

INTRODUCTION

I

Orissa is situated in the east coastal region of the country. Its geographical area is almost 4.74% of India and its population is 36.7 million (2001 census), about 3.57 per cent of India's population. The population density of the state is 236 persons per sq. km. (in 2001), but there is a sharp divide here between the coastal and inland districts (the inter-district coefficient of variation in this respect is of the order of 63.56 per cent, a reflection of a significant differential in the 'carrying capacity' of land). The urbanisation rate, at 14.97 per cent (2001), is the lowest among the major states of India and also there is a very marked inter-district variation (Coefficient of Variation (C. V) : 73.29 % : 2001).

The rate of growth of population of Orissa during the decade 1991-2001 has been only 15.94 per cent as against 21.34 per cent for all-India, and indeed this has been the third lowest growth rate of population among the major Indian states, higher than only Kerala (9.42 %) and Tamil Nadu (11.94%). This has occurred not because of a normal process of demographic transition (as in the case of Kerala and Tamil Nadu), but due to a peculiar demographic regime, namely, a relatively faster decline in the birth rate from a relatively low level on the one hand and a relatively slower decline in the death rate from a relatively higher level on the other.

Table - 0.1

Level of, and Per Cent Change in, Birth Rate between 1986-88 and 1996-98

| States | Birth Rate | | Per Cent Change |
|----------------|------------|---------|-----------------|
| | 1986-88 | 1996-98 | |
| ORISSA | 31.8 | 26.4 | -17.0 |
| Bihar | 36.8 | 31.6 | -14.0 |
| Madhya Pradesh | 36.9 | 31.6 | -14.2 |
| Rajasthan | 34.9 | 32.0 | -8.3 |
| Uttar Pradesh | 37.5 | 33.3 | -11.2 |

Source: Office of the Registrar General, *Compendium of India's Fertility and Mortality Indicators 1971-1997*: based on the Sample Registration System (SRS), New Delhi, 1999, p. 32.

Table - 0.2**Level of, and Per Cent Change in, Death Rate between 1986-88 and 1996-98**

| States | Death Rate | | Per Cent Change |
|------------------|------------|---------|-----------------|
| | 1986-88 | 1996-98 | |
| ORISSA | 12.8 | 10.9 | -14.6 |
| Andhra Pradesh | 10.0 | 8.5 | -15.1 |
| Assam | 12.0 | 9.9 | -17.6 |
| Bihar | 13.2 | 9.9 | -25.0 |
| Gujarat | 10.4 | 7.7 | -26.1 |
| Haryana | 9.1 | 8.1 | -11.1 |
| Himachal Pradesh | 8.9 | 7.9 | -11.1 |
| Karnataka | 8.7 | 7.7 | -11.8 |
| Kerala | 6.2 | 6.3 | 1.3 |
| Madhya Pradesh | 13.7 | 11.3 | -17.4 |
| Maharashtra | 8.5 | 7.5 | -12.5 |
| Punjab | 8.2 | 7.5 | -9.0 |
| Rajasthan | 12.4 | 8.9 | -28.1 |
| Tamil Nadu | 9.6 | 8.2 | -14.6 |
| Uttar Pradesh | 14.1 | 10.4 | -26.4 |
| West Bengal | 8.7 | 7.7 | -11.5 |

Source: Same as Table 0.1, p. 64.

Thus, particularly in comparison to other low-income states, Orissa's birth rate has been much lower and it has also declined the most between 1986-88 and 1996-98 (Table - 0.1). On the other hand, the death rate of Orissa has declined much less than the other low-income states compared to its relatively high level such that, by 1996-98, Orissa's death rate has become very nearly the highest among the major states of India (Table - 0.2)

II

Agro-climatic conditions have a great deal of diversity. The standard classification of the state in terms of agro-climatic zones is four-fold : (i) Coastal Plains (ii) Central Table Land (iii) Northern Plateau and iv) the Eastern Ghats. Regional geographers, however, simplify this further and speak in terms of two agro-climatic regions: Orissa Coastal region (part of the upper Eastern Coastal Plains) and Orissa Highland Region (Singh 1971). The coastal region, in fact the entire East Coastal Plains, had a rich and varied hinterland. From ancient times, the

coastal towns had traded with the Mediterranean traders and the people of Southeast Asia. This hoary maritime tradition is an integral part of Oriya folklore, just as the martial tradition and impeccable temple architecture are.

