CENSUS OF INDIA

REGIONAL DIVISIONS OF INDIA -A CARTOGRAPHIC ANALYSIS

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GOA, DAMAN & DIU

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Maps included in this volume are based upon Survey of India map with the permission of the Surveyor General of India.

The boundary of Meghalaya shown on the map of India is as interpreted from the North-eastern areas (Reorganisation) Act, 1971, but has yet to be verified (applicable to India map only).

The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line (applicable to India map only).

गृह मंत्री
भारत
नई दिल्ली-११०००१

HOME MINISTER
INDIA
NEW DELHI-110001
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FOREWORD

Experience has taught us that planning has to be related to the situation in the field in order to better respond to local aspirations and for better utilization of local resources. A lot of planning has, of necessary, to be for larger areas, encompassing an agglomeration of administrative units. Even such macro planning has, in order to be realistic, to be cognisant of the realities at the micro level. Correspondingly, such plans for bigger areas and involving larger outlays have also to be administered from a suitably high threshold of administrative authority and by a wide network of administrative hierarchy.

Nevertheless, there is a whole corpus of activities which can be and are, in fact, better planned, conducted and financed at the lower or local levels. I think the essence of decentralized planning, which for operational convenience is, essentially, District level planning, i.e. planning for the District and its constituent smaller units at those levels, consists of just this : allowing what is best taken care of at the local level to be so taken care of.

But, all planning, from the national to the sub-micro level, does need, as already stated, a careful study of the situation in the field. And this study also calls for a knowledge of the natural regions, demarcated as per the various physiogeographic characteristics, for a proper appreciation of the planning and developmental matrix and for suggesting the appropriate spatial unit for local and higher area planning.

From this point of view, the present study, done by the Indian Census, is extremely useful as it provides a framework, a backdrop and also a ground-plan on which other studies and data-sets can be built. I congratulate Shri Vijay S. Verma, Registrar General & Census Commissioner, India, Dr. B.K. Roy, Deputy Registrar General (Map) and their colleagues for this fine and timely series.

(BUTA SINGH)

PREFACE

Regions can be carved out with varying criteria for varying purposes. Basically, however, we could, perhaps, distinguish between natural regions-areas which nature intended to be or marks out as separate, homogeneous units-and human intervention regions-areas which have to be or are treated together for different purposes, with varying degrees of consideration for the natural regions.

Thus, special purpose regions may or may not coincide with natural regions. Administrative units represent special purpose regions of a kind and their boundaries, too, may or may not be in conformity with those of natural regions.

But there are further elements making for complexity, even confusion : there are regions within regions--there may be fields with different types of soil calling for different types of treatment even within a village--and different natural yardsticks or criteria may not always converge and coalesce to yield natural regions valid from the point of view of each of the criteria considered or used. Thus, ground water availability and soil texture may not necessarily indicate the same delineation; in theory an area may be thickly wooded and, in reality, quite denuded.

And then comes the final heartbreak for the region-delineator : all the factors and manifestations of nature may point in one direction but the perceptions and the aspirations of the people inhabiting that region may desire something else : nature may cry out for afforestation, rather reafforestation; the people may want to have more and more area under a marginally remunerative agriculture.

The question then arises : why then try to carve out natural regions?. How valid and how usable are they going to be?

As in most areas of human endeavour, no one can hope either for totally foolproof delineation or immediate and whole hog adoption thereof for purposes of administration and development planning. And yet, all such exercises, should, I think, be welcome as contributive to the filling out of the complex scenario which serves as the essential backdrop for the formidable task of development planning in India to which a new dimension and fresh urgency have been added by the current, renewed emphasis on local area planning.

This study of ours seeks to take the work of delineation to reaches lower than hitherto attempted, mutating Districts in terms of natural regions, with the village as the constituent unit of each region. One could, of course, go still lower, carving out regions within Blocks, Taluqs or Thanas, may be with hamlets as the constituent units, and by using the appropriate fine-edged criteria for such sub, sub-micro delineation. Obviously, however, such a study will call for a staggered approach and a much deeper acquaintance with the situation on the ground.

Pending this, the present study which covers the whole of India and posits a scheme comprising of four levels of delineation is, I think, not an inconsiderable step forward and we may not be wrong, I hope, in deriving some satisfaction from its accomplishment. The Census of India is so multi-faceted and so prolific in its output that some aspects of its corporate personality can go at times un or under recognized. One such aspect is cartography. Among other things, I hope, the present series will lead to a better appreciation of the scale and variety of our cartographic output.

The work has been done as a Plan scheme so graciously and thoughtfully sanctioned by the Planning Commission. The foundations of the work were laid under the able stewardship of my predecessor Shri P. Padmanabha. It has been my privilege to steer the work to completion through a time-bound programme. Dr. B.K. Roy, Deputy Registrar General (Map), is one of the stalwarts who have made the Indian Census what it is. This project owes a great deal to him and I have a feeling that he, too, is going to cherish this association. This is not to forget the contribution made by a whole band of able and dedicated officers and cartographers of various ranks at the headquarters and in our Directorates. This contribution is being acknowledged separately. Shri B.P. Jain, Deputy Director of Census Operations, has ensured speedy printing.

We have been extremely fortunate in as much as Hon'ble Shri Buta Singh, Home Minister of India, has always been able to spare time for Census-related matters even though the claimants for his attention have naturally been innumerable. By kindly consenting to contribute a perspicacious Foreword to this series he has deepened the debt of gratitude the organization owes to him. As indicated by him, a follow up project could, perhaps, take care of compiling and presenting data-sets, comprising of demographic and other parameters, in terms of the regions herein presented.

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New Delhi
2nd of January, 1989

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PART-I

REGIONAL DIVISIONS OF INDIA —A CARTOGRAPHIC ANALYSIS
GENERAL NOTE

The regional spatial patterns, variations of resources, heterogeneous physiogeographic factors and problems in development bring out the necessity for a regional approach to planning. Delineation of physiogeographic regions of a country of sub-continental size like India with an area of 3,287,263 km^2, extending between Latitudes 8°4'28" and 37°17'53" North and longitudes 68°7'53" and 97°24'47" East and having a great range of geographic environment, is a gigantic task. During the past 30 years, the macro level planning at the national level and meso level planning at the state level have been duly emphasised. Micro level planning needs, perhaps, to be further emphasised. For this to happen, one requirement consists of homogeneous regions, with natural boundaries, forming viable units of planning.

Thus, there was a need to delineate micro regions to suit the requirements of micro level regional plans within the frame work of the national plan. To achieve this end, we need micro regions which are valid on physio-geographic considerations and also definable in terms of administrative units and boundaries in order to facilitate plan formulation and plan execution. For carving out such natural regions, the following considerations, inter alia, are to be kept in view:

i) contiguous geographical area,
ii) homogenous administrative machinery capable of formulating and implementing integrated area plans,
iii) reliable statistical data base,
iv) existence of nodal regions; and
v) amenability of the natural boundaries to marginal adjustments so that the former, may, by and large, conform to administrative boundaries at given points of time.

In India, the district is the major universal administrative unit below the state level. The administrative boundaries of the districts usually, however, cut across those of the homogeneous natural regions through some district boundaries do coincide with the natural sub-regional boundaries and most of the districts have nodal regions. In cases of extreme heterogeneity however, we may have to think of adjustments in such district boundaries to suit the sub-regional planning to the extent possible. This kind of adjustment was worked out methodologically by V.L.S.P. Rao and L.S. Bhat for the old Mysore state. Also, at the district level, we have an administrative set up which is competent to formulate and implement sub-regional plans. Moreover, a reliable statistical data base (both Census and non-Census) is available at the district level for the purposes of sub-regional planning.

The Earlier Efforts

In regional planning of one type or the other, the delineation of proper regional boundaries has always remained a rather difficult task. A number of schemes for delineating natural regions in India have been put forward by scholars from time to time during this century.The first attempt was made by T.H. Holdich in 1904. He made a very brief and sweeping generalisation and formed rather broad geographical zones of India on the basis of geological information only. Later, during the 1921-31 decade regional delineations were done mostly from the point of view of geological structure and stratigraphy. During 1922-24, L.D. Stamp produced a more substantive and well known work. Stamp adopted Physiography and structure at the primary level, and climate for the second order regions. He divided the country into 3 primary or macro level regions and 22 sub-regions and designated them as 'natural regions'. Almost simultaneously, but independent of Stamp's work, J.N.L. Baker, following the work on natural regions initiated by Wood, proposed another scheme of natural regions. It was in close agreement with Stamp's regional scheme. Later on, M.B. Pithawala, Kazi S. Ahmad and O.E. Baker also proposed their schemes of regional divisions. O.H.K. Spate gave a more comprehensive treatment to this scheme. He was in general agreement with the schemes proposed by Stamp and Baker. He divided the sub-continent into three paramount macro level regions on the basis of geological structure. The regional scheme proposed by Spate is empirically derived. He divided India into 35 regions of the first order (under the three macro regions excluding the islands), 74 of the second order with 225 sub-divisions.

