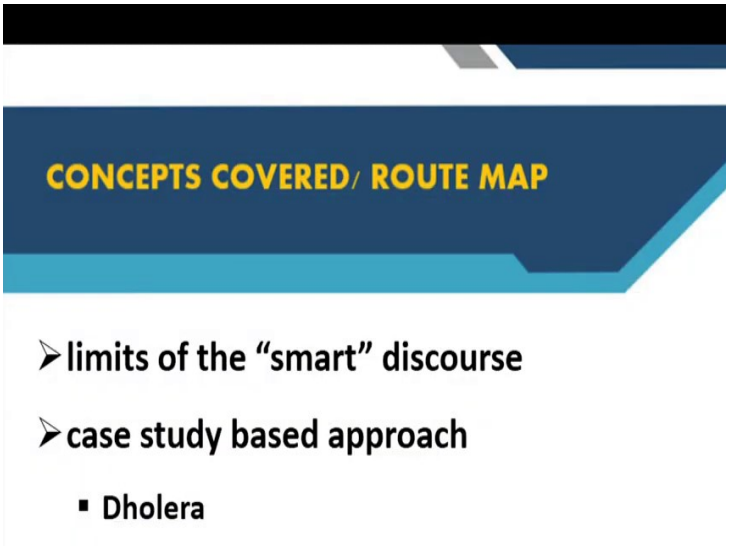
Urbanization and Environment
Prof. Jenia Mukherjee
Department of Humanities and Social Sciences
Indian Institute of Technology, Kharagpur

Module - 04
Urban (environmental) trajectories in India: Plans, policies, visions and missions
Lecture - 17
"Fantasy Cities"? Understanding Limits of "Smart", "Eco" and "Green" Doctrines
Case Study 1 : Dholera

Alright. So, with this, we will now move into lecture 17 which I have put as you know "Fantasy cities" and a question mark on this. So, Understanding Limits of "Smart", "Eco" and "Green" Doctrines through what I say the Case Study based approach.

So, I will be kind of deploying the case study based approach to basically flesh out fallacies and exclusions you know within this kind of doctrines like smarts, eco and green cities. And so, I will be covering actually three case studies; Dholera, Lavasa and Rajarhat you know so that you can have a better and consolidated understanding of the exclusions that these kind of discourses actually entailed.

(Refer Slide Time: 00:59)



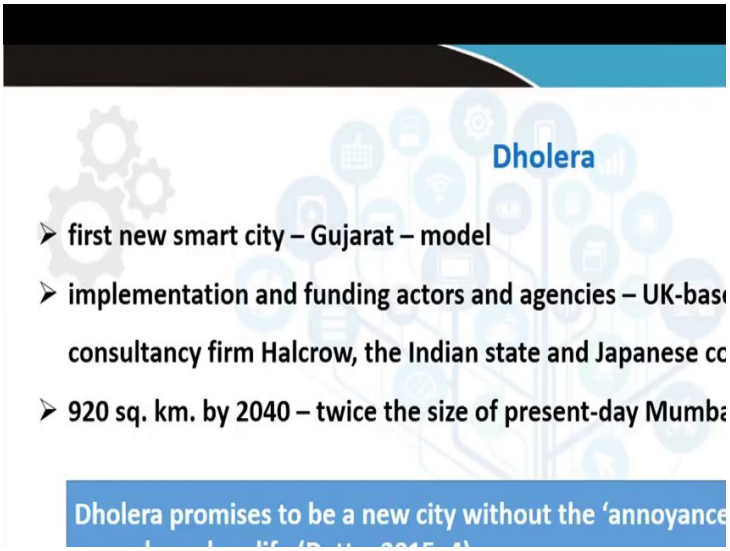
So, yes, will be discussing limits of the smart city discourse here through the application of the case study based approach, so which I call case study based approach. So, we will take a detailed look into some of these plans, I mean the cities which have been or which are being planned as smart cities. So, they are I mean this the so the there will be whole

lot of investments to kind of develop these areas, so these spaces as smart city and some of the cities are also.

For example, Lavasa is actually kind of mentioned as the eco-city and here in this particular lecture, I will also be talking about the slippery ontologies you know that how different terms and terminologies are actually used interchangeably to also suit the larger political, economic needs and imperatives of the stagecraft.

So, here, I would be specifically focusing on Dholera and I mean across these three lectures, this one and the next two that is lecture 18 and 19, this will be the key question that you know whether this is smart or utopian or fantasy cities.

(Refer Slide Time: 02:15)



So, here focusing on Dholera, let us first the get into some of the basic or fundamental information and facts. So, the first important information is that Dholera is the first new smart city in emerging in the Western State of Gujarat and it is also held as the model on which the other 99 smart cities of India would actually you know fall back upon.

