**International Studies in Vernacular Architecture**
Professor Ram Sateesh Pasupuleti
Department of Architecture and Planning
Indian Institute of Technology, Roorkee
Lecture 20
Yonmenkaigi (Four square table system) Method for Collaborative Knowledge Development

Welcome to the course International Studies in Vernacular Architecture. Today we are going to discuss about Yonmenkaigi four square table system method for collaborative knowledge development. So, in fact this is our last concluding lecture. So, far we have discussed about various understandings on dwellings, places and the habitats, how different aspects of culture have changed and the materiality, the natural hazards, the geography the concepts we discussed about that.

Till now you have heard from our understanding and where Melissa, Anne and myself we talked about our experiences and our learnings and we try to put it forward for you. But the last session is going to be a kind of learnings from the community, what we learn from the community. So, here you will be hearing from the words of the community representatives and the stakeholders from the hill communities.

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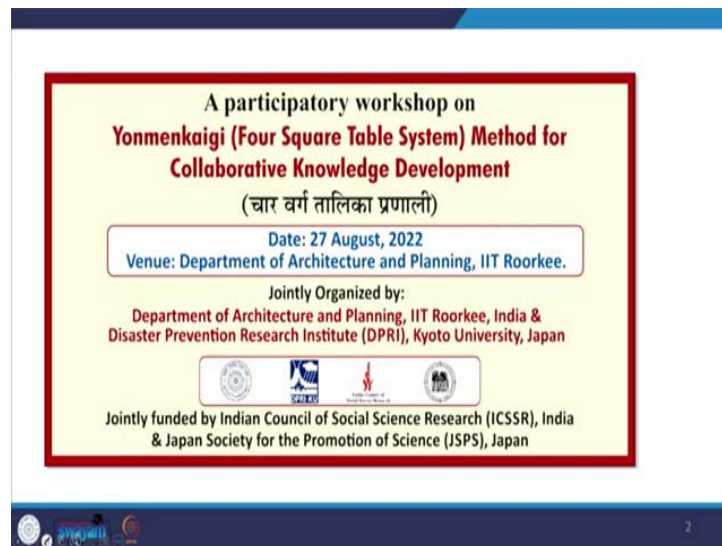
I am going to talk about particular workshop which we have recently conducted in our department, as a part of a project which is funded by Indian council of social science research and Japan society for the promotion of science Japan. So, this is a part of the project is one of the tasks and go through this particular workshop it is a participatory workshop on

Yonmenkaigi four square table system method for collaborative knowledge development. So, in Hindi we call it as "char varg talika pranali".

So, we conducted this on the 27th of August, here in the department of Architecture and Planning IIT Roorkee. So, the workshop coordinators myself and my Japanese partner Doctor Subhajyoti Samaddar and Doctor Uttam Kumar Roy and we have actually invited the communities, the stakeholders, the decision makers, the bhatwari block pramukhs and the NGOs and the local architects who are working with the hill communities and certain people who are running the homestays.

So, different stakeholders were actually brought to this workshop and there is certain issues which are deliberated in a particular format. First of all, let me tell you what is this Yonmenkaigi. So, this is a particular method which actually been derived in the Japanese systems and here when the military was working with the communities, there is always a disconnect between the military understanding of, and the community needs.

So, this is how a system has been developed where Kaigi means meeting and Yonmen means a four square table. So, basically there is a four groups which are brought together and they are being deliberated on a particular aspects and a particular theme and then they interchange the roles. So, in that process they develop an understanding towards an action processes, so in that way each of them actually come to these different roles and they understand the issues from a different shoes as well.

So, that is how this particular workshop was very helpful to understand not only from the experts or the scientific perspective, we need to understand from the community perspective, from the facilitators perspective, from the decision makers perspective. So, before that in the previous lectures I have also explained about the climate change adaptation and the disaster risk reduction, where we did some studies in the mountain regions.