ORISSA COASTAL REGION

The coastal tracts of Baleswar, Cuttack and Puri are covered with deltaic sediments of the Mahanadi, Brahmani and other rivers, formed in recent times, while there is a narrow strip of coastal alluvium in Ganjam. Coastal alluvium soils are exceptionally fertile and highly valuable for agriculture, especially paddy. The degree of fertility, however, decreases gradually according to the distance from the river.

There are two features of the coastal region, which may be mentioned. One is the coastal wetland ecosystem and the other is the coastal mangrove, including swamps and marshes. The Chilika Lake – the second largest open lagoon (brackish water) in Asia – is the dominant wetland system. It is 65 km. long from northeast to southwest and is wider in the northeast and narrowed only to 8 km. in the southwest. Its area varies between 780 sq. km. and 1,144 sq. km. from the winter to monsoon months. Besides its economic value due to its rich fishery potential, it is known the world over as it attracts migrant birds during the summer months, notably the Siberian cranes, turning the spot into a birdwatcher's paradise. The coastal mangroves consist of variegated flora and fauna and, importantly, act as a natural barrier to tidal ingress.

The Mahanadi, in combination with the Brahmani and Baitarani, forms an extensive alluvial tract stretching from Lake Chilika in the south to Bhadrak (in erstwhile Baleswar district) in the north, 172 km. long and over 80 km. wide. The Mahanadi is subject to heavy flooding – causing extensive damage to life and property, as 94 per cent of the annual total and 95 per cent of the monsoon precipitation of the entire catchment basin are discharged through the Mahanadi delta.

In the coastal tracts, as the general level of the land is low, rural settlements have been established over high levels along the embankments which provide safety from floods. Sometimes piling up earth, dug from the backyards of houses artificially raises these high mounds. These are common in the Mahanadi and Subarnarekha-Budhabalanga deltas where

almost every house has got a pond (*pokhari* or *gadia*) at backyard, which provides for fishing. In the Lake Chilika coast most of the temporary huts are fishermen's settlements. In the irrigated and flood protected tracts, the density of settlements is high and settlements are of large size, often located along the canals and their distributaries. However, in general, habitations are seldom compact.

The long-term average rainfall from the Southwest monsoon is of the order of 1500 mm. (60 inches), with moderate variability (25%-30% coefficient of variation). The moderately high variability is due to the fact that rainfall is associated with depressions from the Bay of Bengal, which are often erratic. Areas of somewhat low variability lie in the coastal plains of Ganjam and Puri.

During the post monsoon and early part of the Northeast monsoon, storms and depressions originating in the Bay affect the weather of much of coastal Orissa. Some of those depressions intensify into severe cyclonic storms with strong winds (80-140 km. per hour) and squalls giving heavy rainfall to the region and disrupting communication and causing loss to property and standing crops.

In the Orissa coastal region, cereals predominate the cropping pattern and among cereals, rice is dominant, making it virtually a monoculture region. There are three types of paddy that are usually grown – *Sarada* (**Kharif**) which is best suited for the low lands subject to flooding, *Biali* (Autumn) thrives best in *Sarada* lands which are slightly elevated and free from frequent flooding and *Dalua* (Summer paddy) grows well in marshy lands reclaimed by suitable drainage methods in areas subject to flooding and harvested before the onset of the monsoon.

