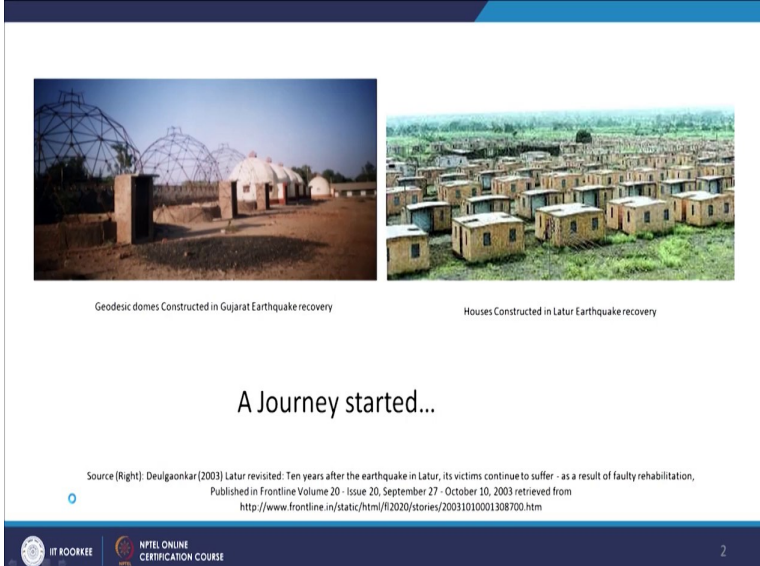**Culturally Responsive Buit Environments**
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Lecture -16
Culture and Disasters – Towards Method and Framework

Welcome to the course: Culturally Responsive Built Environments. And today, we are going to talk about Culture and Disasters - Towards Method and Framework. Infact, here, we are looking at what is the role of culture in the disaster context, you know. So, what I did is, I divided this whole study into two lectures and this is the first part of the lecture and it is actually my own work: own doctoral research-masters. So, it is almost a decade journey of working in the culturally responsive built environments in disaster context.

So, this is the first part of the lecture which talks about how actually I have developed a method and a framework, accordingly to understand the role of culture and its relation to the vulnerability. So in fact, I did show this particular photograph earlier, in sometime back in one of the lecture and how I think it will, probably in the first lectures: how my journey have started and still bringing back here. In fact, I was a bachelor student and I was doing my thesis on Gujarat earthquake housing, back in 2002 and 2003, sometime, yeah 2002.

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Geodesic domes Constructed in Gujarat Earthquake recovery

Houses Constructed in Latur Earthquake recovery

A Journey started...

Source (Right): Deulgaonkar (2003) Latur revisited: Ten years after the earthquake in Latur, its victims continue to suffer - as a result of faulty rehabilitation, Published in Frontline Volume 20 - Issue 20, September 27 - October 10, 2003 retrieved from http://www.frontline.in/static/html/fl2020/stories/20031010001308700.htm

And that is how I come across the right hand photograph which is the Latur Earthquake recovery and as well as, in the left hand side, we have Geodesic domes, so where actually, my journey have started.

In fact, I thought this journey was a very short journey, but I never imagined that this has taken me so long and still I am in the same parts working on it. And what the reaction I got for by looking at this photograph on the right hand side is, this was a photograph from Latur Earthquake recovery programs where many of the houses are still lying empty and they are unoccupied. So, the first question which came into my mind was why these technologically well built constructions were unoccupied by the local inhabitants. So, this question, to answer this question, I started looking at, working on my thesis on the housing rehabilitation in Kutch in the Gujarat Earthquake. So, I come across, though there are many concrete structures and permanent structures where the agencies have started giving and how people are not happy about it and how people are not comfortable in it.

So, with those gaps, I still had some interest on developing and understanding on the role of culture and what is this vernacular architecture and that is where I passed through ISVI which is the International Studies on Vernacular Architecture. And even there, with my elective server, with my subject on natural hazards and environment, I developed an understanding little deeper into it and then, in another 2004, by the time, my masters was getting over, before my thesis, I got a chance to work on the thesis on the immediate impact of the disaster, that is where I looking at: the kind of gap between the community and development groups and what is this interaction gap. In fact, this is where I worked on the few villages; I visited in Cuddalore district, Devana Pattanam and in the Nagapattanam districts.