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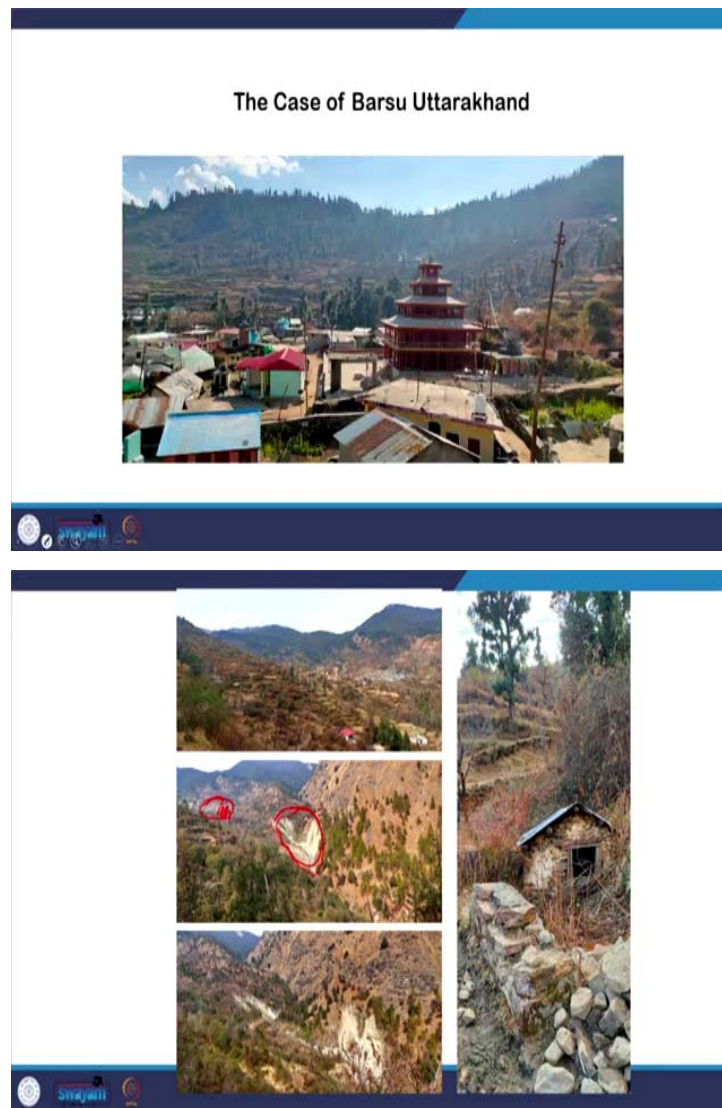
And this is the context of the Barsu Uttarakhand, where we can see that after the 2012 floods the certain landslides have happened in the Swarigad area and this is called Giri pahad and you can see that the settlement Barsu exist here. So, day by day they can see that gradually there is some damages which are happening onto these hill slopes and it is actually affecting part of the villages and today if you go almost 80 to 90 percent of the houses either they have developed cracks, they have partly broken or completely broken down, you can see different levels of intensity, whether it is old building or a newer buildings or any other items that have built, so gradually they could see that some changes are happening to these settlements and also to their buildings.

So, people believe that, yes, the whole land mass is actually sliding down and that was the reason why it is. But there was some groups which actually mentioned to us that some agencies have done some drilling and they tested these soil and they actually said that yes it is moving, but we have not found any such reports in our query and we are also neither the community has that copy of that.

So, we asked to procure that so that we get a thorough understanding of why this is happening. So, this is a gharat again the traditional water mills of Uttarakhand, almost 60,000 water mills are still abandoned and they use, these are the alternative hydro energies, they use these natural forms and in that way they use it as a flour mill. So, today there are many of these abandoned.

