Regional disparities in Rural Thane District, Maharashtra : An Overview

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Abstract

The following paper makes an attempt to analyse the type of regional disparity and level of development in rural Thane district of Maharashtra. The types of regional disparities are classified as physical, demographic, social and economic. The composite scores(1-5) have been calculated and categorized into very low, moderate, high and very high. Based on the secondary data collection at village level, the study shows that the disparity increases from the coast (east) to interior (west) and majority of the settlement indicate low to very low status of development.

Introduction

It is undoubtedly true that, not withstanding fifty years of planning; that no Indian State can be looked upon as an entirely developed homogenous region or as a nodal region. Therefore, disparity does exit at national, regional and local level. Taking the case of Maharashtra, even after decades of developmental programmes there has been not much significant or no perceptible change in the life of the populace. The regions of the State *i.e.* Konkan, Western Maharashtra, Marathwada and Vidharabha display dynamics in physical and cultural landscape and its ramifications can be witnessed in skewed pattern of development.

Thane district of Maharashtra, with its sharp contrast between rural – urban dichotomy, is one such area that displays extreme disparity in the regional development. Unlike the Western Maharashtra, where the spillover effect of the sugar industry is noticeable, the urban areas within the district, due to proximity to Mumbai, have come to be identified virtually as part of

the mega city where as rural tracts of the district, particularly area occupied by the tribal population, except settlements located along the main transport routes have remained grossly under developed. This varied disparity is an outcome of constraints imposed by the physical factors and further enhanced by the under utility of socio-cultural potentials and opportunities.

Thus, here an attempt has also been made to find the regional disparities in rural Thane district as there are widespread disparities in the levels of economic and social development between the urban and rural areas of the district. In the study region, area disparities in the level of poverty, unemployment, infrastructure, mode of transport, communication, and agriculture industry and above all the level of living of the people exist significantly across the regions. The rural areas of Thane District, particularly those in the north and northeastern parts of the district stand out as the less developed areas. Though being well within reasonably short distance from

the country's economic capital, Mumbai, the region has not been developed. The areas of Thane district that border the Mumbai metropolitan district have been benefited by the spillover effect.

Study Area: Thane District

Thane, the northern-most district of Konkan Maharashtra, lies adjoining the Arabian Sea in the northwestern part of Maharashtra State. It covers 9558 sq km, accounting for 3.11 percent of the total geographical area of the State.

The district extends between 18°42' and 20°20' North latitude and from 72°45' to 73°48' East longitude. It shares its northern boundaries with the Valsad District, a part of State of Gujarat and Union territories of

Dadra and Nagar Haveli. The districts of Nasik and Ahmednagar are to its East, Pune to the South-East, Raigad to the South and Mumbai Metropolitan to the South-West. (Fig.-1 & 1.1).

The District of Maharashtra is one such area that displays high-level of disparity in the regional development within the administrative region of the collectorate. The levels of regional disparities are such that it makes one wonder to consider the life in urban Thane and that in the rural Thane district. The urban areas within the district, like Kalyan, Bhiwandi, Vasai etc due to the proximity with Mumbai, have come to be identified virtually as part of the mega city. However, in rural tracts of the district, particularly area occupied by the tribal population, life is lagging
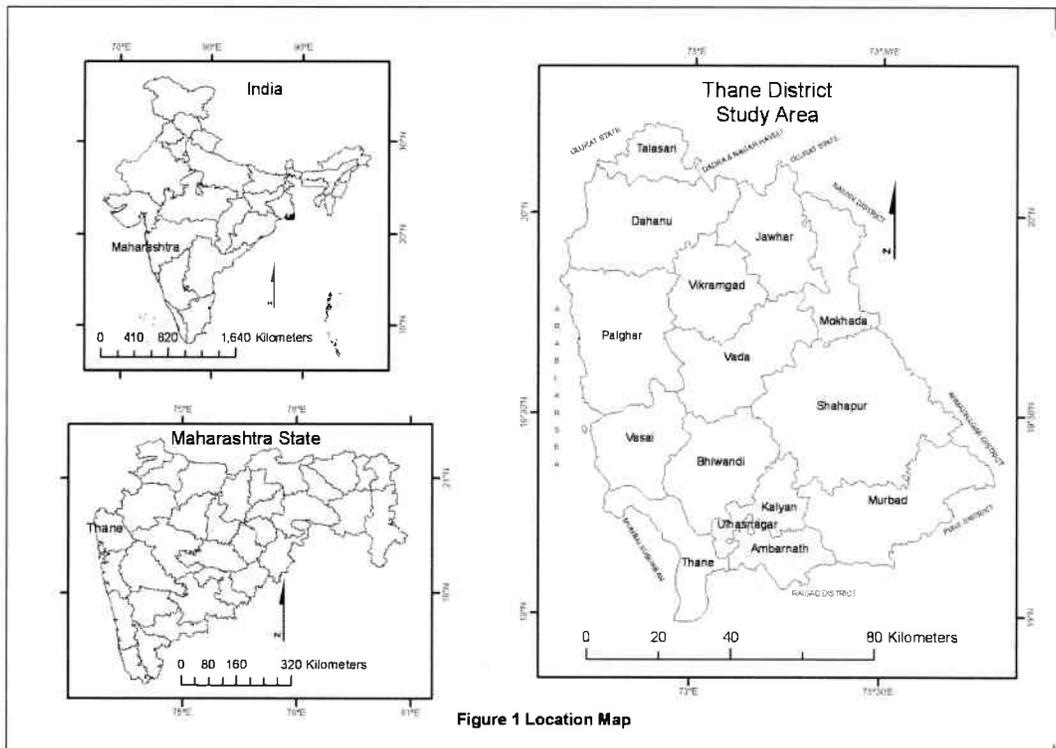