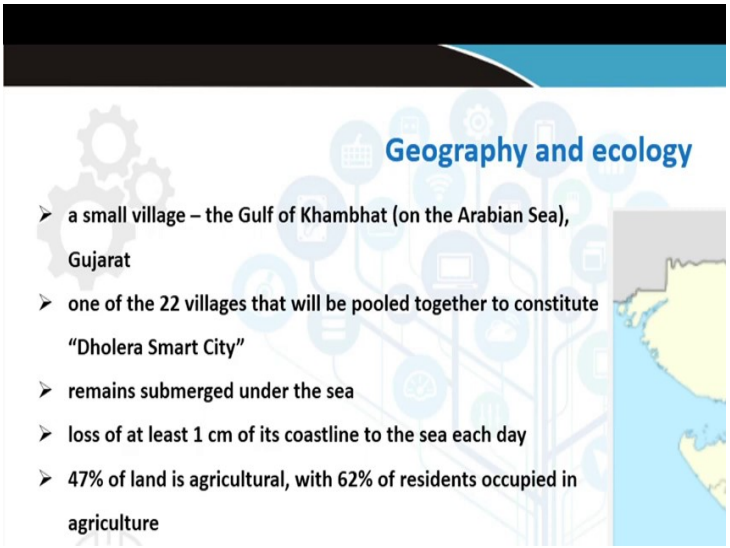
And you know it is it has been master planned by the UK-based global consultancy firm called Halcrow and it is partially paid by you know the finance is the finance is will be taken care of or is being taken care of by the Indian state and several Japanese corporations.

And the idea is to develop the Dholera smart city, I mean if traversing across 920 square kilometer. So, by 2040, 920 square kilometer will be ready as the Dholera smart city and if you can see you know this is twice the size of present day Mumbai. So, it is a big space right.

So, and again, I am quoting from Ayona Datta. So, I have drawn a whole lot of information from Datta's research; Ayona Datta's research on Dholera which came out in guardian and which also came out in dialogues in human geography. So, and the reference is of course there in the reference list and Datta says that Dholera promises to be a new city without the annoyances of everyday urban life.

And I think this is true not only for Dholera, but several other smart cities or plans smart cities and eco-cities like Rajarhat and green-cities like Rajarhat and eco-cities like Lavasa. Because you know these kind of promises, they really to a great extent are empty promises because they do not really you know they do not highlight or bring to the fore annoyances of everyday urban life. So, the situatedness remains absolutely missing, you know from this kind of otherwise techno managerial perspective or approach.

(Refer Slide Time: 04:31)



So, let us take a look into the geographical and ecological details of this particular village called Dholera. So, I know on the name of which this Dholera smart city has actually been planned. So, in this map, you can actually locate Dholera and it is a small village

located and its low lying, its low lying an ecological area of the gulf of Khambhat on the Arabian Sea in the Western State in Western Indian state of Gujarat.

And it is one of the 22 villages that will be pulled together or that is already being pulled together to constitute the Dholera smart city. So, that 920 kilometers plan which I discussed already with you in the last slide, which has to be completed by 2040. So, this Dholera village is one of the 22 village villages which would be part of this Dholera smart city.

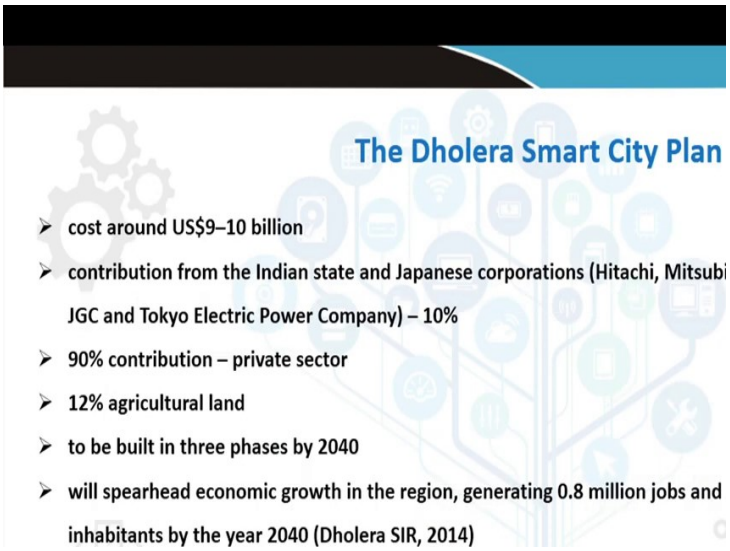
Now, if you take a look into the geographical and again, ecological details, you will see that being I mean as it is a low lying ecological area and as it is on the coast. So, it remains submerged under the sea for most of the times of the year and every day, at least 1 centimeter of its coastline is lost to the sea.

This is a very very crucial fact. And you know so far as like economic scenario is concerned, 47 percent of land in this village is agriculture is agricultural and 62 percent of residents. They are occupied, they work in the agricultural sector. So, it is a high reliance of on subsistence farming and minimum demand for industrial products.

So, and we can also you know from this, we can understand the mismatch between the official plan about the Dholera smart city with Dholera villages, the locus of you know of this grand plan and the actual realities that I persist in the Dholera village. And also like this about so far as this controversial dam, Narmada dam is concerned.