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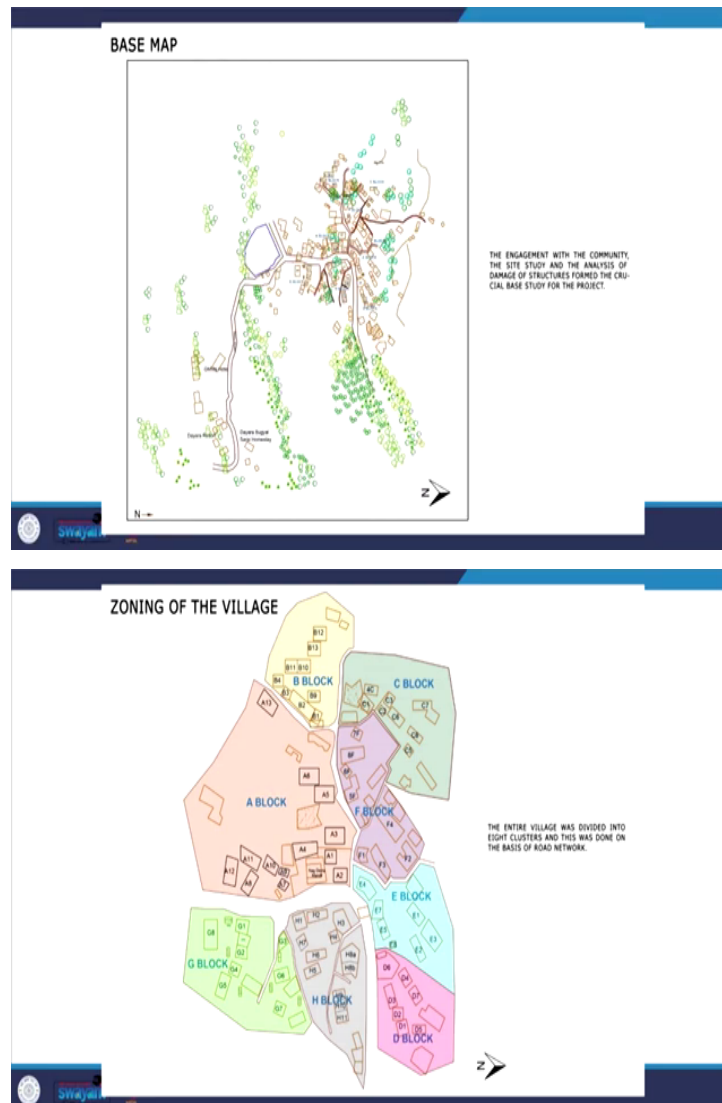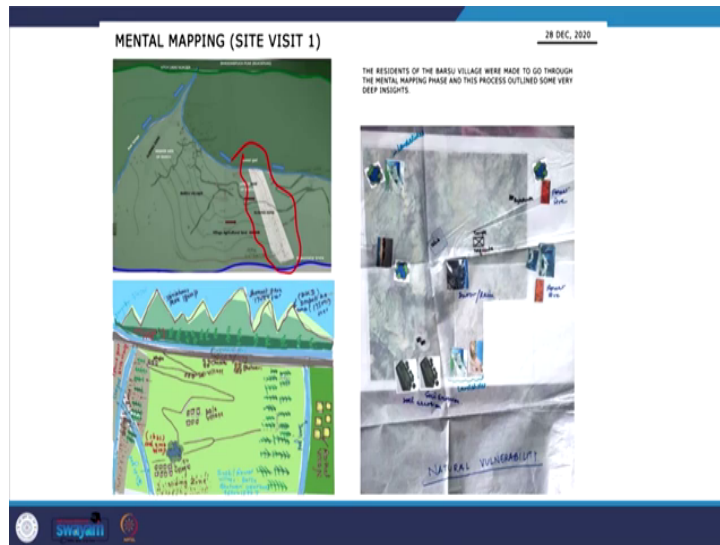
So, what we did was we actually tried to develop a base map of that and we started engaging with the community, taking the consent from them and we developed into for a documentation purpose, we developed into different blocks. And then we have from the community narratives we have taken their mental map, how they feel risk from their perception, what the good things about their settlements, what are the problematic issues within that, so you can see people have really mapped down this is a sliding zone. And they could able to understand where the potential of this risk is coming from and how so this is basically from their minds and memories, their experiences and their observations.
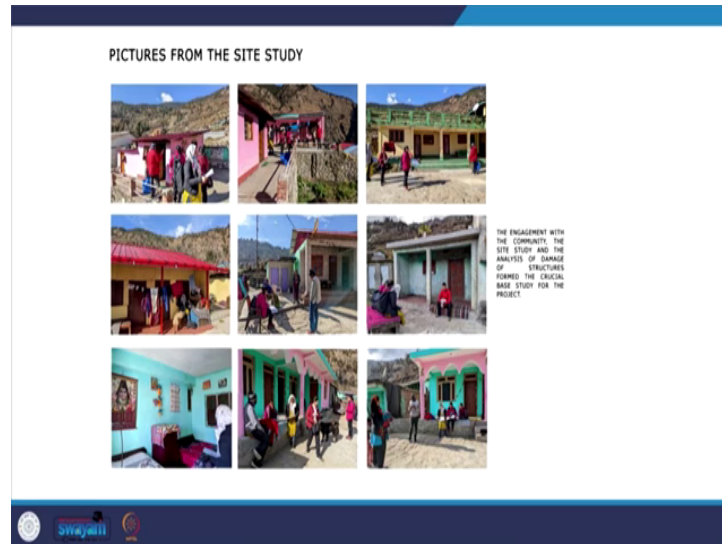
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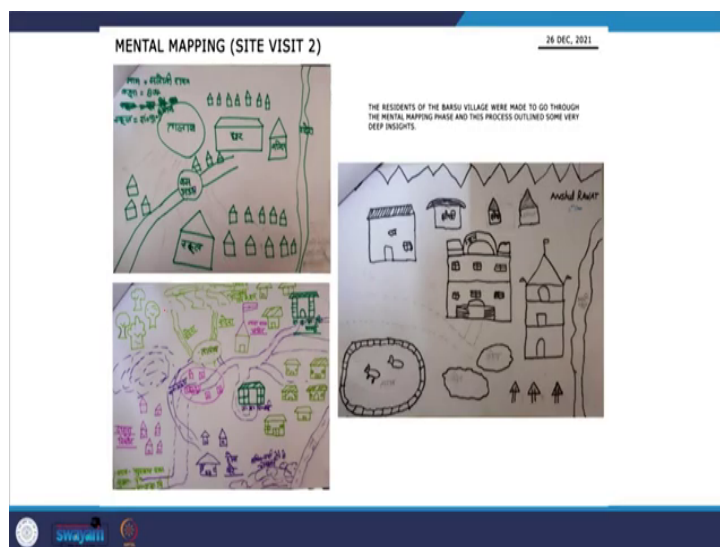
Even the school children they talk about how the water bodies are coming up and how what they see and what they can even identify how this rubble is falling down every day. So, in

