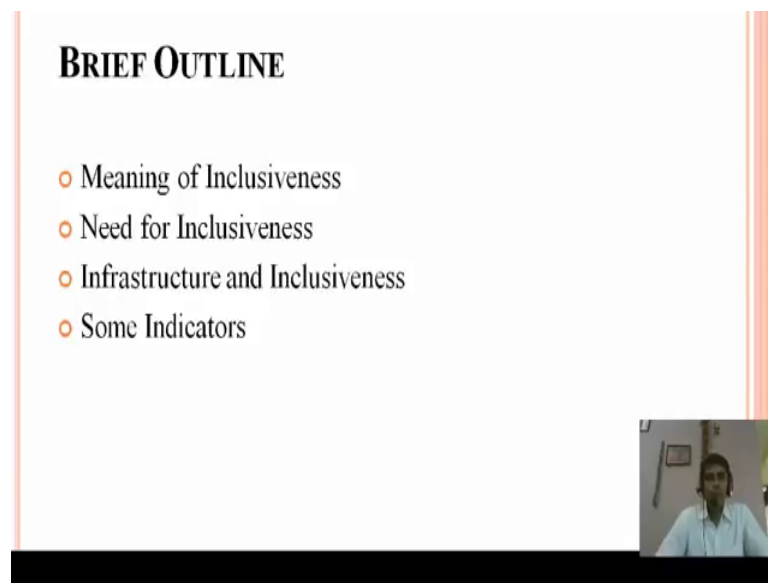


Infrastructure Economics
Department of Social Sciences
Prof. Nalin Bharti
Indian Institute of Technology Madras

Module –08
Lecture - 34
Inclusive Infrastructure Development

Inclusive Infrastructure Development, as a part of the new discussion, we are going to learn the basic idea about, what is basically inclusiveness? Why inclusiveness is important for infrastructure development? And, how to have such inclusiveness? Today, we live in a world where economic development is one of the most buzzing word. But, at the same time, this word is now well connected with a new word and that is the inclusive development. When the entire process of development is inclusive in nature, we cannot really have infrastructure development without that inclusiveness.

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BRIEF OUTLINE

- Meaning of Inclusiveness
- Need for Inclusiveness
- Infrastructure and Inclusiveness
- Some Indicators


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The brief outline of this presentation will be the meaning of inclusiveness, need for inclusiveness, the connectivity between the infrastructure and inclusiveness and some indicators for this inclusiveness.

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MEANING OF INCLUSIVENESS

- Strategy to ensure that the benefits of a process are more broadly experienced by all
- Rising concern that the benefits have not been equitably shared
- Inclusive development process create economic opportunities along with ensuring equal access to all
- Inclusive process focuses on both pace and pattern
- Inclusive process ensure sustainability




What is basically the meaning of inclusiveness? Inclusiveness is a strategy to ensure that the benefits of a process are more broadly experienced by all. Rising concern that the benefits have not been equitably shared. At the same time, inclusive development process creates economic opportunities along with ensuring equal access to all. Inclusive process focuses on both pace and pattern and the inclusive process do ensure the sustainability not only in the infrastructure development field, but in the entire development process as well as in the entire planning and development of all economic activities of the world.

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NEED FOR INCLUSIVENESS

- To tackle inequality and poverty
- Fight against unemployment and provide equal opportunities
- Ensure equitable distribution of resources and output
- Help in reducing social problems
- Balanced regional development
- Sustainable human development



Why there is a need for such inclusiveness? Inclusiveness is really required today to tackle, to handle the inequality and poverty. We have seen in our previous discussion that one of the major economic issues in infrastructure development is the economic inequalities. When infrastructures are developed across the world, we find that every part of the world is not having the equal potential to develop such infrastructure, because there are lack of investors in some places, there are lack of capacity of the paying for such infrastructure facilities in some of the countries.

