



“Challenges of Planning a Climate-Friendly Built Environment”

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Gaurav Shorey
Area Convenor
GRIHA
(Green Rating for Integrated Habitat Assessment)
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Let's examine the terms first

- ❑ **Planning** : is both the organizational process of creating and maintaining a plan; and the psychological process of thinking about the activities required to create a desired goal on some scale.
- ❑ **As such, it is a fundamental property of intelligent behavior.**
- ❑ **Climate**: The Intergovernmental Panel on Climate Change (IPCC) glossary definition is the statistical description in terms of the mean and variability of relevant quantities (such as temperature and precipitation) over a period of time ranging from months to thousands or millions of years.
- ❑ **The classical period is 30 years, as defined by the World Meteorological Organization (WMO).**
- ❑ **Climate in a wider sense is the state, including a statistical description, of the climate system.**



Continuing examining the terms

- ❑ **Friendly:** Friendly means showing kindness to someone, as a friend would behave. Thus friendly implies a mode of friendship as distinct from amiable or genial.
- ❑ **Professional service is expected to be amiable or genial but not necessarily friendly.**
- ❑ **Built environment:** refers to the interdisciplinary field of study which addresses the design, management and use of man-made surroundings and their relationship to the human activities which take place within them.
- ❑ **The field is generally not regarded as an academic discipline in its own right, but as a "field of application" (or "inter-discipline") which draws upon the individual professional services of economics, law, management, design and technology in a sustainable sense.**



So -

- ❑ **Planning a Climate-friendly built environment literally means:**
- ❑ **Using intelligent behaviour**
- ❑ **to create and maintain a plan**
- ❑ **that spans over a classical period, which is 30 years**
- ❑ **by a group of people who are showing kindness, as a friend would behave (politicians, industrialists, real-estate developers)**
- ❑ **by drawing upon the individual professional services**
- ❑ **of economics, law, management, design and technology**
- ❑ **in a sustainable sense.**





Now, let's break that down



Using 'Intelligent' behaviour

- ❑ Intelligence comes from the Latin verb *intellegere*, which means "to understand".
- ❑ By this rationale, intelligence (as understanding) is arguably different from being "smart" (able to adapt to one's environment).
- ❑ Another simple and efficient definition is: **the ability to apply knowledge in order to perform better in a particular environment.**



Challenges in 'Intelligence'

- ❑ Our education and awareness, ergo the resultant intelligence is designed and built on a largely homogeneous, western model
- ❑ We are constantly made aware of what the west has achieved, what they invented, what they discovered, who they married, who they divorced, what they wear, what they eat, And most importantly HOW THEY BUILD THEIR BUILDINGS.
- ❑ Real-estate development (oxymoron) happens at the hands of a few who see some glossy examples overseas and want to copy those here.
- ❑ We are among the oldest civilizations in the world, with sciences and practices that are only being understood by the west today, yet our insecurities?
- ❑ So, what is the REAL "understanding" of our (read 'Indian') environment? Do we have one at all?



To create and maintain a 'Plan'

- ❑ A plan is typically any procedure
- ❑ used to achieve an objective.
- ❑ It is a set of intended actions,
- ❑ through which one expects to achieve a goal.
- ❑ Such as
 - ❑ The Yamuna Action plan
 - ❑ The Delhi Master Plan
 - ❑ The Mumbai Master plan
 - ❑ The National Rural employment plan
 - ❑ Gurgaon development plan
 - ❑ JNNURM City Development Plans
- ❑ And all the other plans that can be added to the list of failures

