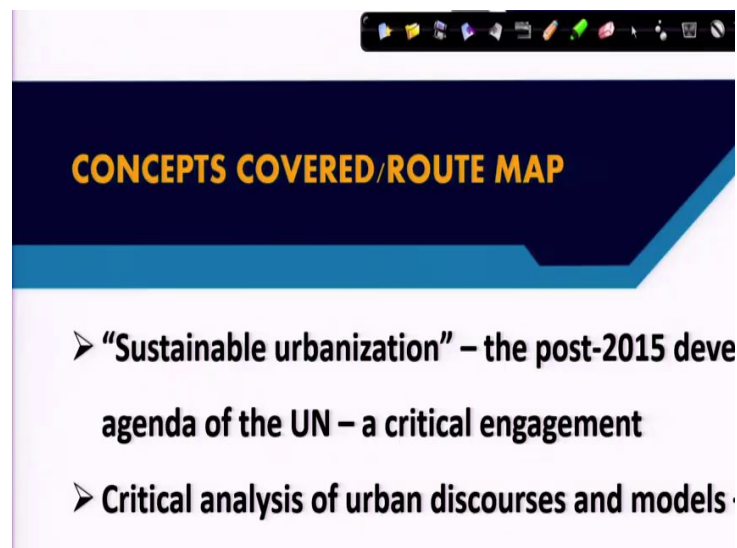


**Urbanization and Environment**  
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**Module-02**  
**Incorporating the Environment in Urban Planning**  
**Lecture – 10**  
**How “Sustainable “? Critical Analysis of Contemporary Urban Models**

So, in this particular lecture, I would be focusing on like this particular question of How Sustainable. These contemporary urban models are or the contemporary so called sustainable cities are; so we would plunge into a Critical Analysis of Contemporary Urban Models in this particular presentation, lecture 10.

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Before you know, plunging into the critical analysis of urban discourses and models, so how sustainable you know these models are. I think it is it will be also important for us to discuss a bit on sustainable urbanization, which is the post 2015 development agenda of the United Nations.

So, it is you know it puts lot of emphasis on the urban on city, but it is it will be also important for us you know to critically understand the significance of in sustainable urbanization. So, like they I think there is a gap between this theoretical rhetoric and

actual reality and we would get lot of scope or opportunity, you know to discuss this even within the context of India.

So, when we will be discussing on contemporary Indian you know plans and missions like for example, sustainable cities or sustainable city, smart city mission. So, when we will be discussing Indian smart city mission, we will also be contextualizing you know these grand ideas and plans within this larger visions of the global organizations like United Nations. This sustainable urbanization most importantly; because you know Indian missions and ideas are also to great extent they are in tune to the gospel of sustainable urbanization.

So, we would enter into a critical engagement, you know of these ideas etcetera; but here I would slightly touch upon sustainable urbanization and mainly focus on you know the various challenges or limitations or criticisms relating to this. I mean the urban environmental discourses and models which we had discussed in the previous lecture.

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So, sustainable urbanization, this is the post 2050 development agenda of the UN and it like reports came out from the ECOSOC in 2014. And for the first time in 2014, you know we came across this terminology sustainable urbanization; integrating economic, social and environmental dimensions of sustainable development.

And all of us can understand that why 2014, because you know 2014 actually sets the context you know for this particular discussion. Because it was understood by then that you know urbanization is irreversible and like I mean the urbanization or hyper urbanization or urbanizing trend would go on, which is best I think explained in terms of planetary urbanization.

So, when planetary urbanization you know it became a vivid reality and almost I mean there were no ways or viable pathways to step back. So, I think again this sustainable urbanization, again very much you know derived from the concept of sustainable development, this was floated by the ECOSOC.

So, what is the key idea or what are the key ideas in this particular gospel? So, the key ideas are that you know, there is an overarching emphasis on cities. So, cities are considered as access for the new global change, economic forces for entire nations, central players on the world stage, the locus of change and the venue where human agency is mobilized.

So, whole lot of like you know optimism on cities. And this is a quote from UN habitat. So, UN habited report 2012, which can also be considered as a precursor for this UN ECOSOC 2014 report. So, here in this 2012 report, like this optimism surrounding cities you know is it is vividly reflected.

So, cities around the world are playing an ever increasing role in creating wealth, enhancing social development, attracting investment, and harnessing both human and technical resources for achieving unprecedented gains in productivity and competitiveness. So, it is absolutely believed that you know cities are very very efficient.