There are poor nations where we have to start infrastructure development from the zero level, at the same time, there are few countries where we have a very well developed infrastructure condition. So, we have a very unequal world in the case of infrastructure development. When we have to really think for the next generation infrastructure, we cannot really look for further unequal development of infrastructure.

So, the need for inclusiveness is to fight against the unemployment and to provide equal opportunities; that is true in case of the general development process as well as for the infrastructure development process. Ensuring equitable distribution of resources and output, more we have the inclusive development, more we have the equitable distribution of resources and more we have the equitable distribution of the output.

Inclusiveness helps us in reducing social problems, because more we have the unequal distribution of the income and opportunities, more we have the higher poverty level in the country. And in that case, as we know that unequal distribution of income provides more conditions for the crime and in that case, we have to have inclusiveness in our developmental model.

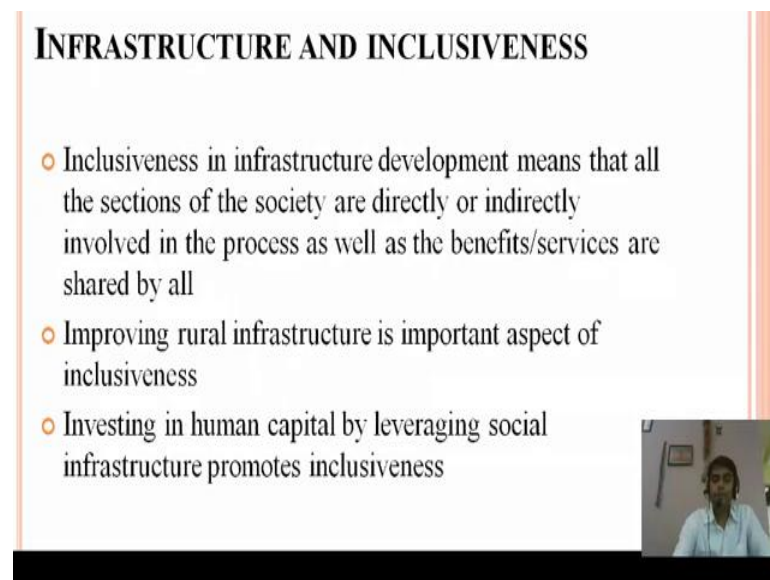
So, at the level of regional disparities, we do find that there are certain regions in the country, which has more better infrastructure and there are certain regions in the world, which has very low level of infrastructure. Within the country also we find that some of the areas in particular countries having much richer infrastructure, but some of the countries not having rich infrastructure facility.

So, there is a need to have the balanced regional development and that balanced regional development is impossible without taking care of the inclusiveness in our development process as well as, if we are really looking for the better infra development also. In that case also, we have to consider a regional disparities, how to reduce that regional

disparities in terms of general developmental process as well as the infra development process.

At the same time, we do have to consider the overall human development. Inclusiveness in the development process do provide as an opportunity to have an unequal distribution. And at the same time, haphazard development, more urbanization not having real care and precaution for the environmental development. So, it says sustainable harm for the entire development process and there is a need for this inclusiveness in our developmental process.

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INFRASTRUCTURE AND INCLUSIVENESS

- Inclusiveness in infrastructure development means that all the sections of the society are directly or indirectly involved in the process as well as the benefits/services are shared by all
- Improving rural infrastructure is important aspect of inclusiveness
- Investing in human capital by leveraging social infrastructure promotes inclusiveness

The slide features a title at the top, three bullet points, and a small video inset in the bottom right corner showing a person speaking. The slide is framed by orange vertical bars on the left and right sides.

Connecting this entire inclusiveness of developmental process with the infrastructure development, one cannot really say that inclusiveness in infrastructure development is not needed today. But, it is the need of our, because in our previous lecture also, I have discussed that how different environmental challenges are on the way when we are developing infrastructure.

And there are so many precautions, which world is taking care and where the precautions were not taken care, we have seen that, there are huge damage to the human society and to the next generation of the human society. So, in that case, inclusiveness in infrastructure generally means that, all the sections of the society are directly or indirectly involved in the process, as well as the benefits and services are shared by all.