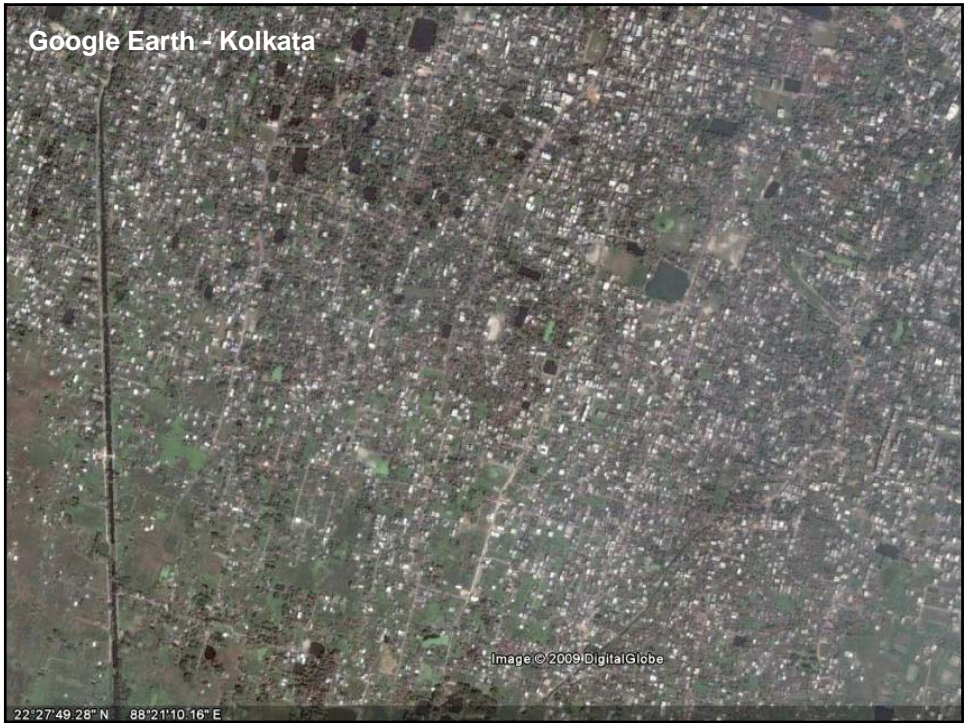
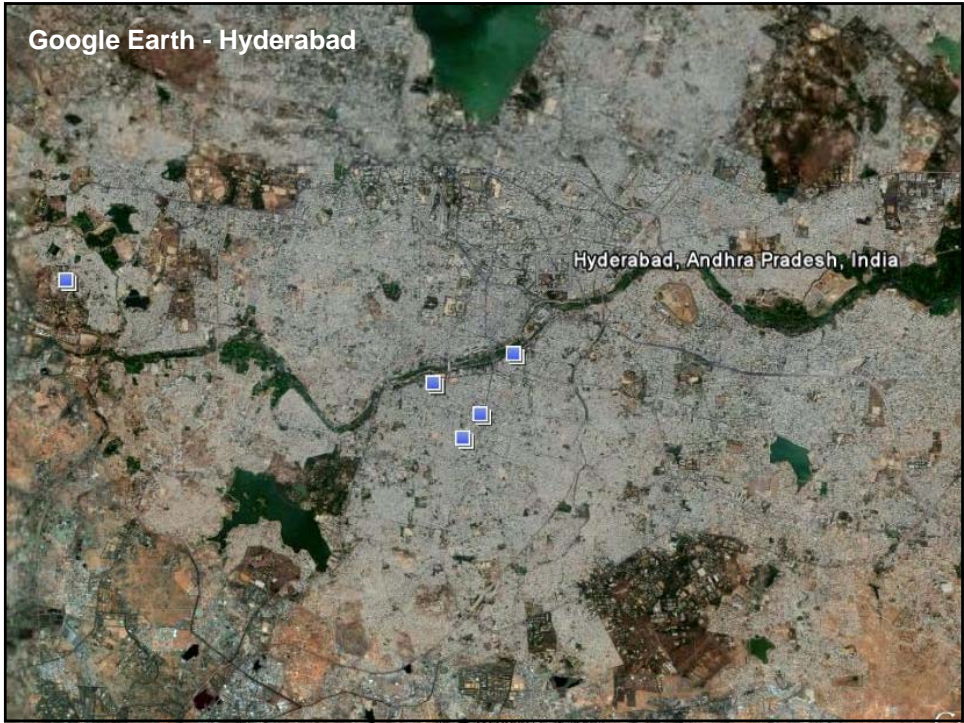


Challenges in 'Planning'

- ❑ India is a country with a rich history of planning
- ❑ We have the maximum number of examples to learn from
- ❑ We perhaps have the most diverse and in-depth plans in the world
- ❑ Alas! Implementation is a different ball game.
- ❑ Plan periods (development plan, master plan, etc.) are not 'friendly' with
 - ❑ politician's plans,
 - ❑ political parties' plans,
 - ❑ party-hopping politician's plans,
 - ❑ real-estate developers' plans and
 - ❑ industrialists' plans, etc.
- ❑ So...









