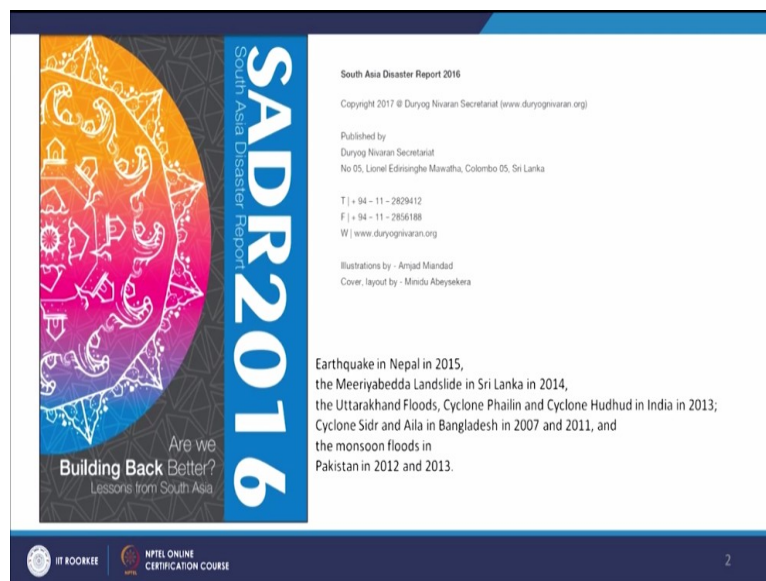


Disaster Recovery and Build Back Better
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Lecture - 23
Build Back Better in Nepal Recovery

Welcome to the course, disaster recovery and build back better. My name is Ram Sateesh. I am an assistant professor in Department of Architecture and Planning, IIT Roorkee. Today, we are going to discuss about build back better in the case of Nepal recovery.

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So, whatever I am going to discuss with you today, it will be from the South Asian disaster report which was published in 2016 and these about the BBB the build back better and how different case studies are able to produce different lessons, what we can take back and how we can learn from it because every disaster experience provide us some lessons to take over for the future.

So, this has been published by Duryog Nivaran secretariat and this is about the build back better concept as a theme and how it has been implemented in different disaster context in the South Asian region. So, they have tried to cover the earthquake in Nepal in 2015 and the Meeriyabedda Landslide in Sri Lanka in 2014, the Uttarakhand Floods, Cyclone Phailin and Cyclone Hudhud from the Indian geography and which was in 2013, Cyclone Sidr and Aila in Bangladesh in 2007 and 2011 and the monsoon floods in Pakistan in 2012 and 2013.

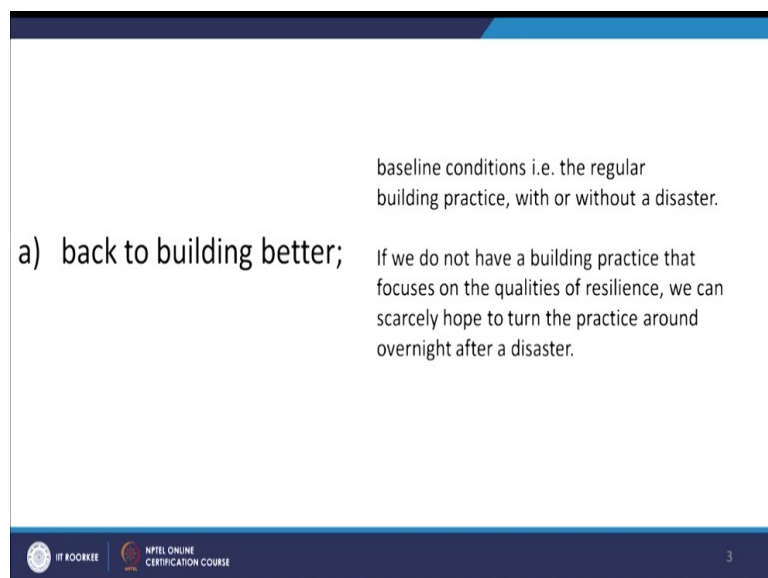
So, if you look at it from 2007 to 2015, almost like how about 7 to 8 years, we can see a variety of disasters hitting the South Asian context and we as a different countries though it is a Pakistan, Sri Lanka, India, Bangladesh and as well as Nepal, we share some similarities, not only from the cultural aspect but also from our socio-economic context of it and our the vulnerable context of it and the development setting of it.