We have seen that, when we are trying to have more fast urbanization process, we do not really consider the rural growth rate, rural contribution, we do not really take care of the rural infrastructure projects and then, we are having large migration from rural to urban India. And, so that creates further problem, further challenges and many economic and social issues in the cities today.

We have seen such problems in city like Delhi, in Mumbai, in London or in Washington or even many places in other developing countries including developing and least developed countries including cities like Dhaka or Islamabad or even some of the places in East Asian countries. So, in that case, there is a need to have this inclusiveness in infrastructure development. How good we are really connecting the stake holders in the infrastructure development projects; that is one of the major challenge today.

And if that inclusiveness is not connected to the infrastructure development, we are really lacking in terms of the well being of the infrastructure. So, improving rural infrastructure is important aspect of inclusiveness, as we have also discussed just now that we have to have rural infrastructure on the way and more, we are lacking in rural infrastructure basically more we are inviting the imbalance between the rural and urban population.

And we do provide more opportunities to the urban areas on the cost of not providing opportunities for the rural people and then, we have huge unemployment problem in rural India and we have more migration from rural to urban India. A high level of crime continues in the rural part. At the same time, majority of the issues, land related issues and other conflicts are due to the not having any better job opportunities and employment opportunities.

So, it is indeed important to have investment in human capital by leveraging social infrastructure, which promotes inclusiveness. When we really think for the rural infrastructure or physical infrastructure in urban areas, at the same time, we forget to develop the human capital and that is more important for the inclusiveness in the society. Today, we live in a society where there are few economies, which has a very pathetic condition in terms of nutritional level, in terms of literacy, in terms of diseases, health conditions.

So, to promote those indicators, we have to have such investment in social infrastructure projects and in our previous discussion also, we have seen that, there are few country in the world, Sri Lanka is one of the example in South Asia. And many South East Asian countries has proved that, without land reforms, without education and health, improving health and education conditions, a society cannot really have the inclusiveness development.

So, when we are in the field of infrastructure development projects, we cannot really ignore those facts and those facts are basically the social infrastructure projects, which come as a part of the human capital.

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INFRASTRUCTURE AND INCLUSIVENESS...

- The right mix and synergy of infrastructure development and affordable services are important to ensure inclusiveness
- Well-functioning and efficient infrastructure promotes inclusiveness by expanding access to vital services
- Improves economic opportunities for all

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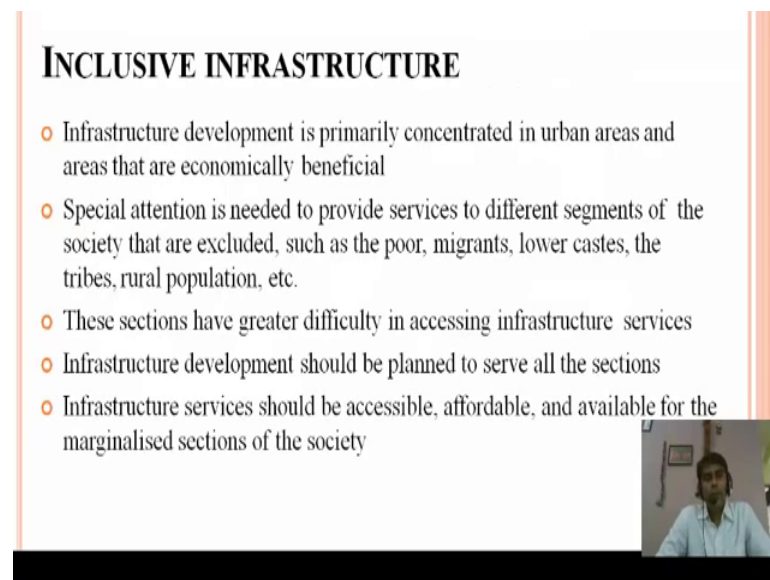
The right mix and synergy of infrastructure development and affordable services are important to ensure such inclusiveness. Well-functioning and efficient infrastructure promotes inclusiveness by expanding access to the vital services. We have seen that, when we have improved the level of literacy, we have improved the level of health, their participation in the job market is also very high and they participate in the job market on a very high level compared to, when they were illiterate and when they were having ill health.

