ghottis those people who have come from Bangladesh they have come from Bengals they are stigmatized and their ostisized, there is stigma against them they are alienated from the larger society. And due to arsenic when cases of arsenocosis come, people are saying that this this is a new disease, which has come along the migrants from Bangladesh.

There is no connection between migration and arsenic problem but, because people do not understand. So, likewise wherever people do not understand connections between pollutants or impacts of development projects, adversities they are like, likely to go for magic, crafts, superstitions and so, on.

We know that like in Kanpur, we know that the water Ganga is polluted, because of tannery but, some people who do not understand this connection, many rural folks, they may attribute this to kalyug. Now it is kalyug the fourth stage of cycles of time and it is because of kalyug, that we have this pollution in the river. And they will even pray the river Ganges they will make an idol of river Ganga, goddess ganga and pray for removal of pollutants.

So, Lack of knowledge, so for correcting correcting environmental beliefs, we have to act the sources of beliefs people can be folk wisdom, religious tags and religious organization. Education, media, migration, advertisement, political party and leaders and non government organizations, particularly those organizations working in the specific field.

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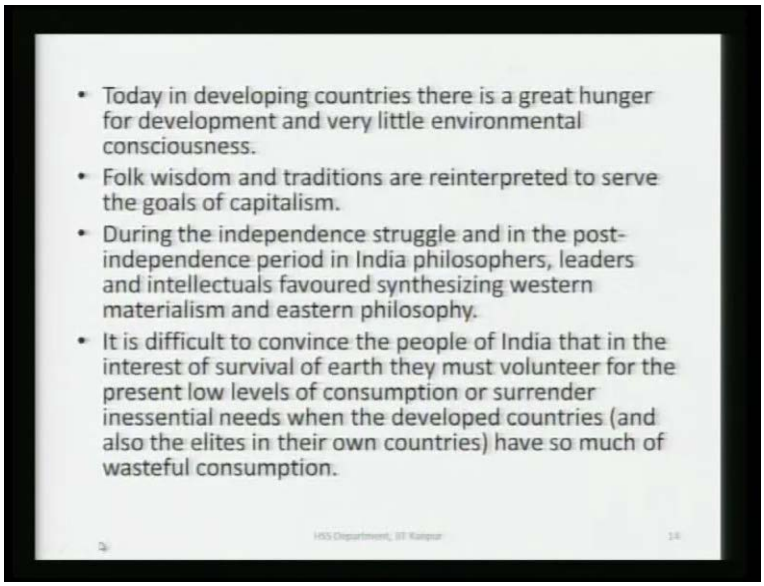

Today in developing countries there is a great hunger for development and folk wisdom and traditions are reinterpreted to serve the goals of capitalization, localization of sociological language, we call localization. And during the independence struggle and the post independence period in India for philosophers, leaders, intellectuals favored synthesizing, western materialism and eastern philosophy.

So, the importance or the impact of eastern philosophy, has not died down it is a source of belief including beliefs about environment. It is difficult to convince the people of India that interest of survival of earth, they must volunteer for the present low levels of conjunction or surrender in essential needs, when the development has, so much of wasteful consumption.

Actually, we need a new approach to tackle environmental problems it as to be based on justice, equality, science and technology physical advancements. Better understanding of linkages, scientific linkages between man and environment and developmental processes.

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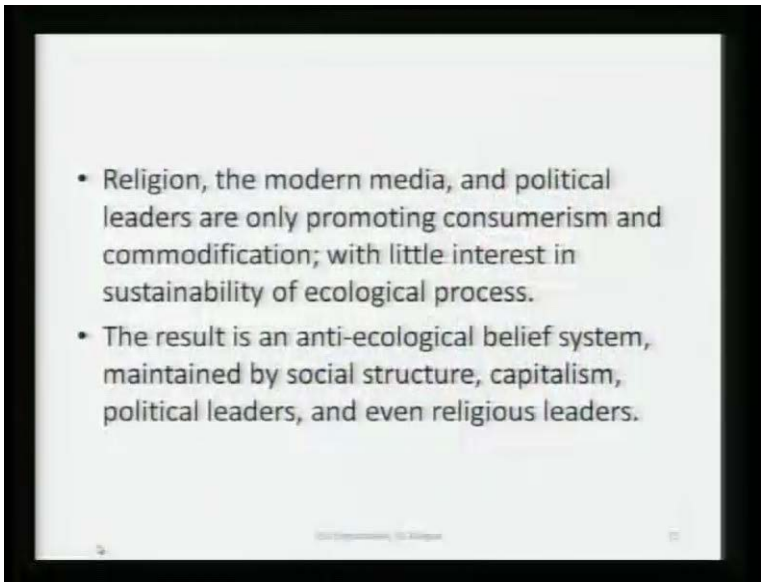

Now, religion the modern media and political are only promoting consumerism and commoditization, with little interest in sustainability of ecological process. The result is an anti ecological belief, nobody is bothered about (( )) everybody knows, why the river Ganges is polluted in Kanpur in Allahabad or (( )) or in Varanasi.

