

INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

NPTEL

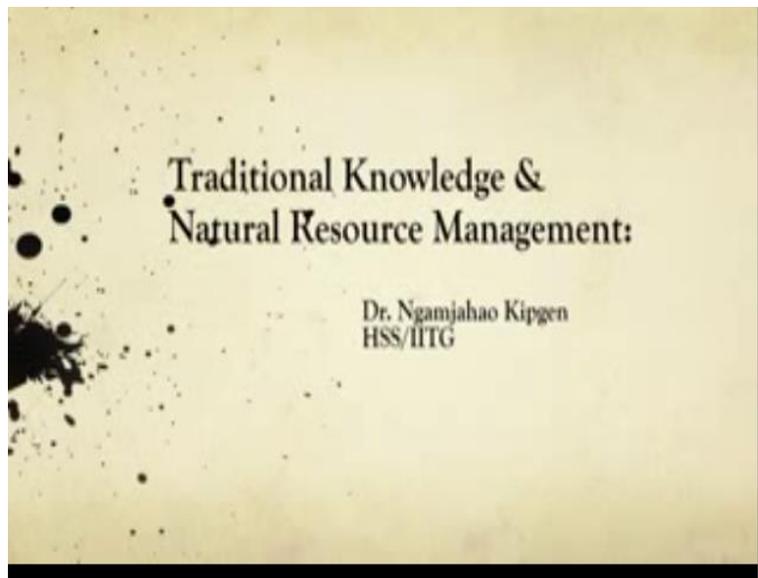
**NPTEL ONLINE CERTIFICATION COURSE
An Initiative of MHRD**

Ecology and Society

**Dr. Ngamjahao Kipgen
Department of Humanities and Social Sciences
IIT Guwahati**

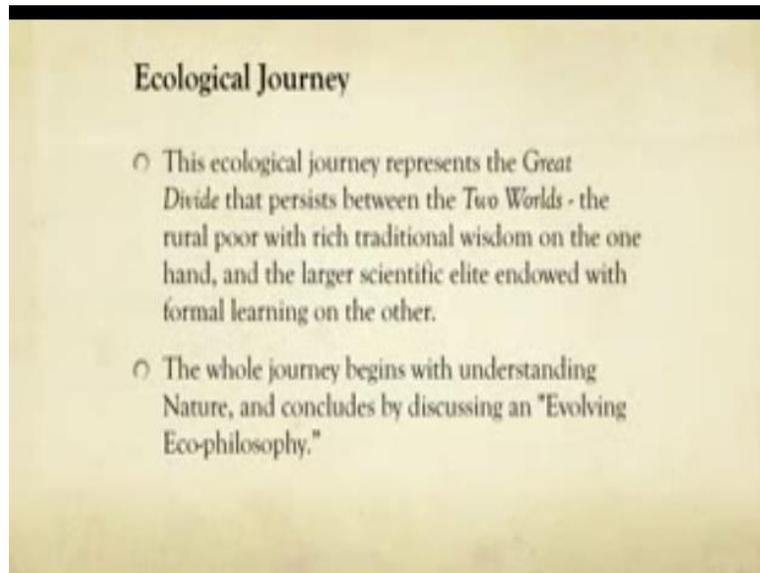
Well in continuation to what we have discussed in the indigenous knowledge system.

(Refer Slide Time: 00:41)



This is a follow up and then a continuation which will be situated slightly in different tones.