that spans over a 'classical period' (30 yrs)

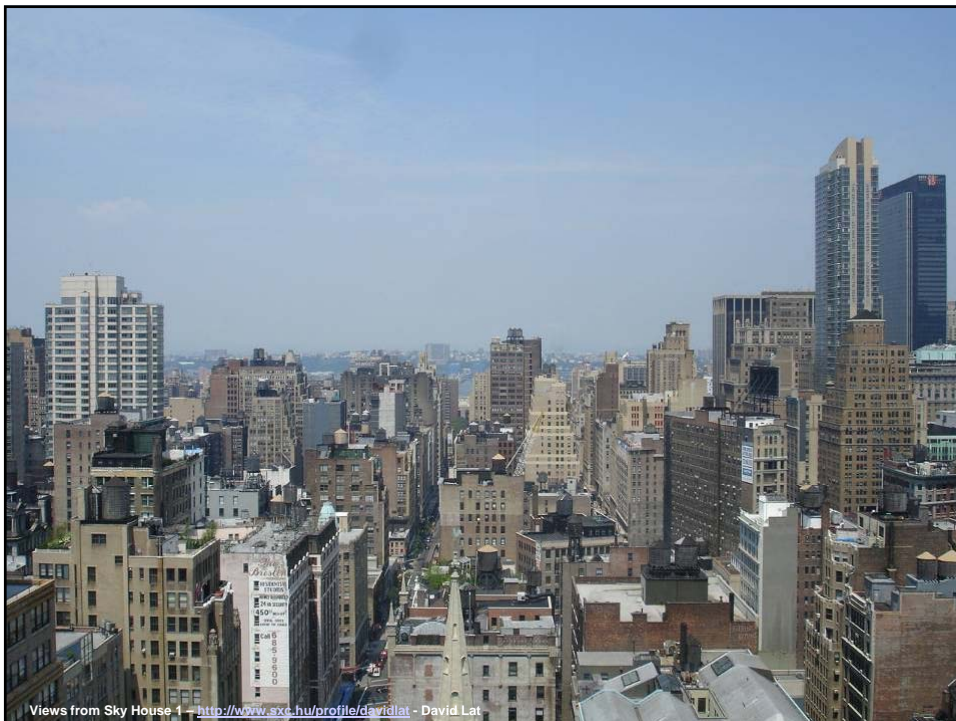
- ❑ “Aji Kal kissne dekha hai? Tees saal ki baat kar rahe ho!”
- ❑ “3 years is the max within which we should get our returns on investment or there’s no point in going green”
- ❑ “Why should we invest in green features when the occupant reaps the benefits?”

- ❑ But, 30 years in the past is not all that long back!
- ❑ In fact, its taken us under 15 years to go from environmentally sustainable to as far away from sustainable as possible.