But nothing has been done, the government of India also has spend lakhs of rupees on the this project but, nothing has been done, nothing is achieved it is because people are not bothered. Either people do not understand the connection, they do not have the right kind of beliefs, they have the beliefs or they have the understanding but, there is no one to mobilize them or there is tremendous hunger for socio economic development. So, much hunger for socio economic development that they are ready to tolerate the other adverse effect on environment.

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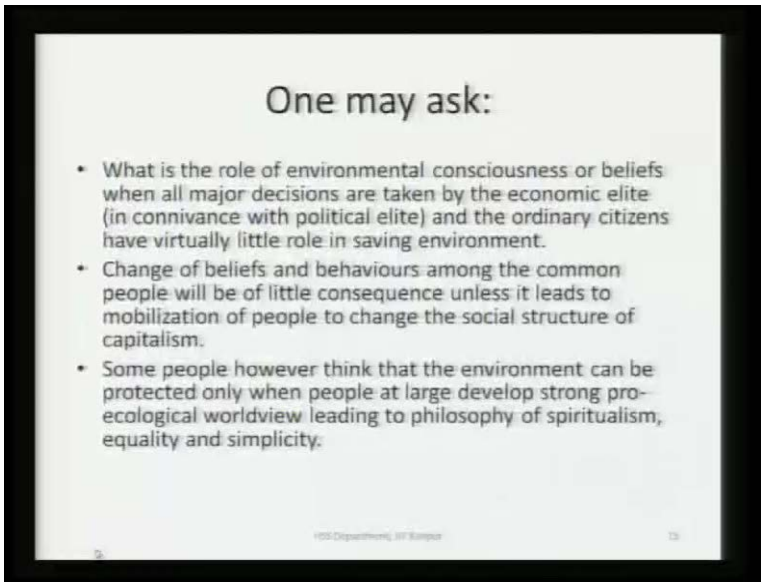

Here one may ask what the rule of environmental concepts is these are the questions of sociology, which you can take up for M.Phil and PhD research; role of environment consciousness, change of beliefs and behaviors and among the common people and its consequence for social structure. Some people think that the environment can protected only when people at large develop strong pro ecological world, leading to philosophy of spiritualism, equality and simplicity.

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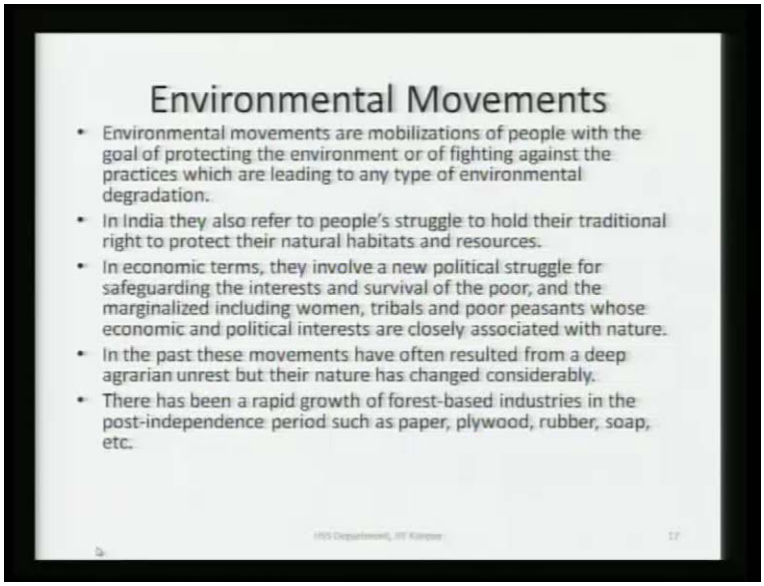

These are extreme rules, you know little bit about environmental movements, we have had a number of environmental movements and though not so successful. We had Chipko in Uttarkhand, Appoiko in Karnataka, the Narmada (( )) smaller movements at sevaral places in Kerala particularly (()). So, many movements but, it seems that today the impact of all those movements is declined, the there they quote from Augustine, who worked on environments in our department.

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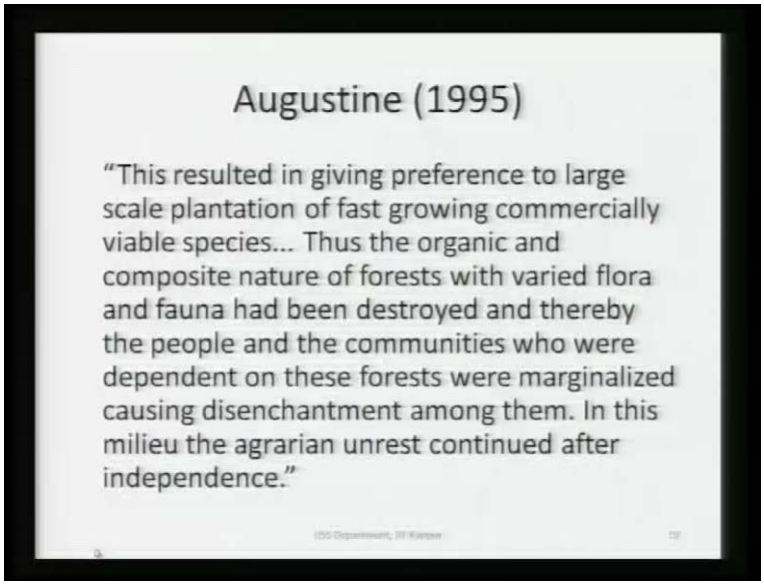

That this resultant is preference to large scale plantation of fast growing commercially (()) species, that the organic and composite nature of forest is varied flora and fauna had been destroyed; this means development. And thereby the people and the communities who were defendant all these forests for marginalize causing disenchantment (( )) continued after independence.