Figure 1 Location Map

Fig. 1: Location Map

behind at least by few centuries. The rugged topography, inaccessible nature and sociological isolation of tribal people have been the factors responsible for this state eg. Tehsils like Mokhada, Talasari.

Objective

The sole aim of the research is to assess the form and level of disparities that exist in rural Thane.

Data base and Methodology

The following research is an outcome of secondary form of data, largely government and non - government publications. Census data has been used for preparing social and economic profile of the study region. Besides these many reports and government publications viz. Gazetteer, Socio-economic abstracts, periodicals have been also extensively used.

Most of the census and revenue data was analysed through Arc-View 3.2, Arc-GIS 9.1, Auto-Cad Map, Global Mapper, Surfer software besides MS Office Excel used for data processing.

In all 26 topographical maps, at the scale 1:50000 have been used to evaluate the physiographic conditions and the variables such as elevation (contours), drainage, forest land, village locations, roads, railways, schools, health centres etc. These attributes have been digitised using Auto-Cad software and subsequent GIS platform used. FCCs of the region and the LISS III digital data have been employed in identifying the actual coverage of natural vegetation. The elevation data available in raster format from SRTM (data with 90 m ground resolution) for visual representations of selected areas from the Ghats section.

Table 1 : Developmental Status

Development level and Scores	Number of Villages in percent	Area in percent
Very low: 27-39	21.94	28.05
Low: 40-43	20.11	20.25
Moderate: 44-46	19.5	17.23
High: 47-50	22.22	16.33
Very High: 51-63	16.25	18.14
	100.00	100.00

The data has been analysed at village level for all the variables of disparity. Table 1 shows the variables and the weightage given to derive the composite score.

Indicators of Disparity

The following indicators have been chosen:

1) **Physical factors**: (a) Relative relief and Slope (b) Rainfall and Drainage Density (c) Forest Cover.

2) **Demographic factors:** (a) Proportion of Tribal Population to total population (b) Density (c) Sex Ratio (d) Literacy

3) **Social factors**: (a) Education (b) Health (c) Transport & Communication. (Road Density Network)

4) **Economic factors**: (a) Income (b) Non Agricultural workers (c) Banking & Finance (Commercial Bank Facility)