The traditional divisions of the country into mountains, plateaus and plains, and further regional division as envisaged by Stamp and later on improved by Spate provided a base for the study of regional physical conditions. During 1931-1941 the regional studies so developed could not be elucidated or enlarged mainly due to the politically unstable conditions of the sub-continent. M.W.M. Yeatts in the General Report of Census of India, 1941, proposed a broad division of the country into four regions demarcated according to economic and geog-

raphic principles. However, it was only after 1951 that with the help of more elaborate geological surveys and geographical mapping, by foreign as well as Indian geographers, the work on major natural regions could be reoriented. The 1951 Census of India report gave considerable impetus to the progress of studies of natural regionalisations as for the first time the Census data were interpreted in geographical context in some details. The map of major natural regions of India of 1951 Census was rather sketchy in character. However, it served the purpose well and was laudable for its time considering the resources then available to the Census Organisation. Subsequently, at the time of the 1961 Census, more maps and ideas from foreign as well as Indian geographers were obtained in carving out the natural regions of India for development purposes. S.P. Chatterjee divided India on the basis of physiography and geological structure. A.Mitra, grouped various districts of India into four categories on the basis of their development levels. Late (Miss)P.Sengupta suggested a scheme of Geographical Economic Regions of India which was utilised in the Census of India monograph entitled "Economic Regionalisation of India, Problems and Approaches" and Census of India Atlas of 1961. The basis for this classification was mainly in the works of Spate and Chatterjee as well as in those of the previous scholars referred to above.

However, all these schemes proposed by the various scholars did not provide a base for mapping and for statistical analysis of the Census data at sub-micro level. They did not also provide precise boundaries or relate the regions to administrative boundaries. In case a scheme was based on the district as the basic unit, as was the case with that proposed by Mitra and Sengupta, it did not take into consideration the intra-district details. The subsequent availability of fairly intensive data, specially on the distribution of soils, forests, geological formations, climatic conditions and large number of maps produced by various national and international organisations, encouraged B.K. Roy to revise the then existing frame work of natural regions. A map of India showing Physio-geographic Regions was included in the National Volume of Census Atlas, 1971 wherein three tiers of regional boundaries (Macro.Meso and Micro) have been precisely adjusted with the district boundaries. The important materials consulted for revising the scheme were the maps published by the Geological Survey of India, Chief Soil Survey Office of the Indian Agricultural Research Institute and the book, 'India - A Regional Geography' edited by R.L. Singh.

The Present Study

The above work was welcomed by scholars, geographers and planners both in India and abroad. To further refine such delineation and also to get it done on a comprehensive scale, the Government of India sanctioned a plan scheme to the Census Organisation on "Regional Divisions of India - A Cartographic Analysis". It aimed at working out a viable grouping of Census villages and towns on a large scale map keeping in view their physio-geographical characteristics in order to bring out viable homogeneous regions at the sub-micro level within the districts. Broadly, the physio-geographical factors which have been kept in view while undertaking this exercise are (i) Physiography, (ii) Geological structure, (iii) Forest coverage, (iv) Climatic conditions and (v) Soils.These sub-micro regions have been further pulled up on uniform scale to provide a framework for mapping and cartographic evaluation of Census as well as non-Census data to enlarge the scope of the Census Atlases of the country and also to help in the interpretations of population data in terms of sub-micro regions which are physio-geographically homogeneous in character and have similar problems and prospects requiring uniform application of planning strategies for better utilisation of resources and for provinding amenities to the inhabitants. Since each sub-micro region has been clearly defined in so far as its rural and urban constituents are concerned, the demographic characteristics and other statistics can be generated for the past Censuses also to the extent to which village-wise/town-wise data are available. The sub-micro regions have been delineated within the district. In case the boundaries of the district experience any change in future, due to administrative or any other reason, the required scores can be obtained by compilation of data as we know their constituent units. The sub-micro regions of the districts will play an important role in the implementation of the plan at the grass root level within the framework of the state plan which, in turn, is a part of the overall National plan. Agricultural development in India is dependent upon the regional approach because of wide areal spread and the resultant contrasts in cropping patterns arising mainly from the regional variations in physical conditions. Since the landuse pattern should be adopted as per physical conditions of the region, the demarcation of physio-geographic regions will help in the long-term planning for the country. It is hoped that this scheme, the first of its kind in the history of the Census in India, besides enlarging the scope of Census Atlases, would serve as a useful framework for administrators, planners, researchers and other data users.

The Procedure Followed

The procedure for delineation of the sub-micro regions encompassed the following steps and considerations :

Since the aim was to delineate sub-micro regions within

the district, the number of sheets covering the areal spread on standard topographical sheets either on 1:50,000 or 1:250,000 scale, as available, were consulted. These sheets were mosaiced to ascertain the boundary of the district concerned. In case of change in the district boundaries between the 1971 and 1981 Censuses, the updated map of the district as per 1981 Census was consulted. Similarly Tahsil/Taluk/P.S./C.D. Block/ Circle boundaries were reoriented. As the second step, the villages alongwith their Census location code numbers were marked on the topographical sheets for evaluation of the environs of the group of villages with reference to the physical details. The delineation of sub-micro i.e., the fourth order regions followed. In this exercise physio-geographical details of contours, drainage, spot heights, bench marks, watersheds as well as the distribution of high land and low land (land levels in broader perspective) were examined. This gave further suitable background for the delineation of a group of villages in one viable unit. Simultaneously, names were assigned to particular zones on the basis of major and minor rivers/rivulets, names of mountain ranges, forests or on the consideration of bigger Census villages and popular geographic names of local importance which may be acceptable in view of the regional geographical pattern of the particular region. At times one could feel that the contours or drainage designs are so complex as to complicate geographical thinking for the regions. In such cases, drainage patterns were worked out separately to ascertain their alignment in the formation of sub-micro regions. similarly, due to the complexity of contour lines on topographical maps, profiles were drawn to arrive at a particular conclusion whether the physio-geographical landscape of the area was consistent with reference to valleys or rivulets of the regions at higher altitudes for zoning of the sub-micro regions. This method provided a decision making criterion to streamline the regions.

While operating on the above system, step 3 required the consulting of maps on geology to further streamline the region-forming factors in the delineation of sub-micro areas. Where the micro relief and the micro physiographic elements on such consideration corresponded fully, the viable region in the district gave a precise zoning. Further, the forest spread on the maps helped to reorient the sub-micro regional boundaries. In addition, rainfall (isohyetal) maps also helped in the delineation of these boundaries. Thus, all the factors as envisaged in the programme have been synthesised judiciously and to the extent possible to carve out the sub-micro regions within the districts throughout the country.

Code Structure for the Regions and the Scheme of the Contents

The map 'Regional Divisions of India' included in this volume depicts 3 digit codes. The first digit stands for the macro regions, the second digit for the meso regions and the third for the micro regions. The four macro regions have been numbered as : the Northern Mountains (1), the Great Plains (2),the Deccan Plateau (3) and the Coastal Plains and Islands (4). In the 3 digit code 2.1.1 on the map, the first digit (2) stands for the macro region - the Great Plains, second digit (1) for the meso region - the Punjab Plain and the third digit (1) stands for the micro region - Ravi Beas Inter-fluvial Plain. In this frame, 4 macro, 28 meso and 101 micro regions are outlined for the country and the same have been briefly described in the later part. Within this frame of micro regions, sub-micro regions have been delineated within the district under this scheme. These sub-micro regions are given 4th digit code and this 4th digit has been repeated, district-wise, from 1 to the number of sub-micro regions in the district.

After finalization of the sub-micro regions and their code numbers, list of villages and towns were prepared for each sub-micro region and basic data pertaining to area and population were generated. In addition, some physio-cultural characteristics are also highlighted. Part II of this volume incorporates brief description of physio-cultural aspects supplemented by maps and basic data at state level while Part III gives information for each sub-micro region within each district of the state.

It will be seen that the tables included in Parts II and III approach the configuration from the point of view of the administrative unit i.e., State/District/Taluk/P.S./ C.D Block, Village. In other words, these tables give the position of these units with reference to the natural regions in which they fall, as determined at these respective levels. It will be perceived, however, that the same region or a similar region under a different name may be transcending the administrative bounderies of states and districts and there may be a legitimate enquiry seeking the total geographical spread of the same region or similar regions across and beyond such administrative boundaries but in terms of such administrative units. For purposes of planning it is as necessary to know as to what natural regions comprise a state or a district as to know the position from the opposite point of view as to what state and district or segments thereof comprise one region or similar adjoining regions.

To serve this latter purpose, we have added to each state/union territory volume an appendix which presents administrative constituents of similar regions which extend beyond district and state boundaries. In the case of the adjoining state/union territories, this excercise is, naturally, restricted to the limits of region/regions transcending the

boundaries of the concerned state/union terriory to which a particular volume in this series is devoted. For getting fuller details with regard to these "extended areas" in terms of their constituents the reader is invited to refer to the volumes dealing with the concerned states/union territories.

BRIEF CHARACTERISTICS OF REGIONAL DIVISIONS

1. THE NORTHERN MOUNTAINS

The Northern Mountains corresponding with the Himalayan zone facing the northern frontier of the sub-continent comprise Jammu and Kashmir, Himachal Pradesh, Northern Uttar Pradesh, Sikkim, Northern West Bengal, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Meghalaya and part of Assam. The Northern Mountains have been divided primarily according to the geology and forest cover. The relief and drainage however, have also played a dominant role in establishing various sub-divisions within the Himalayan zone. This macro region has been divided into 5 sub-regions (meso) and 24 divisions (micro) on the basis of above mentioned factors.

These sub-regions are :

1.1 Jammu and Kashmir Himalaya

This sub-region covers the entire Jammu and Kashmir and is further divided into following three divisions (micro regions) :

1.1.1	Ladakh
1.1.2	Kashmir Valley
1.1.3	Jammu

In these divisions the relief presents remarkable variations. The grouping of the districts has been made in conformity with the geological structure, elevation and forest cover. Other factors do not play signigicant role in delineating these divisions. However, sub-montane soil (Podsolic) is dominant in the Kashmir Valley and brown hill soil is seen in the southern part of Jammu and Kashmir. Ladakh region is fully predominated by mountain meadow soils as well as glaciers and eternal snow. Forest is mostly alpine type in the northern regions and sub-alpine in the southern regions.