So, when the I mean in 2006, the state promise that farmers will get water to irrigate their fields from the Narmada dam. But unfortunately, it remained faulty promise and these people are also facing lot of challenges and constraints from increased soil salination and in the last few decades, the agriculture productivity in this area has also declined.

(Refer Slide Time: 07:13)



So, now if you take a look into the Dholera smart city plan, of course, you could understand it is a very costly plan with a cost around US 9 to 10 billion dollars and who would be funding this project?

So, there will be contribution from the Indian state and also, several Japanese corporations including Hitachi, Mitsubishi Corporation, Toshiba, JGC and Tokyo Electric Power Companies; but they will only be making 10 percent of the total contribution; the 90, I mean remaining 90 percent of the contribution will come from the private sector.

So, the project has to draw a whole lot of you know corporate funding and the project has to draw private investments and I mean this like drawing funds or drawing this attraction or making the private companies attracted to I mean in this particular project remains a very very important component so far as Dholera smart city plan is concerned.

And yes, another crucial data is that you know so far as the smart city plan is concerned, in this planned city only 12 percent land will be then dedicated to agriculture. So, we can see a sharp reduction from the previously cultivated arable land to the plan, I mean to 12 percent which is you know which means that you know that the farmland will be heavily transformed.

So, there will be a significant land use and land cover change. Also, you know affecting the lives and livelihoods of laborers, agricultural laborers and farmers, who are involved in this in the agricultural sector. So, the idea is to build a Dholera smart city in three phases by 2020.

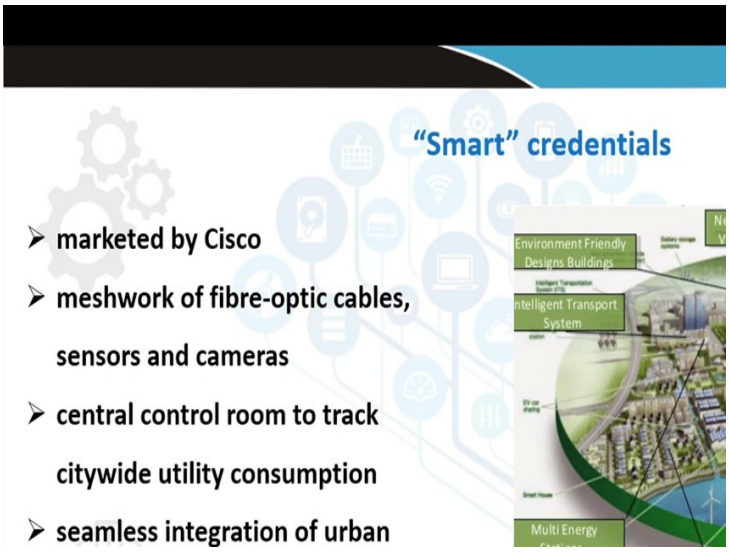
So, if you take a look into the official website, you will find that it says that the second phase has already started; it has already been initiated. And I mean of course, the website is very positive about this grand idea and it says that this will spearhead economic growth in the region generating a 0.8 million jobs and supporting 2 million inhabitants by the year 2040.

So, this is from the Dholera SIR, which is the special investment region. I will shed light on what SIR is in the next couple of slides. And you know, so it is very very ambitious grand plan and the bureaucracy and technocracy, they are really quite happy and proud about this particular plan.

And if you see this quote in the orange box, here where I have quoted or here where I mean which I have taken from borrowed from the official website of Dholera smart city, you can see you know you can this remark actually reflects the pride and glory that is actually associated with this grand plan or project.

So, you take a look into this quotation in this orange box. It says- Dholera, India's biggest largest greenfield smart city, first ever of its kind to be developed in India is being looked upon as the 'engine for economic resurgence' and is thus, the development of it in an apt manner is capable of changing how future would perceive the country.

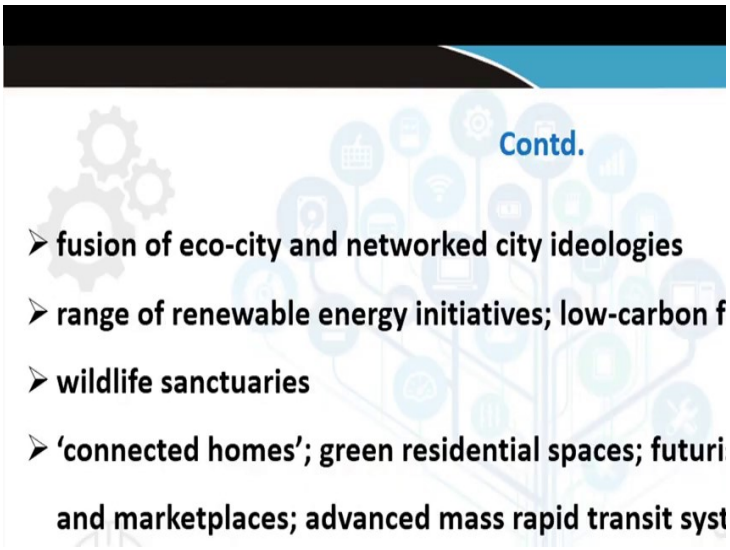
(Refer Slide Time: 10:49)



So, I told you that you know it is held as the model of you know the smart city plan. The smart city credentials are being marketed by the global IT firm Cisco as a mesh work of fiber-optic cable, sensors and cameras. So, there will be a central room to track citywide utility consumption and the office lettering seamless integration of urban planning and digital technologies.