So, that was a beginning step and still after that, I moved to a kind of villain's role after my masters, I was working with Benfield Advanced Timber Frame Technologies, where I was engaged in working on prefab timber frame technologies and there was a project came from United Nations World Tourism Organizations. In 2005, there was a Kashmir earthquake and there was lot project is all about sending a few houses- prefab houses to the Kashmir the, the Pakistan occupied Kashmir or we call it P O K or the others call it as Azad Kashmir part of it. So, where I was designing everything from return and shipping these houses to the Pakistan occupied Kashmir and I was not aware of who was

the owner and how it was built, neither I do not know what was the site. It was a prefab component, manufactured in the factory and packed up like IKEA furniture and then sent it in the ship. And someone goes there and somewhere erects it. So, this is where some of the questions started coming in my mind because I am working from the practice side also and how these gaps could be concealed and how they can be looked into. And this is where, I started the very first understanding which I started, was understanding the basic terminology and that is where the beginning part of my doctoral research at University of Westminster under Tony Lloyd-Jones and Marion Roberts and this was a time I am talking from 2006 to almost like 2010 and very beginning, I finished my doctorate in 2011 January.

So, in the beginning stages, I wanted to make clear within myself that what is development. So, there have been a various definitions I look across from starting from Amartya Sen's "Development as Freedom" where he talks about the ability that one or individual or a society or a community, how they are able to access their resources and how they manage to survive. So, in my context, when I am looking at disasters, I looked at development in three phases; one is the usual development processes which is even before the disaster, the municipalities or the counties or the local panchayats: how they are involved in the development process. And just immediate impact of a disaster: how the relief or the rescue operations that is also supported by various international NGOs and the national NGOs and that is also one set of development and the third one is little long term after the disaster, following a disaster which is a post disaster development process.

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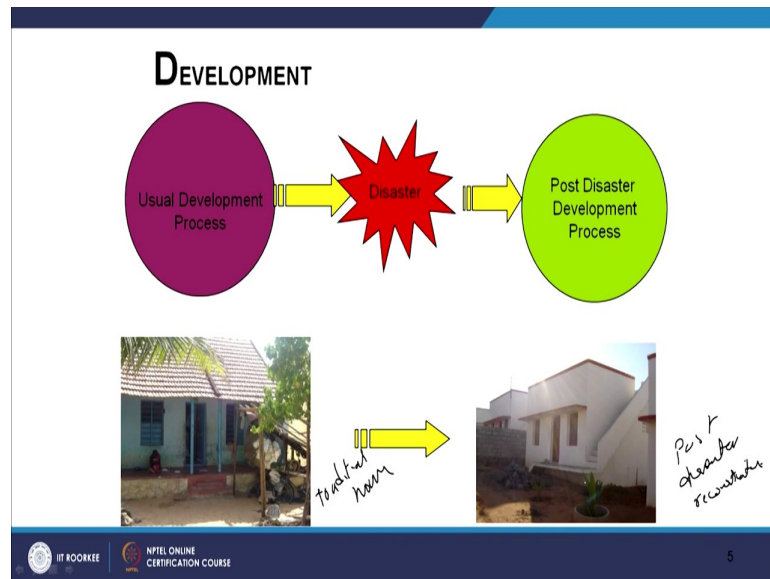
So, what you can see here is a traditional house and you can see a post disaster reconstructed. So, here, what I am looking at it is not just only the dwelling units, but I am also looking at who are the actors involved in it. Here, the local municipalities, local communities were involved, local stakeholders, here, the international NGOs, but here is a long term project of settlement and the adaptation process, where a part of NGO culture or the non government organizations and there is little interface between the local and the nonlocal.

So, then I started looking at understanding the basic concepts of what is the relationship between the disasters, development and vulnerability and that is where I come across a lot of literature. In fact, one person which I should thank is Rohit Jigyasu's work; on his work to and Nepal and then Gujarat. So, where he talks about the reducing vulnerability through the local knowledge and here what he talks is, he brings some of the models of this development and disaster and vulnerability.

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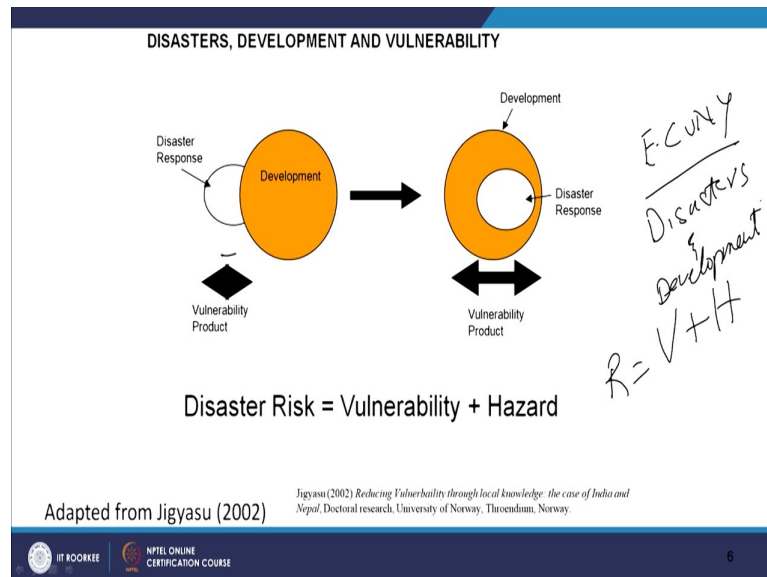
So, ideally if a disaster, if the development is followed after a disaster which was a traditional model before (Refer Time: 08:34) Latur, the disaster happens and the development follows upon it; ideally, the vulnerability should be less, the factor that in reality, our issue is the disaster component responsible within the development, we have the existing component that is where the vulnerability component is more and that is where we call is R is equal to vulnerability plus hazard.