Though paddy provides almost a monocultural landscape in several parts, it is grown in a two-crop combination with pulses, oilseeds or jute and also in three and four crop combinations with the same crops. The monocultural region lies in the northern and southeastern quarters and the central coastal belt. The two-crop combination covers an extensive tract of the middle delta. The four-crop combination region is concentrated in the Mahanadi - Luna and Devi-Prachi doabs.

The south Baleswar plain is dominated by cereals while the entire Mahanadi, Brahmani and southern portions of Baitarani delta form the most important diversified crop region with distinct sub-zones. Throughout the zone, pulses, next to paddy, are extensively cultivated, whereas in the core, sugarcane, jute and oilseed along with other cereals are to be widely met with. The Rushikulya plain is also important for pulses.

ORISSA HIGHLAND REGION

The Orissa Highland Region comprises seven districts, which have been carved out of the merger of the various princely states in the post-Independence period. The region has rugged, undulating topography and the aboriginal races, mainly the Bhuinyas and the Gonds were the main inhabitants of this forest-clad region.

This region is mainly drained by the Mahanadi, the Brahmani and the Baitarani river system, which cuts wide valleys across the highland. The region is an interesting complex of denuded hills, plateaus, sharp ridges and mature valleys. Physically, the region may be broadly divided into three distinct units, each with a different physical character : (i) northern upland; (ii) the erosional plains of Mahanadi valley, and (iii) southern hilly region of Eastern Ghats.

The tropical monsoon climate of the region is characterised by high temperature in most parts of the year and medium to high annual rainfall. There is a considerable extent of natural vegetation in this region. Besides the abundant growth of bamboo along the Eastern Ghat tracts and other low-lying areas, sal forest also occurs extensively throughout this region. The forests yield a variety of products like kendu leaves, tusser cocoons, lac, myrobalans, cane, arrow-roots, *mahua* flowers, broom grass, *sabai* grass, gums, resin, khair and sunari bark which provide livelihood support to the original inhabitants of this region.

The predominant type of soil found in this region is lateritic, which is not particularly suitable for agriculture as it is poor in nutrients, but it is good for construction purpose. The Central Table Land comprising the Mahanadi – Tel basin as well as the whole of the northern portion of the region from Sundargarh to Mayurbhanj contains red soil which is also poor for plant life. Besides, brown soil occurs in patches over a portion of Sambalpur and Kandhamal, where there is dense growth of bamboo and various trees of moist deciduous type including sal. Black cotton soil similarly occurs in patches and to a limited extent in the central belt of the

region. The soil is rich in potassium and magnesium but poor in nitrogen and phosphorus. It is suitable for growing *Rabi* crops like wheat and pulses.

In addition to forest resources, all the major mineral deposits are concentrated in this region. The density of population in this region is extremely low and roughly corresponds to the fertility of agricultural lands; it is the lowest in the southwest and eastern parts of the region. The river basin contains some of the fertile parts of the state, mostly in Bolangir, Sambalpur, and Dhenkanal districts. The Mahanadi-Tel basin in the northwestern part of the region is the most populous and agriculturally prosperous part of the area with compact settlements. The isolated hills rising abruptly from the plains have mostly scattered and semi-compact rural settlements.

Among the crops, paddy is most important. It is a staple cereal and is raised by the tribal people as a cash crop also. While the physical yield is very low the quality of rice produced is very fine in the western part though it is coarse in the eastern areas. Rice is most widely cultivated in the river valley; millets are cultivated in drier interior parts. Gram, *mung*, *biri* (black gram), *kultha*, pea, mustard, linseed, groundnut, jute, mesta, sugarcane are other miscellaneous crops. In general, in this region, there is a highly diversified cropping pattern, which minimise risk arising out of moisture stress.

III

Given the specific agro-ecological conditions (as outlined above), and the nature of political control over the present-day Orissa (wherein no more than one-fifth of the state was under external political power) – the Mughals, the Marathas and the Britishers - there was an in-built economic and social diversity between the coastal and the highland regions. In addition, a large indigenous population also gave rise to a cultural divide.