So, cities are the locus of change, locus of productivity, locus of creativity, locus of efficiency etcetera; but very unfortunately you know lot of key or crucial you know concepts or understandings are actually missing, you know from this particular tenet or gospel of sustainable urbanization.

So, for example, most importantly you know this the key ideas like sustainable flows between cities and their wider ecological infrastructures, urban metabolism; the concept of urban metabolism which is, so very important for the survival of the urban itself. These are all missing in this particular gospel, which you know which to I mean which

aggressively puts lot of emphasis, overarching emphasis on the urban or cities. And like this if you go through the report, 2014 UN ECOSOC report, you will understand that you know it does not even pay hit to this fundamental or basic fact that you know by their own definitions, cities are actually not self-sufficient.

So, these are some of the criticisms and I think we need to have a critical outlook when we kind of analyze or interpret you know this report and when we try to understand what sustainable urbanization is all about. And as I mentioned that I will be discussing or shedding light on this particular aspect in detail, when we would also be focusing on contemporary you know urbanization or urban environmental trajectories within the Indian subcontinent.

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**High-density City**

**On poverty**

Poverty is not necessarily bad for cities

Provides conditions for rags to riches...

- disapproval of perpetual urban poverty – immigrants, segregated African-American ghettos, etc.
- how impoverished citizens can get out of poverty – remains unaddressed

health, happiness, green productivity, sprawl – significant variables; but people actually live in an understand their urban environments and how s perspectives fit within hi framework for change' (2011)

So, with this, I move on to the main part or the major part of lecture 10, where I would be also discussing you know the limitations or challenges that are embedded in you know the contemporary urban environmental models and designs like high density cities, zero carbon cities etcetera.

So, to begin with high density cities, so we all of us know by now; because this was covered in lecture 9, that how Glaeser actually he kind of he like promoted urban density or urban core like anything. So, he also reflected a lot on poverty. So, if you go through this book, you will find his reflections on poverty.

So, and he says that you know poverty is not necessarily bad for cities and he also says that cities are not responsible you know for impoverishment or poverty; because like people who are already poor and who stay in rural areas, they actually come to I mean they migrate to the urban areas in search of prosperity, in search of mobility, upward mobility and also like in search of opportunities etcetera.

So, and you know cities, in cities some of them can actually make their future. and in an anecdotal note, in an anecdotal approach; Glaeser also you know kind of he talks about some of the, some of the families which could make their fortunes you know in I mean being industrial era urbanites, like for example, the Kennedys in Boston, Richard Wright and also you know people like Lara Vase in Rio etc. So, he gives these examples and he shows that, how cities actually provides conditions for rags to riches.

But unfortunately you know he disapproves or there is a disapproval of perpetual urban poverty, which is like reflected in the spaces, where the immigrants actually inhabit and also the segregated African American ghettos. So, there is disapproval of perpetual urban poverty in the Glaeserian paradigm.

And Glaeser also you know he does not talk much or he at all does not talk about how impoverished citizens in these high density cities can actually during the contemporary now can actually get out of poverty. So, these questions very important questions on poverty, post industrial you know poverty remains unaddressed. Also, he fails to make a very good distinction between the industrial you know industrial economic sector and the post-industrial economic sector.

So, the political economic mode of production lens or you know a framework is very much missing in the otherwise so called very tech induced tech oriented understanding of ED Glaeser. So, final question like for example, which also remains unaddressed in the Glaeserian paradigm is, would today service information and knowledge based economy be accommodative to the marginalized classes.