Further, a composite Index has been prepared for all the physical, demographic, social and economic variables by denoting score of 1-5. (*i.e.* low to high) Based on the variable supporting socio-economic development of the population, the lowest score indicates less development and highest score indicates
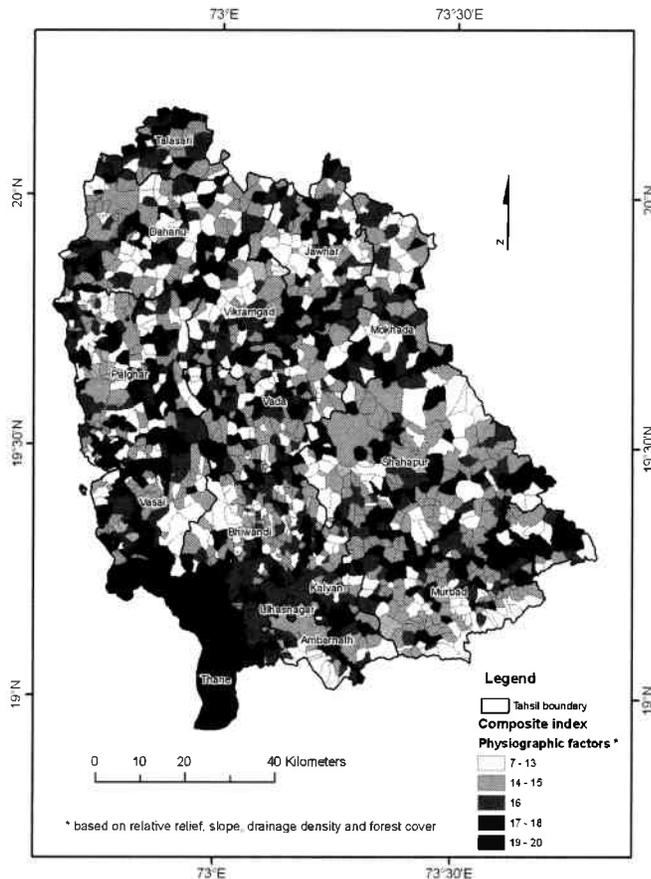
Fig. 2: Physiographic composite index

Discussion

high development. This has enabled the researchers to analyse the regional disparity lucidly.

The fact that the rural Thane is under-developed is obvious. However, it was thought appropriate to assess the developmental levels and find the degree of disparities in the level of development within the rural district.

1) Physical Disparity

a) Relief and slope

The district is characterized by rugged and undulating topography where the general gradient is from west to east. In general, it can be divided into three physical divisions: coastal plains (below 25 mts), mid plateau region (500 to 1000 mts) and the eastern hilly region (more than 1000 mts). The distance between coast to central low land is 14.62 km and it is 105 km from coast to ghat. The total distance between coast to Ghat is 113 km. Due to gentleness and low angle of slope, the plains have their natural

advantage. This has promoted faster socio-economic growth and it is slowly diffusing towards the interior. High altitude areas have constraints for economic functioning due to ruggedness in topography, steep gradient, faster degradation and copious rainfall. Since, the population has remained sparse, the pressure on land has remained low. This ensures harnessing of resources that have remained untapped.

b) Rainfall and Drainage Density

The region receives copious rainfall due to orographic influence. The annual average rainfall is 2500 mm. This increases from the coast to the highland. *i.e.* 2000 mm to 4000 mm. The Ghat section forms the water divide for numerous streams and rivers. These water bodies originating from the upland flow westward down stream towards the plains. Though the drainage density in the highland region is high, the sustenance is low, especially for agricultural activity due to the seasonality of the streams. Thus, the beneficiaries have been the plains. The two main perennial rivers Vaitarna and Ulhas flowing east to west traversing and criss – crossing the region have supported larger population and their economic activities particularly in their lower reaches.

c) Forest Cover

The percentage of forest cover is a product of physical and cultural attribute (climate, relief, soil, urbanization, settlement etc.) For Thane, three zone of forest cover can be determined (a) Very low to low forest cover (10%) (b)Moderately forested (27-50%) and (c) High forest cover (> 50%).

All along the coast, there is absence of forest due to higher density of population and development, similarly low forest coverage is also found along the National Highway and umbrella zone of urban Kalyan and Bhiwandi. Yet another zone of low forest cover is the hilly tracts of Jawhar and Mokhada that have degraded and exposed landscape.

The transition zone, between low and high forest zone, has a moderate forest cover. Large tracts of Dahanu, Shahapur and Murbad have one - fourth to half area under forest. High concentrated forested zones are found in Palghar, Vasai, Bhiwandi and Shahapur where as patches are found in Dahanu, Vada and Mokhada.