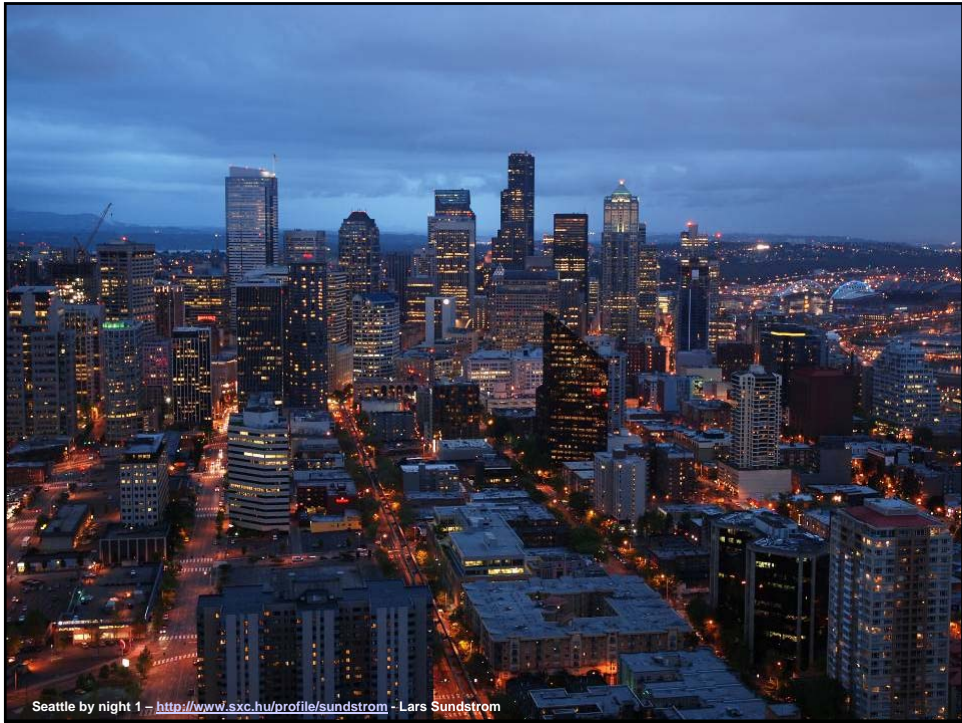


Challenges in 'Classical period'

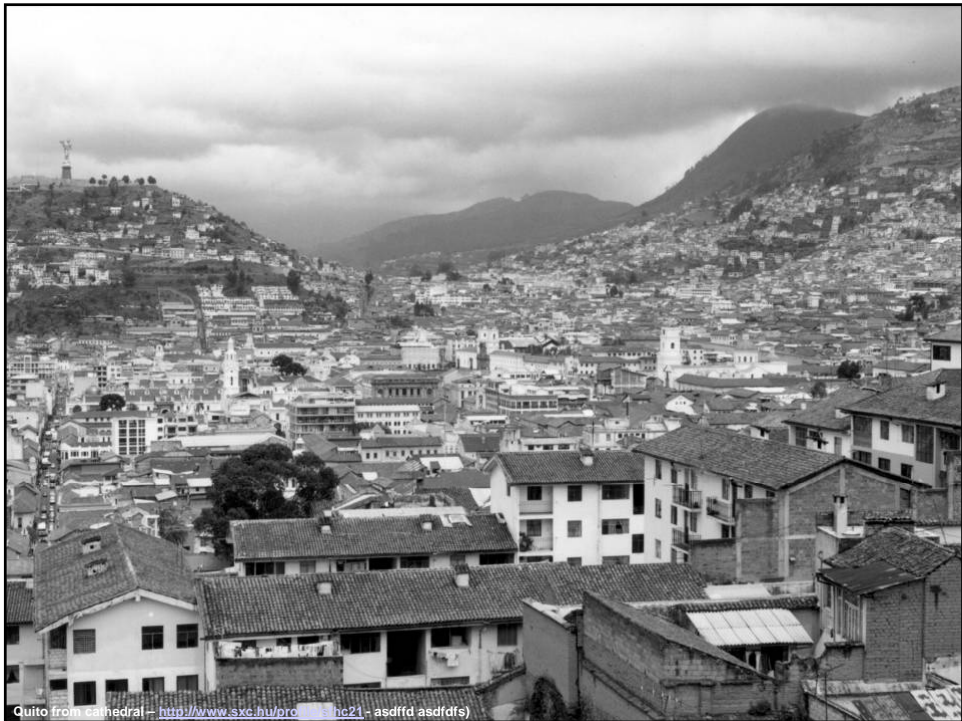
- ❑ All investment for short-term gain – perspective planning failures to address this issue
- ❑ Lack of intelligence and knowledge towards what to invest in and what not
 - ❑ Jacuzzi vs. shading devices
 - ❑ 32 shower-head cubicles vs. water saving taps
 - ❑ Lots of glass vs. brick and insulation
 - ❑ Style vs. substance
 - ❑ West vs. East
- ❑ Poor implementation of wonderful plans due to short term perspective
 - ❑ Master plans, EIA requirement, ECBC, NBC
- ❑ LOTS of misinformation – aluminium and glass buildings are cheaper, they need lesser labour, they are “better”!



Views from Sky House 1 – <http://www.sxc.hu/profile/davidlat> - David Lat



Seattle by night 1 - <http://www.sxc.hu/profile/sundstrom> - Lars Sundstrom



Quito from cathedral - <http://www.sxc.hu/profile/nc21> - asdff asd(fds)

And then...