(Refer Slide Time: 00:45)

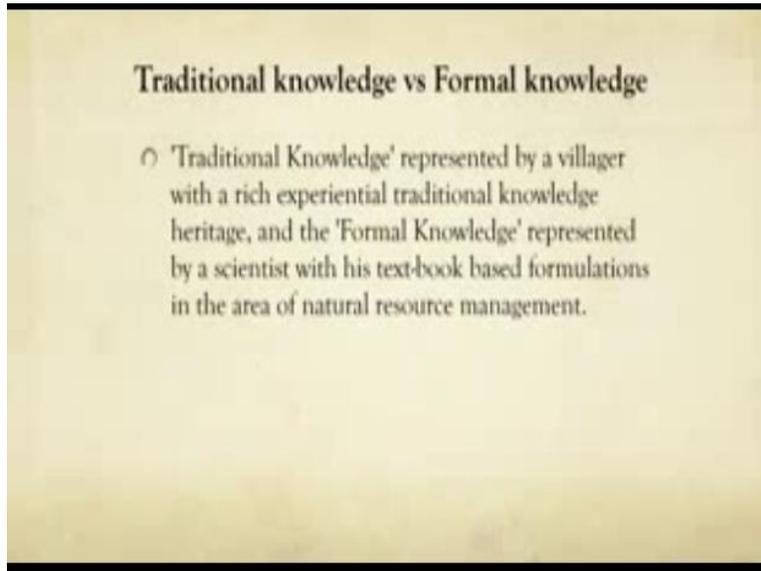


Now I am drawing primarily from the works of what I have also partly mentioned the works of PS Ramakrishnan. And in his work it is very interesting to look at how the kind of ecological journey which is perhaps being seen in the context of two complementary or two worldly whenever rather when one is represented by the formal knowledge and the other is by the informal knowledge or the traditional which is guided by traditional wisdom.

Now this ecological journey innovative presents the great divide that persists between the two worlds. Now what the Ramakrishnan innovate tries to present here is in his works titled one son tools the ecological zone. So even when humans have experienced the same kind of time space and environment they do have different kind of, how the maxims or interact with the environment is something which is different.

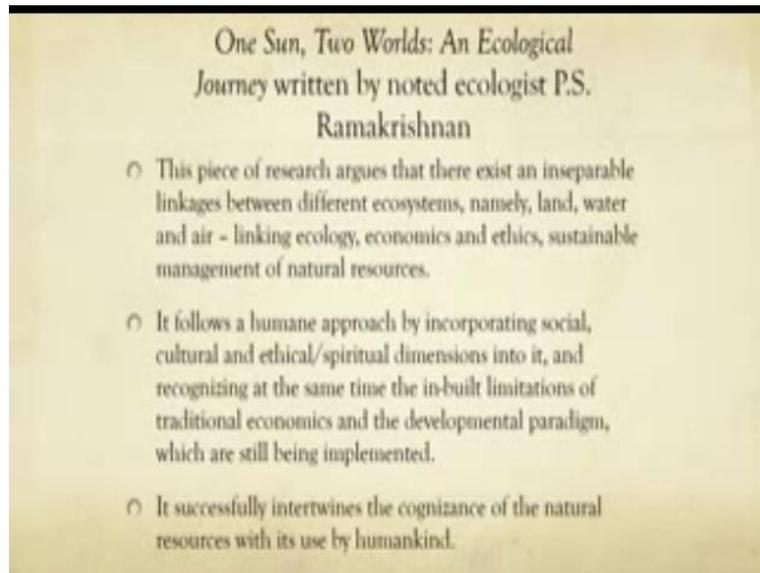
Now therefore, this great divide can be seen in the context of the rich and the poor and the rich and the rural perfect of its traditional wisdom on the one hand and this the largest scientific elite and all fit from the learning on the other. So these are the kind of two premises which in a way share and divide. Now this whole journey in a way begins with understanding with nature and concludes by discussing and evolving eco philosophy.

(Refer Slide Time: 03:11)



So in the pursuit to understanding nature one tends to in work in different arts for a knowledge that is the traditional knowledge and formal knowledge. Traditional knowledge again is represented by a villager with a rich experiential traditional knowledge heritage, and the formal knowledge which is represented by a scientist with his textbook based formulation in the area of natural resource management.