2) Demographic Disparity

a) Proportion of tribal population to total population

A cursory glance shows that the proportion of scheduled tribes increases from the south to north of the district. The urban centers, Thane, Ulhasnagar, Ambernath, Kalyan and coastal parts of Palghar and Vasai have low tribal concentration (< 25%) whereas the Central portion of district *i.e.* Vada, Bhiwandi, and Shahapur have tribal population ranging 25-65 percent. The remote, and hilly tracts found in the northern and north eastern portions of the study area have higher concentration of tribal population. i.e. Talasari, Dhanu, Jawhar, Vikramgad, Mokhada, Shahapur and Murbad (> 85%). Thus there is disparity in distribution pattern of tribal population.

b) Population Density
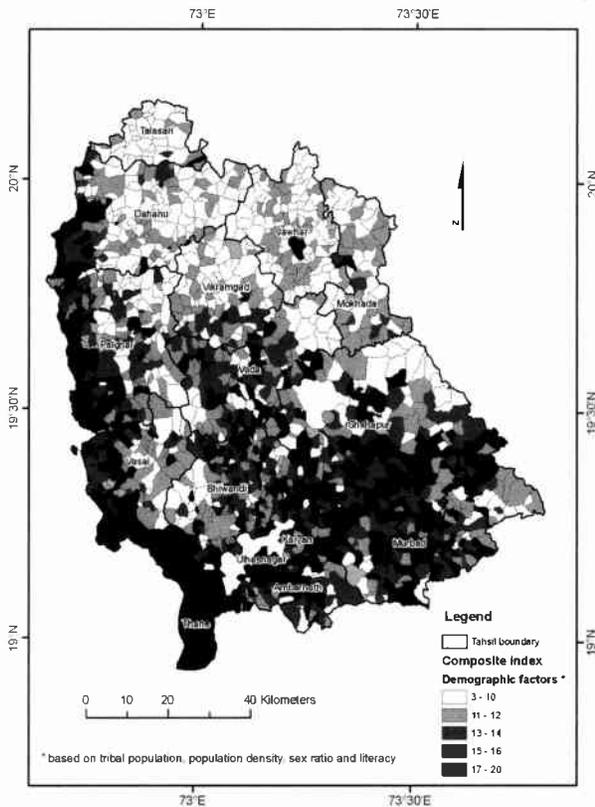
The density of population shows variability,

Fig. 3: Demographic composite index

much influenced by the various physio-socio-economic factors. In general, the density of population increases from west to east. The eastern portions i.e. mountainous region impose constraints, discouraging population concentration and therefore the settlements have low density of population averaging less than 100 persons per sq km. Moderate population concentration *i.e.* 100 to 250 persons per sq. km is normally witnessed in the transitional zone, away from the National and State highways and portions of Mumbai Metropolitan region. High population concentration can also be witnessed along the National and State Highways, Coastal

areas, and settlements under the shadow effect of Mumbai metropolitan region. Here the density ranges from 250 -1125 persons per sq km. Thus the transport linkage, physiography and economic function have played a vital role in population concentration.

c) Sex Ratio

Sex ratio is a demographic and social indicator that determines well being of the society. Unfavorable sex ratio is a product of deficient of males or females. The sex ratio ranges between 750-1150 females per 1000

males, the district Kulhe (Shahapur tehsil), Sakur (Jawhar tehsil), Sasvand, Devapur (Vikramgad tehsil), Karajgaon (Talasari tehsil), Khatali (Palghar tehsil), Ghanode (Dhanu tehsil) shows excess of females in the tribal dominated areas, probably due to male out flux for better economic prospects to the urban centers like Vasai, Ambarnath, Thane, Kalyan and Mumbai and on the contrary, the urban areas show deficient of females. This clearly shows depressed regions have high sex ratio. The settlements that are substantially progressive and self sustaining have balanced sex ratio. These settlements are Deoghar, Shirpr, Alyani, Narayanga, Sajgaon, Wadu, Jadai(Murbad tehsil) Pawali, Dehigaon, (Shahapur tehsil) Kohpur (Vasai tehsil) Mandava, Vadavali (Vada tehsil) Dhudgaon, Charangao (Mokhada tehsil) Talavali, Nagzari (Vikramgad tehsil) Sakharshe (Jawhar tehsil) Rahur, Vavali Ta., Pahare, Vape (Bhiwandi tehsil). (Census of India,2001)

d) Literacy

Literacy holds the key for socio-economic development. The variations in literacy show the level of development in Thane district. Areas that are economically backward lacking infrastructure, lack of proper linkages, dense forest and uneven topography have low literacy. Most tribal dominated settlements of Dahanu, Mokhada, Jawhar and Vikramgad have half of its population as illiterate. Literacy rates ranging between 60 and 75 percent are recorded in the midland region where there has been significant development in terms of transport network and other infrastructure facilities. The urbanized centers and their periphery centers show high level of literacy, much higher than the State and District average. Here more than three – fourth of the population accounts as literates. To sum up, one can conclude that literacy disparity increases from south to north. An array of reason can be accounted for such disparity.