that way through the word of mouth or through their living experience they were able to map down certain understanding of the settlements and certain changes which are happening.

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So, as a team we went and we have taken the consent of the people and then we have actually started interacting with them and we documented each and every house.

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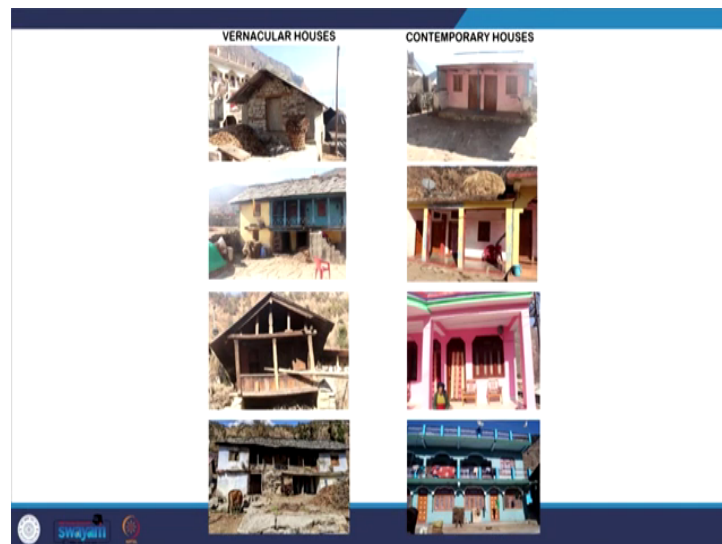
So, we can see that even the newer buildings which are constructed they are also gradually deteriorating and they are getting cracks including the traditional buildings. So, the technologies which they adopted earlier using the wooden as a which acts like a shock absorbing process. So, now many of these are also they are developing cracks.