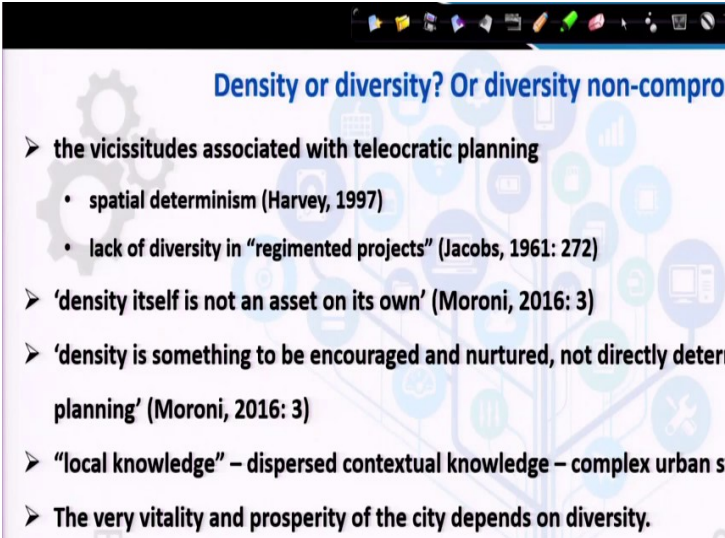
So, today cities you know they provide, they provide services, they no more provide goods. So, services are more important which are provided by cities. Services in the form of information, technology, communication, knowledge based economy etcetera. So, these cities providing services and not goods; would this be accommodative to the marginalized, impoverished, vulnerable classes?

So, this a question also remains quite unaddressed in this book by Glaeser. And I mentioned Ocejo in my last presentation as well. So, Ocejo when he also did an analysis of you know Glaesers approach or Glaeser Glaeserian high density cities; he says that yes Glaeser has considered health, happiness, green, productivity, sprawl as important variables, but how people actually live in.

So, this everydayness, every day live realities, everyday coping mechanisms, you know flurry of bottom up needs driven activities which are pursued by you know by the local urban residents, sometimes you know where there is an absence of policy driven facilities or infrastructures.

So, how people who live in and understand their urban environments and how such perspective fit within his framework for change. So there is no scope you know for incorporating this everydayness in his otherwise very elaborate and technology induced sophisticated density paradigm.

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**Density or diversity? Or diversity non-compro**

- the vicissitudes associated with teleocratic planning
  - spatial determinism (Harvey, 1997)
  - lack of diversity in “regimented projects” (Jacobs, 1961: 272)
- ‘density itself is not an asset on its own’ (Moroni, 2016: 3)
- ‘density is something to be encouraged and nurtured, not directly determined by planning’ (Moroni, 2016: 3)
- “local knowledge” – dispersed contextual knowledge – complex urban s
- The very vitality and prosperity of the city depends on diversity.

So, apart from these, there are also other challenges. So, for example, the vicissitudes associated with teleocratic planning, top down, very top down and which also you know to an extent which leads to spatial determinism; it is because like more emphasis is on the form than the content.

So, and of course, when there is more emphasis on form than content; then the danger of spatial determinism is always there and lack of diversity. So, there is promotion for density, but no promotion for diversity and no understanding that why and how diversity is so important and should be nurtured and harnessed in order to you know, in order to inject livability and you know energy in these livable urban spaces.

So, lack of diversity in regimented, in this regimented process projects. So, this was also like long, but this is not typically the typically a challenge or a limitation from, I mean limitation of the high density city design, specifically like specifically being discussed by Glaeser. But long back you know Jane Jacobs also criticized you know, he criticized his lack of diversity in regimented process.

So, the same problem or the same mistake we also find in the Edwardian; oh! Sorry, in the Glaeserian high density paradigm. And Moroni; Moroni is a very recent like Moroni in his recent work, he has talked about the very fact that; why you know we should invest more or understand more I mean why should we provide or give more significance to diversity than density or like you know even if we are more innovative. We can think about diversity non compromised density.

So, it is very important to take care of this nuances, right. So, Moroni says that density itself is not an asset on its own. So, density is something to be encouraged and nurtured, not directly determined by planning. So, again it should not be top down, it has to be bottom up and or you know at best it can also be a kind of, it can be crafted through a continuous interplay or dialogue you know between these top down and bottom up processes.

So, like the very vitality and prosperity of city depends on diversity right; local knowledge remains so very important, because each urban space has its own narrative. So, the knowledge has to be dispersed, knowledge has to be very very contextual; because we are talking about the contemporary complex urban system. So, we are talking about complex urban systems of our contemporary times.