3) Social Disparity

a) Educational Facilities

Education holds the key for development. Lately, much emphasis is given in promotion of primary education through government and non government efforts. In case of Thane, irrespective to the size and population, every village is served with at least one primary school. What is commendable that the tribal tahsil – Talasari, Dahanu, Jawahar, Mokahada, and Vikramgad show many villages having more than one primary school. The Government initiatives to promote education to the deprived communities has resulted in more schools. Some of these are residential schools specially started for tribal population. These are popularly known as *Ashramshalas*. For example, out of the total number settlements, nearly 9.21 percent settlements have more than 3 schools per settlement, likewise 35 per cent of Vikramgad tahsils has more than 2-3 primary Schools per settlement. However, one can notice variation in availability of educational facilities. The south-eastern portion of tahsils *i.e* .Murbad and Shahapur are poorly developed as compared to coastal and north western portion.

b) Health facilities

The region *i.e*. Thane district displays wide disparity in availability of basic health facility *i.e*. PHC. Most parts, excepting urban
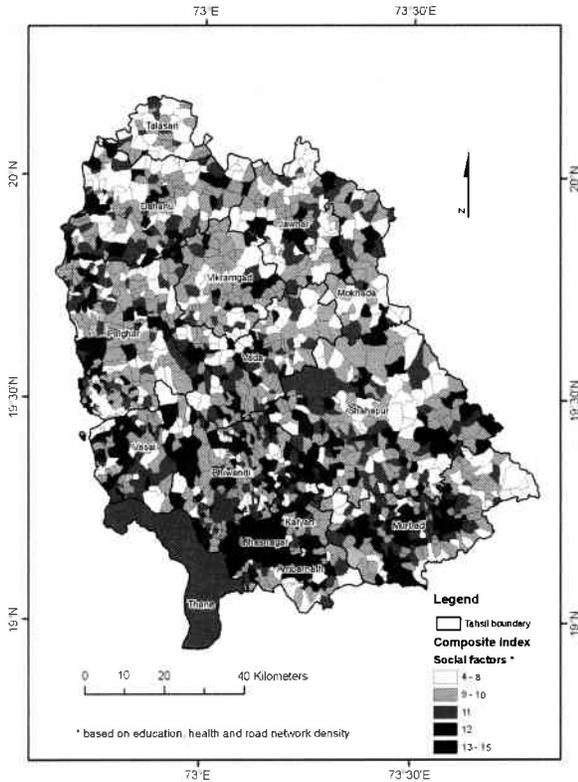
Fig. 4: Social composite index

centres/tahsils headquarters, are poorly served by PHC. The tahsils of Bhiwandi, Vasai, Kalyan, Murbad and Ambarnath are substantially better in medical facilities in contrast to the tribal belt *i.e.* Jawahar, Vikramgad, Dahanu and Mokhada. Here one can easily notice that there are few health centers and the population served is large, infact the range exceeds 10 km. To cite example, In Vikramgad – a tribal tahsil, there are 3 primary health centers serving a population of 1,14,254, and 100 of settlements. Population of 27 settlements fall in the category of less than 5 km. Population of 30 settlements have to travel 5-10 kms to avail medical facilities and for 40 settlements

the distance is beyond 10 km. This clearly shows that most parts of north and north eastern Thane district are underdeveloped in terms of health facilities.

c) Transport & Communication (Road Density Network)

Transport network is considered to be arteries or the lifeline of people as it plays a dominant role in mobilization of goods and services. Even government efforts are towards connecting each village with all season road. The district is traversed by National Highway NH-3, NH-4, NH-8, NH-222 and many district roads.

Undoubtedly, settlements along the National and State highway have higher density of road network but three zones can be demarcated that have low road density. These zones are North-Eastern hilly tract, Western portion of Shahapur and whole of Bhiwandi, except the Urban Bhiwandi. The tahsils of Talasari and Mokhada are served moderately by road network density (9-13 km2). This is indicative that excepting few portion, there is a need for better development of transport *i.e.* roadways.

