

REBUILDING FLOOD AFTERMATH IN KASHMIR

The new PDP Government in Kashmir, following up on its Election Manifesto, has begun to buy land to build a "new" Srinagar and expand towns in Kashmir. The 2014 Flood has added impetus to rebuilding. Also, building new settlements for the displaced Kashmiri Pandits is mandated by the government in Delhi; it has opened its purse strings. The rebuilding is required for the 2014 Flood destroyed property. Also, additional land has to be devoted to alleviate congestion and house the growing populations in Kashmir. However, my submission is that expanding existing areas will not alleviate, but will aggravate, the problems of congestion and will add pollution in Kashmir. Purpose of this writing is to explain the rationale for this claim and to suggest redress.

The PDP Election Manifesto initiatives calls for building of mega cities and: "Creating model business villages. Model Apple Village ... Upgrade all towns with population size class of 30,000 to 99,999 into cities". And, also, "Rebuild shehr-e-khas as a heritage destination by dovetailing craft, heritage and tourism." etc, etc. These seemingly nice ideas are, I am sorry to say, jargon that does not address the underlying problem in the urban areas. The initiatives are fragmented schemes that do not account for the impact on the natural environment and physical infrastructure, like traffic capacity of existing roads.

Simply put, the proposed initiatives of building mega cities and model business villages and upgrading towns with population of 30,000 to 99,999 into cities in Kashmir are faulty propositions. Let me explain why.

CONTEXT FOR PLANNING

Kashmir is a river valley about 70 miles long and on average some 25 miles wide. It is enclosed by the mountains. Srinagar, located in the geographic center of the valley has from ancient times been the economic and cultural center for the whole Valley. At present thousands from Srinagar commute to their work to the far ends of the Valley. Thousands come in reverse to Srinagar for trade and employment. Even school children are bused to Srinagar from places like Char and Pulwama. Thus the whole valley in its entirety is in effect the hinterland to

Srinagar. In ancient scripts Srinagar and Kashmir are synonymous.

Sir Walter Lawrence writes wheeled carriages for passengers did not exist when he wrote his book Valley of Kashmir (published 1895). In Kashmir agriculture was the mainstay of livelihood for its population. The water ways in Kashmir were the main means of transportation. As a result towns and villages, grew in a pattern to serve a rural economy. Waterways and walking distance determined the location and physical pattern of build up areas. The villages were at walking distances from agriculture fields around natural water sources, towns evolved on river navigation routes. Srinagar, in the geographic center, became the economic and cultural center of the whole the Valley.

All that has changed now. Kashmiri economy is changing from an agriculture rural economy to a service based urban economy. Because of this change and also the growth in populations build up areas are expanding. This expansion is taking place along the existing roads, on flood prone areas on prime agricultural land. This highly productive agricultural land is weak soil, unsuitable for building. This land is a flood prone area. Haphazard land filling for building in this basin shape area disrupts the natural drainage, result is water logging and that increases flood peril. Without adequate sewage facilities in this basin shaped area waterways get polluted. Srinagar generates 538 tons of solid waste per day. Only half of that is picked up by the Municipality, 230 tons end up in water bodies. Estimates are that more than half the population in the Valley has no access to clean water.

According to an Indian Chamber of Commerce report Kashmir Valley has the lowest road density in India. Meaning that road surface area as a proportion to the total land area in Kashmir is very low. Kashmir thus needs new roads that will open up new areas for development. Instead in Kashmir existing roads are widened, creating double jeopardy. First, the existing business and building on the road side are destroyed for widening. Second, the compensation provided for the property, provides incentive to build along the widened road. The new building - unregulated- impedes traffic flow. The road building program in Kashmir wastes precious resources and property. In Srinagar, dubbed as a flyover, a 2-mile concrete overhead bridge is under construction. This extravagance, to reduce the commute time from the civil secretariate to Airport by some 20-minutes, in a city where raw sewage flows in open drains, where about half the municipal garbage remains uncollected.

By public works projects and unregulated private development the alpine environment of the Valley is being made into a concrete jungle. If this present trend continues the future building pattern of the Valley will be an unending bazaar, on all old roads and new by-passes from Qazigund to Uri and beyond. And "New" Srinagar and the upgraded towns will be water logged, congested, smelly unhealthy mess.

It does not have to be that way, there are better alternatives.