- We're stuck



533-India-Highway (Traffic congestion south of New Delhi in February. (Photo by Gurinder Osan-Associated Press))



<http://images.encyclopedia.com/xref/media/sharemed/teach/028/T0289511.jpg>



<http://photography.nationalgeographic.com/static/files/NGS/Shared/SipicFiles/Photography/Images/00/tribhuanaram-crowd-508657-sw.jpg>





Drawing upon individual professional services

- ❑ Individuality is the state or quality of being an individual
- ❑ a person separate from other persons and
- ❑ possessing his or her own needs, goals, and desires
- ❑ And possessing his / her own needs leads to hostility and unfriendly behavior!



Challenges in 'professional services'

- ❑ They need to become 'professional'
- ❑ They need to stop being 'individual'
- ❑ Green buildings and climate-friendly cities need an integrated design approach that integrates the following
 - ❑ The end user – as opposed to thrusting anything and everything down their throats
 - ❑ The planners
 - ❑ The government
 - ❑ The politicians
 - ❑ The architects / engineers / consultants (AEC Community)
 - ❑ The various economic classes
 - ❑ The bio-diversity and natural environment
 - ❑ Etc.



in a 'sustainable sense'...

- ❑ India is generating 120,000 tons of waste every day
- ❑ 993 cars are getting registered on Delhi's roads every day
 - ❑ 9000 accidents / year in the capital alone
 - ❑ 270 people die every day on Indian roads
 - ❑ Road accidents now are the number two killer of young people age 5 to 29 worldwide
- ❑ Millions of new houses are being built all over the country
 - ❑ For a few thousands who can afford 80% of them
 - ❑ But millions of people who can't afford them at all
- ❑ India's energy consumption is steadily rising
 - ❑ Most of which is in the metropolitan cities
- ❑ India's pollution levels are also steadily rising
 - ❑ We stopped monitoring air and water-quality levels lo-o-o-o-ng back



in a 'sustainable sense'...

- ❑ India is fast nearing the 'water-stressed' category of nations
 - ❑ States within India are already fighting wars over water
- ❑ The percentage of "educated" population is at its highest ever
- ❑ Simultaneously, the percentage of
 - ❑ uneducated people and drop-outs,
 - ❑ below poverty line people,
 - ❑ under nourished children,
 - ❑ homeless people
- ❑ is also at its highest ever