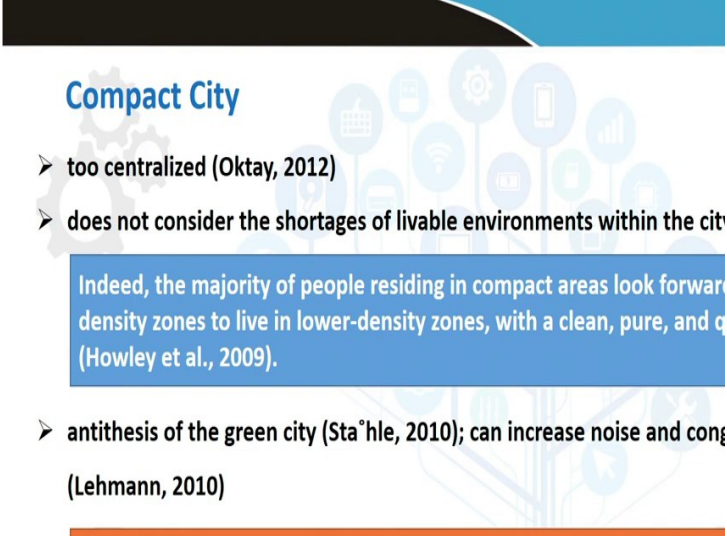
So, dispersed and contextual knowledge seems to be or remains very very important and that is why there is a need to transcend from teleocratic to nomocratic planning. So, nomocratic planning were you know, where planning is more bottom up and also you know this transition from directional to relation approach has to be crafted. Relational

approach you know which is very flexible, which promotes flexible socio spatial planning, it remains simple, it is stable, it is flexible, it is impersonal and there is a whole lot of scope to kind of you know accommodate diversified and countless, sometimes like incomparable experiences.

So, density has to be a tool and it cannot be an end. So, I think these are a couple of important points which also make us understand that when we are talking about urban spaces, it is not about I mean it is not a technical story; but socio cultural dimensions, psychological dimensions need to be taken care of.

Of course, apart from you know the very important political economic variables; that finally you know that finally, gives shape to a particular city and help us understand whether the city is just democratic equal and hence sustainable and resilient.

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### Compact City

- too centralized (Oktay, 2012)
- does not consider the shortages of livable environments within the city

Indeed, the majority of people residing in compact areas look forward to live in lower-density zones, with a clean, pure, and green environment (Howley et al., 2009).

- antithesis of the green city (Stahle, 2010); can increase noise and congestion (Lehmann, 2010)

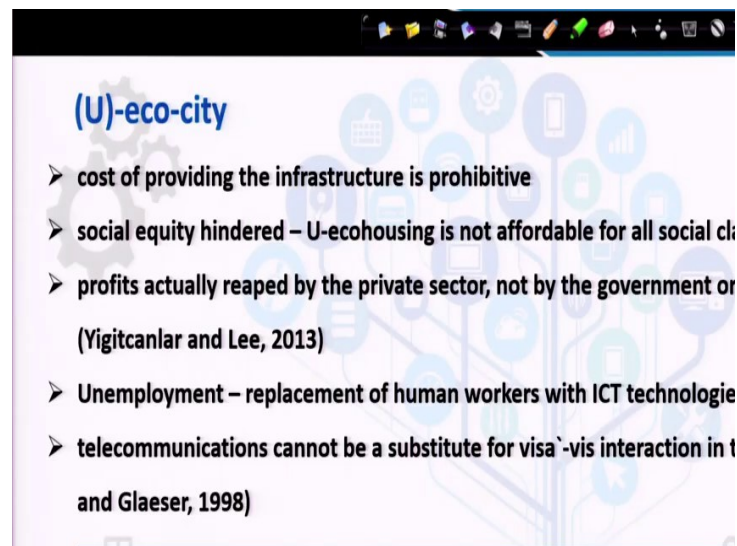
Compact cities, so if you remember I mentioned in my last class that there is an ambiguity in this design of compactness itself and here you know this ambiguity just see the last portion of this slide. So, compact city tries to address you know a dual goal. So, urban sustainability derived from a compact pattern on one hand and then livability derived from lower density areas offering greenery and clean environment on the other hand and these two seems to be a little clashing to, I mean seems to be clashing.



And like there are some layer of works, which talk about the limitations of this particular model, this model of compact cities and for example; Oktay says that it is too centralized, does not consider the shortages of livable environments within the city. And indeed the majority of people residing in compact areas, look forward to leaving the high density zones to live in lower density zones with a clean pure and quiet environment.

So, the I the essence of compactness actually gets compromised. And again like if you are talking about, I mean if you are talking about dense core. If you are talking about compactness; then like there can be lot of noise due to motorized traffic congestion. And if you have more noise and more pollution and more congestion; then of course you know it is an, it becomes an antithesis of the concept of green city. So, these are some of the ambiguities within know that are that are embedded in the compact city design.