4) Economic Disparity

a) Total Income

Quality of life, progress and development of the settlement depends on the income or revenue of the village. Availability of funds empowers the concerned authorities to undertake developmental project for the particular village. The range of revenue for villages in Thane district is Rs. 48 to 73,951 annually. It is apparent that villages located in the coastal belt, along the main National highways and those under the umbrella effect of Mumbai metropolitan region have higher incomes. For example, a village Umele (Vasai tahsil) and village Dandi (Palghar Tahsil) near Mumbai, has an income of Rs. 73,951/- and Rs. 60,758 /- per annum respectively as the main commodities exported are rice for Umele and Rice, Banana and Vegetables for Dandi village. Similarly settlements located close to Gujarat boundary and those having tribal dominated areas as expected have insignificant income. Taking the case of Dahanu, Talasari, Vikramgad, Vada, Jawahar and Mokhada it may be noted that out of the total settlements composing of 626 villages have income less than Rs.11,038/- .

Precisely stating, there is definite contrast in income between underdeveloped and developed portions of Thane district. Here government's intervention in progress would be appreciated. Allocation of funds by government should be under serious consideration to those villages that have low revenue.

b) Proportion of Non-Agricultural Workers to Total Population

The development of any region is an attribute to process of tertiarisation. A region characterized by dominance of tertiary & secondary functioning shows higher level of development than an economy with an agrarian base.

Thane shows sharp dichotomy between an agrarian and non-agrarian base. The tribal dominated tahsils show higher proportion of working population as agriculturists. In spite of environmental constraints agriculture is largely practiced, much rudimentary and therefore the economic development is low. Regions with efficient transport network, nearness to urbanized centers and higher literacy level like the coastal areas and patches of Ambernath, Kalyan, Vasai and Ulhasnagar show dominance of working population in the non-agriculture economy. These tahsils have been developed as industrial hubs and therefore provide ample opportunities to working population in service and manufacturing sector.

Composite Indices

a) Physiographic Composite Index

The calculated composite index of physical indicators clearly shows that the disparity increases from the coast to the interior. The

scores of composite index signify inverse relationship. Higher is the score, lesser is the disparity. Therefore, the coastal areas with composite scores more than 10 signify low physiographic composite index and it proportionally increases towards the hilly interior highlands along the longitudinal east. Ruggedness in the topography, heavy rainfall and high drainage density is the physiographic characteristic of the interior Ghat region showing low composite score and as discussed earlier, the plains with certain advantage show high composite index clearly signifying the disparity.

b) Demographic composite Index

The demographic composite Index clearly reveals distinct zones of highly developed, (>15), moderately developed (10-15) and less developed (3-10). (Fig 3) The coastal portions of Palghar, Vasai and Dahanu having favourable demographic factors *i.e.* higher levels of literacy, less proportionate of S.T and favourable gender ratio show higher demographic development. Accordingly Ambarnath, Kalyan and Murbad also classify as highly developed region. Four tahsils viz. Jawahar, Mokhada, Dahanu and Talasari are classified as demographically less developed regions as they are characterised by dominance of tribal population, low literacy rate and un favourable gender ratio. Southern portion of Vikramgad, entire Vada and Bhiwandi are the tahsils of moderate development.

c) Social composite Index

Social composite index measured through health services, road length and educational facilities show high polarisation of high level of development (score >12) in and around the peripheral areas of Ambarnath and Kalyan. (Fig 4) However, there are few pockets sporadically spread over the region. As discussed earlier, the facilities need to be increase as larger parts of Thane district where the scores are average to low social composite Index (< 9).

d) Economic Composite Index

The synoptic view of the region shows that there is large disparity in economic development of the region. The level of economic development decreases from the coast to interior. Expecting a few pocket scattered all over the region, the whole of the coast shows high economic development. (Fig .5) The process of industrialisation and urbanisation has positively spelled over in the rural areas of Vasai, Palghar, Bhiwandi and Ambarnath.

Dismally, the backward tahsils *i.e.* Mokhada, Jawhar and Vikramgad show economic growth (CI 1 - 4). The retarding factors are agrarian economy, largely tribal population and low income/revenue.

e) Composite Index for Development Status

Here the attempt has been made to show overall level of development and disparity in Thane district by taking aggregate scores of Physical, Social, Economic & Demographic aspects.