So, this is a very simple equation. In fact, it is not the hazard which is killing people, it is not the hazard which is taking out the lives and livelihoods and the property. Like, if a cyclone comes, yes it just comes and goes; even earthquake comes, it comes and goes, but what is the susceptible part of it is how you are prone to it. Now, the same Nine Richter Scale will come in Japan, the same eight Richter Scale will come in California, but still why you don't see that kind of losses. Here, how you can see in a countries like India or Indonesia or even Gana and how you can see that more number of losses especially in because that is how we are susceptible and prone to those hazards. Though they are also prone, but there, the capacities are different, they develop their capacities and that is what we are talking about this the relations between disasters and development and vulnerability.

One of the important person we have to bring is Frederick Cuny, who actually brings a research between disasters and development. So in fact, till that point development was disaster they, they have seen in 1980's, they have seen as a two independent futures' phenomenas, but then Cuny actually brings the relationship between the disasters and the

development and even professor like Young Davis, who actually talks about shelter after disasters and how disasters as a catalyst of change, how it can be agents of change both in a positive and the negative ways of it.

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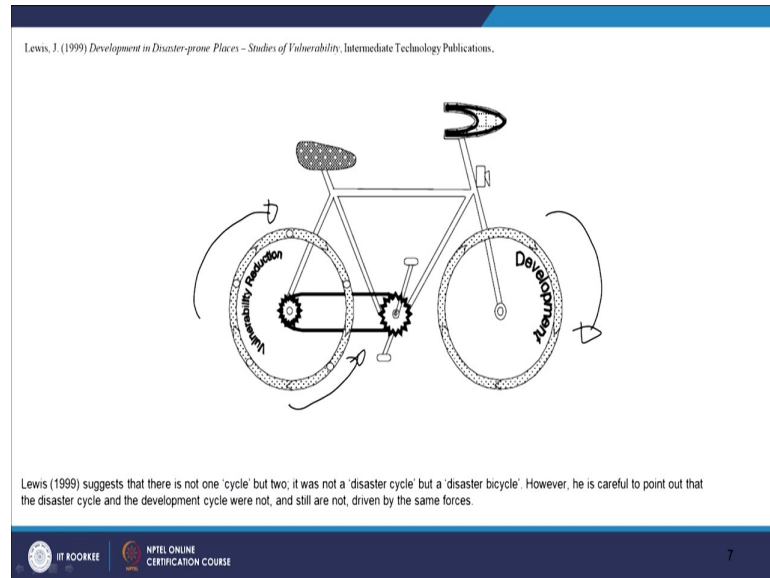
Whereas Lewis, he talks about it is not just a cycle, he talks it is a bicycle but what he actually compares is he puts the development which takes in the forward phase, but ideally if you are riding a bicycle, it should move in this way but not really, it may move in this direction as well.

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So, which because they both are not driven by the same force, so here one has to look at its not the development always taking the vulnerability forward, but it is also the different forces bringing this vulnerability in a different direction, that is one phase he thought from the concept of moving of a cycle disaster, cycle to a disaster bicycle. Now, I started working on the vulnerabilities. So, the way I have start describing on the pre disaster development and the post disaster development and that is where you can see, even in this photographs, in the villages which I have visited, the pre disaster they have problems of water supply, they have problems of sanitation, they have problems of various local disputes, you know the land tenure issue. So, we already have this vulnerable situations and disaster adds to it.

So, with what we are having and how the disaster adds to it because the loss of heritage and loss of our infrastructure, so because it is not just we can't see what was been lost, but what is made them to lose and what is still, what are the pre disaster situations. And now, I will again show you the same photograph which I showed you earlier on the similar way and same village, where the post disaster vulnerability even after two years, still there were water issues and still people are so, what this photographs are telling you the span of two to three years; a span of two to three years, it is saying that yes, it is the direct, it is the vulnerability is directly proportional with the kind of development and then how development overlooks the pre disaster conditions.