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So, what we did was in order to get an understanding of hot spot understanding, we developed a matrix using the brunskill method and after visiting one or two times what are the typical housing typologies, we developed the matrix from here. And using particular reference to the office of Prime Ministers in Japan document so which they have actually showed us a direction how to grade.

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So, in fact by looking at the nature of cracks, nature of damages we could able to identify each of this building, yes, this is in a grade 3 or grade 2 and with photographic evidence like for example you can see that these are newer buildings but depending on the nature of the

description they have given in the matrix, so we could able to find all the grading process. So, then we further mapped on to what the communities have said and what is the real part.

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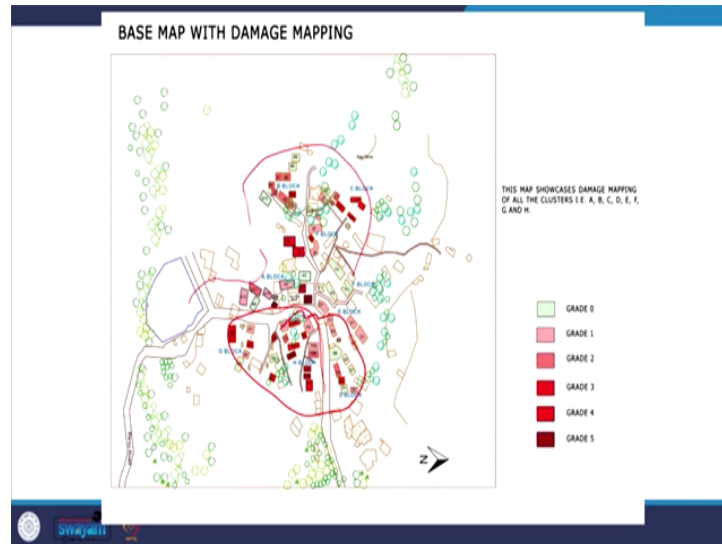
So, even we actually talked about the community, the community have said this was the most problematic part, but we can actually see that there is other areas which are also gradually deteriorating. So, in fact whatever the interactions we had earlier with the communities they expressed many concerns that with the rodents how the soil is loosened out, the langurs, the monkeys or any other wild animals are coming to their crops, damaging their crops, the forest fires and the traditional knowledge which is completely, the medicinal knowledge which is completely forgotten. So, lot of concerns which the communities have established.

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So, what we did was we brought this community and other stakeholders to this workshop including some facilitators like the practicing architects and the NGOs and we conducted this workshop. So, what we did was first we have taken a written consent from all of them that we are recording and we would be using for the academic and the research purposes.

With their consent we have proceeded, first we explained the project what we did in these all these two years of time, how we have interacted with these settlements, we explained this whole process, what we learned from them. And in the Yonmenkaigi system so what is this method about?

So, I try to explain why we are conducting this workshop, what is the method and the protocols of this workshop. So, here it consisted of four stages, one is the clarifying the main theme by the SWOT analysis and the second is we drawing up the Yonmenkaigi chart by the four groups, and the third is the debating to improve the implementation of collaborative action plans among four groups, and the final part is the presenting joint action plan for the groups. So, in this process we were able to do the first two successfully and then the first third I think we need to do again with the community again and so here we will next time we will be going out there and we will be coming up with an action plan.