So, it provides better entitlement conditions for the workers in the society and it improves the economic opportunities not only for that particular individual, but economy as a whole. So, when we are in the well connected world today, we cannot really say that

economic opportunities provided to an individual is not going to be an advantage for the economic opportunities for other part of that society.

Because, a producer, a small producer, if they are really having more better opportunities in production, they are really going to have more and more better facilities for improving the economic conditions.

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INCLUSIVE INFRASTRUCTURE

- Infrastructure development is primarily concentrated in urban areas and areas that are economically beneficial
- Special attention is needed to provide services to different segments of the society that are excluded, such as the poor, migrants, lower castes, the tribes, rural population, etc.
- These sections have greater difficulty in accessing infrastructure services
- Infrastructure development should be planned to serve all the sections
- Infrastructure services should be accessible, affordable, and available for the marginalised sections of the society

Video inset showing a speaker in a light blue shirt.

Infrastructure development is primarily concentrated in urban areas as we have discussed and areas that are economically beneficial. Because, when it is linked with the investment, investors are only looking for those destinations, where they can have more better return. We have already discussed rate of return in our previous lectures. So, when they are looking for more better rate of return, they are not looking for those rural areas, where rate of returns are limited.

So, a special attention is need to provide services to different segments of the society that are excluded, such as the poor, migrants, lower castes, the tribes and the rural population. So, when we have such inclusiveness in our developmental plan, we do have to consider all left out population, which were not really considered for development in past. So, these sections have greater difficulty in accessing infrastructure services, because they are not really in the mainstream of the economy.

So, to bring them in the mainstream of the economy, it is indeed important to really invest on the social infrastructure projects and then, they will be also an important partner for the physical infrastructure projects. And that will be the better understanding of the population, which will have good connectivity in getting income as well as employment.

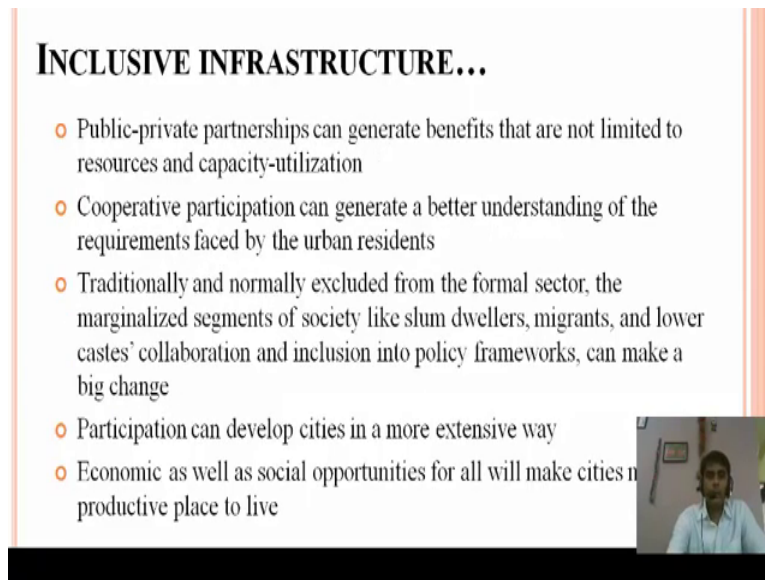
So, infrastructure development should be planned to serve all the sections and that is not happening basically; that is one of the challenge which as a part of the one of the social challenge, which we can say today that, when we are coming out with large projects, we are not considering those farmers, who are going to lose their land. We are not going to consider those workers, who had no other choice except to work on the country side and they have no alternative gain for their survival, because these infrastructures when they are fully developed, they have to face rural population and nearby population.

