CHAPTER: VIII

Problems and Suggestions for the remedies of the Industrial Landscape Evolution:

In course of this work the author has observed that the Basin has been suffering form several problems related to development and under development of industries in the classified industrial regions of the Basin (Chapter I to VII and Fig: 21 to 36).

One of the problem within the Basin related to the industrial evolution, is disparities amongst the industrial regions. The Trio-Axis region (Durg-Raipur-Bilaspur) comes in the highly industrialized region and the industrial clusters, growth centres and Estates of this region, namely, Siltara, Urla, Rawan, Borai, Bhanpuri, Heavy Industrial area Bhilai, Nandani, Tifra, etc. possess maximum numbers of industries. whereas in the Low and Very low industrialized region i.e. Rajnandgaon, Dhamtari, Mahasamund and Kabirdham the under development and less value addition to available resources i.e. agriculture resource and forest resource, human resource, mineral resource insufficient infrastructural development, lack of speedy and cheap transport network, delayed industrialization process and ignorance, etc. together restricted the pace of industrialization in the very low industrialized region of the Basin (Fig: 21 to 32). In the very low industrialized (Dhamtari and Mahasamund) region till the 5th Plan there were no LSI and MSI industries and at Kabirdham till the beginning of the 10th Plan there was no industry. That is why, the disparities amongst industrial regions widen and make these very low and low industrialized regions backward and under developed (Fig: 33 to 35). This under development also affected the economic condition and development of social infrastructure and over all human development scenario of this low and very low industrialized regions of the Basin (Fig: 36 and Chapter VI).

The reasons behind industrial development disparities and backwardness of the industrial region within the Basin consists of several factors and co-factors i.e. lack of appropriate planning in the earlier years of Plan to develop backward regions, insufficient transport and communication networking, delayed exploration of resources and less emphasis on value addition to the localized raw materials comprise of Minor Forest Produces (MFPs) agriculture and allies produces at large scale, delayed initiation of industrialization in the low and very low industrialized regions of the Basin, unwillingness of funding agencies to invest in the backward industrial regions of the Basin, on availability of skilled labourers, problem of less productivity, increase in input costs, incompetent and out aged technology, growth depreciation in SSI and artisan industries and problem of marketing, etc.

In the earlier Plan Periods much stress had been on LSI and MSI industries evolution, particularly at the near by locations of the railway-routes and available raw-material potential locations, which were easy to access. The highly industrialized region has been top priority region within the Basin, where in consecutive Plan periods rapid industrial growth occurred (Chapter IV and Fig: 21 to 32). Though, during Pre-Plan period the present low level industrial region-district Rajanadgaon had been the centre of industrial activities where first LSI industry of the Basin had been installed in the year 1882 (Fig: 20) but due to lack of proper future plan and vision the region did not hold its earlier status and the surrounding locations which had been developing as the centre of netting, weaving, colouring, rinsing, bamboo crafts and several other handicrafts, etc. could collapsed.
In the very low industrialized region more than 80% people are engaged in substantial agriculture and farming (Chapter V and VI). This region had been less accessible due to insufficient means of cheap and speedy transport network (Fig: 17). Till 5th Plan period there were no LSI and MSI industries in this region (Fig: 21 to 32) and till the 8th Plan no sufficient survey and exploration of mineral resources had been done in the very low industrialized region of the Basin. The region have high crop intensity level (140-155%) but due to low productivity and insufficient production of required agro-raw materials (to secure LSI industries raw material supply) for food processing industries few SSI and artisan types agro processing units have been installed at Mahasamund and Dhamtari during 6th Plan and 7th Plan. At present, there are no mineral based industries in Mahasamund and Dhamtari as the exploration work of mineral resources has been started in 9th and 10th Plan period and it is found that the region has good potential of bauxite, dimension stones, hematite ore, quartzite, gold, kimberlitic, etc. During 9th Plan, on account of these above resources availability few MoUs (Table 3:2) have been signed to install herbal Park, agro processing industries and steel industries (Chapter III and IV) in this very low industrialized region of the Basin.