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A participatory workshop by the Yonmenkaigi System Method be summarized as follows;
1) Making collaborative action plans to carry out community building activities for disaster restoration,
2) Providing a sharing space between local community and local government,
3) Sharing vision among local community people for community building from the flood disaster,
4) Improving capacity of human resources in a local community.

So, here the method could be summarized as follows and you can see it is a process how we make the collaborative action plan to carry out community building activities for disaster restoration. And providing a shared space between local community and local government. Sharing vision among local community people for community building from the flood disaster. And improving capacity of human resources in a local community.
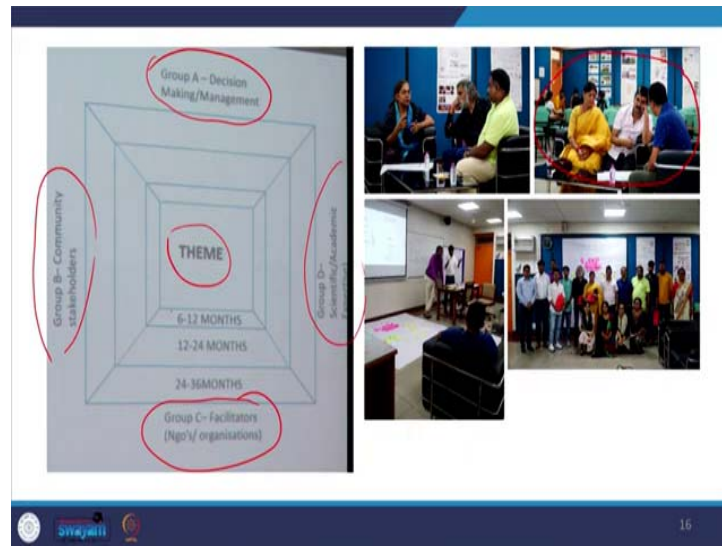
So, this is what I call it as a Yonmenkaigi, so I said about the time frame. So basically, we come up with a theme after the SWOT analysis so I am going to show you a video of the certain deliberations and based on that we come up with a theme of the resilient hill settlements and environments.

So, in that way there is four groups which are formed, one is the group a so bhatwari pramukh and certain decision making people who are part of it. Similarly, the community stakeholders who are part of it and we have the facilitators like NGOs or organizations who are part of it and we have the scientific and academic expertise were again part of it.

So, there were four different themes and this in this particular chart we put a time frame in our project we put from 6 to 12 months and 12 to 24 months and 24 to 36 months, what kind of actions, because the first half of the day we discussed about the problems, the strengths, weeks, threats and opportunities. But whereas the second half we discussed about the follow-up actions what we should do. So, I am just going to run through this video and before that I will brief you what we have discussed.

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So, strengths, weeks, opportunities and threats, we have also written in Hindi and the whole conversation we conducted in Hindi so that the local people can easily understand. So, one of the important strengths which they said is the climate and the natural resources that is the strength of them, hill communities.

And more importantly the unity, the unity of these like if some village is in a distressed situation, the other villages will come forward, so that is the level of unity they had and that is what the communities are able to tell that. And we have the strength is the arts and crafts, the skills, today they are also having some issues in finding the skill resources, but still they believe it is a strength and their belief systems.

And their natural resources and they have these shramadhan, the shramadhan process like imagine someone is building a house or something so the whole village they contribute something, they contribute their effort to make some public facility or anything so in that way every villager they take a role in this process, that is one of the strength they said.

They said, yes, the technology is also strength, at the same time they also said technology is also a weakness because of the technology there are good things happening but they are also mentioning that yes they are not something which are not very good for their daily activities, like even the yoga and other things which are part of their lives.

And migration, again migration they consider is the strength at the same time there is also a threat because yes, the people who did not migrated here this remained as it is in the hills but the people who went but the next generation, they went and they got jobs, the better jobs,

their children were educated and then they come back, obviously they could able to see some differences.