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Now, I started understanding that in what way, I can understand vulnerability. So, we looked at various aspects where how one can understand the vulnerability; one is the techno centric analysis which talks about the physical vulnerability of buildings through technical inspection of false, weaknesses and basically a civil engineers or the structural engineers or surveyors do come and understand the site, how it has failed, where it has failed. And later from 1980's onwards, there is an awareness on target group analysis because every disaster happens, it is not every time it is the same groups who are getting you know having an impact. So now, they are focusing on this target group that is where the sociologist started looking at it at a target group, who are these target group and why they are targeted, how they are targeted, you know.

So, and that is where it talks about the social vulnerability. And a third one is a situational analysis. It is not a just in like a what kind of a group or a person and our family belongs to but it is the nature of their daily life and their actual situation, how it was and how it is and how it is changing. So, we are talking about a situation because sometime, a person might be poor before disaster or he might have become rich or he might have become wealthy person, became poor you know because of his loss of family and you know so, basically there is a tremendous change in the whole process and that is where one have to understand the situation. And in the last model, we talk about the community based analysis which is more of a kind of PRA techniques where we talk about how NGO's work together to make awareness within the community realize their problems and show them a direction how to build it. I tell you a good example of a Bollywood movie of Swades, where Shah Rukh Khan, he at the end of the, he goes to a village, a Nasa scientist, he goes to a village and he helps all the villagers in, there was no electricity in that village. At the end, he only makes a small bulb, he brings electricity but the whole process is all about how we makes the villagers realize their own indigenous issues, how he puts together: it is not just throwing money and constructing the electricity platforms for them, but how he actually puts the villagers in confidence and how he brings them and how he uplifts them so that they can help themselves in making, dealing with their own issues. So, that is where the community.

But in this my research, because being a single person and handling it, understanding the change, especially the culture when we are talking about how this transformation, the pre

disaster to post disaster context, how it is changing, how the response situation, so that is where I looked at the situation analysis.

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And so the other models, which I can just give you a brief on this, the 'Pressure and release' model which is of a Blaikie and Terry Cannon and Davis, where they talked about this pressure and release model. So, here also, it says about how a progression of vulnerability, you have the root causes which you have the existing, like for instance: certain types of certain tribes or certain villages who have a very limited access to power, structures and resources and also the ideologies like in the Arab countries, they have a different ideology of gender; they have some power limited power to the gender, you know. Many of the people who died in tsunami from the fishermen communities, many of them are women and because women does not know how to swim, whereas, in a western culture is at least because if many of the women are familiar with, maybe they might have rescued themselves. So obviously, these are some of the root causes; added to that, there is some kind of dynamic pressures which talks about how their lack of local institutions, local training and the local markets, you know, how the change in the market trends and rapid urbanization. So, these are all some everyday add on things which adds more pressure to it.

And ideally, this whole process leads to unsafe conditions; that is where people living water settlements, people living in an unsafe locations and lack of local institution

supports and you know. So, this whole thing that is where we talk about the R is equal to H plus V. So, this is the model which we talk about. And coming to the sustainable livelihoods model, where it is an Asset Framework. DFID have developed this, and later Tony Lloyd Jones and Carol Record already have also have worked on a kind of basis.

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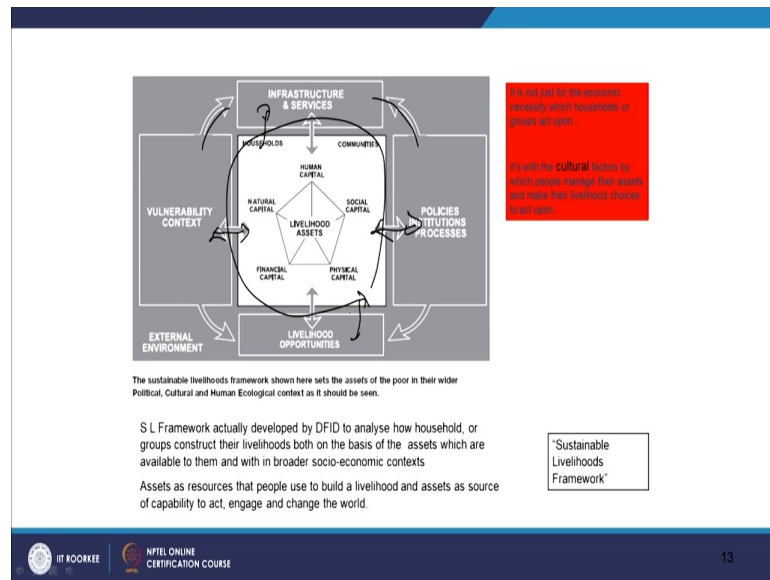
In fact, this original model was developed in the by DFID, in 1997 sometime. And later, how it was modified is because it is how the livelihood assets, how people manage their assets and how people cope up with, how they can access the resources. So, that is where the linked with the vulnerability component and how the policies and institutions relate to it and how they derive to the infrastructure and services and at the same time, the livelihood of opportunity. So, this whole framework which we call it is a sustainable livelihood framework and but what is here missing is, it is not just an economic necessity one looks at it or how one act upon, it is also about the cultural dimension or the cultural factors which, where people manage their assets and make their livelihood choices to act upon.