(Refer Slide Time: 03:37)

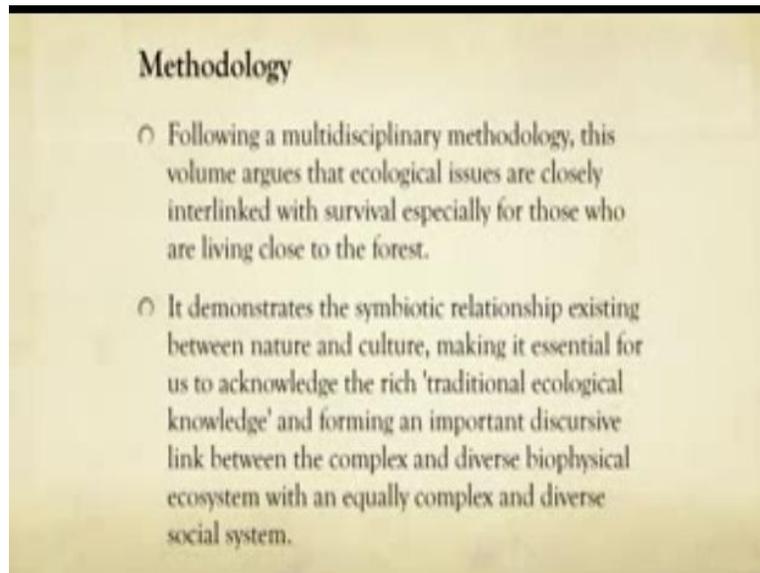


Now this book in a way is sort of a dialogue which we say which is constantly and gazing with where a scientist set out of his textbook based formulations and trying to maximize all the natural resource how it is being managed. And on the other hand the rural bills who have which traditional knowledge in a way tries to explain the stance which normally is being used in their everyday life.

Now this piece of research that is once and two worlds and ecological journey in a way argues that there exist and inseparable linkages between different ecosystems, namely land, water and air which normally link ecology, economics and ethics sustainable development, sustainable management of natural resources. It follows a human approach in trying to incorporate the social, cultural and ethical or spiritual dimensions into it.

And also recognize the same time the inbuilt limitations of these traditional economics and the developmental paradigms with are still being implemented. It also successfully intervened that once the cohesions of these natural resources which is used by the human kind.

(Refer Slide Time: 05:29)

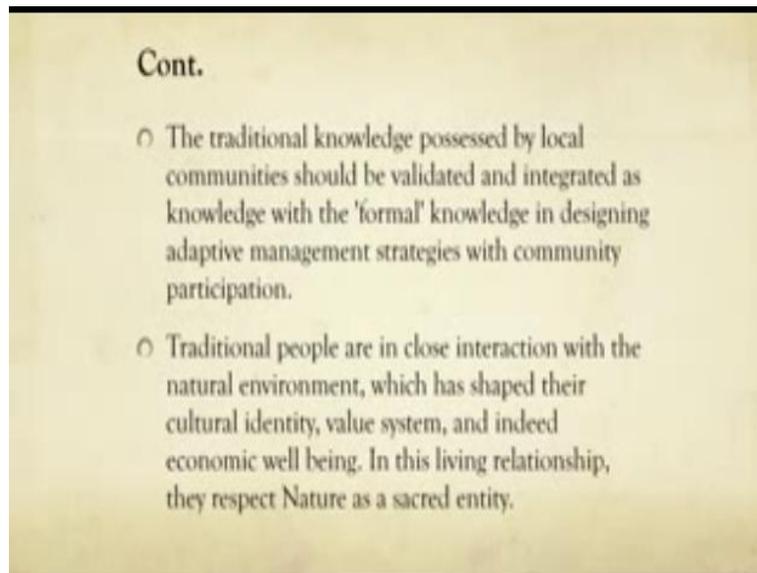


Now based on all these, our approaches it tries to locate the kind of relationship humans share with nature. Now the methodology which are being followed is the multidisciplinary in nature, and this works in a way argues that the ecological issues are closely interlinked with the survival especially for those who are living close to the forest or why, you know close in close relationship with nature.

It demonstrate the symbiotic relationship which exists between nature and culture making it essential for us to acknowledge the rich traditional ecological knowledge and forming an important discursive link between the complex and diverse biophysical ecosystem with an equally complex and diverse social system. Now therefore, this biophysical ecosystem and diverse social system is something which needs to be understood.