And I think this illustration explains it well. So, how smart infrastructure, governance, mobility, living, technology and economy are being planned so far as Dholera smart city is concerned.

(Refer Slide Time: 11:25)



And of course, you know this eco-city idol of I mean which is being marketed by Cisco, so it is not only an eco-city ideal, but you will also you can see a fusion of eco-city and networked city ideologies in the Dholera smart city plan. So, which also means that if you know Dholera has to keep in tune to the eco-city status or idea, then range of renewable initiatives, low carbon footprint initiatives have to be part of has to be part of you know this smart plan smart city plan.

So, yes, if you go through the plan you will see that range of renewable energy initiatives and low carbon footprints have been planned for the smart city and also, some wildlife centuries as eco-tourist spots have also been planned. Apart from this like the city, the Dholera smart city will have connected homes. So, placeless connectivity, if you remember from our previous lecture.

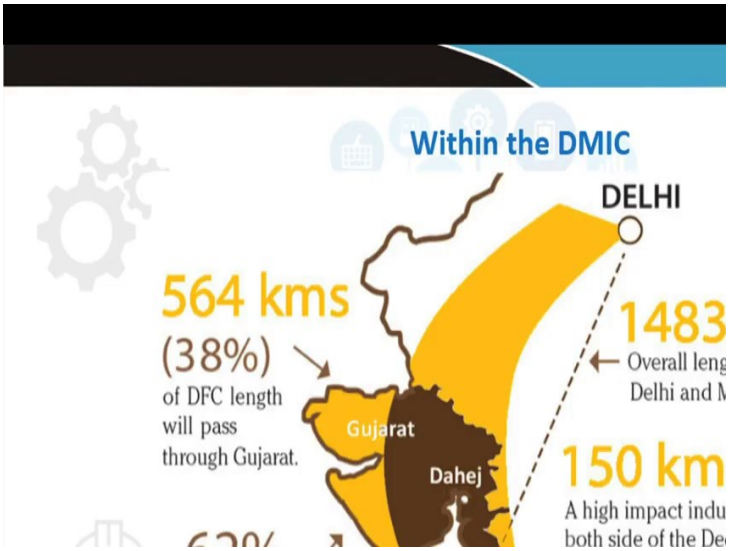
So, it will definitely have connected homes, green residential spaces, futuristic malls and marketplaces, advanced mass rapid transit system and smart metering and these are all you know these are all you know these are the typical characteristics or attributes that actually define any smart city for that matter.

Because smart cities are technologically enabled data centric data driven you know discourse or design for that matter. So, and smart metering, it implies that you know infrastructures will be emitted. So, there will be automatic or automated metering in

terms of in terms of generating data so far as utilities are concerned like water sanitation, water sanitation components of a particular city. So, everything will be smart.

So, the you know I mean the smartening idea and the smartening essence is very much infiltrated in this particular plan of the Dholera smart city.

(Refer Slide Time: 13:29)



Yes, this is a very very important component you know and the map, why I have put this map? Because this Dholera smart city is going to it is it is part of this influential corridor which is the DMIC corridor which means Delhi-Mumbai Industrial Corridor. So, city used by the urban pulse of the Tokyo, Osaka industrial corridor, this DMIC has been planned. I mean it is very very it is a very long it is a it is one of the longest stretch.

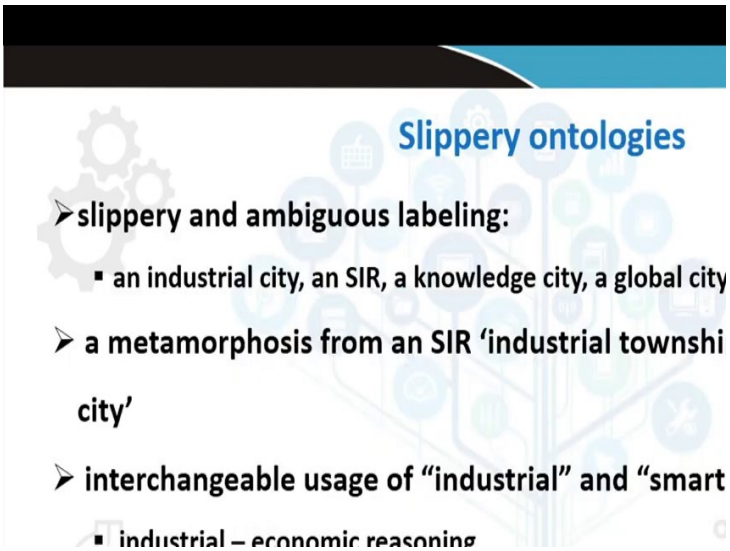
So, the overall length between I mean the overall length being 1483 kilometers crossing like 6 states including Gujarat and you know the whole idea is that it will interconnect, it will connect you know four mega cities; Kolkata, Mumbai, Delhi and Chennai.