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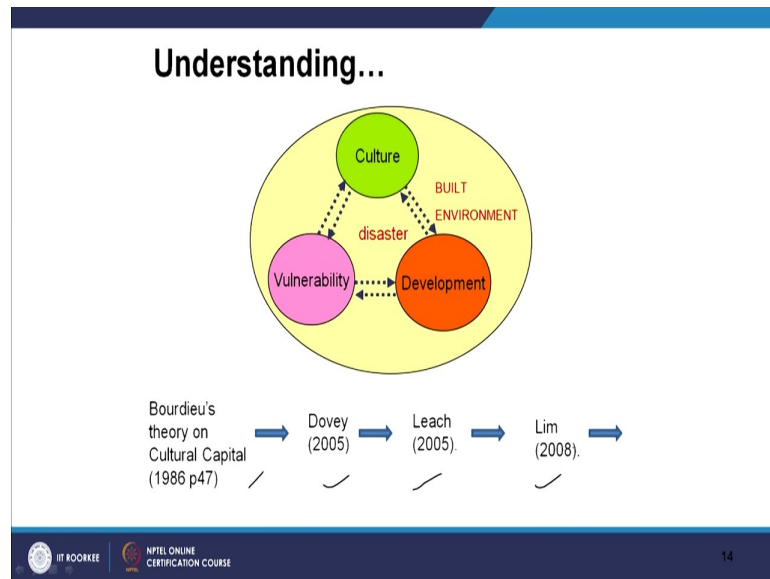
Now, this is how I come to a point where how because there are lot of literature working on the relationship between culture and built environment, I think our previous many lectures have discussed about it. And there is also about lot of literature and culture and vulnerability and is also a lot of literature on vulnerability and development. But, how I am looking, because a sociologist can look this in a very different approach and anthropologist can look at this component in a different approach. So, I am looking, being an architect, I am looking from a built environment perspective. And not only built environment perspective, I am looking in a disaster context more specifically. So, this is how I started looking at various work on Bourdieu's cultural capital and Kim Dovey's and the Leach work and the Regina Lim's work. So, this whole discussion what we have talked about habitués, cultural capital in my earlier lectures, this is all have been read through and been analyzed to formulate my understanding and how I can go ahead in understanding the culture.

So, in one of the model which I had come across, especially from the built environment perspective are Regina Lim's model and this where is she worked on. She coins a term called cultural environment. It is a matrix; we define this environment as a matrix of various dimensions of religion, belief system, the ecological environment, economy and the family structure kinship, gender roles, politics, cultural interactions. So, all this becomes a kind of matrix and how this becomes a structures that create a cultural identity and this whole set she formulate it as a, she coins it as a cultural environment.

Then, to give a little brief about Bourdieu's theory, where in 1986, in his book of 'Forms of Capital' where he talks about three forms of capital; one is the inherited the or the embodied, the second one is an objectified and third one is an institutional. So, from an educational perspective, this particular theory has been developed and in a inherited, how you learn from your parents and how your society, the kind of language you will develop, the kind of habitual practices which you developed. And similarly, in objectified: how you portrays your objects, how you sculpts your being, you know thought process and identity; like a fisherman boat in China and fisherman boat in Kerala and the fisherman boat in Bengal, all of them are doing fishing but their boats are different, their houses are different because that is how the representation comes into the how they objectify through art and architecture. And institutional, obviously, it was been much debated because he talks about this the popular culture as well.

So and then, I think in our previous lectures we did discuss the about the criticism on Bourdieu's theory and from the built environment perspective, where Neil Leach talks about identification of a space in three dimensions.