Because there is a symbiotic relationship which exists between nature and culture. And therefore, it requires, and it demands for to acknowledge the traditional ecological knowledge.

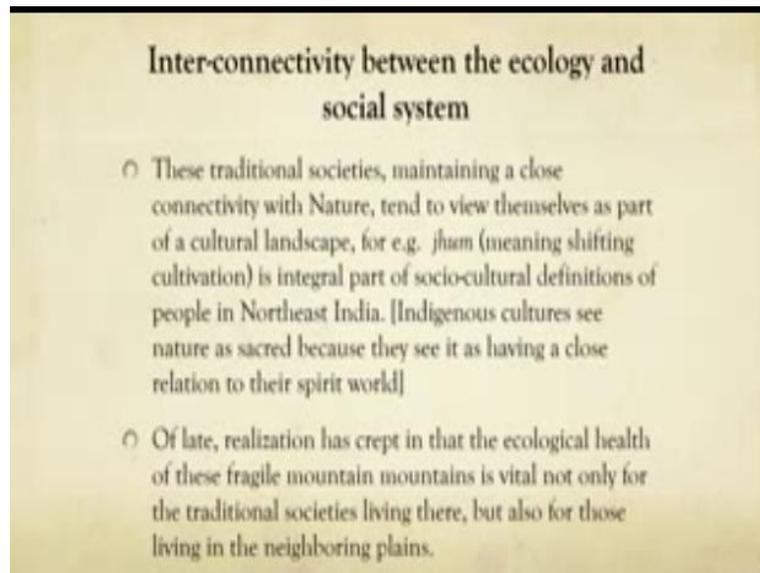
(Refer Slide Time: 06:53)



Now this traditional knowledge which is normally possessed by the local communities in a way should be validated and integrated as knowledge with the formal knowledge in designing adaptive management strategies with community participation. This is something which Ramakrishnan et al and would like to reveal from their extensive study. And therefore, one needs to acknowledge and then design the form of knowledge and this traditional knowledge in a way should be clubbed together.

As we had talked about in the lectures on these indigenous peoples life products and development force I mean the team of that how the coexistence is necessary. Now this traditional people in a way are in close interactions with the natural environment which is only not only safe their cultural identity value systems and in bits, then the economic well-being. In this relationship the respect nature as a second anxiety. So in a way they have that the spiritual and the cultural connections with nature.

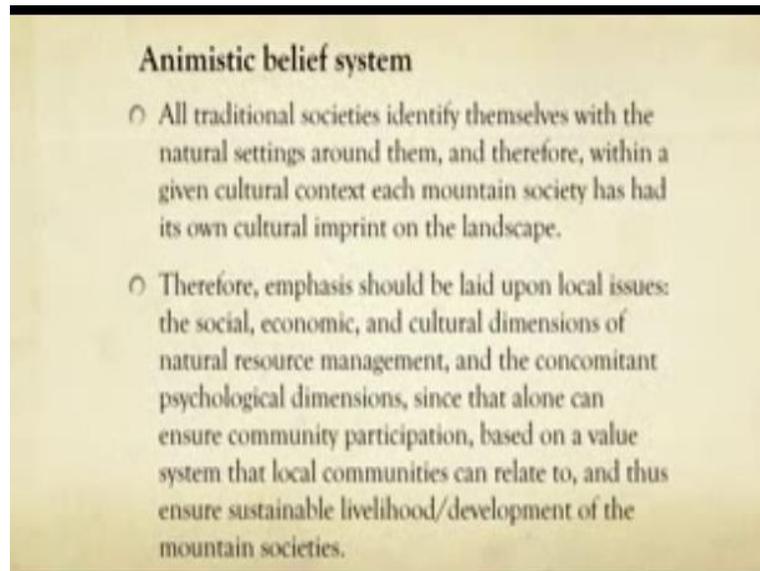
(Refer Slide Time: 08:25)



Now the interconnectivity between these the equality and social system, how are they being interconnected these traditional societies in a way maintains a host connectivity with nature, and also tend to view themselves as part of a cultural landscape. Now for example, Jhum which means shifting cultivation is pretty much dominant among the indigenous people is perhaps integral not just an economic aspect.

