This dialog is premised on the understanding that sustainability and infrastructure development can and must go hand-in-hand. This perspective must contend with the reality that the opposite view still has a strong, possibly dominant, position – namely that more roads, more dams, more power plants are essential and must come first, we can worry about sustainability later.

Sustainability as social justice was the focus of the World Bank’s 2014 report on “Reducing Poverty by Closing South Asia’s Infrastructure Gap” – which says that designing infrastructure that caters to the poor and lower income groups is essential. But environmental and ecological sustainability are still relatively in the background, rather than being treated as an imperative.¹

In this context I would like to highlight just two points:

1. That infrastructure is ‘sustainable’ which fosters varied dimensions of ‘social and solidarity economy’ rather than merely raising national or regional GDP.

2. Spatial guidelines for infrastructure development must be primarily based on Bioregions and associated local economies as the basis for fostering wider regional economic dynamism.

Many of the questions framed for this session on interregional corridors can be illustrated through the story of Timbaktu Collective, a civil society organization working in Anantpur District of Andhra Pradesh – about two hours drive from Bangalore airport. In an area where land had been degraded due to deforestation and intensive peanut farming Timbaktu Collective worked with local communities to regenerate some of the ancient tanks – thus enhancing availability of water for humans and cattle. Similar community mobilization also led to the regeneration of commons – creating lush green oasis in an otherwise denuded landscape. This vital resuscitation of eco-systems, and the water ‘infrastructure’
of the area, was partly undone by the arrival of large windmills – which were installed on the low lying hills by indiscriminately cutting into the hill-side to make roads. The soil and boulders left to cascade along the hill-side have undermined the regeneration of tanks and vegetation.\[^{iv}\]

It is in this context that we need to explore the question: how do we define an economic region and spatial guidelines for infrastructure development?

In the mainstream discourse this question is addressed in three dimensions:

1. **Nation States.**
2. Markets populated by commercial entities pushing against the barriers and constraints of nation states – a sector that involves at best, less than 10% of the global asset/income pyramid.
3. People at the middle and bottom of the asset/income pyramid who are relatively still more dependent on the local/regional economy and related eco-systems.

If “Regional Economic Transformation” is the objective we need to first ask -- from whose vantage point is this objective to be defined and framed.

Is our objective to look at potentialities within the frame of Business-as-Usual or can we aim for a more ambitious goal – a possible shift in the paradigm of how markets intersect with society and nature’s eco-systems?

Without belittling the power of competitive nation states to shape and twist economic relations, regionally and globally, I urge that regional economic transformation requires an understanding of the realities of bio-regions and the needs of local economies. This exploration needs to be anchored in a commitment to economic democracy—which means fairness to people at all levels of the economy and equitable access to resources and opportunities.

The conventional approach would be to match gains and losses between nations in terms of their share of global/regional trade and how that grows GDP. But both environmental phenomenon and rising disparities of income and asset accumulation require a shift in favor of bioregions.

A bioregion encompasses both eco-systems and social-cultural systems that depend on and nurture the eco-system. So far this concept has been deployed almost entirely by environmental groups. The World Wildlife Fund (WWF) has a list of bioregions across the earth.\[^{iv}\] “Bioregions” is also a civil society organization which maintains a website which describes bioregionalism as “a view which uses knowledge of the regional ecology and culture to develop resiliency and encourage sustainability.”\[^{iv}\]
The Greater Mekong Subregion (GMS), a development project formed by the Asian Development Bank, is an example of a block of nations working together in terms of a bio-region. The GMS, which is a major biodiversity region, consists of six states of the Mekong River basin, namely Cambodia, Laos, Myanmar, Thailand, Vietnam, and Yunnan Province, of China.