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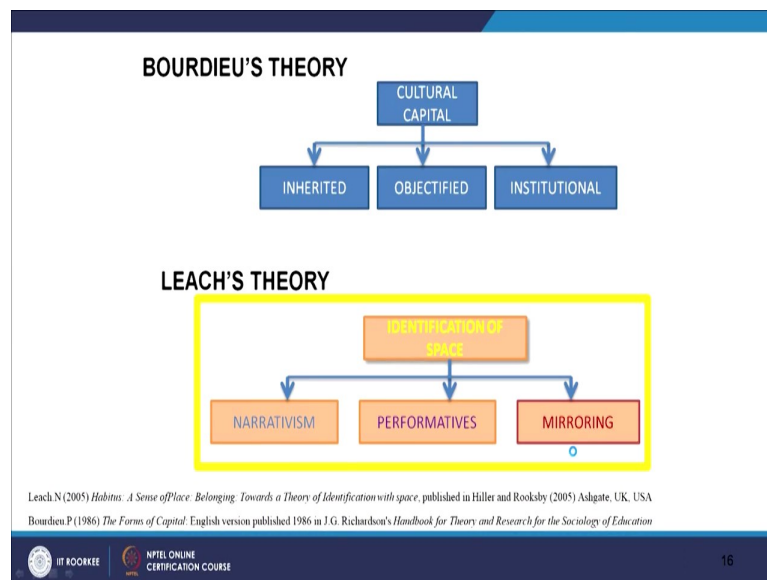
One is the Narrativism, Performatives and Mirroring; how we talk about spaces, how we narrate the spaces, is it a footpath? Is it a market? How obviously, thus the narrations talk about. In fact, in our lecture series of power series of that, we talked about all the narrations where Dovey also narrates the Chinese Tiananmen square and the Nazis

ideologies, how they have placed. Similarly, on the performatives, where certain activities are performed and certain rituals are taken place. So, there is a action taken place and how it is remembered and a similar actions are repeated by a course of time and that is how one will develop an attachment to it. So, that is where the mirroring comes up. So, this is on the discussion on the culture, but whereas, to cut short it, I would now bring to the, there was always a dialogue of how in a disaster situation, how we can bring back to the same situation. Now, whether we need to bring back to the same situation or we need to build back better. So, in fact, that is where the arguments of globalization you know because now people can now can now Deborah Lupton talks about now people cannot simply rely on local knowledges, traditional religious precepts, habit or observation of other processes to conduct their everyday life as they did in pre modern or early modern types.

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So, there is always conflict between traditional and there is a tension between tradition and modern; you know because obviously, each influences each other, there is a little contest between these subjects.

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And that is how I started defining of , how we can define the culture? Culture is defined as the sum of total experiences and accumulated indigenous knowledge within the space that communities rely on and giving meanings to the lives and places they live in, through which people habitually develop an approach to survive their everyday life, whether it is a pre disaster situation or a post disaster response situation.

So, this how we here I brought some kind of experiences and how it transforms through their habitual practices.

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Now, again here the main argument of the study talks about is the cultural dimensions of local communities are not effectively and sufficiently addressed in the current post disaster humanitarian and development processes but to the disadvantage of both, the communities affected on the humanitarian development agencies helping them. So, here I am bringing the component of because why we have to address, why your culture and the culture which is overlooked in the process, it is not only an disadvantage to the communities but it is also disadvantage to the NGOs, all the humanitarian agencies working on those projects. How much investment do you think about the Latur Earthquake has been spent and what happens to those investments if someone is no some development is not compatible with the local cultures.

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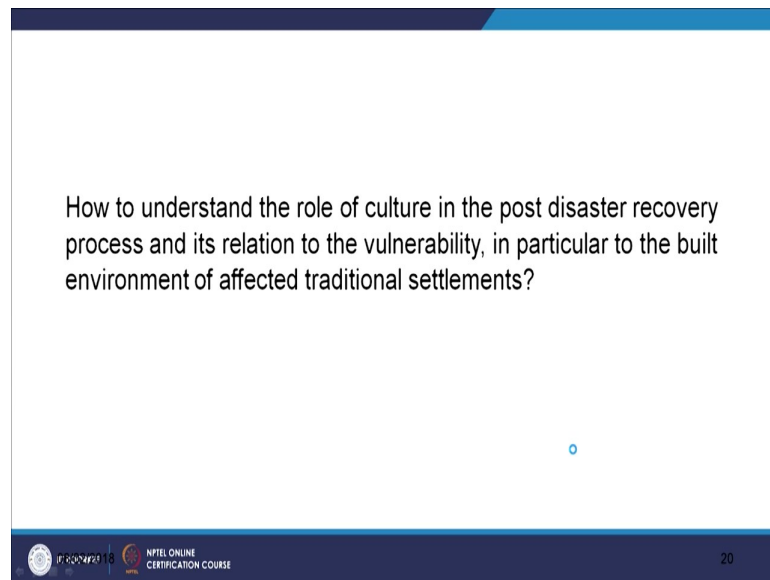
So, that is how I started looking at how to understand the role of culture in the post disaster recovery process and its relation to the vulnerability. Here, the very, it was important for me to address with culture, it is not just only the role of culture in the post disaster recovery process but what is the this relation, how it can reduce or increase the vulnerable situation, in particular to the built environment of affected traditional settlements. So now, after looking at various theoretical discussions and various analysis of deriving certain methods, I looked at two components; one is the cultural anthropology and the second one is a morphology which talks about the change.