But is integral to part of the socio-cultural definitions of most people especially in northeast India. And indigenous culture is seen as settled, because they see it as having a close relationship to the spirit world of late there is a realization has crept in that ecological health of the Frisell mountains, because mountain is might or not only for the traditional societies living there, but also for those living in the neighboring plains.

(Refer Slide Time: 09:58)



You know why the ecosystems of the hills is important in equal to for people who live in the neighboring plains is, because as the riddle of for example, deforestation or maybe if the resources are depleted in the hills it could have caused a lot of hamper to the neighboring plains, because you can witness a landslides, and flooding and then we have what we call as the cloud birds and all this the natural surrounding is not able to retain.

And you have encounter a lot of catastrophic kind of problems, and therefore, if the healthy ecological health of the mountains are equally important for those who inhabit the plains. So therefore, this sort of realizations or the kind of interconnections in a way are being sort of understood in a more holistic way. Now in the animistic belief system this whole traditional societies identify themselves with the natural settings around them.

And therefore, within a given cultural context it is mountain society has had its own culture in print on the landscape. Therefore, emphasis should be laid upon local issues such as the social economic and cultural dimensions of natural resource management. Now how do we try to broadened this idea of natural resource management, we cannot afford to devote only to a single perspective.

But rather the social economic and the cultural dimensions all has to be brought in so that, there is a lasting if not holistic approach of natural resource management will be realized. And also the psychological dimension is important, because that can ensure a community participation which are based on system of the local communities which they can innovate and lead to.

Therefore, to ensure a sustainable livelihood or development of the mountain societies one needs to incorporate all these aspects. Now why is the conservation of forests in a way again important it is increasingly failed that one possible method to conserve the forested areas is to see them as cultural landscape.

So by injecting the idea of this cultural landscape there is a greater possibility of conserving the forest as it has a complex socio-economic expression of not just the terrestrials, ecosystems that have in a way equal fully both under the interactive in the frames of these biophysical sectors as well as human societies at different levels., that is based on their cultural, social and technological development. Traditionally this concept of this cultural landscape is linked to a given natural landscape unit where humans function as a part of socio ecological systems.

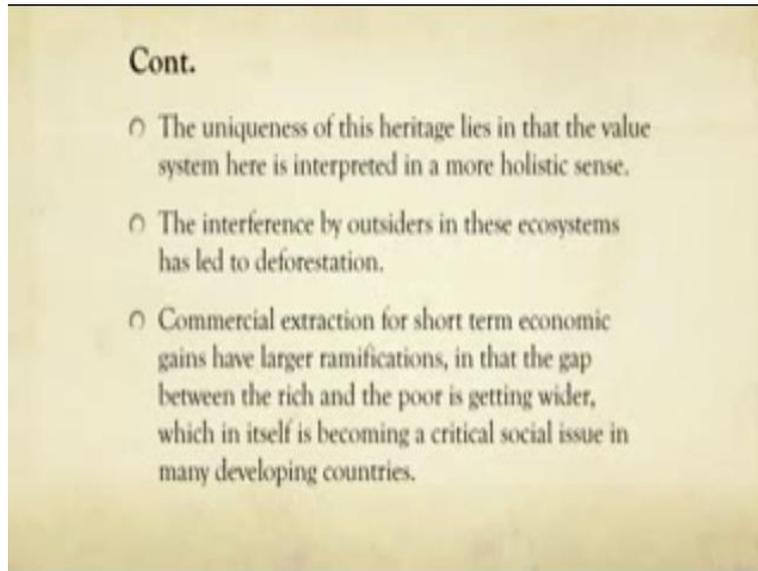
(Refer Slide Time: 14:10)



Conservation of forest

- It is increasingly felt that one possible method to conserve the forested areas is to see them as a 'cultural landscape'.
- Cultural landscapes are complex socio-economic expressions of terrestrial ecosystems that have co-evolved under the interactive influences of bio-physical factors as well as of human societies at different levels of their cultural, social and technological development.
- Traditionally, the concept 'cultural landscape' is linked to a given natural landscape unit, where humans function as part of the socio-ecological system.