So, it is also considered to be one of the very influential, influential projects of this golden quadrilateral. So, which is again which is the 5th largest highway that is being planned in the world, which will not only connect the four mega cities of Mumbai, Kolkata, Delhi and Chennai.

But it would also tap and harness the business opportunities by connecting the I mean by connecting the peri-urban and rural areas and by tapping on opportunities relating to

commerce, education, health etcetera. So, this is a grand project and Dholera smart city project is part of this grand and influential project called the Delhi-Mumbai industrial corridor.

(Refer Slide Time: 15:23)



Yes. So, I already has discussed, I already have discussed this which I call slippery ontologies. So, what by slippery ontology I mean that you know and this again, I borrow from Ayona Datta, who says that Dholera was the when the initially the city was planned, it was not I mean the smart city concept was not tagged to it.

Because you know the smart city idea was not there in India that much during that time. In 2009 for the first time when you know this project got the approval and when the UK-based global consultant; sorry, the UK-based consultancy or consultant Halcrow, you know created the master plan and it got approval from the government from the government Gujarat government.

So, during that time, you know when the Halcrow company drafted the design, so it was basically you know the term that they use was industrial township right. But you know later, what happened is that in 2012, there in the first time in when in the ted talk by Amitabh Kant and who is Amitabh Kant?

He is the one of the state officials who is involved in the DMIC project. So, Amitabh Kant actually used this idea of smart growth and how smart growth will actually shape Indian urban future and he talked about 7 cities which actually also included Dholera.

So, then, we you know find the smart leveling on Dholera for the first time in 2012 and from there on, you know the Dholera smart city came to be conceptualized and from industrial township, the concept of smart city was kind of tagged with the urban development of this particular stretch or space. So, you know Ayona Datta talks about the genders that are there in terms of interchangeable usage of you know industrial and smart.

So, Dholera, as we find slippery and ambiguous leveling because sometimes it is it was previously, it was projected or portrayed as industrial city, then an SIR Special Investment Region, knowledge city, global city, eco-city and now, smart city. So, you know industrial, it basically you know kind of conveys that you know there is a kind of a re economic reasoning in the idea called industrial; but in smart, so smart is basically the globally marketable logic you know for attracting business and investment.

(Refer Slide Time: 18:01)

So, and this becomes very clear because if you see that these cities or is specifically the Dholera smart city you know it is not the vision of visionary architects and urban planners, but who are in control of design and implementation and everything for that matter for.

I mean the entire, if you consider the entire ADDIE phase that is Analysis, Design, Development, Implementation and Evaluation, you will see the prominent role of the corporate giants you know in the in this whole project from initiation to the implementation level.

So, you know this, so this has become this is a market for corporate giants like IBM, Cisco, Microsoft, Oracle etcetera and this is part of the Gujarat plan and Gujarat is definitely an investor friendly state and like when India was facing an economic downturn and I mean the annual growth rate of India between 2004-05 and 2011-2012 was only 5 percent, Gujarat was I mean higher economic like or annual growth rate was quite steady.

So, when the country level annual growth rate was 5 percent between 2004-05 and 11-12, Gujarat annual growth rate was 10 percent and this growth rate or growth you know is actually reliant on three strategies; very interesting strategies of acting active lobbying and active lobbying for investment.

The speed in the issuance of clearances for capital investment projects and this we will see how you know when this SIR special economic region concept was formulated, how this concept I mean the execution took place at a very high speed and efficiency. So, and also the third factor is you know or the third strategy is reducing what the corporate lobby again says quote unquote political interference or social resistance to development projects.

(Refer Slide Time: 20:03)

And LAA which is this Land Acquisition Act to SIR; so, Special Investment Region. So, if we understand or properly if you are able to explore and capture this shift from LAA to SIR and what has been its implication or what would be its implication on the people especially the socially vulnerable and marginalized sections, we can understand you know the complex politics and this complex social dynamics that is actually which that are actually shaping you know this particular master plan on the Dholera smart city.

So, in 2009, you know this special investment region act was passed in Gujarat under the Gujarat Town Planning Scheme of seven 1976 and the whole idea is that you know I mean so far as the SIR act is concerned, so it says that development within Gujarat or any area of more than 100 square kilometer or industrial area with an area of 50 to 100 square kilometer can be considered within SIR.

And it this SIR very important, it actually bypasses India's 1894 Land Acquisition Act. So, the first two, I mean the first two provisions these have not been so much bypassed by SIR; but the last provision has been absolutely bypassed by SIR.