1.2 Himachal Pradesh Himalaya

Himachal Pradesh state entirely falls under this sub-region. It has been further divided into the following 4 divisions:

1.2.1	Northern Himachal Pradesh
1.2.2	Trans-Himalayan Zone
1.2.3	Central Himachal Pradesh
1.2.4	Southern Himachal Pradesh

Geologically, it is almost similar to that of Jammu and Kashmir Himalaya. However, this sub-region is characterised by marked variations in the relief features, mainly on the consideration of micro-relief and little variations in soils.

1.3 Uttar Pradesh Himalaya

This sub-region has been divided into three divisions, viz.

1.3.1	Kumaon Himalaya – North
1.3.2	Western Kumaon Himalaya, Siwalik and Doons
1.3.3	Kumaon Himalaya – East

In these areas, the elevation has been taken as the main basis for classfication. Geology and forest have also been taken into account. The soils are mostly of brown hill type in the sub region with marked differences in the southern Siwalik zone, locally known as 'Tarai' and 'Bhur' soils. The Kumaon Himalaya—North has important peaks like Nanda Devi, Kamet and Badrinath. The Ganga and the Yamuna have their sources in this region. The Western Kumaon Himalaya, Siwalik and Doons cover Dehradun, Garhwal and Tehri Garhwal districts and have an elevation of 900 to 1000 m. The Kumaon Himalaya—East which comprises Almora and Nainital districts is marked with some narrow valleys on high altitudes.

1.4 North Eastern Himalaya

This region includes 4 sub-regions extending over Sikkim, Darjiling and 'Duar' areas of West Bengal and Arunachal Pradesh. The Darjiling section of the Himalayan zone rises abruptly from 'Duar' plains of West Bengal. Three high peaks namely, Siwalik Phu (3630 m), Sabargam (3546 m) and Phalut (3596 m)are located in this section of Himalayan zone. Similarly, the loftly range of about 5000 m with intermittent summits are the chief charcteristics of Arunachal Pradesh. Weather is damp and cold and the forests are dense. Annual rainfall ranges between 250 and 350 cm. The drainage is in evolutionary stage and immature. This region has been divided into 4 divisions as below :

1.4.1	Sikkim Himalaya
1.4.2	Darjiling Himalaya including 'Duars'
1.4.3	Western Arunachal Pradesh Himalaya
1.4.4	Eastern Arunachal Pradesh Himalaya

1.5 Eastern Hill Zone

This region represents the eastern section of Himalayan zone extending, over Nagaland, Manipur, Mizoram,

Tripura, part of Assam and Meghalaya. This region is interspersed with plains especially in Silchar, North Cachar Hills and adjoining areas. Topographically it is rugged. The slopes are quite steep. Over the Tripura region the topography has interspersed ranges and valleys. Consequently communication is difficult.

The Khasi and Jaintia Hills in Meghalaya is like a table land. Geologically it is an eastward extension of the massive block of the peninsular region broken by the alluvium of Bengal basin. In its long geological history this region is said to have submerged during Mesozoic and early Tertiary times due to marine transgression which was further uplifted at the time of Himalayan orogenesis.

The region has been divided into 10 divisions as below :

1.5.1	Nagaland Hills
1.5.2	Manipur Hills
1.5.3	Imphal Valley
1.5.4	Hill Zone
1.5.5	Tripura Plain
1.5.6	Tripura Hills
1.5.7	Cachar Plain
1.5.8	Karbi Anglong & North Cachar Hills
1.5.9	Eastern Meghalaya
1.5.10	Western Meghalaya

2. THE GREAT PLAINS

This is the most important zone in view of human concentration and it stretches from Rajasthan via Punjab, Haryana, Uttar Predesh, Bihar, West Bengal to the eastern section of Brahmaputra Valley. It is an enclosed vast basin of various small and large rivers separated by 'alluvial divides'.

The western section comprising arid Rajasthan, Punjab, Haryana, Chandigarh, Delhi and Western Uttar Pradesh is slightly higher in elevation over 150 m, than the eastern section of the plain. However, according to elevation, this plain shows three levels of relief configuration, between 0 to 75 m in the eastern section, 75 to 150 m in the Central Uttar Pradesh and 150 to 300 m in the western zone with the exception of small zone in eastern Jaisalmer district where the elevation is below 75 m. Geologically the whole region is made of alluvium brought by rivers from the Himalayas and this is a gradational plain formed during Pleistocene and Recent geological times. On the basis of drainage, soils and rainfall, the region has been divided into 7 sub-regions and 24 divisions :-

2.1 Punjab Plain

In this plain 4 divisions as listed below have been delineated on the basis of soils and rainfall. Soils are alluvial with variations of 'banger' and 'Khadar'. Agriculturally, this is the most important region.

2.1.1	Ravi—Beas Inter-Fluvial Plain
2.1.2	Hoshiarpur—Chandigarh sub-montane Plain
2.1.3	Beas—Satluj Doab
2.1.4	Punjab Malwa Plain

2.2 Haryana Plain

In this region which also includes Delhi, three divisions have been delineated on the basis of topography and distribution of soils which are sandy and calcareous.

2.2.1	Eastern Haryana Plain
2.2.2	Western Haryana Plain
2.2.3	Southern Haryana Plain

2.3 Arid Rajasthan Plain

This meso region received an average rainfall of less than 40 cm. It has been divided into four micro regions mainly on the basis of distribution of rainfall which are:

2.3.1	Ghaggar Plain
2.3.2	Rajasthan Bagar
2.3.3	Extremely Arid Tract
2.3.4	Luni Valley

2.4 Upper Ganga Plain

This is the vast stretch of the Ganga Plain where the rivers are playing important role in carrying out definite influence area of their own. In general, the soil is alluvial but variations have developed on the upland and the low land areas. The upper Ganga Plain has been divided into 2 divisions, viz.

2.4.1	Northern	Upper Ganga Plain
2.4.2	Southern	Upper Ganga Plain

2.5 Middle Ganga Plain

This is the transitional zone between the Upper Ganga Plain and the Lower Ganga Plain and has been divided into two divisions, viz.

2.5.1	Middle Ganga Plain—West
2.5.2	Middle Ganga Plain—East

2.6 Lower Ganga Plain

The Characteristics of the landscape in the Ganga

Plain change abruptly in Lower Ganga Plain extending over Bihar and West Bengal due to high rainfall. It has an elevation of below 75 m and has been further divided into following six micro regions :-

2.6.1 North Bihar Plain
2.6.2 South Bihar Plain
2.6.3 Barind Tract
2.6.4 Moriband Delta
2.6.5 Proper Delta
2.6.6 Rarh Plain

2.7 Brahmaputra Valley

The Brahmaputra Valley presents typical geographical features. In general, the valley has an elevation of below 75 m. The estern section is more undulating.. Rainfall is very high and river pattern is braided in various sections of the Brahmaputra. The tributaries joining the main river Brahmaputra discharge large amount of water during the monsoon period and hence cause floods in the valley region. It is also covered with luxuriant vegetations throughout. Hence, on these basis this valley has been divided into three divisions with definite characteristics.

2.7.1 Western Brahmaputra Valley
2.7.2 Central Brahmaputra Valley
2.7.3 Eastern Brahmaputra Valley

3. THE DECCAN PLATEAU

The Deccan Plateau represents the whole of South Indian tableland. From the point of view of geology, the whole region is composed of metamorphic rocks of pre-Cambrian age. Considering drainage, elevation, forest cover, soils and rainfall, sub-divisions were delineated. In general, the elevation rises to over 1000 m in the south while it hardly exceeds 500 m in the north. The rivers of this region have mostly reached their base level of erosion which have carved wide valleys in various regions of considerable importance. This regions has been divided into 12 sub-regions and 33 divisions.

3.1 Semi-Arid Rajasthan

This portion of Rajasthan is marked with intervening valleys where the soils are red, yellow and mixed red-black in character. The regional characteristics of this region are different from those of the arid zone of the Rajasthan (2.3). The annual rain fall here varies from 35 to 45 cm. Besides, the vegetation is partly developed over the hills and slopes which mostly belong to semi-arid type; while the arid plains are infested with thorny scrub and bushy vegetation. This region has further been divided into three divisions:

3.1.1 Aravalli Range and the Associated Uplands
3.1.2 Semi—Arid Uplands of Eastern Rajasthan
3.1.3 Banas—Chambal Basin

3.2 Uttar Pradesh Uplands

Uttar Pradesh Uplands represent well defined zone of Vindhyan System in the south. The average elevation is 500-600 m and slopes towards the plain in the north. The divisions made in this meso region are:

3.2.1 Jhansi Uplands
3.2.2 Mirzapur Uplands

Jhansi Uplands are comparatively dry while the Mirzapur Uplands are wet.