So, instead of comparing with something what is happening in Netherlands, it is good to see in a similar geographies, in the similar vulnerable context and a similar development context how these build back better approaches have been adopted and what are the challenges to build back better. And whether it is an institutional level challenge, whether it is a legal challenge you know, so all these things will be discussing about.

So, in today's lecture, we are going to discuss about the Nepal earthquake recovery, which has hit in the April of 2015 and as a part of this report before this there have been some event which happened in Delhi and School of Planning and Architecture, New Delhi also have been part of this and initially this report discusses about the jargon on similarities and dissimilarities of a build back better, the notion of build back better.

So, they try to alter a few words and they try to present you know, how each of these terminologies refers to what.

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baseline conditions i.e. the regular building practice, with or without a disaster.

a) back to building better; If we do not have a building practice that focuses on the qualities of resilience, we can scarcely hope to turn the practice around overnight after a disaster.

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Number one, back to building better; it refers to the baseline conditions that is a regular building practice with or without a disaster. For instance, if we don't have a building practice

that focuses on the DRR or the qualities of resilience, we can scarcely hope to turn the practice around overnight after a disaster, so this is the first concept.

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b) better build back;

a sense of urgency to build back.
If we build back too slowly after a disaster – on the pretext of building back better – then that itself will compromise community resilience.

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Whereas, better building back; so this talks about a sense of urgency to build back. So, this is in the event of a disaster. Imagine, if we on the pretext of build back better, if we do it very slowly after a disaster, then on the pretext of build back better then, it will also compromise the community resilience because the slow process also will compromise the community resilience, so that is where the second concept is working.

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c) build back better.

not just in the physical sense but in a more complete sense incorporating other social dimensions of recovery.

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The third concept which is talking about the build back better, which is one of the important subject of our whole course. It is not just in the physical sense, you know that we build

infrastructure, we build housing, we build the schools, we build hospitals, this is not just only in the physical sense.

But in a more complete sense incorporating other social dimensions of recovery, how we can build the capacities, how we can build trust, how we can develop the belief systems, you know, how we can develop cooperation, how we can develop the partnership, how we can enhance the social capital. So, all this putting together, apart from only limiting to the physical sense, we need to embed all the social and cultural and economic aspects sent to it in a holistic sense.

That is where we talk about the build back better; it emerged as after the 2004 Tsunami, it emerged not only as a theme but also as a framework during the multinational recovery effort because each and every nation is putting certain efforts in the disaster recovery and the intention of this is we have to use a holistic approach towards reconstruction recovery with the physical, social, economic conditions of a community are collectively addressed to create overall improved resilience.

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The slide features the title "BUILD BACK BETTER" in blue. Below it, a text box explains that "Build Back Better" (BBB) emerged as a theme and framework during the multinational recovery effort following the Indian Ocean Tsunami, aiming for a holistic approach to reconstruction and recovery by collectively addressing physical, social, and economic conditions to create overall improved resilience. A handwritten red diagram is overlaid on the slide, showing a circle with "Capacities" written vertically on the left, "SOCIAL" in the center, and "IMPROVE RESILIENCE" on the right. Below "IMPROVE RESILIENCE" are three small square boxes, each containing a letter: "P", "S", and "E".

BUILD BACK BETTER

"Build Back Better" (BBB) emerged as a theme and a framework during the multinational recovery effort following the Indian Ocean Tsunami with the intention of using a holistic approach towards reconstruction and recovery where the physical, social, and economic conditions of a community are collectively addressed to create overall improved resilience.