South Asia has nothing comparable even though the well-being of several hundred million people depends on both geo-economics and geo-politics respecting bio-regional links. Rivers of the Tibetan Plateau are one of the stark illustrations of why the lens of bioregions is crucial in seeking to alleviate regional disparity. The Tibetan plateau is the starting point of many major international rivers, including the Brahmaputra, the Yangtze, and the Mekong. If a large volume of water in these rivers is prevented from its natural southward flow India and Bangladesh will suffer dire consequences.

According to a report by the Infrastructure Development Finance Corporation, a private Indian company:

"... The plan includes diverting the waters of the Yangtze, the Yellow river, and the Brahmaputra to China’s drought-prone northern areas, through huge canals, aqueducts, and tunnels. One of the water diversion routes, more specifically the southern component of the route cutting through the Tibetan mountains, will divert waters of the Tsangpo for a large hydroelectric plant and irrigation use. The planned water diversion will have adverse consequences in the downstream areas. Implementation of the plan will result in loss of land and ecosystems due to the submergence of a huge area in the Tibetan region. Flow control for power generation and irrigation during the dry season, and water release during the flood season may pose a serious threat to the flood management, dry season water availability, and ecosystem preservation of northern India and Bangladesh."

By contrast bio-regional cooperation would enable people in different countries to benefit by sharing the major rivers and manage both floods and lean flow periods. A bioregional perspective would also enable better watershed management, water quality and navigation of water ways.

Conventional mapping of regional disparities takes into account how such water disputes affect GDP and even to some extent a country’s rating in the UNDP’s Human Development Index. There is often no detailed and multi-dimensional understanding of how economic democracy is subverted or fostered when natural resources are deployed with disregard for the ecological dynamics of the bioregion and struggles/aspirations at different levels of affected communities.
For instance, the area covered by One Belt One Road has starkly divergent socio-economic realities:

a) Some sections of affected populations are already plugged into or aspiring to join the global economy and will see this ambitious infrastructure plan as an opportunity.

b) Others, mostly rural, may neither be ready nor able to join – due to lack of skills, opportunities or choice.

It has already been widely observed that the success of China's One Belt One Road (OBOR) initiative depends on China's ability to involve local stakeholders and ensure transparency in the design and implementation of projects along the various planned routes. While transparency and accountability are vital – they are the means. The key question is what is the end, what is the goal of OBOR and other such infrastructure initiatives?

In this context emerging work on the Social and Solidarity Economy requires closer scrutiny. A United Nations Research Institute for Social Development (UNRISD) position paper defines Social and Solidarity Economy as:

“... the production of goods and services by a broad range of organizations and enterprises that have explicit social and often environmental objectives. They are guided by principles and practices of cooperation, solidarity, ethics and democratic self-management. SSE includes cooperatives and other forms of social enterprise, self-help groups, community-based organizations, associations of informal economy workers, service-provisioning NGOs, solidarity finance schemes, among others.” vii

The UN Inter-Agency Task Force on Social and Solidarity Economy (TFSSE) was set up in September 2013, bringing together UN agencies and other inter-governmental organizations with a direct interest in Social and Solidarity Economy (SSE) as well as umbrella associations of international social and solidarity economy networks.

This work is based on the premise that the international development community recognizes the need to rethink development because business-as-usual has not prevented financial and food crises, climate change, persistent poverty and rising inequality. Thus the TFSSE was established to raise the visibility of the SSE in international knowledge and policy circles. Timbaktu Collective, cited earlier, is a classic example of a SSE.

The global phenomenon of Community Supported Agriculture (CSA) is another major example of SSE. Across Asia, Europe and North America CSA practitioners have succeeded in creating local cultivation...
and distribution of food thus providing enhanced income to producers and affordable healthy food for consumers. Much of this food is grown in peri-urban areas through business models in which the consumers become investors and supporter and trust between producers and consumers is strengthened. In mid-November Beijing hosted practitioners of Community Supported Agriculture (CSA) from across the world. China has over 800 CSA practitioners with about 100,000 consumers in more than a dozen cities across the country.