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Eco city, U eco city; cost of providing infrastructure is prohibitive, because it is absolutely ICT enable. So, one can understand that why cost of providing the this very sophisticated infrastructures is really prohibited. So, and hence like this is related to hindrance to social equity. So, why and how social equity is hindered; because it is only affordable to some specific groups or specific communities.

And eco housing is actually not affordable for all social classes and sometimes also it remains you know, it is only targeted to the affluent sections of the society. Profits are also ripped by investors, who of course is the, which is of course is a private sector in

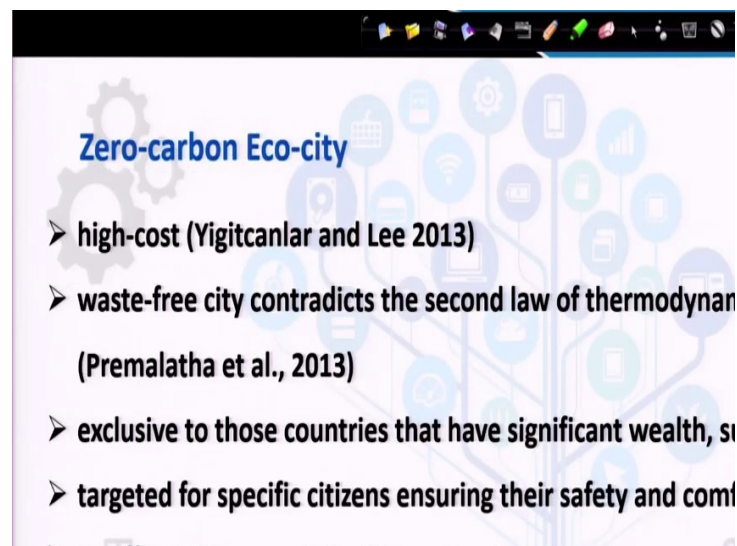
this case and not the public sector and neither citizens can rip the benefits, not the private sector; but it is absolutely a private driven and private fed and where the profits can only be made by the private you know high tech corporate capitalist companies.

Unemployment, so because human workers are replaced with ICT technologies. So, which is true for any kind of so called quote, unquote, like AI enable, ICT enable smart technologies. And telecommunication also which is another key feature of U eco city cannot be a substitute for interaction you know in the city.

So, Gaspar and Glaeser again they have, they have written on this particular feature characteristic of U eco city, where they argue that yes this can be, this tele video conferencing or telecommunication it can be considered as green communication, because the ecological footprint is less. But at the same time you know the absence of physical touch and face to face communication; it has some impact on the social and ecology and the psychological you know well being of citizens.

So, ubiquitous eco cities cannot support sustainability; because if these are the criticisms, then how can you say that you know this ubiquitous so called ecocity is actually eco friendly or sustainable. So, eco cities cannot support sustainability, notwithstanding all the advances in communication technologies. So, this is a major criticism of U eco city.

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Yes, coming to you know problems or challenges associated with zero carbon ecocity, it is high cost. Again like U eco cities, zero carbon eco city is also, I mean it is very very costly. Because it is a kind of a laudable project, it is a highly public, oh sorry, private investment laden. And also you know there is a very interesting you know article by Premalatha et al in 2013, where the authors argue that waste free city itself, this particular concept of waste free city contradicts the second law of thermodynamics.

So, what is this second law of thermodynamics? So, according to the second law of thermodynamics, any organism or any place can never be hundred percent efficient. So, it means that, you know a system whether it is engaged in production or pollution control etcetera any other activities; it will generate some sort of waste, it cannot be absolutely you know waste free or emission free.

So, I mean it absolutely kind of negates or contradicts the second law of thermodynamics. So, it is not possible. So, the question of, I mean the criteria or I mean not criteria; but this impossibility dimension is very much there, it is enmeshed in this particular idea or concept of so called, it sounds, it is it sounds fascinating.

But in terms of its feasibility, in terms of its practical application; I mean I do not, I think it is a limited option and also again it is very exclusive to those countries that have significant wealth, such as UAE. And when we discuss political ecology, when we discuss so urban social science frameworks and approaches.