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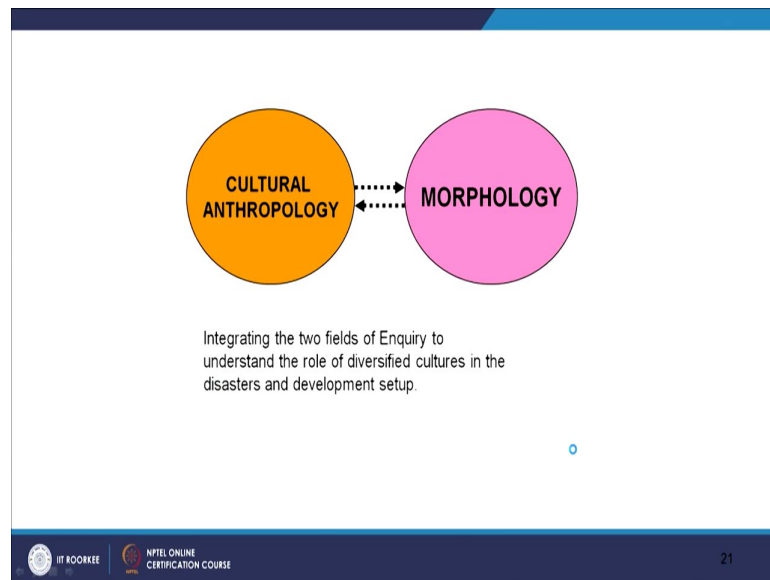
And these two fields of enquiry have been implemented, taken into consideration to understand the role of diversified cultures in the disasters and development setup.

And then, this is where I was started looking at various literature and how I can actually set a benchmark of whether this has achieved, this space has achieved a better environment or not and that is where one of the good theories, good old theories of responsive environments developed by Ian Bentley from Joint Centre for Urban Design ,the responsive environments where he talks about certain principles: permeability, legibility, variety, visual appropriateness and richness. These all forms a set of responsiveness of a place and that is how I name this course Culturally Responsive Built Environments.

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Now, I develop the kind of framework.

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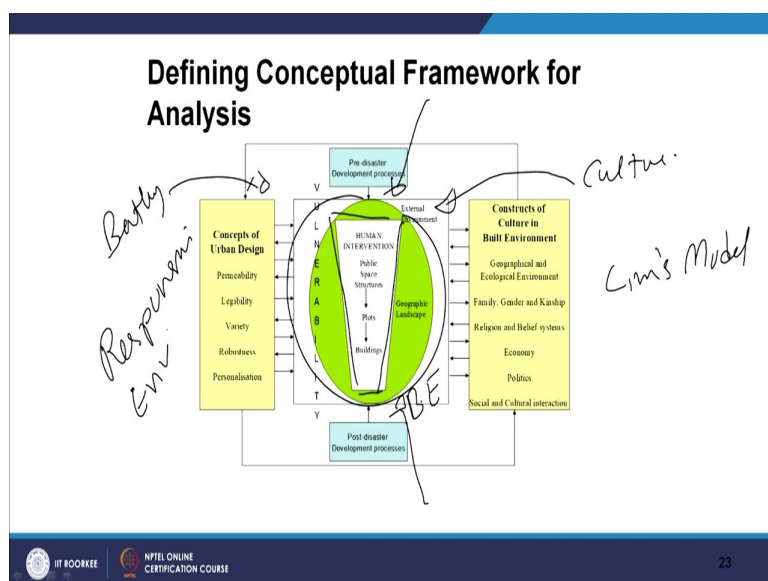
What I did was, I first divided this whole built environment into a kind of funnel type where we have an ecological environment and have a geographical landscape and then the humans intervene and then the sets of the kind of public space, structures, plots, buildings. So, this is the built environment component. So, you have the built environment component and on one side, you have the pre disaster influences on it and the post disaster influences of it, but another side of it is the culture component; the structures which create an identity. So, taking from the Lim's model, so I started working on this, how this is shapes the built environment than the Bentley's work of responsive

environments. So, how these dimensions, I mean how these indices can actually check space whether how this is shaping this place and how whether it is how it is qualifying this place and in both the context. This how I develop the framework. It took a long time to come with this kind of framework. And then, I travelled across to how many case studies I should select. Then I travelled across the Tamil Nadu, the scope, the coast of Tamil Nadu, visited many villages, 17 villages I have visited.