3.3. Bihar—West Bengal Uplands

Bihar—West Bengal Uplands region is one of the most interesting regions for the studies in geomorphology and cultural geography. The whole region belongs to the unclassified crystalline rocks. The elevation of the Bihar Highlands known as Chotanagpur Plateau, is in the range of 300-900 m which is often high above 900 m at places in the form of rounded hills. Soils in this region are mainly red and yellow, and red sandy. Red and black soils are predominant in Singhbhum region. The drainage is radial. Forests are dense in Palamu, Ranchi and Hazaribag areas, while it becomes sparse in Puruliya on account of degenerated soils on the uplands. On the basis of elevation and nature of topography the region has been divided into 4 divisions:

3.3.1 Ranchi Plateau
3.3.2 Hazaribag Plateau
3.3.3 Puruliya Uplands
3.3.4 Singhbhum Plateau

3.4 Northern Madhya Pradesh Uplands

The Northern Madhya Pradesh Uplands region has been sub-divided into three divisions. In general, the elevation is between 300-600 m with numerous hills which are thickly forested. The Northern Madhya Pradesh is typically a ravine and derelict land zone on account of erosion by the tributaries of Chambal system. The Northern Madhya Pradesh Uplands—East region represents the Vindhyas with well developed scraps. Three divisions made in this mesco region are :

3.4.1 Northern Madhya Pradesh Ravine Uplands—West
3.4.2 Northern Madhya Pradesh Uplands—Central
3.4.3 Northern Madhya Pradesh Uplands—East

3.5 Central Madhya Pradesh Plateau

The Central Madhya Pradesh Plateau inherits a complex geology. In general, gneisses-Vindhyans and Gondwanas are fairly represented here. Forest is deciduous and presents large varieties of Sal. Soils are primarily medium black to deep black types. The region has been sub-divided into three divisions:

3.5.1 Sagar Plateau
3.5.2 Bhopal Plateau
3.5.3 Ratlam Plateau

3.6 Southern Madhya Pradesh Uplands

The region in general represents black soil. Annual rainfall varies between 200-300 cm. The whole region is densely forested in general. According to the elevation, drainage and micro-orographic characteristics the region has been divided into three divisions.

3.6.1 Narmada Region including Flanks of Vindhya and Satpura
3.6.2 Mahanadi Basin
3.6.3 Madhya Pradesh Dandakaranya

3.7 Northern Maharashtra

The Northern Maharashtra represents the major soil regions developed over 'Deccan Flows'. In this region average annual rainfall ranges between 40 and 80 cm. The altitudinal characteristics are quite pronounced and hence the delineation of above regions is based on the 'Valleys and Divides' concept of orography of the region. It has been further divided into following two divisions:

3.7.1 Tapti – Purna Valley
3.7.2 Wardha – Penganga– Wainganga Plain

3.8 Maharashtra Plateau

This meso region in general, has an altitude ranging between 300 and 900 m and extends over basalts. Some high ranges like Ajanta range, Harischandra range, Mahadeo range and Balaghat range break the monotony and thus form a mosaic of plateau with protruded hills. Annual rainfall in general, varies between 80 and 100 cm except in the central region of Maharashtra Plateau which generally gets less than 80 cm rainfall. Forest cover, in general, is sparse and at places dense which is of dry deciduous type. Consequently two divisions have been made in this region, viz.

3.8.1 Eastern Plateau
3.8.2 Western Plateau with Protruded Hills

3.9 Karnataka Plateau

The Karnataka Plateau is a well defined plateau region of the Deccan over the unclassified crystalline rocks. In general, the northern portion is having an elevation of about 300 m with a westward slope, while the southern portion is high (over 900 m) and slopes towards the southeast. Tungabhadra river cuts it into two regions. Average annual rainfall is around 80 cm in major part of this region. Soils in the northern Karnataka are black, while in the south these are mostly laterite, red sandy and red loamy. Forests are dense only in Malnad bordering Sahyadri where the main elevation reaches 1000 m with heavy rainfall of 150 cm per annum. Three divisions made on the above considerations in the region are :

3.9.1 Northern Karnataka Plateau
3.9.2 Central Karnataka Plateau
3.9.3 Southern Karnataka Plateau

3.10 Tamil Nadu Uplands

This region is the southern extensions of unclassified crystalline rocks of Cambrian period and is marked with fairly wide valley of Cauvery and its tributaries. In general, the elevation is over 900 m in the west due to southern Sahyadri and Nilgiri Hills. The western and the eastern flanks get an annual rainfall of about 80-200 cm but the central part of the uplands is almost dry. Due to comparatively high rainfall the hilly areas are forested. On the basis of elevation two divisions have been carved out which are: :

3.10.1 Eastern Flanks of Sahyadri
3.10.2 Tamil Nadu Uplands

3.11 Andhra Plateau

Andhra Plateau is another well-defined plateau region over the Archaean gneissic rock of Southern India which is drained mostly by Godavari, Krishna and Penner river system. Over the western margins, the soils are mostly medium blalck with intrusion of deep black soils in Krishna valley. The rest of the region is charcterised by red sandy soils. The average annual rainfall is below 80 cm in this region. The region is covered with deciduous forests. On the basis of elevation and other considerations, the region has been divided into four divisions and identified as :

3.11.1 Godavari Depressions
3.11.2 Telengana Plateau
3.11.3 Krishna Piedmont Plain
3.11.4 Rayalaseema

3.12 Orissa Highlands

The Orissa Highlands region is comprised of the north-eastern extension of unclassified crystalline rocks of the Deccan Plateau. Here the topography is rugged and elevation is about 1200 m in Koraput Plateau. The Mahanadi and Brahmani rivers have carved out well defined valleys. Soils of the region are mostly red and sandy interspersed with red and yellow soils in some areas. The western portion of the region consists of deep valleys with spurs. In general, the southern portion is much more dissected and higher than the northern, where the range of elevation is between 300 and 900 m Average annual rainfall of the region is between 200and 300 cm The region has been divided into two well marked divisions according to elevation, viz.

3.12.1	Northern Orissa Highlands
3.12.2	Southern Orissa Highlands (Orissa Dandakaranya)

4. THE COASTAL PLAINS AND ISLANDS

Geologically the Coastal Plains adjacent to the Penisular regiona re mere 'Shore Facies' of the Deccan Trap. The region has attained a definite regional approach for classification on account of coastal alluvium characteristics hemmed in between the Sahyadri and Arabian sea in the west and the Eastern Ghats and Bay of Bangal in the east. The rainfall varies in the sections which is high (above 300 cm) in the Western Coastal Region and low (100 cm) in the Eastern Coastal Region. The Coastal Plain has been sub-divided into 4 sub-regions and 20 divisions.

4.1 Gujarat Coastal Plain

This region represents almost the whole of Gujarat state. This region is composed of 'Deccan Flows' and coastal Tertiary deposits. Gujarat Plain is drained by Sabarmati and Mahi rivers. Eastern Hilly Region is comprised of Panch Mahals and the Dangs districts. Kathiawar Peninsula is partly rocky having an elevation of above 75 m. Radial drainage is the chief characteristic feature of this zone.

Kachchh Peninsula solely corresponds with Kachchh district. The chief characteristic feature of the region is the sandy plain with isolated rocky hills. All these regions may typically be said as semi-arid while the Kachchh Peninsula is arid. The above mentioned four regions are as follows:

4.1.1	Gujarat Plain
4.1.2	Eastern Hilly Region
4.1.3	Kathiawar Peninsula
4.1.4	Kachchh Peninsula

4.2 Western Coastal Region

The Western Coastal Region lies just bordering the Sahyadri (the Western Ghats). The width of the region is often very narrow in Karnataka Coastal Region which broadens further south in Kerala. Rainfall is quite heavy over 300 cm per annum. Six divisions have been demarcated in this region which cover portions of Maharashtra, Karnataka, Kerala, Mahe district of Pondicherry and Goa district of Goa, Daman & Diu. The six divisions are :

4.2.1	Maharashtra Littoral
4.2.2	Goa Coast
4.2.3	Karnataka Coast
4.2.4	North Kerala Coast
4.2.5	Central Kerala Coast
4.2.6	South Kerala Coast

4.3 Eastern Coastal Region

The Eastern Coastal Region can be distinguished from the Western Coast because the basic geographical factors of these two regions vary to great extent. The 100 cm isohyetal line separates the eastern and western coastal areas at the district level at Kanniyakumari. The Eastern Coastal Region is wide and the soils differ appreciably within this region. The big rivers carve out broader valleys or deltas which give further help in establishing the division in the Eastern Coastal Region. The Eastern Ghats are broken as they do not run as continuous geographical barrier. The region has been divided into 8 divisions viz.

4.3.1	Kanniyakumari Coast
4.3.2	Sandy Littoral
4.3.3	Coromandel Coast
4.3.4	Southern Andhra Coastal Plain
4.3.5	Krishna Delta
4.3.6	Godavari Delta
4.3.7	Northern Andhra Coastal Plain
4.3.8	Mahanadi Delta

4.4 The Islands

The Andaman and Nicobar Islands in the Bay of Bengal and Lakshadweep in the Arabian sea vary between themselves in the geographical location as well as in human geography and form two micro regions.

4.4.1 The Andaman and Nicobar Islands are composed of more than 300 named and unnamed Islands. Out of them 33 major islands are inhabited, while the remaining islands are uninhabited. Geologically, sandstone and shales of Eocene period predominate. Due to hot and humid climate, soils are lateritic and degenerated with

luxuriant growth of vegetation cover. Coral formation is the chief characteristics of the islands and so the group of islands forms a definite entity of a region on these considerations.

4.4.2 The Lakshadweep—These islands have developed very near to the continental shelf of the Indian coast. The total number of Islands is 27 out of which 10 are inhabited and the remaining 17 are uninhabited.

These two present a particular geographical environment, ecology and cultural zone of India.

Based upon Survey of India map with the permission of the Surveyor General of India.
The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

The boundary of Meghalaya shown on this map is as interpreted from the North-Eastern Area (Reorganisation) Act, 1971, but has yet to be verified.