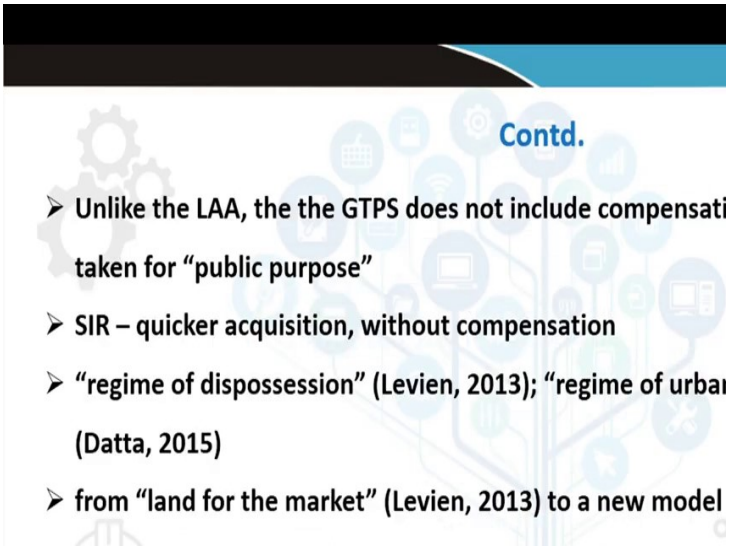
So, what are the three provisions? The first provision is approval for acquisition for certain types of land. So, in the if you see the Land Acquisition Act of 1894, you will see that you know it says that if land has to be acquired for public purpose and here, public purpose means, if you want to you know construct an education, educational institution

or housing or even you know some projects relating to rural planning, you can acquire land.

So, you can acquire land for this public purpose and then, it mentions that land under multi crop cultivation can be acquired only as the last resort. So, if no other patch of land is available or you know I mean if no other alternative is available, then only you can acquire multi-crop you know cultivable land as the quote unquote last resort.

And the final point is also very important and in 2013 revisions, it was I mean it was I mean it got a consolidated kind of consolidated brush of the stroke, where it says that you know when land is acquired for public purpose, then fair amount of compensation has to be given to the households losing land. And also, the idea was to kind of consult to have consultation with local self government institutions before this land allocation would start.

(Refer Slide Time: 23:01)



But what we find in SIR is that, unlike LAA, the Gujarat town link scheme from which the SIR has been has you know has emerged does not include compensation. It does not include, it does not include compensation for land taken for public purpose and this is dangerous.

So, what is SIR? SIR is actually a capitalist tool to facilitate quicker acquisition without compensation. So, what has it crafted finally? It has actually crafted a regime of

dispossession or as Levien says or you know as Datta says a regime of urbanization, where land is acquired for public purpose has capitalist space to attract private global capital. So, this is it.

And so, there has been a shift of transformation from land for the market to a new model of land for urbanization through the active dispossession of those working and living in the rural periphery. So, this has generated, I mean we can we remember immediately of Harvey, the geographer, the renowned Marxist geographer who has talked about or who are talked about you know accumulation through dispossession accumulation by dispossession.

(Refer Slide Time: 24:25)

And if you looked into few works or if you look into the recent scholarship, I mean some of the researchers argue that you know this the land which are being acquired for public purpose, people or the farmers, who are losing land they are not protesting. So, I mean this resistance or protest or you know aggression against this kind of social injustices, this has reduced.

You know it no more kind of flood the Indian scene, but you know so far as this particular project is concerned and so far as land acquisition for Dholera smart city is concerned, we definitely you know this is dotted with a protracted struggle of fight for land rights and social justice.

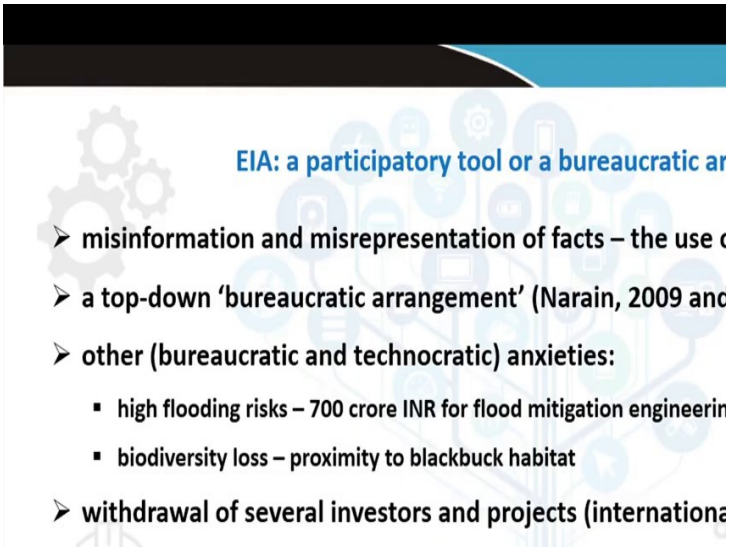
And one of the major farmer cooperatives who are very active or I mean this is the cooperative which is very active for this movement or resistance is this Jameen Adhikar Andolan, Gujarat which means land rights movement in Gujarat. So, this is a 2000s coalition of farmer cooperatives.