Partly because of its geography, the coastal region forged well ahead of the highland region in infrastructural development. Certain natural advantages (such as superior quality of soil) coupled with irrigation facilities in the coastal deltas made possible a certain degree of agrarian dynamism. On the whole, the unevenness of development has persisted and perpetuated – particularly in respect of infrastructural development – in the post Independence period.

Against this backdrop, the developmental challenges for the State are strong. At the core lies the issue of sustainable livelihood. The present report seeks to give a broad-based account of the status of natural resources and the extent of degradation of certain resources (which are of an open access as is the case with forest resources) which provide critical livelihood support to the tribal people living on the fringe of forests (Chapter 1). The state of infrastructural development, stressing the inter-district disparities and the quality of infrastructural services are discussed next (Chapter 2). The growth performance, pattern of structural change and certain key characteristics of the workforce are examined in Chapter 3. Agriculture remains the backbone of the economy, as more than 80 per cent of the workforce is engaged here. Chapter 4 analyses the performance of agriculture, both over a long time-span and across districts. Chapter 5 discusses forest resources of the state and its management. Though agriculture remains the mainstay of the economy, the industrial structure, performance and prospects are examined in Chapter 6, as the state, at least on the face of it, has certain comparative advantages in the form of abundant raw materials (particularly for metallurgical and non-metallic mineral based industries as well as forest resource-based industries), and potential capacity to produce cheap hydel and thermal power. The changing status of the most important traditional industry of the State, namely, the handloom industry is discussed in Chapter 7. Chapters 8 and 9 examine the conditions of poverty and social sector development which are major challenges in their own right in that they call for appropriate public policies which cannot be addressed through economic development alone.

Financing of social sector development including safety net programmes is an important issue, just as financing of infrastructural development is. Faced with acute financial crisis the State has started taking several initiatives for fiscal restoration. Chapter 10 looks at some major dimensions of the fiscal crisis. As a case study of fiscal-cum-economic restructuring, some of the innovative reform initiatives in the power sector are critically examined in Chapter 11.

In the context of Orissa, the word 'tourist potential' is often used, and not without reason. Given the State's heritage, the long coastline having several beautiful beaches, the famous Chilika lake which can become an international tourist attraction all by itself, wildlife sanctuaries (now existing and many more that can be developed in certain parts of highland Orissa), tourism is certainly an area which can change the image of Orissa. Chapter 11 looks at this potential, based on past trends.

Partly because of its geography (the coastal region is prone to cyclonic storms during the onset of the Northeast monsoon, as observed earlier), the riverine hydrology is such that concentrated precipitation often exceeds the discharge capacity of the three major rivers of the State. Further, a good portion of the northwestern part of the State (i.e., Kalahandi and part of Balangir districts) lies in the rain-shadow region of the Southwest monsoon. Thus cyclonic storms, floods and drought conditions prevail in different parts of the State simultaneously. Chapter 13 is devoted to the issue of disaster management.

The indigenous tribal population constitutes nearly one-fourth of the State's population. Whatever developmental activities have taken place have more or less bypassed them and they remain marginalised and outside the mainstream. This is a major developmental challenge both in terms of economic growth and, more importantly, socio-cultural perspective. An overview of major issues relating to the tribal population is provided in Chapter 14.

Provision of certain basic public services is a citizen's right in any democratic country. Based on village-level information and combining structured questionnaires with participatory methods, Chapter 15 provides an assessment of these services in respect of people's awareness of them, and access to and quality of such services.

Finally, Chapter 16 concludes with certain policy recommendations and strategic vision statements taking into account desired objectives in respect of certain economic and social goals.

REFERENCE

Singh, R.L. (ed.) (1971). *India : A Regional Geography*, Natural Geographical Society of India, Varanasi.