That why it is important you know to understand urban environmental issues through the various social sciences, very you know cutting edge, radical, breakthrough, social science paradigms approaches, frameworks etcetera like political ecology. We will see that how this you know urban, how this like UAE cities, I mean on paper they are described as or they are yes they are described as zero carbon; they are described as ubiquitous eco cities etcetera.

But you know how unequal they are, we will be aware or we will get exposed to this iniquity; when we apply political ecology lens or particular ecology approach to understand the functioning of these you know unjust cities. So, and we will take this up for sure.

So, yes finally, you know wrapping up this discussion with the limitations that are embedded in zero carbon eco city; they are definitely targeted to specific citizens like highly educated the masses, high tech corporations, affluent sections, and they are totally geared towards ensuring their safety and comforts.

So, finally, unaffordable, unequal unjust. So, if unaffordable, unequal, unjust; then how can they be sustainable and resilient at all? So, they are unsustainable and non resilient for sure.

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Initiative/ theory	Advantages	
The compact city	<p>The compact city shortens the motorized trips, and hence saves energy, and mitigates carbon emission</p> <p>Mixed land-use inherent in the compact city makes it more liveable and interactive</p> <p>Compact cities are safer than suburbs or gated communities</p> <p>The medium-to-high population densities that distinguish compact cities afford a feasible service by public transportation</p> <p>The urban pattern of compact city is adaptable thermally with arid hot and cold regions (Hassan and Lee 2014)</p>	<p>Remodeling the historic areas or city by compact theory may contradict the archeological nature of the city, or interfere with the laws of historic preservation</p> <p>The majority of compact cities suffer from lack of greenery and privacy, in addition to the increase in noise, especially in over-compact cities</p> <p>Regenerating the city in the non-compact areas needs rehabilitation of infrastructure networks, at prohibitive cost</p> <p>The compact pattern would be intolerable if the dependence on private car did not decrease</p>
The ubiquitous eco-city	<p>ICT embedded bicycles can boost green transportation and health fitness, and reduce bike thefts</p> <p>The U-eco-city uses ICTs embedded in the city infrastructure to offer services anytime and everywhere</p>	<p>Some people believe that telecommunication may promote social linkages. Nevertheless, telecommunications cannot be a substitute for vis-à-vis interactions</p> <p>The U-eco-city automatically leads to undermining the employment rate, due to depending on ICT</p>

So, this particular table again I have taken from Hassan and Lee. So, in the last presentation I also talked to you, I mean I also asked you to go through or access the article by Hassan and Lee. Because it is very I mean it provides comprehensive coverage on this urban environmental designs and models. And this table is, I mean it is very useful; because it captures a snapshot on you know the initiative, advantages, disadvantages and you know conflicts with sustainability pillars.

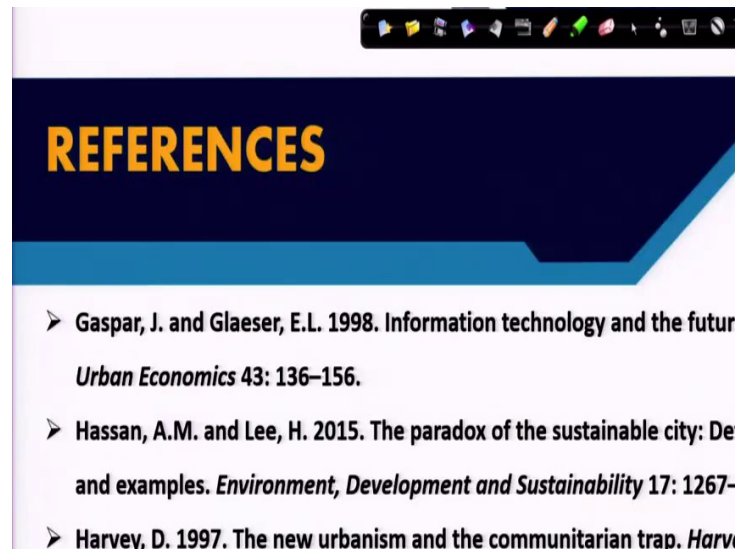
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So, you remember like we discussed this four pillars the and how sustainable cities; this the concept of sustainable cities actually, it is very much dependent or on the integration of these four pillars. So, here you know if you see, a take a look into the table; you will understand the compliance of these models or these designs with the pillars of sustainability.