PHYSIO- GEOGRAPHIC REGIONS OF INDIA
(REGIONAL DIVISIONS)

Regions with Code No. (Macro)	Sub-regions with Code No. (Meso)	Divisions with Code No. (Micro)	Districts	State/ Union Territory
1	2	3	4	5
1 The Northern Mountains	1.1 Jammu & Kashmir Himalaya	1.1.1. Ladakh	Ladakh & Kargil	Jammu & Kashmir
		1 1.2 Kashmir Valley	Anantnag (KS), Baramula,(K.N), Pulwama,Badgam, Kupwara & Srinagar	Jammu & Kashmir
		1.1.3 Jammu	Doda, Jammu, Kathua, Rajauri, Punch and Udhampur	Jammu & Kashmir
	1.2 Himachal Pradesh Himalaya	1.2.1 Northern Himachal Pradesh	Chamba	Himachal Pradesh
		1.2 2 Trans-Himmalayan Zone	Kinnaur, Lahul & Spiti	Himachal Pradesh
		1.2.3 Central Himachal Pradesh	Kangra, Kullu. Una, Hamirpur & Mandi	Himachal Pradesh
		1.2.4. Southern Himachal Pradesh	Bilaspur, Solan, Shimla, & Sirmaur	Himachal Pradesh
	1.3 Uttar Pradesh Himalaya	1.3.1 Kumaon Himalaya North	Chamoli, Pithoragarh, Uttarkashi	Uttar Pradesh
		1.3.2 Western Kumaon Himalaya, Siwalik & Doons	Dehra Dun, Garhwal, Tehri Garhwal	Uttar Pradesh
		1.3.3 Kumaon Himalaya East	Almora, Nainital	Uttar Pradesh
	1.4 North Eastern Himalaya	1.4.1 Sikkim Himalaya	North District, West District, South District, & East District	Sikkim
		1.4.2 Darjiling Himalaya including Duars	Darjiling & Jalpaiguri	West Bengal
		1.4.3 Western Arunachal Pradesh Himalaya	West Kameng, East Kameng, Lower Subansiri, Upper Subansiri, West Siang and East Siang	Arunachal Pradesh
		1.4.4 Eastern Arunachal Pradesh Himalaya	Dibang Valley, Lohit and Tirap	Arunachal Pradesh
	1.5 Eastern Hill Zone	1.5.1 Nagaland Hills	Kohima, Mokokchung, Mon, Wokha, Zunheboto, Phek and Tuensang	Nagaland
		1.5.2 Manipur Hills	Manipur East, Manipur North, Manipur West, Pocket of Manipur Central & Manipur South	Manipur
		1.5.3 Imphal Valley	Manipur Central & Tengnoupal	Manipur
		1.5.4 Hill Zone	Aizawl, Lunglei and Chimtupui	Mizoram
		1.5.5 Tripura Plain	South Tripura & West Tripura	Tripura
		1.5.6 Tripura Hills	North Tripura	Tripura
		1.5.7 Cachar Plain	Cachar	Assam
		1.5.8 Karbi Anglong & Cachar-Hills North	Karbi Anglong & North Cachar-hills	Meghalaya

1	2	3	4	5
		1.5.9 Eastern Meghalaya	West Khasi Hills, East Khasi Hills & Jaintia Hills	Meghalaya
		1.5.10 Western Meghalaya	West Garo Hills & East Garo Hills	Meghalaya
2. The Great Plains	2.1 Punjab Plain	2.1.1 Ravi-Beas Inter-Fluvial Plain	Amritsar and Gurdaspur	Punjab
		2.1.2 Hoshiarpur, Chandigarh Sub-Montane Plain	Chandigarh, Hoshiarpur & Rupnagar	Chandigarh & Punjab
		2.1.3 Beas Sutluj Doab	Jalandhar and Kapurthala	Punjab
		2.1.4 Punjab Malwa Plain	Bathinda, Firozpur, Ludhiana, Patiala, Sangrur & Faridkot	Punjab
	2.2 Haryana Plain	2.2.1 Eastern Haryana Plain	Ambala, Kurukshetra, Jind, Karnal, Rohtak and Sonipat	Haryana
		2.2.2 Western Haryana	Hisar, Sirsa & Bhiwani	Haryana
		2.2.3 Southern Haryana Plain	Delhi, Gurgaon, Mahendragarh and Faridabad	Delhi & Haryana
	2.3 Arid Rajasthan Plain	2.3.1 Ghaggar Plain	Ganganagar	Rajasthan
		2.3.2 Rajasthan Bagar	Churu, Jhunjhunun, Nagaur & Sikar	Rajasthan
		2.3.3 Extremely Arid Tract	Bikaner and Jaiselmer	Rajasthan
		2.3.4 Luni Valley	Barmer, Jalor, Jodhpur & Pali	Rajasthan
	2.4 Upper Ganga Plain	2.4.1 Northern Upper Ganga Plain	Bijnor, Ghaziabad, Meerut, Moradabad, Muzaffarnagar, Rampur & Saharanpur.	Uttar Pradesh
		2.4.2 Southern Upper Ganga Plain	Aligarh, Agra, Bareilly, Budaun, Bulandshahr, Etah, Etawah, Farrukhabad, Kheri, Mainpuri, Mathura, Pilibhit and Shahjahanpur	Uttar Pradesh
	2.5 Middle Ganga Plain	2.5.1 Middle Ganga Plain West	Allahabad, Bahraich, Bara-Banki, Faizabad, Fatehpur, Gonda, Hardoi, Kanpur, Lucknow, Pratapgarh, Rae Bareli, Sitapur, Sultanpur & Unnao	Uttar Pradesh
		2.5.2 Middle Ganga Plain East	Azamgarh, Ballia, Basti, Deoria, Gorakhpur, Varanasi, Jaunpur and Ghazipur	Uttar Pradesh
	2.6 Lower Ganga Plain	2.6.1 North Bihar Plain	Paschim Champaran, Purba Champaran, Darbhanga, Muzaffarpur, Purnia, Saharsa, Saran, Sitamarhi, Madhubani, Begusarai, Katihar, Samastipur, Vaishali, Siwan and Gopalganj.	Bihar
		2.6.2 South Bihar Plain	Bhagalpur, Gaya, Munger, Patna, Bhojpur, Nalanda, Nawada, Rohtas and Aurangabad	Bihar
		2.6.3 Barind Tract	Koch Bihar, Maldah & West Dinajpur	West Bengal
		2.6.4 Moriband Delta	Murshidabad and Nadia	West Bengal
		2.6.5 Proper Delta	Bardhaman, Calcutta, Hugli, Haora and Twenty four Parganas	West Bengal
		2.6.6 Rarh Plain	Bankura, Birbhum & Medinipur	West Bengal
	2.7 Brahmaputra Valley	2.7.1 Western Brahmaputra Valley	Goalpara and Kamrup	Assam

1	2	3	4	5
		2.7.2 Central Brahmaputra Valley	Darrang and Nagaon	Assam
		2.7.3 Eastern Brahmaputra Valley	Lakhimpur, Sibsagar & Dibrugarh	Assam
3. The Deccan Plateau	3.1 Semi-Arid Rajasthan	3.1.1 Aravalli Range and the Associated Uplands	Ajmer, Alwar, Banswara, Chittaurgarh, Dungarpur, Jaipur, Sirohi & Udaipur	Rajasthan
		3.1.2 Semi-Arid Uplands of Eastern Rajasthan	Bhilwara, Bundi, Kota, Jhalwar & Tonk	Rajasthan
		3.1.3 Banas-Chambal Basin	Bharatpur and Sawai Madhopur	Rajasthan
	3.2 Uttar Pradesh Uplands	3.2.1 Jhansi Uplands	Banda, Hamirpur, Jalaun, Lalitpur & Jhansi	Uttar Pradesh
		3.2 2 Mirzapur Uplands	Mirzapur	Uttar Pradesh
	3.3 Bihar-West Bengal Uplands	3.3.1 Ranchi Plateau	Palamu and Ranchi	Bihar
		3.3.2 Hazaribag Plateau	Dhanbad, Hazaribag Giridih & Santhal Pargana	Bihar
		3.3.3 Puruliya Uplands	Puruliya	West Bengal
		3.3 4 Singhbhum Plateau	Singhbhum	Bihar
	3 4 Northern Madhya Pradesh Uplands	3 4.1 Northern Madhya Pradesh Ravine Uplands-west	Bhind, Datia, Guna, Gwalior, Morena and Shivpuri	Madhya Pradesh
		3.4.2 Northern Madhya Pradesh Uplands-Central	Chhatarpur, Panna and Tikamgarh	Madhya Pradesh
		3.4.3 Northern Madhya Pradesh Uplands-East	Rewa, Satna, Shahdol, Sidhi and Surguja	Madhya Pradesh
	3.5 Central Madhya Pradesh Plateau	3.5.1 Sagar Plateau	Damoh, Sagar and Vidisha	Madhya Pradesh
		3.5.2 Bhopal Plateau	Dewas, Indore, Raisen, Bhopal and Sehore	Madhya Pradesh
		3.5.3 Ratlam Plateau	Dhar, Jhabua, Mandsaur, Ratlam, Rajgarh, Shajapur and Ujjain	Madhya Pradesh
	3.6 Southern Madhya Pradesh Uplands	3.6.1 Narmada Region including flanks of Vindhya Satpura	Balaghat, Betul Chhindwara, Hoshangabad, Jabalpur, West Nimar, East Nimar, Mandla, Narsimhapur, Seoni	Madhya Pradesh
		3.6.2 Mahanadi Basin	Bilaspur, Durg, Raigarh, Raj Nandgaon & Raipur	Madhya Pradesh
		3.6.3 Madhya Pradesh Dandakaranya	Bastar	Madhya Pradesh
	3.7 Northern Maharashtra	3.7.1 Tapti-Purna Valley	Amravati, Akola, Buldana, Dhule and Jalgaon	Maharashtra
		3.7.2 Wardha-Penganga Wainganga Plain	Bhandara, Chandrapur, Nagpur, Wardha & Yavatmal	Maharashtra
	3.8 Maharashtra Plateau	3.8.1 Eastern Plateau	Aurangabad, Bid, Kolhapur, Nanded, Osmanabad, Parbhani, Sangli & Solapur	Maharashtra
		3 8.2 Western Plateau with Protruded Hills	Ahmadnagar, Nashik, Pune, and Satara	Maharashtra
	3.9 Karnataka Plateau	3.9.1 Northern Karnataka Plateau	Belgaum, Bidar, Bijapur & Gulbarga	Karnataka
		3.9.2 Central Karnataka Plateau	Bellary Chikmagalur, Chitradurga, Dharwad, Shimoga, Raichur and Pocket of Tumkur	Karnataka
		3.9 3 Southern Karnataka Plateau	Bangalore, Kodagu, Hassan,	Tamil Nadu