In earlier part of the paper, each factor was discussed with reference to composite indices and according levels of development were shown. In this section an aggregate of all the indices has been attempted. The scores range from 27 to 63. On the basis of the scores five categories of development

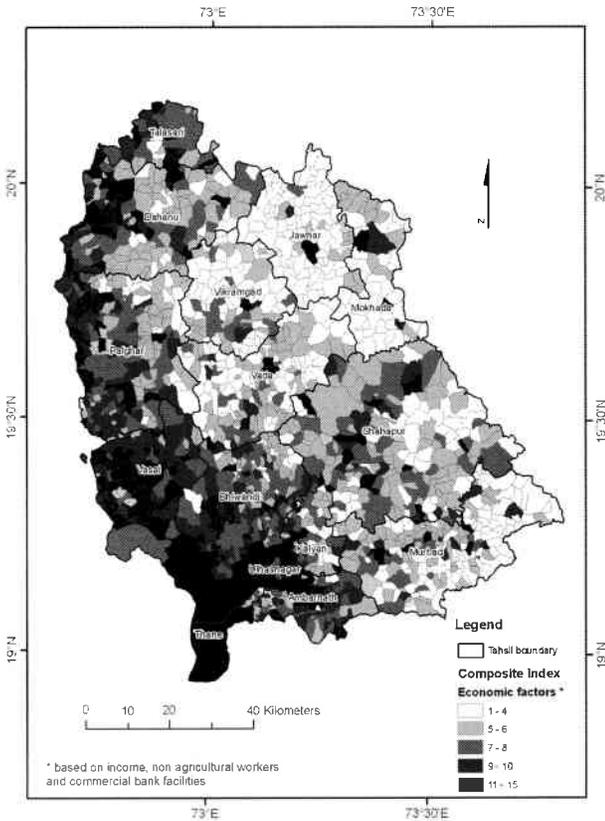Fig. 5: Economic composite index

status are identified. These are as follows 1) very low (< 39), 2) low (40-43), 3) Moderate (44-46), 4) high (47-50) and 5) very high (>51). (Fig 6) Based on this, the coastal zone and shadow zone of Mumbai Metropolitan region *i.e.* entire Ulhasnagar & parts of Bhiwandi and Ambarnath stand out as the highly developed regions. This zone shows positive indicators *i.e.* high accessibility, lowlands, higher percentage of proportion of population in non-agricultural activities.

Moderately developed zone is marked beyond the coastal plain in the midland region and precisely along the NH -3 (Mumbai–Agra)

NH-8 (Mumbai– Ahmedabad) and certain factors that have favored the growth is the accessibility, topography, infrastructural facilities, and positive demographic indicators.

The regions showing low or very low development are seen located in the north and north eastern parts of the district. Talasari, Dahanu, Vikramgad, Vada, Jawahar and Mokhada tahsils have large number of villages in this category. Barring the villages along the NH3, Shahapur tahsil also shows a large number of villages in this category.

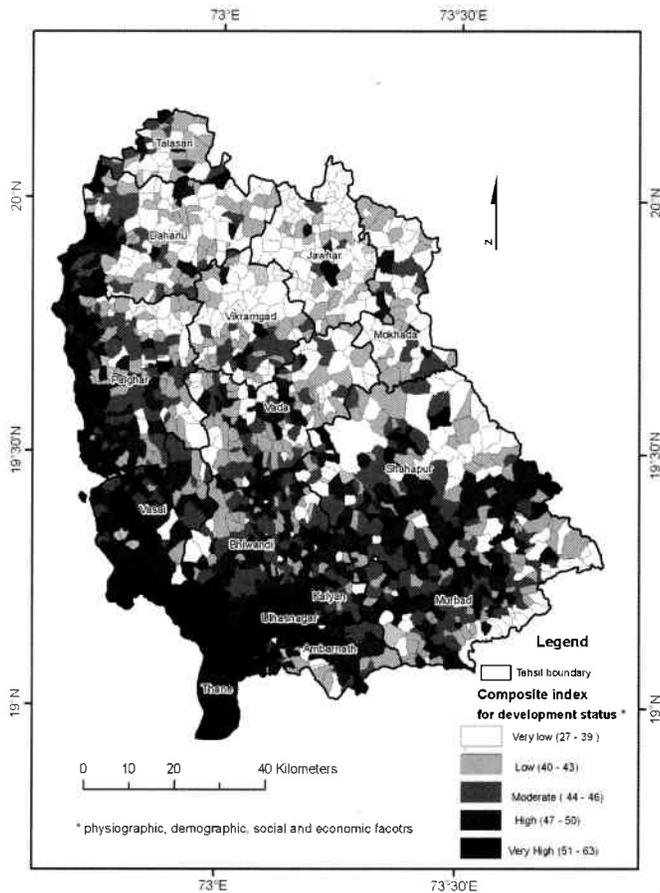Those administrative units that suffer in socio-economic development *i.e.* lack

Fig. 6: Composite index for development status

of transport connectivity, health and low literacy levels, coupled with topographical constraints show low scores.