At policy level, efforts have been made to establish industry in 10th Plan to develop backward areas. Thrust sectors of industrial development were announced (Chapter III, Table 3:1) and incentives for proposals to entrepreneurs have been made for those who has shown interest in the very low industrialized regions to establish their units. To facilitate the less industrialized regions at Kabirdhasm, Dhamtari and Mahasamund districts industrial offices have been setup and some proposals of new growth centres/estates/industrial clusters have been made (Fig: 37).

In spite of all these efforts less infrastructural facilities, slow pace of resources exploration, unwillingness of industrial houses to establish industries in the very low industrialized region, less technological advancement, etc. have restricted the industrialization processes in the low and very low industrialized regions.

The medium level industrialized region includes Korba, Raigarh and Janjgir-Champa districts. The industrial scenario of this region is not uniform in view of industrial development i.e. Korba, possess high degree and intensity of industrialization (Fig: 33 to 35), since 8th Plan Raigarh has been an emerging industrial location and Janjgir-Champa is relatively least developed industrial district within the medium industrialized region of the Basin. So, the problem within the medium industrialized region is not the same as it is in Korba or Raigarh and Janjgir-Champa.

The highly industrialized region of the Basin includes Durg, Raipur and Bilaspur districts which is named by the author “Trio-Axis region” of the Basin. Here the intensity level, degree of industrialization is highest in the Basin. Since 1st Plan period this region has been “the region of preference” for industrial development by the industrial houses, entrepreneurs and governments and planners (Fig: 21 to 35). After 6th Plan due to the establishment of industrial estates and growth centers Borai (Durg), Nandani and Heavy industrial area Bhilai, Ura, Siltara (Raipur), Sirgitti and Tifra (Bilaspur), etc. emerged as industrial clusters.

After formation of new state, between year 2003-2008, hundreds of MoUs has been signed and this region flooded with mineral based LSI and MSI industries and ancillaries units (Table: 3:2). But the required infrastructure to accommodate large number of industries became insufficient causing
over crowding of industries in the Trio-Axis region. The “Rao-Mannmohan Model” of economic liberalization and Globalization permitted the private entrepreneurs i.e. DII (Domestic Investment Institutes) and FII (Foreign Institutional Investors) and FDI (Foreign Disinvestments) to give financial adds to industrial houses to set up industries with raw material facilities but the basic infrastructural facilities have neither been privatized in same pace of industrial evolution by the government nor the industrial houses have shown their keen interest to improve basic facilities to facilitate industries.

The policy level provisions (Chapter III) of autonomy to industrial houses and entrepreneurs resulted in to the evolution of ancillary units around Large Scale and Medium Scale industries in the Basin i.e. in 8th Plan the ancillaries of Bhilai Steel Plant have been given work order of Rs.35 crores only but due to increase package of works to the existing 182 ancillaries, in the 9th Plan and 10th Plan increased up to 218 and the work order increased 600 % (Rs.180 crore). In the highly industrialized region such clusterization of industries alone happened around Bhilai Steel Plant only (BSP, Ancillary Development Cell Report, 2008).

Thus, till the end of 9th Plan and 10th Plan this resourceful highly industrialized region over crowded with iron and steel, sponge-iron, rolling mills and captive power plants, cement-clinker-hydro lime industries and mineral based intermediate manufacturing units, engineering and fabricating plants,(Fig:21 to 32). This has given birth to several environmental and social as well infrastructural problems in this highly industrialized region. A grave condition of pollution emission and infrastructural problems have been observed in this region(Chapter VII), recently in the 10th Plan Siltara, Urla have been banned for further installation of steel and other pollutant emitting industries by the State Environmental Conservation Board, Raipur. As these units have been spreading pollutants in the near by arable holdings and inhabitant villages and townships causing negative effects on the production and quality of the produces and the residents (Chapter VII).

The above details of Basin’s industrial regions with reference to the problems which arises due to development and under development of industrial landscape in these regions need proper caring to curve out disparities of industrial distribution, rational use of available resources, expansion of industrial area , technological upgradation, environmental conservation and policy level reforms, better infrastructural facilities, rural engineering services, transport networking, market access and planned social infrastructure, etc.