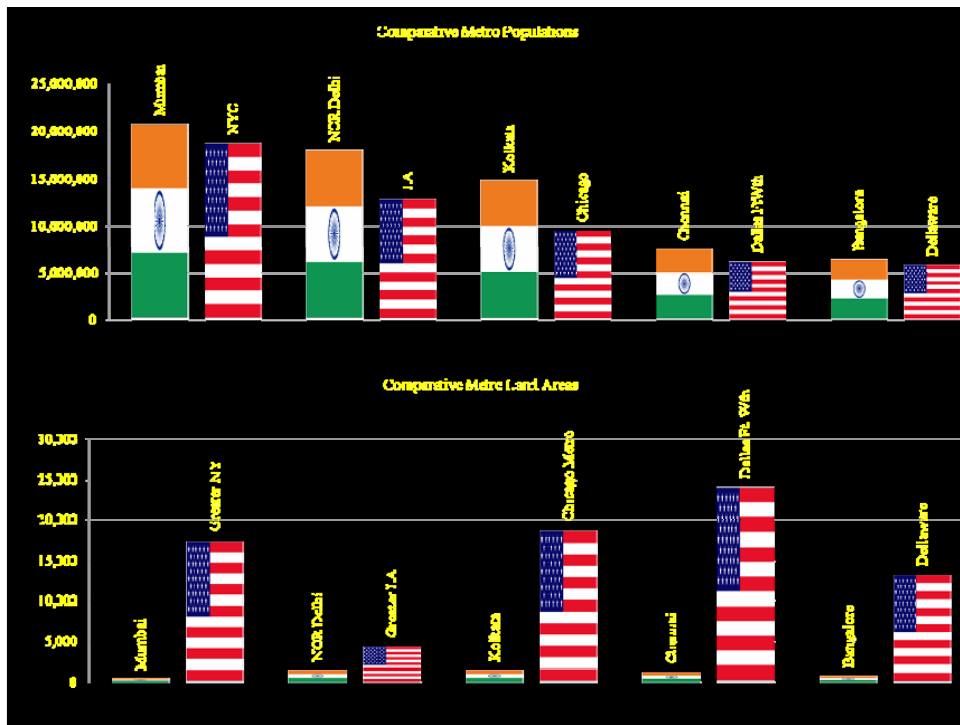
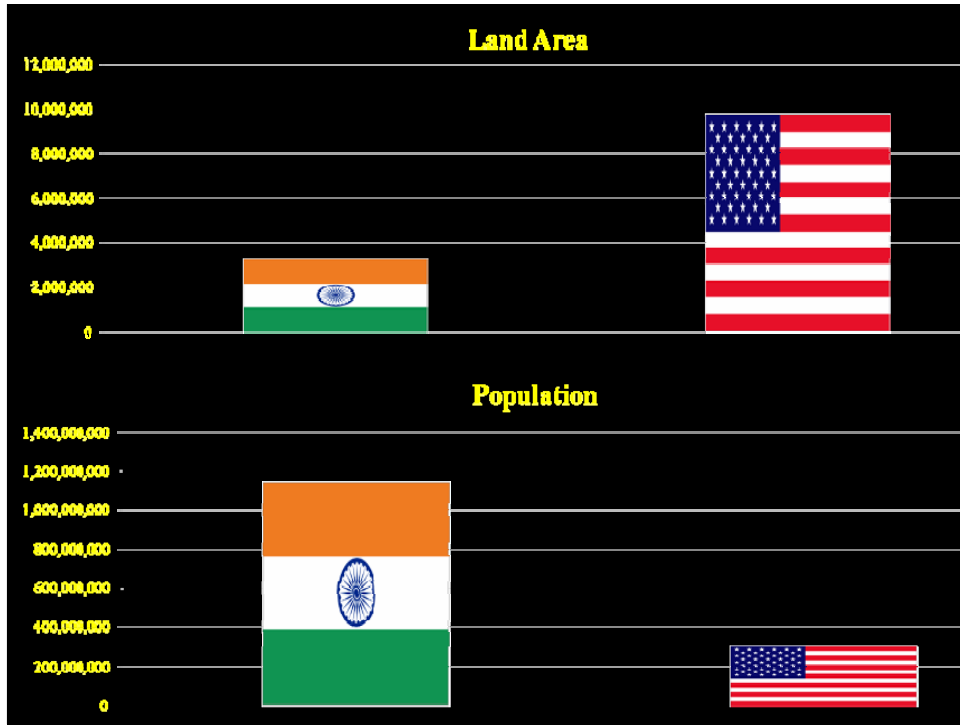


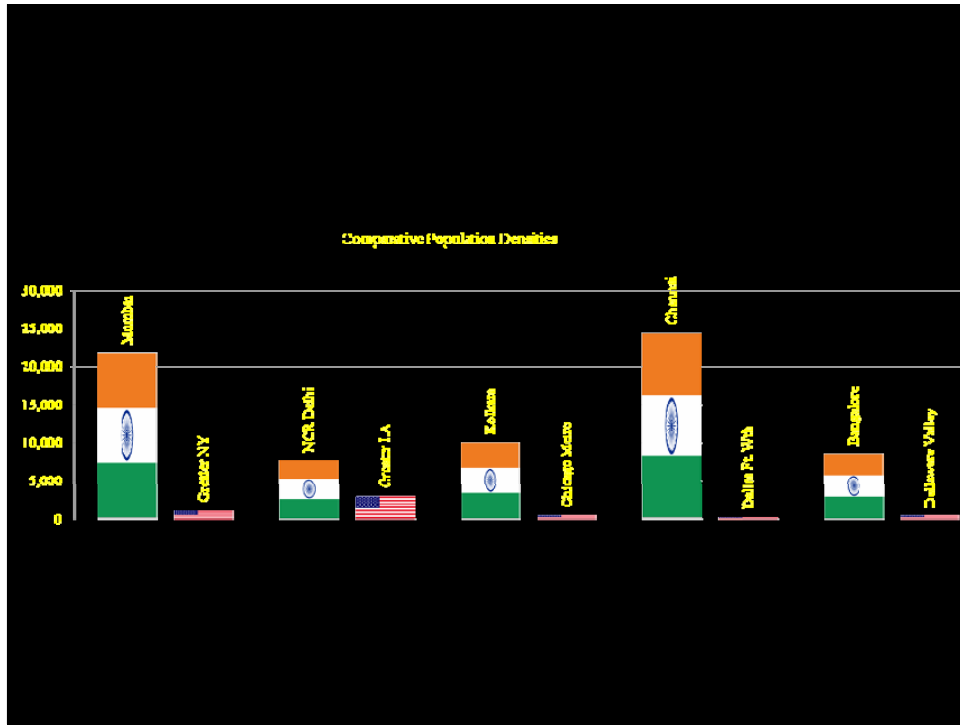
But, you may ask, isn't the western model of "development" the elixir to all our woes?