Capacities
SOCIAL
IMPROVE RESILIENCE
P S E

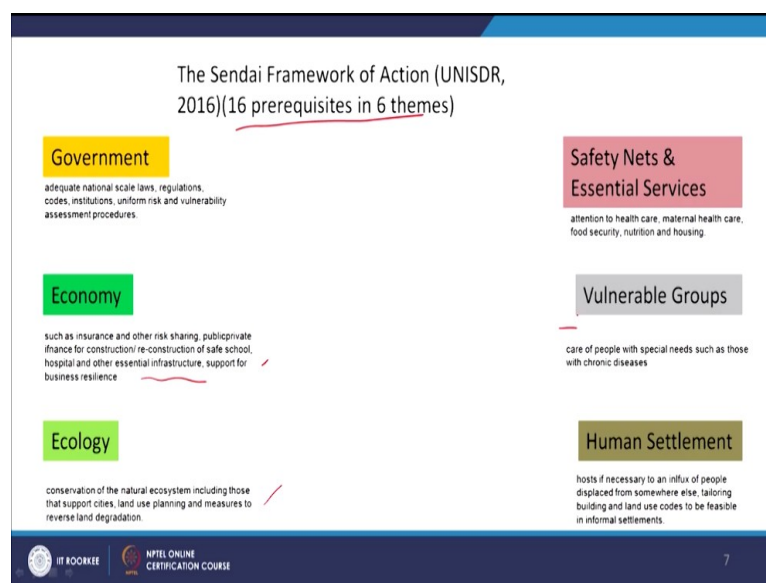
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So, it is not just only we build the housing and we are not only building the roads, we are not only building the infrastructure but we are also dealing with the capacities you know, of social, economic and then how this whole setup will also improve resilience. So, resilience to what, to cope up with the future shocks and stresses that have been imposed not only because of the disaster but with various other vulnerable aspects.

Like it could be a market issue, it could be in a political crisis, it could be a war, so how we can prepare them so that they can able to cope up with it. So, this is how we call it as BBB build back better and in Sendai Framework of action which we already discussed about this in the earlier classes as well, there have been 16 prerequisites, which has been listed under the 6 themes.

Because in order to improve the resilience each and every nation has to incorporate certain action plans in order to address these 16 prerequisites and how these are grouped into different themes.

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Number one is government, when we talk about the government aspect, it talks about adequate national scale laws, you know what are the regulatory mechanisms and building codes how to improve the building codes, in order to the disaster-resistant aspect of it and the land use planning, institutions and when we talk about codes, that is where it is addressing the uniform understanding of the uniform risk and vulnerability assessment procedures.

Then, the second one we talk about the economy and this is where we talk about insurance and other risk sharing public private finance for constructions because who will provide the finance for the constructions, what stages, like in different cases we also have discussed in Argentina, how the four cafe funds have been used from different organizations have put together whereas, the public and private partnerships are coming together and how the needy infrastructure and support for the business resilience.