Considering some of the above problems the author suggests some measures for the upliftment and betterment of industrial activities in different industrial regions of the Basin:

1. To encourage small scale and artisan enterprises the state government has formulated industrial policy 2003-2006 and 2004-2009, this includes thrust sectors of industries in regard to curve out the regional disparities (Chapter III, Table: 3:1). But the restricted volume of production, quality of products, old traditional technology and less competitive strength of SSI and artisan industries make them sick and incompetent in the world and domestic markets as well. Therefore, the state planner should concentrate on measures designed to improve the competitiveness of SSI and artisan industries by constantly improving and modernizing the techniques of production. Here is the example of Chinese “three-tire-technology” that could be a good lesson for Basin’s industrial development.
In this stage of industrial development in the Basin, we pause and look towards the experiences of the Chinese industrialization process in the matter of technology transfer and adaptation in a particular geographical situation in power and energy sector.

China is one of the emerging industrial countries along with India in the basket of developing countries which has evolved three tire technology, through the initiative of its people and government, this technology falls under three categories namely modern industrial technology, rural industrial technology and agricultural technology. The first one technology is highly sophisticated which by and large is confined to industries of national significance and is to be found in large industrial towns. The other two technologies namely the rural technology and agricultural technology are inter-linked and are the main source of inspiration and growth in the rural areas. At the outset of this "tire-technology" the Chinese understood that evolution of industrial landscape in a region primarily depends on percolation of technology as well the availability of power. In this reference China has made an extensive use of small power plants for emerging power system. They have developed small captive power plants in basic industries like cement, steel and alloys, spong-iron, rolling mills, fertilizer and chemical and machinery sectors which account a sizeable share of the domestic power consumption (Mahajan, 1985, 94).

As in case of the Chhattisgarh Basin, keeping the above Chinese experiences in mind, such three-tire-technology system should be adopted and installation of small power generation plants should be made mandatory for all the steel and alloys mills, fertilizer and chemical plants, cement and clinker plants and for this captive mining should be allowed to all the entrepreneurs as allowed to sponge-iron and rolling-mills proprietors to establish 8 MW to 110 MW captive power plants in the Basin in 10th Plan (Fig: 32).

ii. Further, in the Basin more than 85 % people (particularly in the low and very low industrial regions) depend on agriculture and farming comprises of small holdings. So to curve out the extra-burden from agriculture, co-operative farming and corporate farming should be initiated and the size of holdings should be increased to boost up productivity and the quality of products so that constant supply of required raw materials for food processing industry could be assured.

iii. For SSI and artisan sector growth (which significantly depreciated in 10th Plan) the traditional practices and skills could play an important role. But the present traditional technology and rural infrastructure is not too sufficient to make this sector alive and compatible in this age of globalization. So, to make this SSI and artisan sector of the Basin competent, operative, and productive and sophisticated the second-tire-technology namely “rural industrial and agricultural technology” should be adopted in the Basin. This technology is the upgraded form of traditional manufacturing tools and technologies which had been used in cultivation and handicrafts and other artisan works in China. By way of upgrading these traditional techniques there in China the quality of produced goods and articles their production and productivity, cost of production have become very compatible and cheap and its demand is everywhere in the world market. So, learning the lesson from China same rural industrial tool and technique upgradation research and design centres (by combining the perspective regions of rural industrialization) should be opened, keeping the geographical account of that particular region in view. This rural engineering research and design
department's resource persons and employees should be the skilled crafts men, weavers and artists and technical advisors.

iv. The rural infrastructure in the Basin should also be co-ordinated with the mineral and quarrying sector growth and forest resources value addition as adopted in China. There in China most of the industries earmarked for intermediate technology in rural areas are also the user of mineral and forest resources inputs. So, similarly in the Basin's low and very low as well in medium industrialized regions huge potentials of mineral and forest resources available (Chapter II) and also traditional intermediate articles and goods producing skills and workshop units exists for example: black-Smith, bell metal,jewellery-designers, tussar-kosa weavers, Bamboo, terracotta-sculpture's craftsmen, iron melting and fabrication ,herbal intermediate medicines domestic manufacturers, producers and processors, blanket, bedsheets and garment designers and weavers and bidi makers etc. Which above arts and skills are fairly spread over the rural locations of the Basin but in unorganized forms.

So, co-operative plans should be made to organize them and traditional technology should be transformed and improved by virtue of rural engineering and research wings (in the ways the author has suggested previously) which is functioning in different areas near by locations to grab the abundant available resources which are laying in vain without proper value addition in the Basin. And for the spreading of such improved technology regular training and monitoring and need based orientation programmes should be organized exclusively.