The people who went to planes and the people who remained in hills both from economically, from literary point of it, from their status point of it, so in that way they see that there is also strength in the migration, but the same time they express that, yes, migration is also creating challenges. And when it comes to the weaknesses we have this transfer of knowledge and the how we transfer because from we have, they have rich knowledge of medicinal herbs, they have rich knowledge of understanding a places, their waste management but how do we transfer from one generation to another generation.

Similarly, the technology that is as I said to you before it is also considered as a weakness and the involvement of the local communities in the DRR policies. So, what they believe is like the policies and the training programs which are happening at the block level or at the district level, it does not reach to the villagers, how we have to protect ourselves from the disasters.

So, in that way they are concerned about how these policies, why are they not involved in that level, these training programs why are there, why is not reaching to that level. So, lack of skill development, so that is also one of the weakness and lack of physical and digital connectivity. Let us say if some damage happened during a disaster how do they escape with a different route or how they are physically connected, how do we reach to these places, especially for the pregnant women they travel for many kilometers to reach to a hospital, the children travel to many kilometers to reach to a school, sometimes there will be a wild animals. So, all these concerns they have mentioned.

And similarly, the digital connectivity, if they have to call someone on an emergency, sometimes there are some places which the even the phone signal will not reach and real time info because when we talk about certain disaster happened on up hills but some other activity happens in the lower side what happened in the how the water was flowing they are not able to get that real-time information in any kind of rescue efforts or any rehabilitation efforts, so in that way they would be happy to see that if there is some real time data which happens somewhere else they could able to get that access to that.

And similarly, the learning from the previous disasters, yes, we are living in a disaster prone areas, but how much we are learning from that and how we are improving it that particular methodology is not very clear. Then incremental, oval flows and prediction from the natural

responses, earlier their ancestors they used to look from just a bird's movement, the flora and fauna the way the behavioral process, the how the blossoming process, they could able to predict, yes, something is going to happen or they could able to predict certain frost timings so that they can safeguard their crops.

And similarly, there is an improper waste management, now the waste is coming even from the plains because of the many products which are coming from the plains to the hills but earlier it was more sustainable they used to survive what they used to get. So, the joint families have now become many of them become nuclear families, so that is also one of the weakness which the communities have mentioned.

And similarly, the opportunities they said development is both as an opportunity and a threat. Similarly, the forest tax they consider it is a threat and there are many disasters, disaster they mentioned both as a threat and as well as the development, as an opportunity because it provides an opportunity for them to develop further, to learn something new.

So, I was a little surprised to see how the community said yes, we need disaster because we learn from that and we develop from there. So, at the same time it is taking many lives. And the skill development, the ghost villages were abandoned, so many there are some villages no one lives there and how these migration is also a process which is creating this such kind of ghost villages.

And how can we enhance these villages in the context of tourism like how we can actually promote them with the help of two alternative, tourism process or any other development process. How can we promote this medicinal herbs and the natural resources. And similarly, the alternative energy like we talked about the gharat and how we can rediscover these things and make them active so that they can less dependent on the energy process.

But of course, one has to really look at something is getting ready made to you and why do they go far away and get it done, so there is always deliberations on that. So, one of the important aspect which they mentioned is the conservation of these old homes whether in the context of ghost villages or when the context of the abandoned buildings, so how we can conserve them because the tradition has to be showcased.

So, now many of these traditional buildings were bought by people investors from Haryana or Delhi or Punjab, some other nearby areas but they are concerned about what happens to the local because there is a newer investments coming in. At the same time when we were

talking about these when community have expressed this but the experts are also pointed out who is actually selling these places, it is a community who is selling these places, there is always the need and the want process.

So, how do we really conserve these the traditional buildings in that process, so that at least they maintain certain character. And the control tourism because in one side especially for these Char Dham Yatra or any other pilgrimages, sometimes there used to be a mass tourism also, especially for the trekking and other things. So, how can we really control this part because there is very limited resources for the people to get access and this produces waste, this produces lot of unexpected and unwanted things there.