Land use characteristics of Kashmir

As a river valley enclosed by mountains the land in Kashmir has different characteristics at different levels. On the Valley floor at ground elevation of 5000 feet above the sea level are waterways and cultivable land, rising up forest lands at 9000 feet. In this vertical elevation of land profile we can identify five zones with differing characteristics. The first zone is the waterways, rivers, lakes and the wetlands. The second zone, is land on the valley floor, adjoining the waterways. This land is the most productive cultivable land. As noted above, agriculture being the main stay of Kashmir's economy and waterways being the main means of transportation in the past most of the settlements developed on the valley floor. This cultivable land makes about 30% of the total land in the valley. This zone is the most flood prone and soil is soft. Third vertical zone is the Kerewa area. Elevated from the valley, about 100 to 500 feet above the water level with limited access for irrigation Kerewa land is dry and flat. It is used for dry cultivation mostly orchards. Pampore Kerewa has saffron cultivation. The third vertical zone is the land that rise up from the Kerewa to the forest line. This area is unproductive for agricultural uses. This land area is also estimated to be about 31% of the valley land. The fifth zone, the forest zone begins at approximately 7000 feet above the sea level and reaches to the snow line.

Impact of Changing Economy and Technology

The point here is that with the advancement in technology access to essential services like water supply and transportation services are no longer tied to any particular location; essential services required - water, transport - can be brought to higher ground elevations. And with the change from

agricultural to service economy the place of residence for most of the population is no longer tied to proximity to agricultural land or proximity to waterways. And given the characteristics of the Valley land at differing elevations, it seems logical to suggest that for urban uses land in Zone 4 would be suited for new urban development. The land in this zone has better drainage, the soil is better suited for building and the area has commanding views of the Valley. Conversely, on the valley floor the earth is soft, drainage is challenging, the area is flood prone so this land is not suitable for building buildings.

For planning the future growth, the focus should not be on building "new Srinagar" and expanding "existing towns". Instead of upgrading existing towns into cities, new development should be on Kerewa edges and forest foothills. The development in zone 3 and 4 would: (1) Prevent encroachment on agricultural land. (2) Prevent of soil erosion (3) Utilize badly cut up land (4) Improve accessibility and elevate traffic congestion. (5) Offer better micro climate and views.

As noted above, from ancient times Srinagar and Kashmir are synonyms. The new development initiatives for Srinagar and other areas of the Valley must be considered within the context of a **Regional Development Policy Plan**. A plan that demarcates a generalized regional land use plan identifying land for centers of work and residence, network for circulation of men and material and systems for services for the Metropolitan region of Srinagar: all of the Kashmir Valley.

The regional plan would provide a framework for infrastructure to serve an urban service economy and also provide a REGION wide context for the "town area plans" within the Kashmir Valley.

The Regional Plan would for example:

1. Estimate the need and identify appropriate locations for the anticipated urban population growth.
2. Identify prime forest zone, agricultural land, waterways and wetlands and other natural assets that must be preserved.
3. Identify, at a regional scale, need and location(s) of infrastructure such as primary road, rail and water transport travel and communication routes
4. Identify venerable areas like flood prone areas and propose land uses and preventive measures for the areas.

5. Identify special areas such as Heritage Areas and regional scenic travel and tracking routes including related support facilities.

That I submit should be the New Plan, for the Valley, made in two parts:

(a) Public land use policy aimed at conserving the agricultural land and utilizing marginal (agricultural) land for urban growth.

(b) A land use plan and development plan and program for the region that includes a transportation, drainage and waste management plan.

Imagine Then:

A road circling the Vale of Kashmir, along the mountain edge just below the forest tree line - 7,000 ASL elevation - the road is a scenic drive. The drive demarks the forest zone on one side, the natural preserve. Adjacent to the scenic drive, also circling the valley, is a water canal. Its a contour canal, feeding the many mini-hydel power stations generating electricity down below on the Kerewa land edge.

Imagine also, down below the scenic drive, on the other side of the drive, just about where the Kerewa Land meets the Mountain edge, another road circling the valley, parallel to the scenic drive. This is the high speed highway for transporting man and material along the rim of the Kerewa Lands. Attached to the road, like the Canal above is a contour railway also circling the valley. Down below the railway tracks are orchard land.

Imagine then, on every mountain spur jetting on to the main valley from its many side valleys, a shinning city. A city that from afar seems like a beehive of buildings, descending in terraces from the scenic drive to the Highway high speed highway.

The future urban scene of Kashmir then is two strings of transport corridors circling the valley. And between the two strings are cities, towns and villages strung like pearls, below the scenic drive at regular intervals, that seem to hug the mountain side, overlooking the emerald like valley. These towns and villages are build to human scale, for walking. No four wheeled machines are here.

Down below the Kerewa land and the land below on the Valley floor has its road network, a grid pattern of new roads dividing and demarcating areas for land uses.

And then below that are Rivers and waterways. Water passage is unrestricted. Flood prone areas are demarcated, there is a 100 year flood and a 5 year flood line and lines in between. New building construction is regulated, even prohibited in flood planes.

And then there are certain existing build areas - designated as Heritage areas - conserved. Sheri-Khas of Srinager is one, dubbed as the Venice of the East. River Jehlum serves "as a broad rushing river for its high street and the widening canals for its back streets"(quote by Isabella Bird 1889: Venice of Himalayas).

May11,2015

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