They have to face the problem of rehabilitation and migration from one place to other place and in that case, the entire motive of infrastructure developments becomes very biased for those people, who had a traditional house and the traditional connection of that particular area. So, infrastructure services should be affordable, accessible and available for the marginalized sections of the society; that is another challenge, which we are facing today.

The fees or license, which is being charged or the tariff, which is being charged for certain infrastructure facilities, it is well taken for those customers and those individuals, which had really more better payment capacity, more better capacity to afford those high charges of the payment. But, it is not really made for those small sections of the society, which has to be really the major sufferer, when the bigger infrastructures are being developed.

So, how they will manage in terms of their expenditure, if the major part of their income is paid for accessing certain services in the city; that is one of the real challenge, which one has to see, when the inclusiveness in infrastructure development is being discussed.

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INCLUSIVE INFRASTRUCTURE...

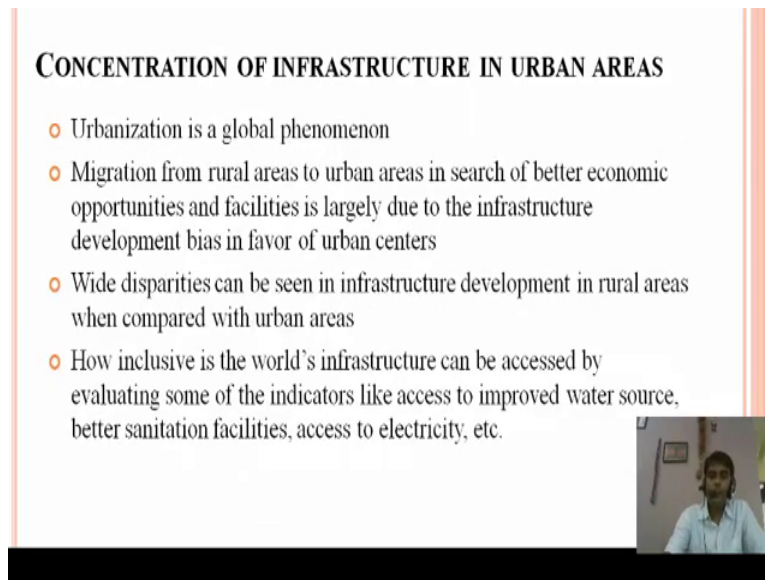
- Public-private partnerships can generate benefits that are not limited to resources and capacity-utilization
- Cooperative participation can generate a better understanding of the requirements faced by the urban residents
- Traditionally and normally excluded from the formal sector, the marginalized segments of society like slum dwellers, migrants, and lower castes' collaboration and inclusion into policy frameworks, can make a big change
- Participation can develop cities in a more extensive way
- Economic as well as social opportunities for all will make cities a more productive place to live

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One another fact is the Public Private Partnerships, which can generate benefits that are not limited to resources and capacity utilization. Cooperative participation can generate a better understanding of the requirements faced by the urban residents and when the various PPP models are also start functioning, it really ignores basic issues and challenges, which society is facing today.

So, traditionally and normally excluded from the formal sector, the marginalized segment of society like slum dwellers, migrants and lower caste collaboration and inclusion into policy frameworks can make a big change and that is not really happening in majority of the country today. So, participation can develop cities in a more extensive way, economic as well as social opportunities for all will make cities more productive place to live and this is possible through the well distribution of the infrastructure facilities.


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CONCENTRATION OF INFRASTRUCTURE IN URBAN AREAS

- Urbanization is a global phenomenon
- Migration from rural areas to urban areas in search of better economic opportunities and facilities is largely due to the infrastructure development bias in favor of urban centers
- Wide disparities can be seen in infrastructure development in rural areas when compared with urban areas
- How inclusive is the world's infrastructure can be accessed by evaluating some of the indicators like access to improved water source, better sanitation facilities, access to electricity, etc.