Well, think again...

The REAL inconvenient truth







**Still think the solution lies across the seven seas?
Still think technology is the only solution?**

GRIHA

Fortunately we have culture...

- ❑ Culture is born of the climate
- ❑ The climate dictates our
 - ❑ Food (Kerala, Rajasthan, Shillong, Manipur, J&K, Bengal)
 - ❑ Clothing (Kerala, Rajasthan, Shillong, Manipur, J&K, Bengal)
 - ❑ Festivals (Kerala, Rajasthan, Shillong, Manipur, J&K, Bengal)
 - ❑ Dance forms (Kerala, Rajasthan, Shillong, Manipur, J&K, Bengal)
 - ❑ Architecture (Kerala, Rajasthan, Shillong, Manipur, J&K, Bengal)
 - ❑ Social traditions (Kerala, Rajasthan, Shillong, Manipur, J&K, Bengal)
 - ❑ Colours (Kerala, Rajasthan, Shillong, Manipur, J&K, Bengal)
 - ❑ Etc. (Kerala, Rajasthan, Shillong, Manipur, J&K, Bengal)



Culture also gives us...

- ❑ A sense of belonging
- ❑ A sense of attachment
- ❑ A sense of pride
- ❑ A sense of honour
- ❑ A sense of protection
- ❑ A sense of the environment
- ❑ But, we are losing all of the above at break neck speed, and that's for you to protect and preserve.



Let's see how a building gets built in India

- ❑ “Client” chooses to become a “real-estate developer” (oxymoron)
- ❑ “Client” may be a rich industrialist with a history not remotely related to architecture or planning, may be ghutka or fertilizers or automobiles manufacturing in the past.
- ❑ “Client” buys land where it's cheap (off gullible farmers) and in areas that are beyond master-plan limits
- ❑ “client” hires a marketing team and pays them to find out what sells
- ❑ The “marketing team”, again with NO experience of planning or architecture and NO appreciation for context, figures “if it works in the west, it'll work for us” and shows the “client” some glossy images of high-rise condos from the west.
- ❑ They also “inform” the client that items like a jacuzzi, 32 shower head cubicles, 30-bulb chandeliers, and a fully loaded (appliance heavy) house would sell like hotcakes.
- ❑ In some cases, they would advise the client to offer air-conditioners, or even cars free with the apartment to entice clientele.



Do yourselves a favour

- ❑ Go home and search for – ‘India’ in Google images
- ❑ Silently observe what you find, especially the first ten odd pages
- ❑ You will not find ONE glass building, technology oriented product, “modern” engineering marvel, star rated product,





<http://s0635254.s3.amazonaws.com/ocw011v1113/2009/06/01/0113-0113-delhi.jpg>



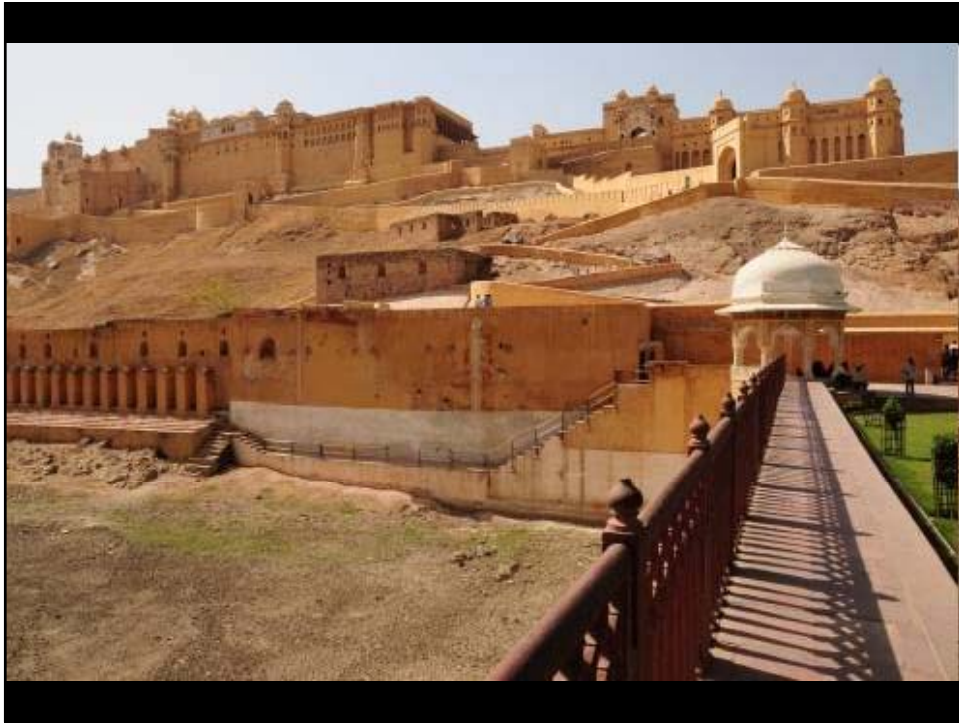
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Remember - Let's save money