Conclusion

Thane district is an example of contrasting regional development. The south- western portion viz. tahsils of Thane, Kalyan, Ulhasnagar, Bhiwandi, Vasai and Ambernath form industrially advanced and urbanized region of the State of Maharashtra. On the contrary, Talasari, Jawhar, Mokhada, Vikramghad, Dahanu, Vada and Palghar tashils with maximum are industrially backward, economically underdeveloped and socially isolated. The deprivation of development is not only due to ruggedness of topography but also due to limited population and low demand ; whereas the plains have developed due to their natural and cultural advantage. Therefore any developmental efforts have to be specifically focussed in the deprived regions that are characterised by tribal populace, highland and socio – economic isolation.

Secondly, statistical and cultural base for planning has been weak and therefore it is essential to have a concrete data base to formulate specific action plan. Different sub-regions of Thane are endowed with resources-natural, social and cultural that need to be assessed and harnessed for regional development This area specific development plan holds special importance to economically less developed and socially marginalised groups, like the tribals of Thane. They have not made headway and are waiting on the edge to receive attention for development. Grass root planning with broad base and perspective would pay rich dividends in future.

Thus, the need is to develop strategies that could cater the most depressed region for balanced development. Therefore, in the planning process, government needs to adopt holistic approach, that would be transparent, decentralised and based on people's participatory.

References

Bhattacharya, B.B. and Sakthivel,S., 2004. Regional Growth and Disparity in India. Economic and Political Weekly, (EPW), March 6, Pp.1071-1077.

Bokare, N, 1995. The Art Mart: Commercialization of Tribal Arts. In: Jain .N. and Tribhuwan R.; (Eds.), An Overview of Tribal Research Studies, Tribal Research and Training Institute Maharashtra State, Pune. Pp. 109-113.

Census of India, 1991. District Census handbook: Thane, Part XII –A and B, Series –14,Maharashtra, Government Central Press, Mumbai.

Census of India, 2001. District Census CD-ROM: Thane, Directorate of Census Operation,Govt. of Maharashtra. Mumbai.

Das, T.K., 2002. Convergence Across Indian States: Cross-Sectional and Panel Estimations. South Asia Economic Journal, Vol. 3, No. 2, Pp. 227- 239.

Dholakia, R.H, 2003. Regional Disparity in Economic and Human Development in India. RBI Chair Lecture, IIM, Ahmedabad.

Gazetteer, 2000. Gazetteer of the Bombay Presidency, Thane Places of Interest, Vol. XIV, Government Central Press, Mumbai.

Government of India, 2000. Small Scale Industries Report, The Industrial Potentials Survey of Thane District, Development Commissioner (SSI), Ministry of SSI, Agro and Rural Industries.(Accessed at- http://www.smallindustryindia.com/ publications/ traderep/thane.htm)

Government of India, 2007. Maharashtra Development Report, Planning Commission. Academic Foundation, New Delhi.

Government of Maharashtra, 1982. Maharashtra State Gazetteers: Thane District. Gazetteers Department, Government of Maharashtra, Bombay.

Government of Maharashtra, 1994.General Economic Service, Annual Plan Report : (1992-93). Department of Planning.

Government of Maharashtra, 2005. District socio-economic survey report: 2003-04. Directorate of evaluation and statistics, Regional Office, Konkan Bhavan, Thane.

Government of Maharashtra, 2007. District socio-economic survey report: 2005-06, Directorate of evaluation and statistics, Regional Office, Konkan Bhavan, Thane.

Misra S. and Rao P., 1976. Regional Development Planning in India: A New Strategy. Vikas Publishing House Pvt. Ltd, Delhi. Pp. -205-214.

Nair, K.R.G, 1982. Regional Experience in a Developing Economy. Wiley-Eastern, New Delhi.

Nidagundi, S.R., 2007. Regional Disparities in Urbanization of Gulburga Division in Karnataka State. The Deccan Geographer, Pune. Vol. 45, No. 1 Pp.83-97.

Shaban, A., 2002. Growth and Disparities of Incomes Across States, Man and Development, September, Pp. 31-47.

Wishlade, F. and Douglas, Y., 1997. Measuring Disparities For Area Designation Purposes: Issues foe the European Union European Policies Research Centre, Glasgow. G40LT United Kingdom. Pp. 01-32.

Ziari, K., 2006. A Geographical Study of Regional Disparity in Iran, The Deccan Geographer, Pune. Vol. 44, No.1 Pp. 01-15.

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