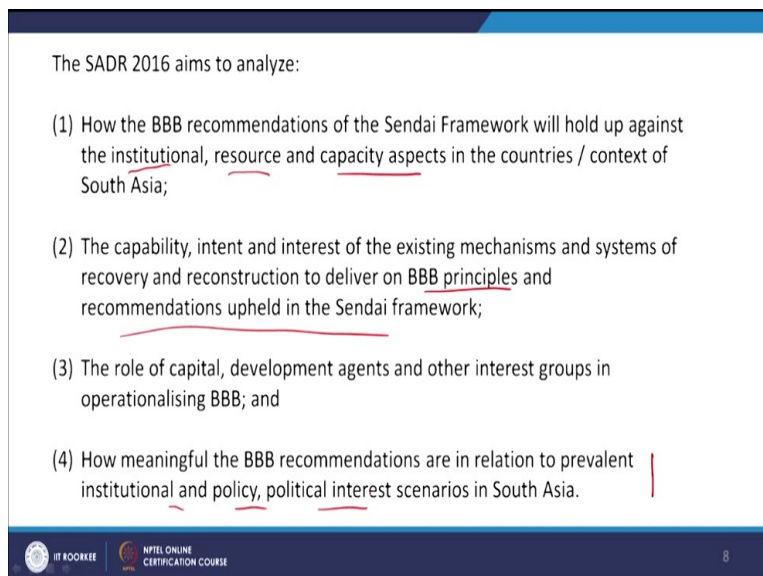
Then, the third aspect is the ecology and this is where the conservation of the natural ecosystem, how important is it, in order to protect the habitats from the disasters. So, this is where the land use planning and measures to reverse the land degradation, you know how we can reverse the impacts and how we can bring back the nature. So, these are all part of the consensus of this Sendai Framework.

Safety nets and essential services, so this can talk about the health care, HIV, maternal health, food security, nutrition and housing and why we are talking about the safety nets and health because most of these affected are the poor, which have a limited access to the medical facilities of the health infrastructure and this is where and also, the access to shelter. So, this is where we need to address that poverty aspect also into this providing them the basic needs and essential services.

And that is where we are talking about the vulnerable groups, who have special needs such as HIV, chronic diseases or even the elderly people who are unable to cope up with their livelihoods and unable to cope up with certain stresses and shocks, so who are these vulnerable people, human settlements because many at the cases like in the disasters people migrate to different places and they try to settle down.

And this is where we need to talk about the tailoring and the building and land use, codes to the feasible in informal settlements.

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The SADR 2016 aims to analyze:

- (1) How the BBB recommendations of the Sendai Framework will hold up against the institutional, resource and capacity aspects in the countries / context of South Asia;
- (2) The capability, intent and interest of the existing mechanisms and systems of recovery and reconstruction to deliver on BBB principles and recommendations upheld in the Sendai framework;
- (3) The role of capital, development agents and other interest groups in operationalising BBB; and
- (4) How meaningful the BBB recommendations are in relation to prevalent institutional and policy, political interest scenarios in South Asia.

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So, this report the South Asian Disaster Report, what does it aim? It aims to analyze these 4 aspects? One is how the build back better recommendations of the Sendai Framework will hold up against the institutional, resource and capacity aspects in the countries, context of South Asia. The second, the capability intent and interest of the existing mechanisms and systems of recovery and reconstruction to deliver BBB principles and recommendations upheld in the Sendai framework.

So, it is basically like having a benchmark how the existing mechanisms are able to set forth for the BBB principles. The role of capital, development agents and other interest groups in operationalizing, so it is talking about the implementation aspect, how these different capital and the development agents and how they are able to organize themselves, in deliver and operationalize the build back better.

Then, the last one is how meaningful the BBB recommendations are in relation to prevalent institutional and policy and political interest scenarios in South Asia.

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NEPAL EARTHQUAKE 2015		
Table 2: Summary of impacts of April 2015 earthquake in Nepal		
S. No.	Particular	Impacts in Number
1	Lives loss	8,896 ✓
2	Person injured	22,303
3	Private houses - destroyed	498,852 ✓
4	Private houses - damaged	256,697 ✓
5	Government building - destroyed	2,656 ✓
6	Government building - damaged	3,622 ✓
7	School building – class room destroyed	19,000 ✓
8	School building – class room damaged	11,000 ✓