And the if you see the social composition of Jameen Adhikar Andolan, Gujarat, mainly they are this the farmers are from Schedule Caste and Schedule Tribes and definitely, they have success stories. So, in many cases, we find that you know they have been quite successful in kind of its not absolutely abandoning, but at least delaying projects.

So, the continuous pressure is there, but also you know this of course, like you know any other resistance movement is also entailed the complex saga of continued struggle between you know the corporate lobby, the state craft and you know this the people who are disposes at the end of the day.

So, like continuous like warrant are issued against activists and sometimes, if you know if through continued struggle, they could actually convince the state to dole out some compensation means; but sometimes, most I mean at times, some of this compensation seem to be very faulty and why faulty?

(Refer Slide Time: 26:57)



Because in the same thing you know like many JAAG farmers, they said and they protested in the public hearing you know they mentioned that the EIA which is this

Environmental Impact Assessment, all of us know that you know before implementing any particular project, now EIA has become mandatory and this is not now like this act was passed a long back 2-3 decades back and so and in environmental impact assessment is mandatory, I mean behind the implementation of any particular project.

And this JAAG farmers, they protested against this misinformation and misrepresentation of facts. So, how facts and data were actually manipulated you know by for example, by the by scenes consultants which was the state appointed consultant who did the EIA for this Dholera smart city project and the kind of sometimes the kind of maps, they use is these were extremely outdated.

So, I mean, so in the maps, you could see so even 100 years old map. So, the maps which show areas as land by now these areas already have been submerged under the sea. So, this is what I mean.

So, one can understand that how this data is being manipulated to kind of cater to larger corporate needs. So, I mean this is a question now that whether it will be right to then consider EIA as a participatory assessment tool or a participatory tool through which the local communities can actually channelize their needs, their aspirations, their interest or whether it should be considered as a top down bureaucratic arrangement. Unfortunately, I think you know very unfortunately the answer will be the second one.

Now, apart from you know this misinformation and misrepresentation of facts, there are several other bottlenecks that this project already you know is dotted with. So, and this has been mentioned in the EIA, Environmental Impact Assessment report by sense consultants and they say that you know then that part parts of these I mean of the region are extremely vulnerable to high flood risks.

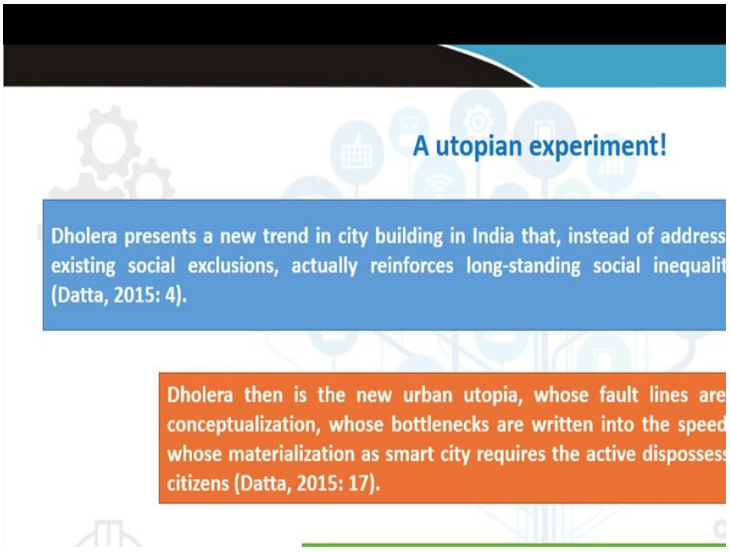
So, at least a 7 crore Indian rupee needs to be arranged for flood mitigation engineering or flood for implementing, flood mitigation measures. So, it is a very you know. So, this will become costlier because this high flood risk component is very much there.

So, apart from there the project, apart from that the project is also you know it is very close to the blackbuck habitat. So, which means that you know there will be an irreversible biodiversity loss, when you know this project will actually be implemented. So, though, the bureaucracy has remained quite apathetic and indifferent to these facts

and data, but you know and I mean they have glossed over you know these facts and data during public hearing.

But this has been the reason behind withdrawal of several investors and some projects like the international seaport, Kalpasagar Dam project etcetera.

(Refer Slide Time: 30:37)



So, finally, I think you know this case study to a great extent, I mean it explains well that why this can be I mean there is whole lot of logic to kind of describe or explain it as a utopian experiment and I borrow here absolutely, totally from Ayona Datta and if you see this three very important remarks, I think you know you will be able to understand the annoyances, the exclusions and the fallacies in this kind of so called otherwise sophisticated techno managerial plans, schemes, initiatives, agendas and programs like the smart city.

So, Dholera presents a new trend in city building in India that instead of addressing existing social inclusion exclusions actually reinforces long standing social inequities. Let us just think about the SIR and the shift from the LAA or to SIR or maybe you know the distinction between LAA and SIR; so, how the SIR component has nothing, I mean the SIR does not say anything about compensation.