1	2	3	4	5
			Kolar, Mandya Mysore and Tumkur	
	3.10 Tamil Nadu Uplands	3.10 1 Eastern flanks of Sahyadri	Coimbatore, Madurai, Nilgiri and Periyar	Tamil Nadu
		3 10 2 Tamil Nadu Uplands	Dharmapuri, North Arcot and Salem Karimnagar,	Tamil Nadu
	3.11 Andhra Plateau	3 11 1 Godavari Depression	Karimnagar, Khammam & Warangal	Andhra Pradesh
		3 11.2 Telangana Plateau	Adilabad, Hyderabad, Mahbubnagar, Medak, Nizamabad & Rangareddi	Andhra Pradesh
		3.11.3 Krishna Piedmont Plain	Nalgonda	Andhra Pradesh
		3.11.4 Rayalaseema	Anantpur, Chittoor, Cuddapah & Kurnool	Andhra Pradesh
	3.12 Orissa Highlands	3.12.1 Northern Orissa Highlands	Dhenkanal, Kendujhar, Mayurbhanj, Sambalpur and Sundergarh	Orissa
		3.12.2 Southern Orissa Highlands (Orissa Dandakaranya)	Balangir, Ganjam, Phulabani, Kalahandi and Koraput	Orissa
4 The coastal plains & Islands	4.1 Gujarat Region	4.1.1 Gujarat Plain	Ahmadabad, Bharuch, Banas Kantha, Gandhinagar, Kheda, Mahesana, Sabar Kantha, Surat, Vadodara, Valsad Dadra & Nagar Haveli & Daman	Gujarat Dadra & Nagar Haveli & Goa Daman & Diu
		4.1.2 Eastern Hilly Region	Panch Mahals and the Dangs	Gujarat
		4.1.3 Kathiawar Peninsula	Amreli, Bhavnagar, Jamnagar, Junagadh, Rajkot, Surendranagar and Diu	Gujarat and Goa, Daman & Diu
		4 1 4 Kachchh Peninsula	Kachchh	Gujarat
	4.2 Western Coastal Region.	4.2.1 Maharashtra Littoral	Greater Bombay, Raigarh, Ratnagiri and Thane	Maharashtra
		4.2.2 Goa Coast	Goa	Goa, Daman & Diu
		4.2 3 Karnataka Coast	Uttar Kannad & Dakshin Kannad	Karnataka
		4.2.4 North Kerala Coast	Cannanore, Kozhicode, Wayanad and Mahe	Kerala & Pondicherry
		4.2.5 Central Kerala Coast	Ernakulam, Kottayam, Malappuram, Palghat, Trichur & Idukki	Kerala
		4.2 6 South Coast	Alleppey, Trivandrum & Quilon	Kerala
	4 3. Eastern Coastal Region	4.3.1 Kanniyakumari Coast	Kanniyakumari	Tamil Nadu
		4.3.2 Sandy Littoral	Ramanathapuram & Tirunelveli	Tamil Nadu
		4.3.3 Coromandel Coast	Chengalpattu, Madras Thanjavur, Tiruchchirappalli, South Arcot, Pudukkottai, Karaikal and Pondicherry	Pondicherry & Tamil Nadu
		4.3.4 Southern Andhra Coastal Plain	Nellore and Prakasam	Andhra Pradesh
		4 3.5 Krishna Delta	Guntur and Krishna	Andhra Pradesh
		4.3 6 Godavari Delta	East Godavari, West Godavari and Yanam	Andhra Pradesh & Pondicherry
		4 3 7 Northern Andhra Coastal Plain	Srikakulam, Vizianagaram and Vishakhapatnam	Andhra Pradesh
		4 3 8 Mahanadi Delta	Baleshwar, Cuttak & Puri	Orissa
	4 4 The Islands	4 4 1 Andaman & Nicobar Islands	Andaman, Nicobar	Andaman & Nicobar
		4 4 2 Lakshadweep	Lakshadweep	Lakshadweep

PART II
REGIONAL DIVISIONS
OF
GOA, DAMAN AND DIU

REGIONAL DIVISIONS OF GOA, DAMAN AND DIU

Goa, Daman and Diu forms an independent union territory within the Indian Union. Though historically united, being under the Portuguese regime for about 450 years till its liberation from foreign rule on 19th December 1961 and merger with India on 27th March 1962, the union territory of Goa, Daman and Diu is physically separated into three district land blocks respectively named, Goa, Daman and Diu. However, all these three land blocks are situated on the West Coast of India.

Administratively, the union territory is divided into three districts, viz. Goa, Daman and Diu. These districts are further divided into 13 talukas comprising of 421 villages (including 9 uninhabited villages) and 17 towns.

The geographical area of the union territory as per the Surveyor General, India, is 3,814 km^2 (0.12% of India's area) of which 3,702 km^2 (or 97.06%) is the area of Goa district alone. The area of Daman district is 72 km^2 (1.89%) and that of Diu is 40 km^2 (1.05%).

The graticular extent of Goa is 14°-53'-57" and 15° 47'-59" north latitudes and 73°-40'-54" and 74°-20' -11" east longitudes. Daman is situated between 20°-22' and 20°-27'-58" north latitudes and 72°-49'-42"and 72°-54'-43" east longtitudes while Diu is situated between 20°-42'-00" and 20°-44' -34" north latitudes and 70°-52'-26" and 71°-00'-24" east longitudes.

Goa is surrounded by Ratnagiri district of Maharashtra in the north and Belgaum and Uttar Kannad districts of Karnataka in the east and south while Daman is bounded from three sides by district Valsad of Gujarat. The western boundaries of the both are made by the Arabian sea. Diu is a tiny island in the Arabian sea near the port of Veraval, separated from the southern extremity of the Saurashtra peninsula by a narrow channel running through a swamp.

Goa has a hilly terrain especially on its eastern side and is intersected by a number of rivers flowing westwards to the Arabian sea. The 100 km long coastline is endowed with some of the loveliest beaches in the world. The physiographic characteristics include verdant hills, forests, coconut groves and rich fields.

The length of Daman from north to south is about 11 kms and the width from east to west is about 8 kms. The altitude is merely 12 metres above the mean sea level. Damanganga is the only river flowing through the region.

The length of Diu from north to south is 4.6 kms and the width from east to west is 13.8 kms. The topography is generally plain. Hillocks found at some places attain a maximum height of 30 metres.

Geologically, most part of Goa belongs to Chitradurga group of rocks of Archaean to Lower Proterozoic period. Leaving aside a few patches consisting of granites (Sensu Lato), quartzite and conglomerate, limestone and dolomite, granodiorite and granite, laterite and deccan trap in the north eastern part, the whole northern half of Goa comes under greywacke-argillite which is spread extensively in southern half also. The southern most part and the south-western part of Goa are covered under metabasalt, migmatites and granodioritic to tonalitic gneisses and polymict conglomerate. Along the coast west of Margao, and river Sal there is an elongated stretch of the Recent alluvium. In between greywacke-argillite deposite a strip of ultramafic-mafic complex with many bends is found. The frequency of dykes is clearly visible from their trends shown on the map.

Unlike varied geological structure of Goa, whole of Daman falls under Deccan trap while Diu has alluvium of Recent age.

Generally, lateritic soils are found in Goa. In the coastal areas alluvial flats are formed through sedimentation along the main rivers. The soil sub-order associations found are Orthids-Aquepts (28), Orthents-Tropepts (61), Tropepts-Aquepts (67) and Humults (90).

In Daman shallow black, brown and alluvial soils of southern region are found widely. The soils of Diu are quite different and classified as Orthids-Aquepts (28).

Goa has a warm and humid climate. It receives heavy rainfall from the summer monsoons during June to September. The annual rainfall varies between 2,500 mm and 4,300 mm. Average annual temperature varies between 22°C and 32°C.

The climate of Daman is mild and warm. It receives an average annual rainfall of nearly 1,600 mm. The maximum and minimum temperature recorded at Daman town is 31°C and 22°C respectively.

Diu has a sultry climate. It receives an average annual rainfall of only 540 mm. The maximum and minimum temperature recorded at Diu town is 30°C and 22°C respectively.