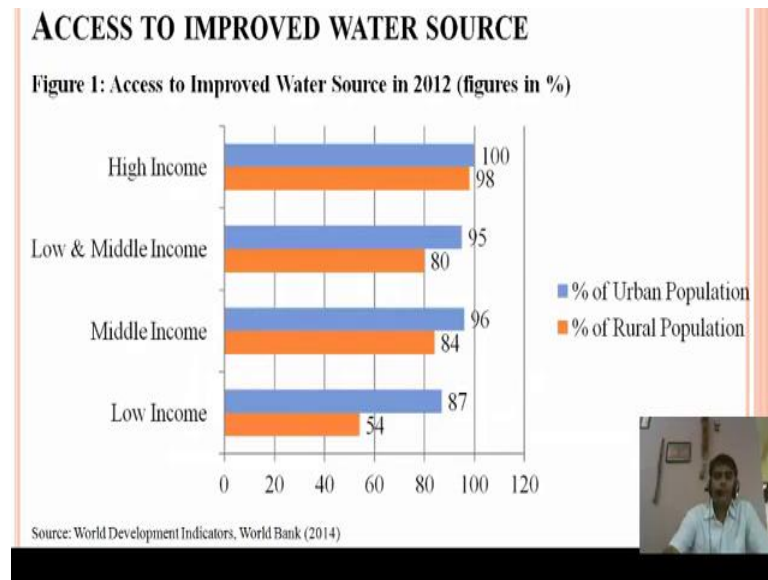
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Concentration of infrastructure in urban areas is another issue, which we have also discussed previously and urbanization is a global phenomenon, it is happening everywhere. And, but at the same time, migration from rural areas to urban areas in search of better economic opportunities, jobs, better house, better electricity conditions and other facilities is largely due to the infrastructure development bias in favor of urban centers.

So, this wide gap between the urban and rural infrastructure can be seen in infrastructure development in rural areas, when it is compared with urban areas. So, the bigger challenge today is how inclusive is the world's infrastructure, which can be accessed by evaluating some of the indicators like access to improve water sources, better sanitation facilities and access to electricity, etc.

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So, access to improved water sources, if we can see the world development indicators urban population, but just the rural population. We do find that low income people or really, especially in rural population, only 54 percent population is in the position to access the improved water sources by 2012. While in the urban population, we are finding that, it is 7 percent, even the low income people are really having the access of improved water source.


In the middle income group, we have seen that the rural population around 80 percent-84 percent population, while 96 percent population in the urban population is having the access of improved water sources. Low and middle income, we are finding again 80 percent rural population and 95 percent urban population. While in the high income, we found that, even in the rural population 98 percent high income people are really having access to improved water sources, while the 100 percent urban population is having access to improved water sources.

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ACCESS TO IMPROVED WATER SOURCE*

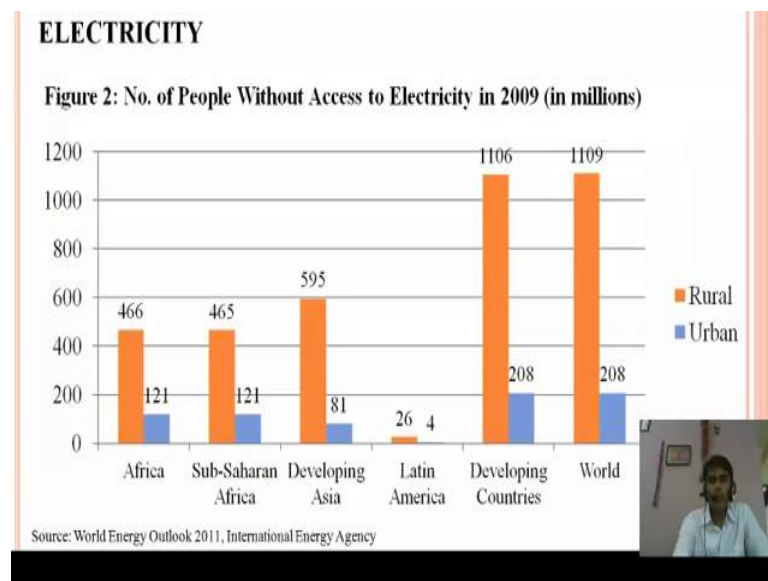
Country	% of Rural Population	% of Urban Population
China	85	98
India	91	97
Brazil	85	100
South Africa	88	99
USA	98	99
Congo, Rep.	39	96
Ghana	81	93
Sri Lanka	93	99

