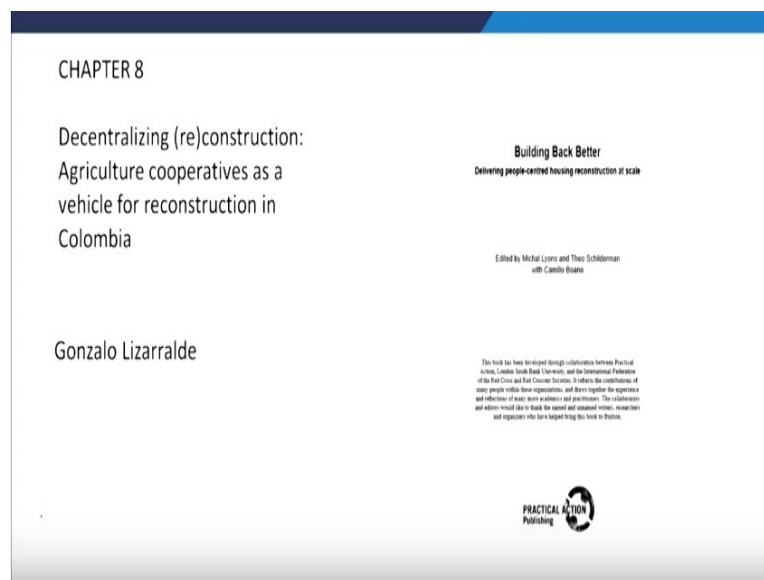


**Disaster Recovery and Build Back Better**  
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**Lecture – 26**  
**Decentralizing (Re) Construction in Colombia**

Welcome to the course, disaster recovery and build back better. My name is Ram Sateesh, I am assistant professor in Department of Architecture and Planning IIT Roorkee. Today, we are going to discuss about decentralizing reconstruction and we are going to learn about this aspect from the cases of Colombian case which is reconstruction in Colombia.

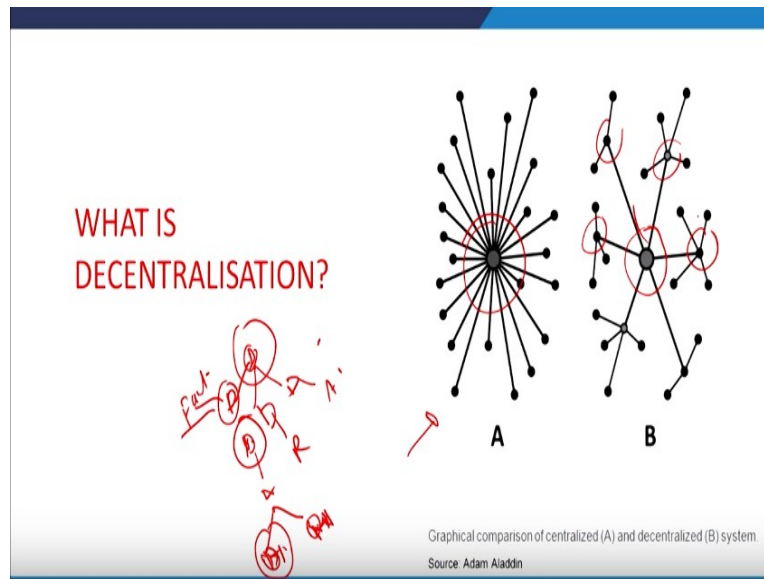
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And today, whatever I am going to discuss you with about the Gonzalo Lizarralde and one of his chapter in chapter 8, is called decentralizing reconstruction agriculture cooperatives as a vehicle for reconstruction in Colombia. So this has been published in the built back better which was edited by Michal Lyons, Theo Schilderman, and with Camilo Boano and published by the practical action publishing group.

So, I am going to take the learnings and understandings from his narratives and from his work and so, that we can learn how the coffee workers society, how they all have organized the reconstruction after the earthquake of 1999. When we talk about decentralization, I think let's start our discussion with the centralized approach and the decentralized approach.

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What you are seeing here, is the centralized approach, where all the decisions all the financial flows and everything is connected through the centre means. So, it is like a kind of dictatorial order or because this particular approaches are very much used in the business sector and also the decision-making sector in the politics you know, so this is how we can actually reduce our burden taking everything on our own so how we can actually decentralized.