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This is a small quote from there is another quote from Shiva Vandana Shiva in 1991 ecological degradation and economic abbreviation, generated by the resource in sensitivity and intensity of the classical modern of the have resulted in conflicts.

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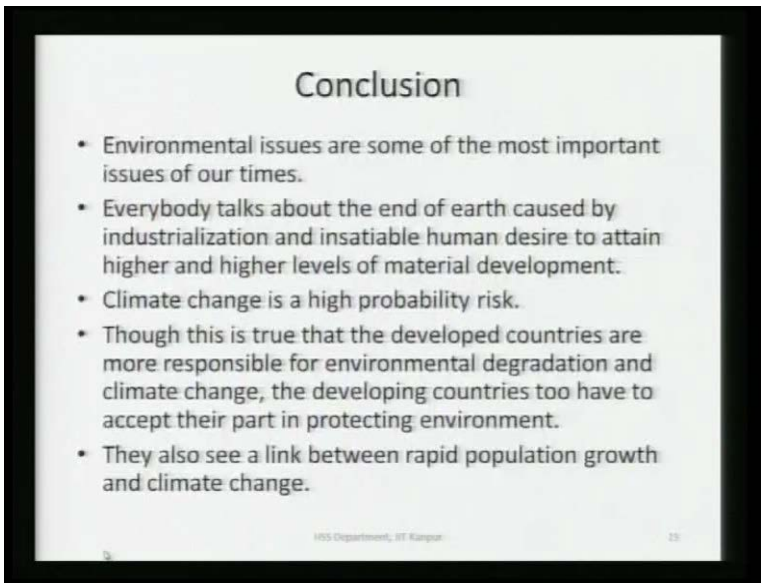

So, w can conclude here by saying a few things, that the environmental issues are some of the most important issues of our times. Everybody talks about the end of the earth caused by industrialization and insatiable human desire to attain higher and higher levels of material development.

And climate change is a high probability risk, though this is true that the developed countries are more responsible for the environment degradation and climate change. The developing countries too have to accept their part in protecting the environment. They also see the link between rapid population growth and climate change.

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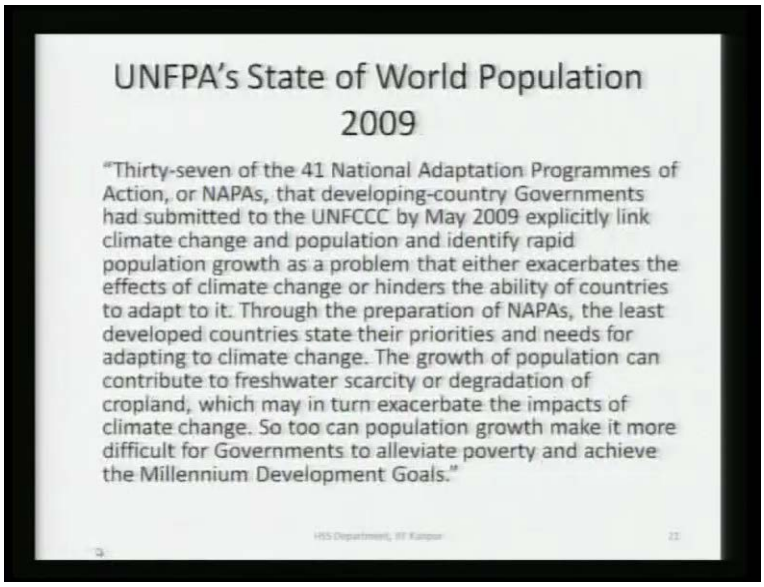

I think we stop here this is a quote from UNFPA state of award population 2009 that thirty seven of 41 left national adaptation program or NAPA. That developing country government had submitted to UNFCC by May 2009 explicitly link climate change and population and identifies rapid population growth as a problem. That either (( )) or hinders the abilities of countries to adapt to it.

Though the preparation of NAPA the least developed country is state their priorities and need for adopting to climate change; the growth of population can contribute to fresh water scarcity or degradation of crop land, which may in turn the (()) impacts of climate change.

So, two can make the population growth may take more difficult for governments, who have powered. So, we have limited and we have to stop now, the point is that population is an important factor in environment change but, we must know that population is not only the factor. The standard of living and that also value system, culture and technology play an important role in deciding climate change; technology can be environment saving or technology can be environment polluting, so thank you.