Source: World Development Indicators, World Bank (2014) * Figures for 2012



Apart from this, we can also see the percentage of rural population, which has access to... access to improved water sources as a part of country wise, China 85 percent, India 91 percent, Brazil 85 percent, South-Africa 88, USA 98, Congo 39, Ghana 81 and Sri Lanka 93 percent. Percentage of urban population... in terms of urban population we find that, Brazil 100 percent, while India 97 percent, China 98 percent, South Africa 99 percent, USA 99 percent, Congo 96 percent, Ghana 93, Sri Lanka 99. So, these figures are from the world development indicators World Bank.

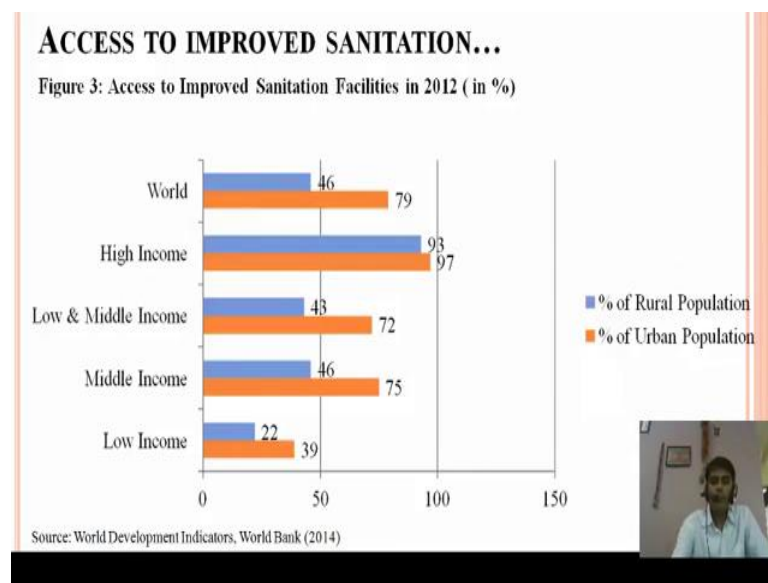
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Number of people without access to electricity in 2009 little older data, we find here in terms of world, we are having 1109 million population without access to electricity in the world, while 208 million urban population without access to electricity. In developing country, we find that 1106 million population, which is close to the world population of not getting people without access to electricity.

Very slight difference between the world data and the developing countries data and at same time, we find that, the urban population, which is without access to electricity in 2009 is almost equal in terms of world and the developing countries. So, not having access to the electricity is the major challenge in the developing country today. And that includes the challenge from Africa, Sub-Saharan Africa, developing Asia and Latin American countries.

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Access to improved sanitation, if we will see the world level, 79 percent of the urban population is having the access to improved sanitation facilities, while overall world only 46 percent of the world population in rural area is having the improved sanitation facilities. The high income in terms of high income population, the urban population and rural population, above 90 percent population is having the improved sanitation facilities.


The low income, middle income and very low income countries, very low income population in urban area is still better in terms of improved sanitation facilities, while the rural population is still worse in terms of improved sanitation facilities.