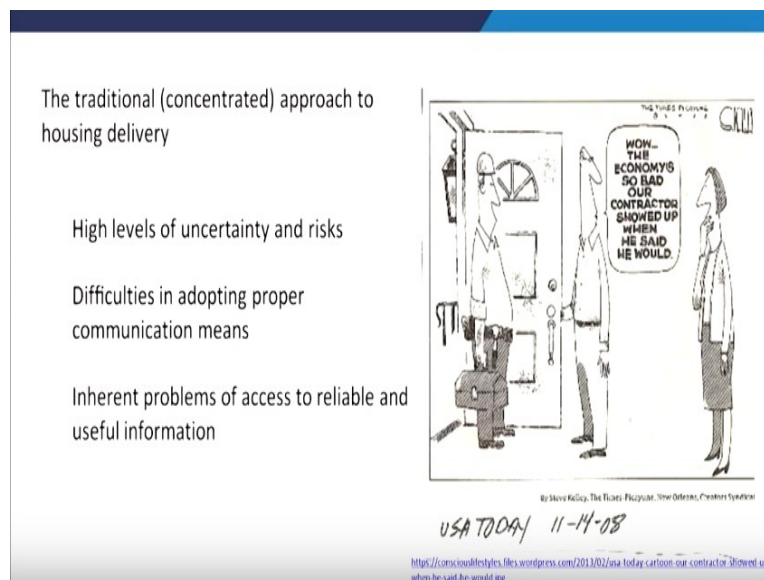
So that what we do is earlier it was all one man's decision and one body's decision or one organization's final decision and all the flow has to take an approval of that so that is how it used to do. So now, as the population have increased as the constraints have increased as the load has increased and that is where many of the models have approached on spreading the load to the other sectors the other bodies.

Like for instance, if you look at any administrative setup like our own IIT we have a director then we have the deans and we have a director and we have the deans and so, someone is taking care of the faculty affairs, someone is taking of the academic, someone is taking with the research, someone is taking to administration and then each this is further divided into different departments and different heads are taking care of it.

So in that way, head has certain powers including the financial power and as well as certain decision-making authority and certain authority has been spitted into these different deans and the director is looking at the overall working of the IITR. So similarly, it has been branched out and subcategories so that certain powers are vested on different bodies and certain decision-making mechanisms have been channelled through.

And also, administrate by a central agency. So, this is how the very basic fundamental difference of a decentralization. In the housing sector, in the housing delivery, there has been a traditional approach, which is a concentrated approach and what are the benefits and risks associated with this approach. One is because it's one authority has to compile a lot of information as a given if it is an authority or it is a small team has to collect a variety of information.

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And they have to take decisions on that. So, this is where there will be a chances of high levels of uncertainty and risks and difficulties in adopting proper communication means so, how at a higher-order level, which can communicate to a lower order level or you know how a macro level will look at a micro level communication, inherent problems of access to reliable and useful information.

So, there is always an indigenous, the difficulties in accessing the information of even a micro-level segment it could be an information about a behavioural aspect of a particular community

group, so that becomes difficult. So, that is where much of this traditional approach they often end up with a contractor. So, most of the times whether in case of crisis in the case of economic crisis so these contractors will be ready.

And that is how most of these traditional approaches the housing delivery is wasted upon the contractor driven process because they are obviously a profit-making body and for them also it is an employment opportunity and through them, there is also some subgroups which will also benefit from them. So this is how the traditional approach works but the problems are different.

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'a concentrated decision-making process'

decisions made under this approach are based on the information collected by one or a few organizations

to design a unique housing model

constrained budgets

And in fact, Gonzalo Lizarralde and Cassidy Johnson and Colin and they have actually worked on rebuilding after disasters from emergency to sustainability, where they talk about it is a concentrated decision-making process. Now, as I said to you because you have to gather a traditional approach you have to gather a heap of information a variety of information and that is where they are based on by collected by one body or a few organizations.

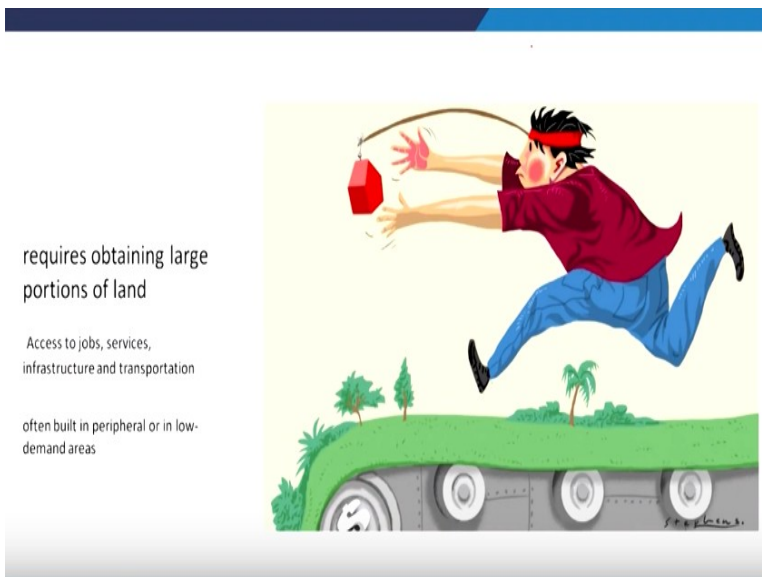
They end up developing a unique housing model because they have many other challenges including the budget constraints they have to finish and they have the time limitation, there could be a political pressure.

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So, that is where, so finally, they end up and coming up with a tested model and then they try to replicate it in different contexts irrespective of the site context, irrespective of the community context they end up replicating a uniform unstandardized development process.