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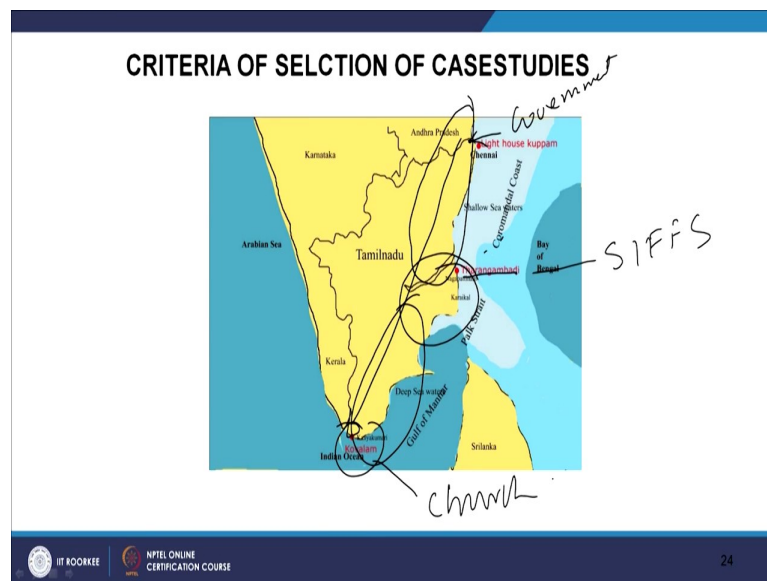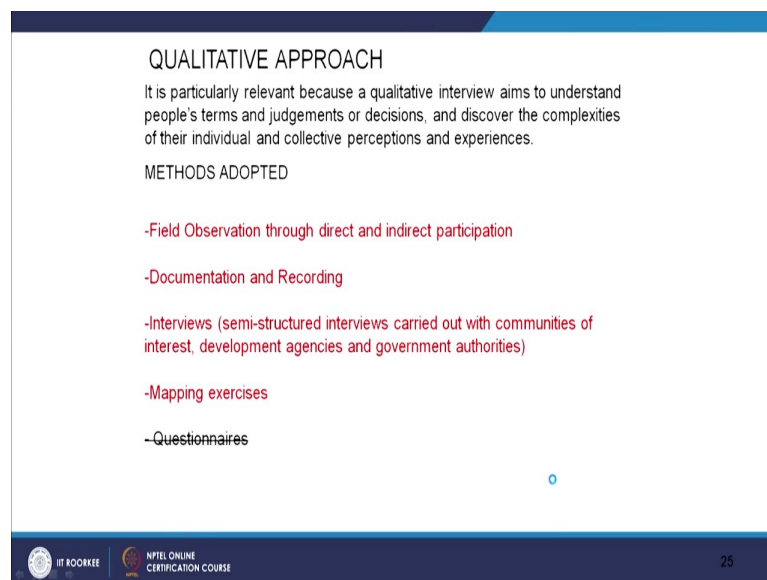
And then, I taken a criteria of some which are least affected, average affected and most affected and then taken by NGOs, taken by institute, taken by relocation contexts; all these criteria has been laid out. And the one good thing what I can see is here, when I was travelling down south from here to here, I can see that most of the Hindu population, I found here and most of Roman Catholic, I found here and most of the mix variety, I found here. So, I was wondering oh! this social landscape little different because most of the fisherman here are the Roman Catholic and of the northern side, more of the Hindu and here I can see the Muslim near Karaikal and Nagapattanam and the mix population.

So, then I started looking at the geographical aspects. I can see that the Coromandel coast which has a shallow waters and the Gulf of Mannar which have a deep waters. So, here you can see that the shallow water indicates less fish and deep water indicate more fish. The more fish, more money; less fish, less money, so obviously, it has an impact on the kind of nature of built environments. So, not only that, I have also taken another criteria

of, so one is the land is different, second is the sea is different, the third is the communities are different, the fourth one is development input is different. Here, I have selected a Dalit village where the government is taking care of the reconstruction, here and fisherman NGO is taking care of the Tharangambadi and in here, it is the local church. So, basically those three sets of development inputs, how they are relating and three different cultural geographic component have taken as a criteria to select my case studies. And then because of being study on culture, I looked at the kind of qualitative approaches where I have adopted the field work through direct, indirect participation, documentation and recording, interviews and the mapping exercises.

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Initially, I adopted the questionnaires is as well but then I thought it was not possible to investigate the culture in that manner. So, I have taken it out.

And these are the some of the methods which I used.

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And this method which I will be discussing again later in my next lecture, the following lecture where this whole I have conducted an kind of anthropological understanding, I lived there as a fisher man and I explained all these things. And here, what happened is in the coastal regulation zone many of the houses following a coastal regulation zone, the villages have been relocated to some other place because they should not construct anything beyond these 500 meters from the high tide line.

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And so, will continue with the next following up lecture, especially with the case studies and this is all developed from my own work and Thank you very much.