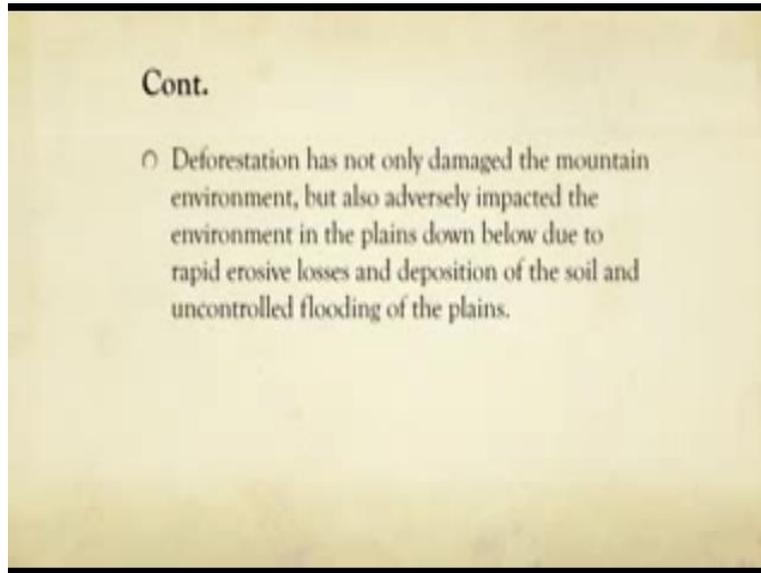
(Refer Slide Time: 14:13)



Now therefore, this idea of cultural landscape in a way can enhance or be really effective in terms of conserving the forest. The uniqueness of these heritages again lies in that the value system here is interpreted in a more holistic sense. The interfere by outsiders in this ecosystem has innovated to the extensive amount of this deforestation. For example, the commercial extractions for short-term economic gains have larger ramifications.

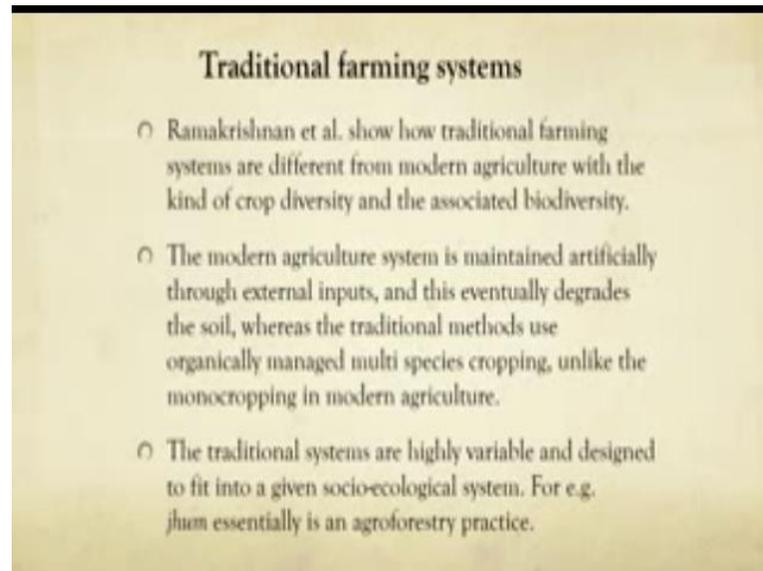
And in depth began between the rich and the poor is getting wide. So which is itself becoming a critical social issue in many developing countries. Now this process of deforestation has not only damaged the mountain environment, but also adversely impacted the environment in the plains down below due to rapid erosive losses and depositions of the soil and uncontrolled flooding of the plains.