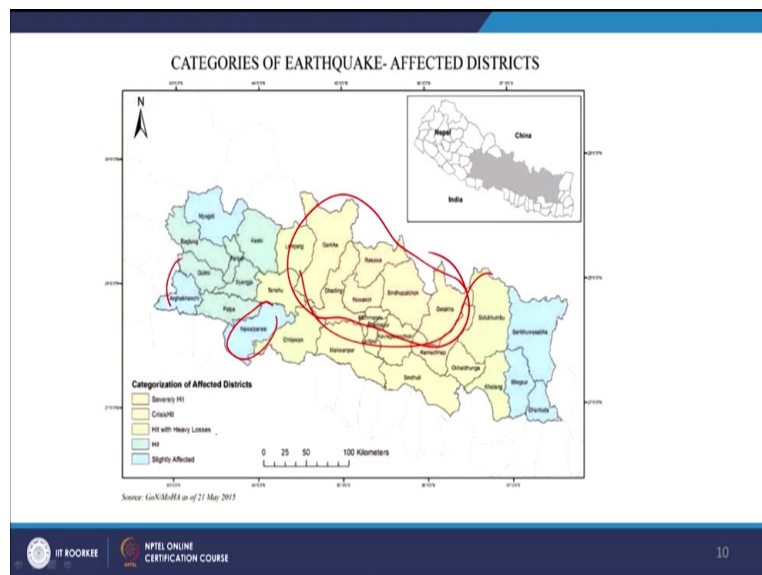
Source: Reconstruction Policy, GoN 2016 (Lives loss and Person injured revisited based on NRA 2017¹⁴)

So, all this they have been discussed in different cases including Nepal, Bangladesh and Sri Lanka, Uttarakhand, Indian context and as well as Hudhud cyclone and as well as Pakistan. So, today we will discuss about the Nepal earthquake. So, in April 2015, there has been a major earthquake 7.6 Richter scale which has hit in the Nepal and it hit the Gorkha region and at 11:30 it has struck the Gorkha region and again at 12:30 it has received about 6.6 scale and again after that it has keep receiving more than 16 times aftershocks.

So, from 7.6 to almost 6.2 the intensity started reducing, so this is where the earthquake phenomenon has hit in this particular whole country in different parts and aftershocks also have created many issues. The summary of the impacts is we talk about the 8,896 lives have been lost and almost 22,000 people have been injured and about nearly 5 lakhs private houses have been destroyed and about two lakhs private houses have been damaged.

Public properties like government buildings about 2,656 have been damaged, destroyed and as well as government buildings which is above more than 3,000 have been damaged, school buildings, institutional they have been again destroyed more than 19,000 have been destroyed and 11,000 have been damaged.

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Now, if you look at the categories of earthquake affected areas, the severely hit region is about this Gorkha land and you have the crisis hit and as well as a hit with heavy losses and the moderately hit and very slightly affected you know. So, like that this has been zoned out and this particular region in the Gorkha region has been affected very badly.

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The Search, Rescue and Relief Phase

National Emergency Operation Centre (NEOC) and District Emergency Operation Centres (DEOCs) were activated as per the SOP which played vital roles in

- disaster information communication,
- management and
- stakeholder coordination.



The slide features a blue header and footer. The main content area is white. On the right side, there is a cartoon illustration of a man in a white shirt and blue pants running towards an open wooden door. Above the door is a blue arrow pointing right with the word 'EXIT' in red. The footer contains the IIT ROORKEE logo, the NPTEL ONLINE CERTIFICATION COURSE logo, and the number 11.

Now, we will discuss about 2 important phases of this whole process; one is the search, rescue and the relief phase. So, the Nepal has a very good system of the disaster management procedures and the standard operating procedures and this is where the National Emergency Operation Center and the District Emergency Operation Centers have been activated as per the standard operation procedures, which is we call SOP which plays an important role.

So, it is, it brings the communication between the national system and the local system at a district level. So, it focuses on the disaster information communication. So, from a national level to the local level how it has to set up that communication. The management and also how different agencies has to coordinate, that is where the stakeholder coordination.

And during this process, the government have tried to adopt a kind of single door entry, sort of thing because they have to channel all the funding mechanism, they have to channel all the NGOs, they have to channel all the relief operations. So, that is where a kind of one door exit options.

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