So, in that way how can we control what kind of guidelines we can come up with to have certain control tourism activities. And when we talk about the threats, the crop productions how they have reduced and the mainly the trade of activities where the middlemen played an important role, that is one of the threat where the farmers are not getting the right benefit.

The traditional farming methods they are again on a threat, again the improper medicinal herbs, water resources and the tools like that they started listing out various activities in terms of strengths, weakness, opportunities, threats of course some of them are overlapped with each other because a disaster was an opportunity and as well as a threat, development was an opportunity and as a threat like that there are a couple of things overlaid. Tourism they want for economy at the same time they do not want more, they need to be controlled.

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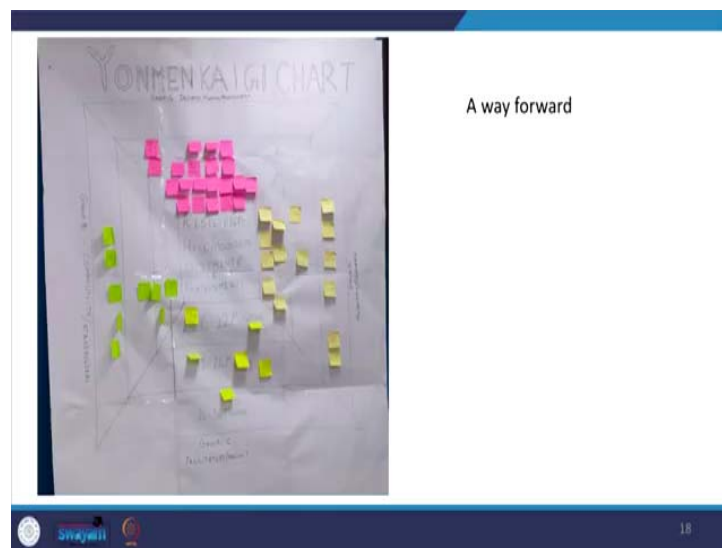
So, in that way they expressed all these concerns and after that what we did was we actually in the second half we conducted the group exercises where each smaller groups were divided into community decision making, community facilitators and the scientific community and they deliberated upon various what kind of actions we can take to the resilient hill mountain settlements and environments to build these particular places.

So, in that way there is a very interesting ideas have come up and of course they have been also again further deliberated by other groups. So, for example, when they were worried about the damage onto the crops by the wild animals they said we can, we have to have a fence, then again that has been argued by the other group saying that why do we need a fence, how can we fix these boundaries.

So, like that there is been certain deliberations, similarly we even, they have even talked about how can we bring these schemes of the government schemes to the local level, that is one of the challenge and what are the actions we should take for that. And similarly for education purpose what we should do, how we can control these tourism activities, they have come up with these ideas.

So, at this stage we have run then the one round has been completed, the second round has been completed, so the communities have become the facilitators and facilitators has become the academicians and scientific community and they become the decision makers, in that way rotation has been done.

So, in this, this particular process has given us some insights. Though it is not a completely finished with an action plan but the next stage is we are going to talk about, going to the community and elaborate on these ideas and we are going to come up with some kind of concrete understanding of who will do what and how do they do, what kind of support they need and all these aspects.

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People are relying more on youtube than on traditional knowledge. Knowledge retained by the older knowledge is not being transferred to the younger generation as it is considered orthodox. Even the policies and training programs do not consider local knowledge.

The first point we will make is about cultural roots. People of older age have extensive knowledge of architecture and building construction, medicinal plant, farming, and so on. As a result, problems were resolved locally. These skills must be documented and preserved.

As part of a long-term improvement plan, technology must be integrated with indigenous knowledge. There are numerous government schemes avail able that must be empowered and appropriately implemented.

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I am going to show you a small video of the Yonmenkaigi workshop which we have recently conducted.

(Hindi Video being played from 23:24 to 32:58)

So, thank you all of you for your participation in our course and I hope you have got benefited with certain understanding on the International Studios in Vernacular Architecture and we wish you all the best for your future endeavours. Thank you.