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But in reality, if you want to develop this kind of the processes, you need to acquire a large portions of land because if you want to deliver a huge housing project you need to have ample of land to have that kind of segment not only that you need to have access to the jobs, services and another infrastructure and transportation. You might find a land outside of the city you might because it was coming for cheap and you might put all the reconstruction activity there.



And this is where, a restricted number of builders, professionals and advisors benefit from the investment made and whatever it is a kind of contractual process and this the problem with this is where a formal builder versus with the informal sector, the informal communities.

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And the informal communities, they have a very diverse livelihoods. In Indian context, if you can say there was some people who place with mine caves, there people who was working as a housemaids, there are people who are working as a small farmers, there people who are working as a garbage collectors. So, there are a variety of informal sectors, it's a very complex phenomenon.

And in this, you one has to also understand that the small bodies which may not have been recognized, which has about a informal companies like we call it as small and medium enterprises which may or may not legally recognized by the professional associations. They play a fundamental role in handling these informal sectors.

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Armenia after the 1999 earthquake

In Colombia in 1999, there was a huge earthquake of 6.2 Richter scale and what you can see is a devastation in Armenia, it has affected both the urban setups and as well as the rural setups and today we are going to more talk more about the rural setups especially with a particular cooperative society of agricultural cooperatives on coffee growers. Now Columbia is known for its coffee growing, it's a coffee culture.

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### Rural reconstruction in Colombia

over 800 deaths, destroyed 1,856 rural houses and damaged 4,552 rural houses and many more urban units.

Losses in the productive sector corresponded to around 4.2 per cent of the regional GDP as more than one thousand buildings for coffee related micro-industries were destroyed and 2,190 were partially damaged



Paisa region of Columbia



That is where, this Paisa region of Colombia which is known for its rich coffee products and there are about 4 departments in this particular region which famous for its coffee-growing culture and even this they have been affected by the earthquake the rural communities have been



affected that's about 800 deaths which has destroyed about 1,856 rural houses and many more urban units.

So, it also have loss the productive sector which around 4.2% of the regional GDP because that is one of the prominent industry in the Columbia and 1,000 buildings for coffee-related micro-industries. so whether it could be filtering you know industrial inputs or any other warehouses or storage so all these things have been destroyed and either fully destroyed or partially destroyed but if one has to understand the Colombia.

The especially the rural communities as we discussed in the theories of vulnerability, it has been noted very much from the extensive literature that it's unequal distribution of wealth and land. There is an urban agglomeration as well as the rural poverty. There are also slumps the informal settlements which has occupied in unsafe lands in the urban setups.

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**Inequalities**  
In recent years, the economic growth of Colombia has placed the country among the world's "emerging economies," but nearly 34% of the population still live in poor conditions (DANE, 2005).  
Colombia is also the world's seventh most inequitable country (Banco Mundial, 2012).

**Slums**  
Colombia has been experiencing violent internal conflicts for more than 50 years. Since 1985, 3.6 million Colombians have been violently displaced as a result of this conflict (CODHES, 2014).  
In search of safety and a better future, the displaced population migrates to urban areas, and informal settlements proliferate on the cities' peripheries.

**Homelessness**  
As a result, 3.6 million households, nearly 30% of all families in Colombia, do not have adequate homes (according to Ministry of Housing estimates from 2013), and 602,146 families are homeless, or 5% of the population.

unequal distribution of wealth and land

social and political indifference towards rural poverty

rural residents rarely have access to banking services and health care

The social and political indifference towards rural poverty and also the homelessness the rural residents rarely access to the banking services and even health care. So, the moment if you are not access to the banking services that itself tells you know, what is the level of the poverty indication. So, health care which is a fundamental aspect so many of these rural set ups they are not often access to the health care and as well as the banking financial instruments.


And in the earthquake, the existing social factors merged with these physical vulnerabilities.

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In the earthquake, social factors merged with physical vulnerabilities such as lack of proper maintenance of houses and uncontrolled informal construction on steep hills and unstable land.

Lack of maintenance of roofs resulted in the collapse of heavy materials such as clay tiles which are widely used in vernacular housing.

Besides, most of the affected structures were built before 1984, when the building codes introduced comprehensive seismic-resistant standards. In total 48 rural schools collapsed and 86 educational facilities were badly affected



Lack of proper maintenance of houses and uncontrolled informal construction on steep hills and unstable land and lack of maintenance of roofs resulted in the collapse of heavy materials such as clay tiles which are widely used in vernacular housing and most of these affected structures were built in 1984 when the building codes introduced comprehensive seismic-resistant standards. In total 48 rural schools collapsed and 86 educational facilities were badly affected.

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Coffee Growers Organizations

The FOREC fund (that amounted to US\$720 million)

So, being a large society of coffee growers is a coffee growers federation which is now termed as coffee growers organizations. So, what they did was the society there is a FOREC fund which