- ❑ It's inextricably linked to the environment
- ❑ It's simple, the more money you spend on something, the more you destroy the environment – NO EXCEPTIONS
- ❑ So be it for energy, water, materials, products, transportation, health, etc. The above rule applies.
- ❑ That's why THEY are talking about adaptation and not mitigation!!

- ❑ Comments?



What's wrong here?

India is an inherently low-energy country

- ❑ We KNEW the concept and fundamental nature of '*Maya*' (tangibles)
- ❑ We have always believed in durability and longevity of materials
 - ❑ Clothes
 - ❑ Machines (cars, electronics, gadgets)
 - ❑ Buildings / Homes
- ❑ We have always preferred fresh over frozen
 - ❑ Vegetables from the vendor
 - ❑ Meats and poultry from the butcher's
- ❑ We have always worshipped nature, and the elements
 - ❑ We have a god / goddess assigned for nearly every thing in the natural world (plants, trees, animals, materials, etc.)
- ❑ We have always followed the diurnal cycle of nature
 - ❑ Wake early (Yog, pooja, namaaz)
 - ❑ Sleep early for health

Where's the disconnect?



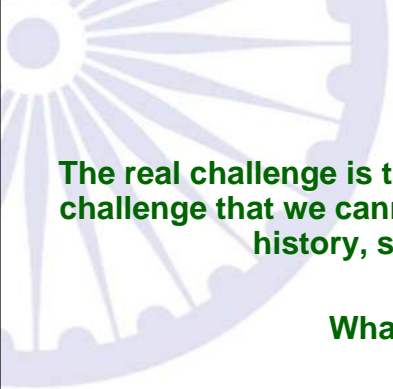
What needs to be understood....

- ❑ Is that regardless of what the west does for sustainable development, they will do it with respect to their level of consumption.
- ❑ Our levels are m-u-u-u-c-h lower than theirs and we need to work towards lowering our consumption with respect to our own levels.
- ❑ So far our attempt has been to come up to their level of consumption and then start reducing.
- ❑ Well...



- ❑ The easiest way to save energy is by not using it, or minimizing our demand for it.
 - ❑ In the past we worshipped Agni or the god of fire (in other words – energy), Ganges was a mother, so we didn't abuse them. Can we stick to that?
 - ❑ The best source of light is day light. It controls our circadian rhythm as well as our hormonal cycles.
 - ❑ Our so called 'life-styles' hold the key to saving the environment. Reassess to reduce and regain control.
 - ❑ The easiest way of reducing a buildings energy demand is through simple measures such as orientation, lesser window area, etc.
 - ❑ The easiest way of keeping a building warm or cool is by planting deciduous trees.
 - ❑ The easiest way of saving water is to use a bucket to bathe and not a 'water saving shower'.
 - ❑ The easiest way of reducing embodied energy consumption is to buy locally available materials and not 'Import! Import! Import!'
 - ❑ The easiest way of saving the environment is by joining hands and doing things as a collective whole rather than individual parts
 - ❑ The easiest way to get it right is to trust 5000 years of wisdom.





The real challenge is to convince us all, that there is no challenge that we cannot overcome by looking into our history, sciences and culture.

What will that take?

Thank you