As per the 1981 census the population of the union territory is 1,086, 730 (0.16 per cent of India's population)

of which 548,450 are males and 538,280 are females. The population of Goa districts is 1,007,749 persons (92.73%). Daman district has a population of 48,560 (4.47%) while Diu has a population of 30,421 (2.80%).

The union territory with 285 persons per km^2 is more densely populated than the country as a whole (208 persons per km^2). Also, the rural density of population in the union territory (203 persons per km^2) is higher than that of the country (density 166). However, the urban density in the union territory (1,824) is much below the all India urban density of 3,000 persons per km^2.

Within the union territory, the density of population and the size of the districts are inversely correlated. The smallest district Diu is the most densely populated (density 761). It is followed by district Daman (density 679) and district Goa (density 272). The rural density of population displays a similar pattern. However, the urban density is highest (3,750) in district Daman and is followed by district Goa (1,820) and district Diu (802).

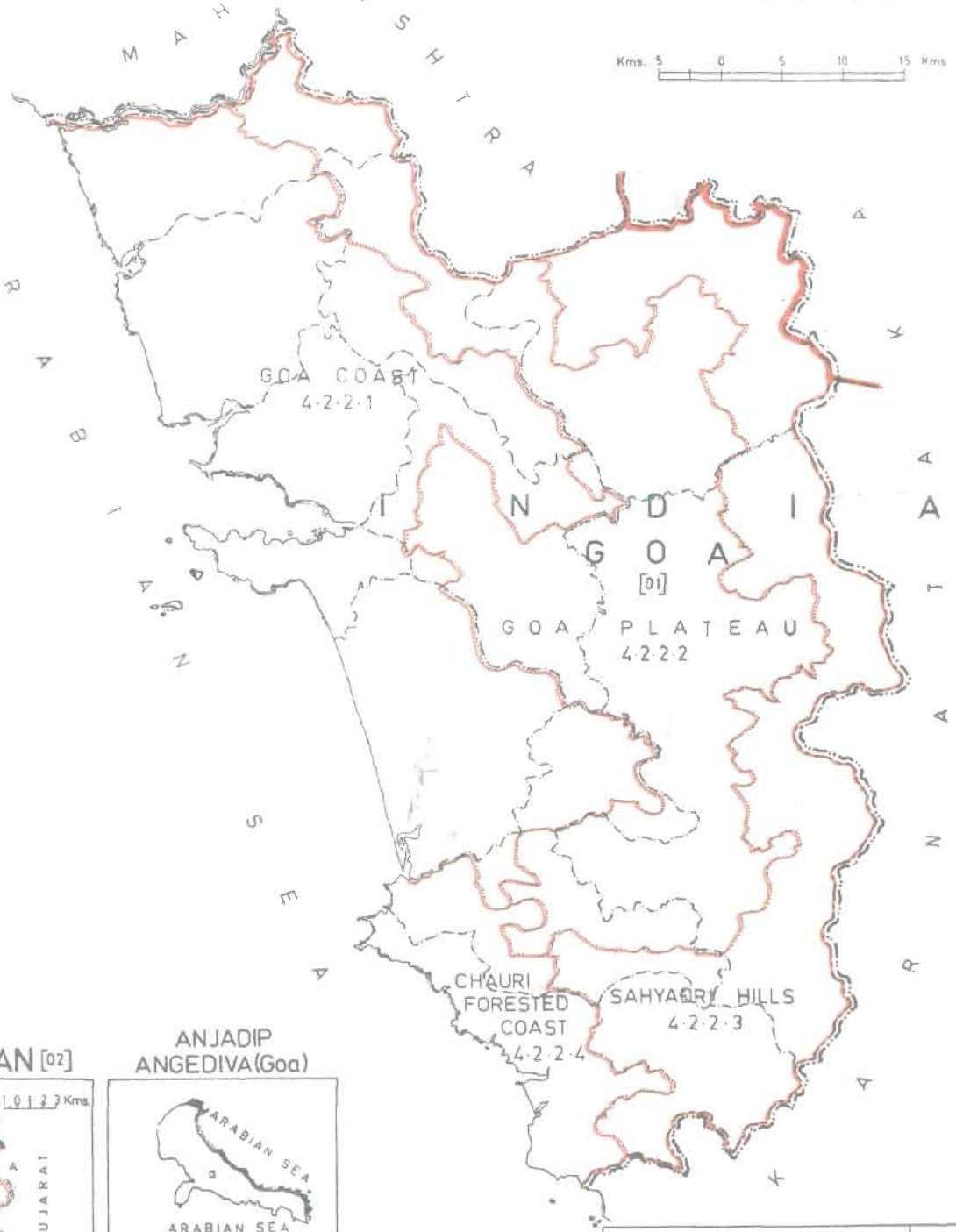
As described earlier, the union territory of Goa, Daman & Diu is not contiguous but it is constituted of three land blocks separated from each other by vast distances. Daman and Diu districts, which are isloated from the main territory, form parts of Gujarat Plain (4.1.1) and Kathiawar Peninsula (4.1.3) micro regions respectively. Since these two districts are very tiny and homogenous in their physical setting, these have not been further sub-divided into sub-micro region. Goa district falls in Goa Coast (4.2.2) micro region which has been further divided into four sub-micro regions as per the following details. Further informations of these sub-micro regions appear in Part III of this volume. Based on these regions, planning process of the district may be integrated further for the multi-level development of the union territory.

Micro Region with Code No.	District with Code No	Sub-micro region with Code No
4.1.1 Gujarat Plain	Daman 02	4.1.1.1 Daman (Valsad) Coast
4.1.3 Kathiawar Peninsula	Diu 03	4.1.3.1 Diu Coast (Junagadh Coastal Plains)
4.2.2 Goa Coast	Goa 01	4.2.2.1 Goa Coast 4.2.2.2 Goa Plateau 4.2.2.3 Sahyadri Hills 4.2.2.4 Chauri Forested Coast

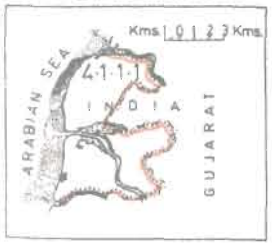
GOA, DAMAN AND DIU

CENSUS CODE 29

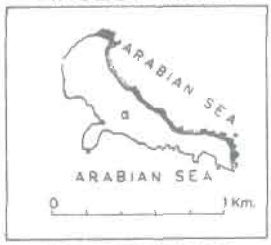
REGIONAL DIVISIONS



DAMAN [02]

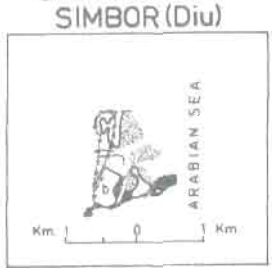


ANJADIP ANGEDIVA (Goa)



DIU ISLAND [03]

SIMARBANDAR SIMBOR (Diu)



'a'- Part of Chauri forested coast
'b'- Part of Diu coast

4·1·1·1 – DAMAN (VALSAD) COAST

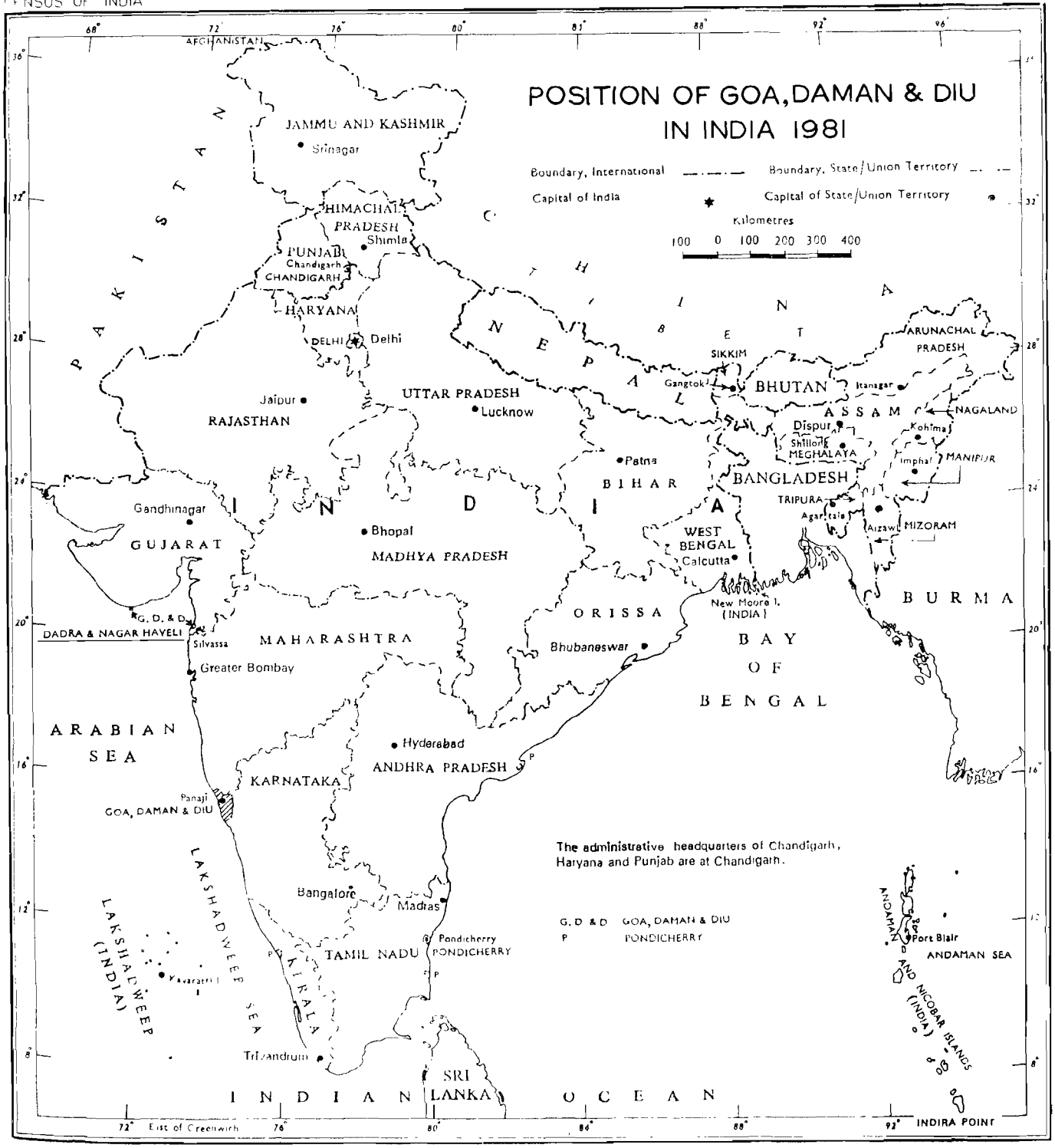
4·1·3·1 – DIU COAST (JUNAGADH COASTAL PLAINS)