So, there is no provision for compensation against land which will be acquired for public code. So, one can understand how it this kind of project can actually reinforce social inequities further rather than addressing social exclusions.

The second quote, where Datta says Dholera, then is the new urban utopia, whose fault lines are drawn in its very conceptualization, whose bottlenecks are written into the speed of its delivery and whose materialization as smart city requires the active disposition of marginalized citizens.

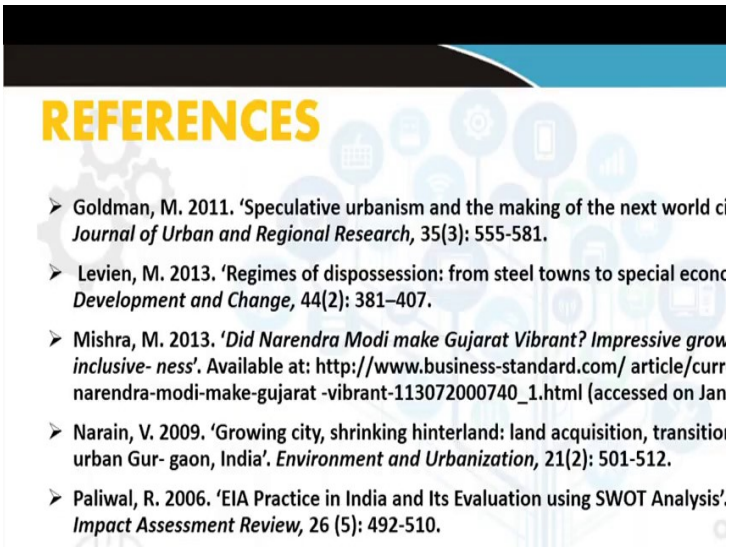
It is very important for us to understand you know I mean to understand the fact that how many people, the most vulnerable, most marginalized sections of the society are actually you know becoming disposes to make way or when the state is making way to this otherwise so called projected quote unquote lucrative projects. Lucrative projects, lucrative for whom? Lucrative unfortunately for the rich private capitalist lobbies.

And the last quote by I mean from Datta here is Dholera can be critiqued as reinforcing India's 'digital divide' and promoting a panoptic urbanism. So, it provides a panoramic view for sure, but it does not take into consideration the nuances and nitty-gritty's you know the everydayness, the situatedness that kind of shape India's urban environmental and India's socio environmental trajectory. So, I mean, so we can definitely understand the limits of this kind of doctrines and agendas.

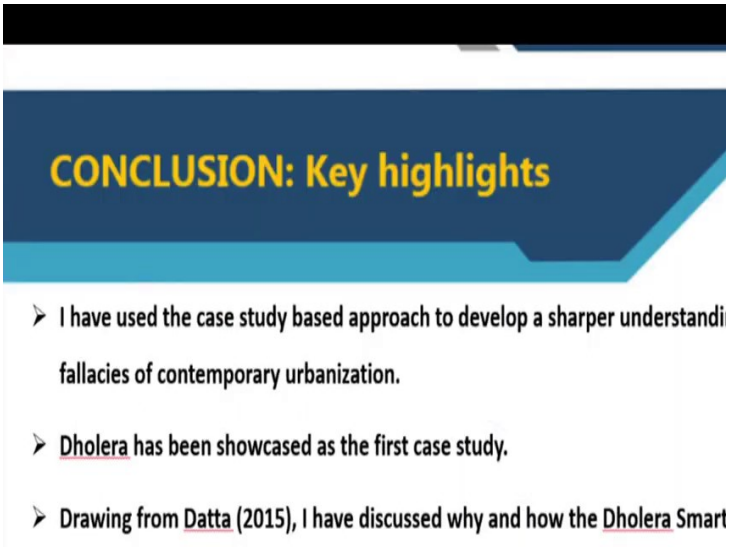
(Refer Slide Time: 33:45)

So, please go through these references. The most important being the second reference here by Ayona Datta, 'New urban utopias of postcolonial India- 'Entrepreneur urbanization' in Dholera smart city, Gujarat'. It came out in 2015, in the journal called, so it is a very renowned journal Dialogues in Human Geography and you can also go through some other references that are here.

(Refer Slide Time: 34:05)



(Refer Slide Time: 34:07)



So, I would like to conclude by saying that in this presentation, I have used the case study based approach to develop a sharper understanding of the fallacies of contemporary urbanization, specifically the smart city doctrine.

So, here, in this presentation, I have showcased Dholera as the first case study and this will be followed by the next two case studies on Lavasa and Rajarhat and finally, I have drawn from Ayona Datta and I have discussed why and how the Dholera smart city plan is a utopian urban experiment; so fantasy city you know, failing to cater to basic social and environmental needs requirements aspirations imperative for any urban project.

So, you know it is important for you to really delve deep in this particular line of direction.

Thanks.