(Refer Slide Time: 15:37)



Now these are some of the repercussions which are being witnessed as a result of deforestation.

(Refer Slide Time: 15:47)



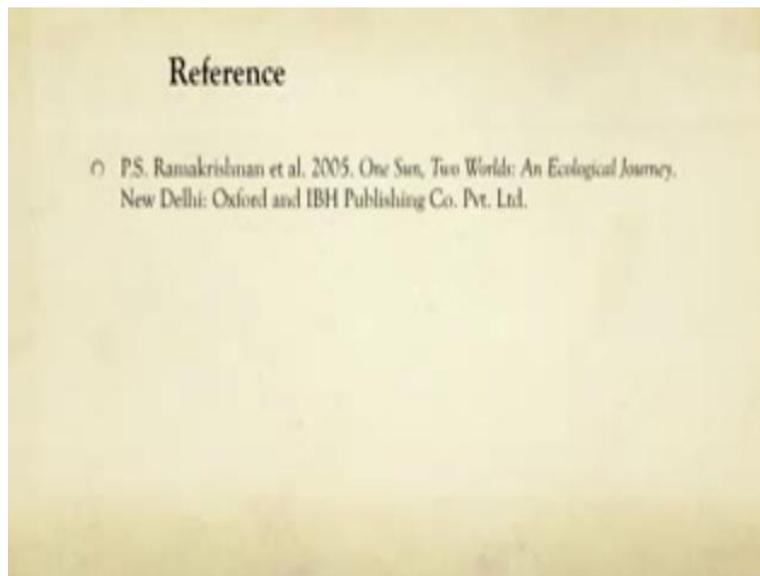
Now looking at the, as our focus is mostly on the traditional knowledge one also needs to moment by highlighting the issue of is the farming system it in India study Ramakrishnan et al. So how these traditional farming systems are different from the modern agriculture with a kind of crop diversity and associated biodiversity.

How because, the modern agriculture systems is maintained artificially through external inputs and this eventually degrades the soil. Whereas the traditional methods use organic organically managed multispecies copings unlike the mono cropping in modern agriculture. Now that is the kind of how this response of the soil or the nutrients of the soils are in a way being effectively managed in the multi species scoping which is pretty much prevalent among the indigenous peoples farming system.

The traditional systems are highly variable and designed to fit into a given socio-ecological system. For example, jhum essentially is an agroforestry practice. Now for instance there is a idea which revolve around saying that jhum many practices the whole forests are being cut down. But an extensive study which is being made by Ramakrishnan and et al has pointed out that this jhum practices essentially is agroforestry practices.

So in a way alongside agriculture you also have this, the conservation of forests which is being carried out. And as we had pointed shown clearly that the modern agriculture system is maintained artificially through external inputs, that is by using different kinds of like chemicals are fertilized so and so forth, it invites a lot of, not just disrupting their soil nutrients in the long run. But also it affects the whole ecosystem.

(Refer Slide Time: 18:20)



Now therefore, with this sort presentation we are just trying to look at how the scientists or in a way who have that formal knowledge is different from the traditional, who is rich in traditional wisdom, and then the manner in which they have tries to look at the perceive nature and their natural surroundings.

And also the kind of engagement they have in these early culture practices and farming, is to be understood in a much more wider holistic manner, if one has to have an in-depth meaning of a traditional knowledge. So you can perhaps read for this book or maybe, I have a book review on this you can just browse and you have a much more quick understanding of this. Thank you.

Centre for Educational Technology

IIT Guwahati

Production

HEAD CET

Prof. Sunil K. Khijwania

Officer-in-Charge, CET

Dr. Subjait Choudhury

CET Production Team

Bikash Jyoti Nath

CS Bhaskar Bora

Dibyajyoti Lahkar

Kallal Barua

Kaushik Kr. Sarma

Queen Barman

Rekha Hazarika

CET Administrative staff

Arabinda Dewry

Swapn Debnath