Within the discourse of international development banks and mainstream investors these tend to be seen as niche phenomenon – of little relevance to gargantuan challenges like infrastructure design and implementation. But it is important to remember that the concept of Triple Bottom Line and related Environmental, Social, Governance (ESG) reporting, which is now mainstream, was a fringe idea that looked impractical just 20 years ago.

Similarly giving primacy to bio-regions and social-solidarity economy in the context of inter-regional corridors is an ‘outlier’ idea today. Indeed, these are concepts on which a great deal of research and practice remains to be done. Yet these are the key challenges ahead if sustainable infrastructure is to become a pervasive reality. Otherwise specific infrastructure projects may conform to various social and environmental metrics but national and regional economics will not shift towards sustainability as economic democracy made possible by a holistic match between business and environmental eco-systems.

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1 South Asian countries will have to invest as much as $2.5 trillion on transport, electricity, water supply and sanitation, solid waste management, telecommunications, and irrigation to bridge its infrastructure gap. According to the report, addressing it will require investing as much as $2.5 trillion over the next ten years: one third to be spent on transport, one third on electricity, and the remainder on water supply and sanitation, solid waste management, telecommunications, and irrigation. Source: http://www.worldbank.org/en/news/feature/2014/04/02/south-asia-trillion-infrastructure-gap [30 October 2015].

As Dan Biller, co-author and Economics and Sustainability Manager at Multilateral Investment Guarantee Agency (MIGA), explains: “It is possible to build infrastructure in a way that targets inequality and poverty alleviation while enhancing economic growth. Alternatively, countries could just keep providing infrastructure services to the rich in society, threatening the environment and social stability. Ironically, those are exactly the ones who can often afford many of these services from private provision. Countries should aim at building infrastructure in a way that reduces inequality not enhances it.” Source:
ii Timbuktu Collective initiated restoration of water harvesting structures that gave immediate results and improved the situation of the farmers thereby motivating them for the “long-term” investment of eco-restoration. The Collective initiated restoration of water harvesting structures that gave immediate results and improved the situation of the farmers thereby motivating them for the “long-term” investment of eco-restoration. Tank desiltation is one of the major components implemented by the CBOs in the project area. As part of the restoration work, tanks were desilted and the excavated silt applied to the dry lands in the catchment area. Over the years hundreds of acres have been treated with silt from the tanks and the villages have benefited tremendously. People’s contribution to this intervention has been to the tune of 35 to 40%. The tanks also are the main source of drinking water for animals during summer, a water source for irrigated agriculture plus is a source of secondary livelihoods to the communities. Source: [24 October 2015].

For more details see: [24 October 2015].

iii For example, the Guianan Moist Forests run through Brazil, French Guiana (France), Guyana, Suriname and Venezuela. A region identified as the ‘Northern Indochina Subtropical Moist Forests’ – runs across parts of China, Laos, Myanmar, Thailand and Vietnam. All countries that will be part of the OBOR. Source: [30 October 2015].

iv The Decolonial Atlas, started in 2014, brings together maps which challenge our relationships with the land, people, and state. According to its website: “The orientation of a map, its projection, the presence of political border, which features are included or excluded, and the language used to label a map are all subject to the map-maker’s agenda.” While the objective of this group is to decolonize maps their work does help the understanding of bioregions. Source: [29 October 2015].


viii. The CSA model was born in Japan, where in the 1970s, as a result of mercury contamination (the famous Minimata disaster), a group of Japanese housewives started sourcing their food directly from organic farmers. This was known as Teikei, and the network is still flourishing in Japan today. The movement went global, with Urgenci, a network of national networks, now bringing well over a million producers and consumers together. There are also many thousands of groups that are not part of networks, especially in the USA. Source: [http://www.agriculturesnetwork.org/magazines/global/rural-urban-linkages/community-supported-agriculture-china](http://www.agriculturesnetwork.org/magazines/global/rural-urban-linkages/community-supported-agriculture-china) [28 October 2015].