Hence, by means of cooperative system, rural engineering and design, orientation programmes the rural small and tiny entrepreneurs and enterprises could regain their confidence and could contribute in the development of industrial landscape of the Basin that will ultimately improve their financial and social conditions also as happened in China and other developing countries of the world particularly in south and south eastern Asia.

The above actions could help to improve the industrial landscape and quality of life of the Basin's inhabitants in several ways. This will strengthen the rural employment base and provide employment opportunity other than cultivation; this could slow down the migration of human resources from rural areas in search of works, due to cooperative work culture and concrete base of rural engineering services the man power extra burden over agriculture and farming would reduce, rural infrastructure will improve and money flow could be diverted towards SSI and artisan types industries installation in the backward regions of the Basin, social infrastructure and quality of life will improve, etc.

v. In the Basin the regions of new resource inventions have potentials of some new industries installation i.e. in Kabirdham sugar cultivation and plantation of Jathropa in barren and waste land and farms have increased the prospects of sugar and its by products and bio-diesel plants installation (with the help of Indian Oil Corporation (IOC)) respectively. The further expansion of sugar plant and its by products related industries like, pulp and paper and ethyle alcohol, lactic acid, etc. from the molasses could be done. The prospect of bauxite based aluminum manufacturing unit is also good in Kabirdham. Keeping all the above perspective industrial development in view in 10th Plan one industrial estate at Harin Chapra has been proposed to installed (Fig:37). Likely, observing the good prospects of industrial development in other districts of the very low industrialized regions of the Basin at Birkoni (Mahasamund), Banjari-Bagoda (Dhamtari) and food processing Park in the low
industrialized region at Indavani (Rajnandgaon) a proposal to develop industrial clusters have been made in the 10th Plan.

In the medium industrialized region observing the true potential of industrial development and to curve out the industrial development disparities within region and intra-region Lara (Raigarh) and Champa-Hathmeora (Janjgir-Champa) have been chosen as the perspective locations for industries clusterization in 10th Plan.

In the highly industrialized region of the Basin to curve out the problem of industries over-crowding Tilda has been chosen as the perspective industrial cluster's location at the near by newly invented mineral resource pocket and further expansion Plans of Urla,Siltara,Borai,Tifra have been proposed within Basin.

To develop industrial clusters and to curve out the industrial development disparities within the Basin's industrial regions and intra-industrial region some reforms at policy level is also required. With reference to this below mentioned Plan and policies need speedy attention:

A. For planning and development of basic infrastructure for new industries keep the geographical account of the concern region in view and then prepare the industrial zones atlas and accordingly initiative should be taken for the basic infrastructural development of the area.

B. To ensure balanced industrial development in the Basin industrial areas or clusters should be well developed at suitable locations in each districts for small scale and artisan and medium scale industries by shouting help from Private entrepreneurs under PPP Scheme so far possible to reduce the extra financial burden and make the above industries more compatible in this age of globalize market and economy.

C. Cluster approach should be adopted for setting up of new industries with similar products for this suitable areas should be identified for the development of herbal parks, food parks, apparel park, James and jwellery park, IT park, etc.

D. Combining few nearby industrial areas government should ensure availability of essential common facilities to avoid the problems of unnecessary delay and expenses of entrepreneurs by means of installing laboratory, quality certification, cold storage and ware house facilities and packaging,etc.And at the same time this will also solve the problems of increase in wasteland holdings and spread of pollutants here and there at tiny and unplanned locations of arable holdings and habitants townships and villages.

E. To promote exports from the state commodities should be identified and effort should be made to set up Special Economic Zones (SEZs), agro export zone, air cargo complex, etc. And last but not least

F. In a particular geographical region for human resource management the workers and inhabitants of the industrial influence areas should be provided facilities of residence, health and community centres, pure water and sanitation, schools and recreation facilities and those whose land has been acquired for industrial purposes should be given permanent employment and the holding of the same fertility at
another location to those who do not want to get employed. For this expert committee comprises of different specific fields should be formed and autonomy of decision making should be given to them.

The above mentioned problems and their perspective remedies could short out some of the problems but not all. With this thought the author has suggested the remedies of the problems which might be helpful to the planners, researchers and academicians, entrepreneurs, etc. in different ways.