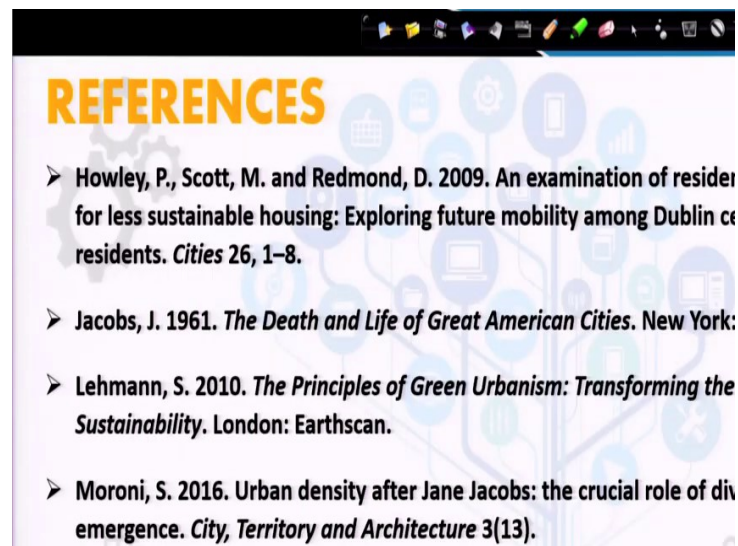
And you can understand and I mean, you can exactly spot the limitations within these models. So, I do not think I am going to read out this table; because itself explanatory and we have discussed a lot about the challenges of these urban models already. So, I think just take a look into this and if you have any question, any doubt; do not hesitate to you know ask those questions and you know and raise those queries in the discussion forum.

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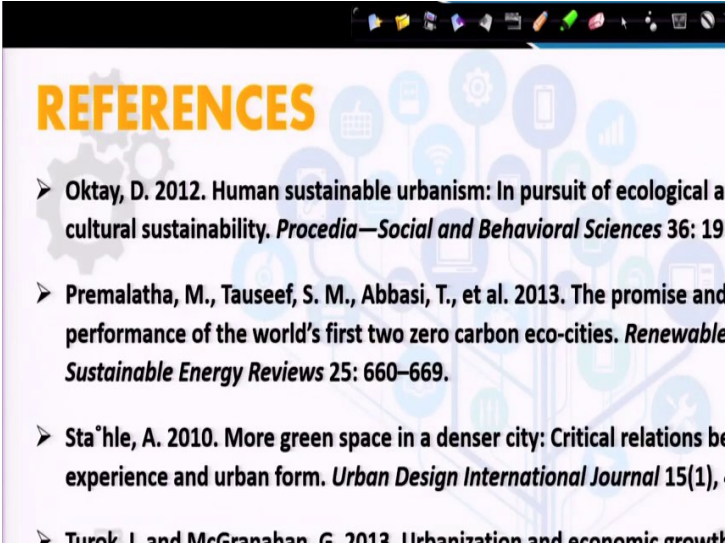
So, these are some of the references and definitely go through Hassan and Lee.

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## CONCLUSION: Key highlights

- The element of “sustainability” for “sustainable cities” need to be critically explored and analyzed across specific historical, cultural and spatial contexts.
- With its overarching emphasis on the benefits of cities, “sustainable urbanization” forces us to consider that by their very own definition, cities are not self-sufficient.

And yes. So, in this lecture, I think we covered the, we discussed a lot about sustainability, the key concept and we discussed sustainable cities and why you know sustainability, sustainable cities and sustainable urbanization need to be critically looked into explored and analyzed across specific historical, cultural, and spatial context. We have not you know, we have not discussed it in very detail; but we have just touched base on this and I told you that, I will be covering this in more details in the subsequent presentations or lectures.

But apart from this we, but one major thing which I think we mentioned in this particular presentation is that, in this gospel of sustainable urbanization; there is an overarching emphasis on you know the benefits of cities and like there is not much discussion or explorations around cities, you know interrelationship with its larger ecological settings and environmental infrastructures.

So, yes and finally, like in this presentation, we talked about you know the limitations that are embedded in the urban environmental discourses, designs and models. And so, there are physical technical and social challenges, disparities imbricated within contemporary urban discourses, designs and models.

So, I think with this presentation, we now have grasp and grip on some of these very crucial limitations of these projects. And you know the limitations especially, so far as



the context of application is concerned. So, please go through the references and if you have any questions, do not hesitate to raise those questions in the discussion forum.

Thank you.