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ACCESS TO IMPROVED SANITATION FACILITIES**

Country	% of Urban Population	% of Rural Population
China	74	56
India	60	25
Brazil	87	49
South Africa	82	62
USA	100	100
Congo, Rep.	20	6
Ghana	20	8
Sri Lanka	83	94

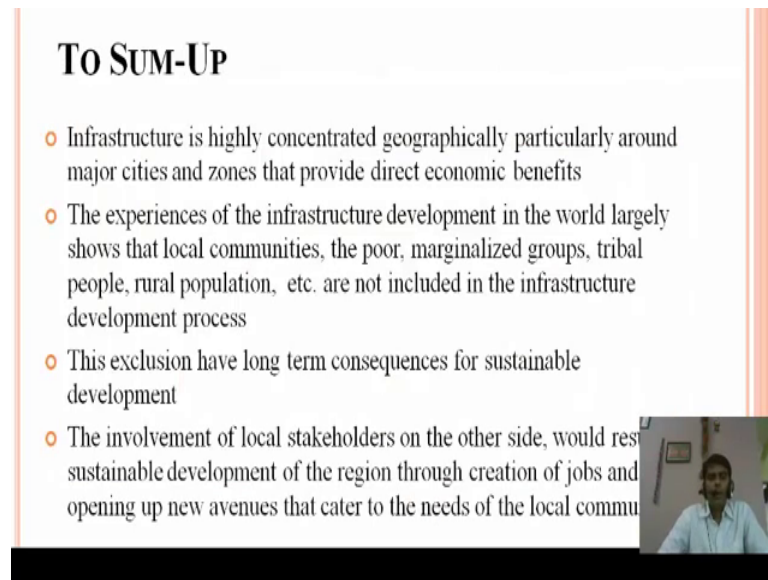
Source: World Development Indicators, World Bank (2014) ** Figures for 2012



Access to improved sanitation facilities, which we have seen in the previous figure and we can find here that United States is one of the country, which has better access to improved sanitation facilities, even in the rural and in the urban areas. While, we have the data from country like, Ghana which has only 8 percent people having the improved sanitation facilities in rural areas, while 20 percent in urban area.

In India also we find only 25 percent of rural population having this improved sanitation, while 60 percent of urban population is having improved sanitation. China 74 percent of urban population, while 56 percent of rural population, much better condition than India.

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TO SUM-UP

- Infrastructure is highly concentrated geographically particularly around major cities and zones that provide direct economic benefits
- The experiences of the infrastructure development in the world largely shows that local communities, the poor, marginalized groups, tribal people, rural population, etc. are not included in the infrastructure development process
- This exclusion have long term consequences for sustainable development
- The involvement of local stakeholders on the other side, would result in sustainable development of the region through creation of jobs and opening up new avenues that cater to the needs of the local communities

Video inset: A man in a light blue shirt speaking.

To sum up, we can say that, infrastructure is highly concentrated geographically, particularly around major cities and zones that provide direct economic benefits to the urban people. The experience of infrastructure development in the world largely shows that, the local communities, the poor marginalized groups, tribal people, the rural population are not included in the infrastructure development process.

So, this is one of the strange conditions for the infrastructure development, when we are not really connecting majority of the poor people, marginalized groups, tribal and rural population, when we are really going ahead in the infrastructure development process. So, this exclusion have long term consequences for sustainable development, because more we have the gaps in the infrastructure generation, more we are inviting further gaps, because generate gaps in infrastructure development.

If we have more urban planning and not having any rural planning, then in that case we are considering more and more urban facilities to be developed and we are not really considering, what has to be done for the rural population. The involvement of local stakeholders on the other side would result in sustainable development of the region through creation of jobs and opening up new avenues that cater to needs of the local communities.

And such challenges we have seen in the place, where we have the low level of literacy and very poor health condition and of very poor condition of the social infrastructure

development indicators. So, to improve the better inclusiveness of infrastructure development, there is a need to really breeze the gap between the haves and have not in terms of physical infrastructure.

And that has to be strengthened through the social infrastructure indicators and health education, sanitation, drinking water facility, these are some of the indicators, which really improves the life standard and which really motivate the people to have a better life and to participate in more better way in the economic development. So, with this background, I hope that, you have understood the importance of inclusiveness and you have seen that, how the inclusiveness is going to lead us in more inclusive and more sustainable infrastructure development activities.

Thank you.