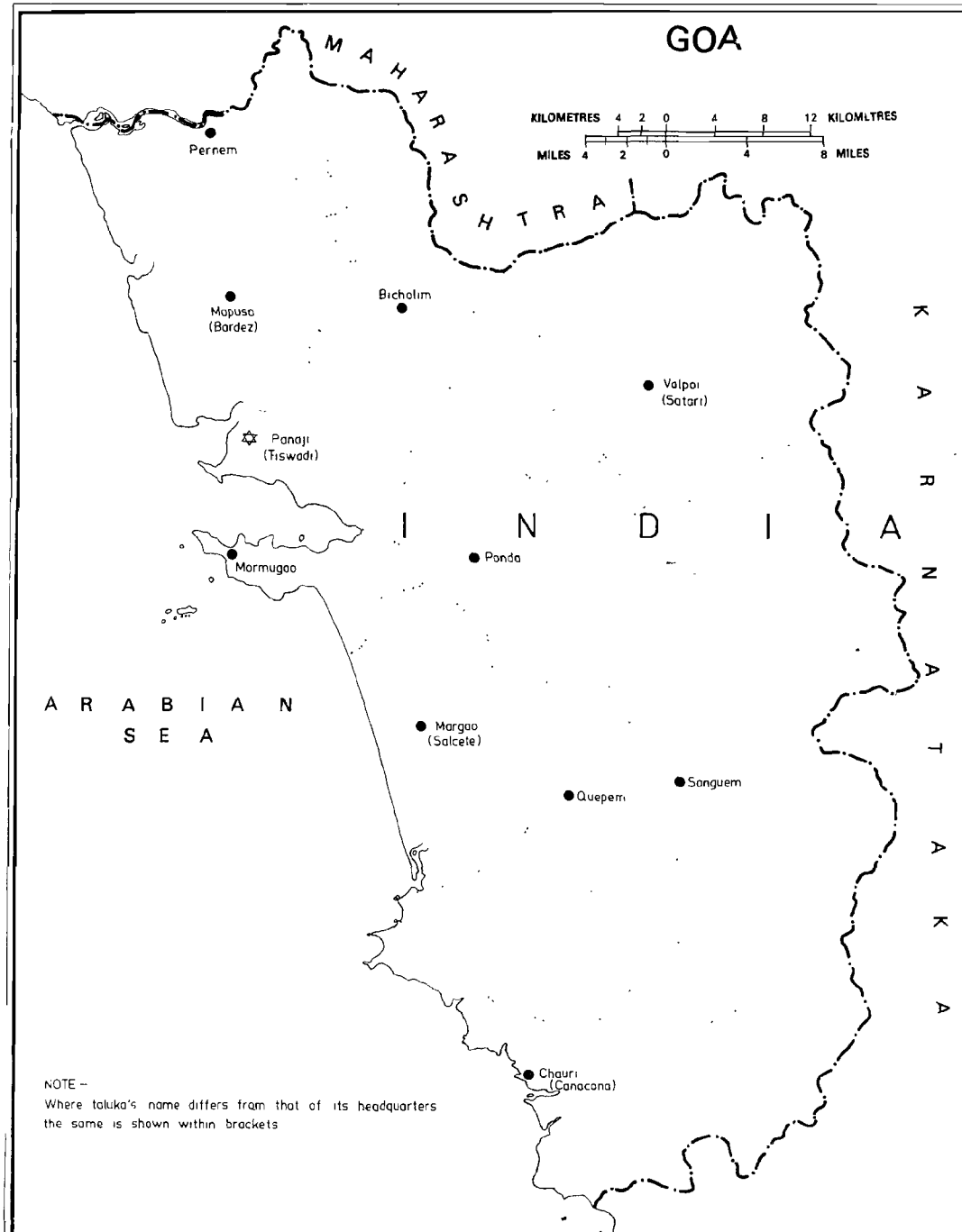
BOUNDARY, UNION TERRITORY/STATE	
" TALUKA	
" MACRO REGION	
" MESO "	
" MICRO "	
" SUB-MICRO "	
DISTRICT CODE 1981	[02]
REGIONAL DIVISIONS	4 · 2 · 2 · 4
MACRO	
MESO	
MICRO	
SUB-MICRO	

(Read the sequence of regional divisions with reference to the all India map codes upto 3 tier)

Macro Region with Code No.	Meso Region with Code No.	Micro Region with Code No	District with Code No	Sub-micro region with Code No. (fourth tier region)	Constituents		Area in km^2			Population (1981 Census)		
					Villages	Towns	Total	Rural	Urban	Total	Rural	Urban
1	2	3	4	5	6	7	8	9	10	11	12	13
4 The Coastal Plains and Islands	4.1 Gujarat Region	4.1.1 Gujarat Plain	Daman 02	4.1.1.1 Daman (Valsad) Coast	21	1	72.0	66.4	5.6	48,560	27,557	21,003
		4.1.3 Kathiawar Peninsula	Diu 03	4.1.3.1 Diu (Junagadh Coastal Plains) Coast	5	1	40.0	30.0	10.0	30,421	22,401	8,020
	4.2 Western Coastal Region	4.2.2 Goa Coast	Goa 01	4.2 2.1 Goa Coast	193	11	1334.78	1179.28	155.50	757,743	461,789	295,954
				4.2.2.2 Goa Plateau	136	3	1180.38	1160.36	20 02	185,436	160,234	25,202
				4.2.2.3 Sahyadri Hills	52	–	897.40	897.40	–	25,928	25,928	–
				4 2.2.4 Chauri Forested Coast	14	1	281.66	279.89	1.77	38,642	37,013	1,629

GENERAL MAPS


POSITION OF GOA, DAMAN & DIU IN INDIA 1981
Boundary, International
Boundary, State/Union Territory
Capital of India
Capital of State/Union Territory
Kilometres
100 0 100 200 300 400
AFGHANISTAN
PAKISTAN
JAMMU AND KASHMIR
Srinagar
HIMACHAL PRADESH
Shimla
PUNJAB
Chandigarh
CHANDIGARH
HARYANA
DELHI
Delhi
Jaipur
RAJASTHAN
UTTAR PRADESH
Lucknow
NEPAL
SIKKIM
Gangtok
BHUTAN
Itanagar
ARUNACHAL PRADESH
ASSAM
NAGALAND
Dispur
Kohima
Shillong
MEGHALAYA
Imphal
MANIPUR
Patna
BIHAR
BANGLADESH
TRIPURA
Agartala
Aizawl
MIZORAM
Gandhinagar
GUJARAT
Bhopal
MADHYA PRADESH
WEST BENGAL
Calcutta
New Moore I. (INDIA)
BURMA
G. D. & D.
DADRA & NAGAR HAVELI
Silvassa
MAHARASHTRA
Greater Bombay
ORISSA
Bhubaneswar
BAY OF BENGAL
ARABIAN SEA
Hyderabad
ANDHRA PRADESH
KARNATAKA
Panaji
GOA, DAMAN & DIU
The administrative headquarters of Chandigarh, Haryana and Punjab are at Chandigarh.
Bangalore
Madras
Pondicherry
PONDICHERRY
TAMIL NADU
KERALA
LAKSHADWEEP (INDIA)
LAKSHADWEEP SEA
Kavaratti I.
Trivandrum
SRI LANKA
INDIAN OCEAN
G.D & D GOA, DAMAN & DIU
P PONDICHERRY
ANDAMAN SEA
Port Blair
ANDAMAN AND NICOBAR ISLANDS (INDIA)
INDIRA POINT
East of Greenwich

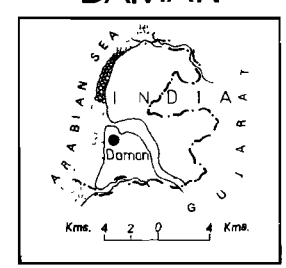


GOA, DAMAN & DIU

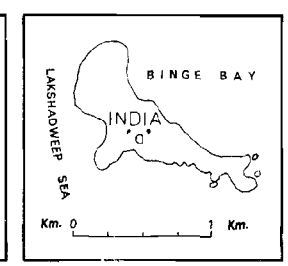
ADMINISTRATIVE DIVISIONS 1981

BOUNDARY, UNION TERRITORY
" UNDEMARCATED
" TALUKA
UNION TERRITORY CAPITAL
TALUKA HEADQUARTERS

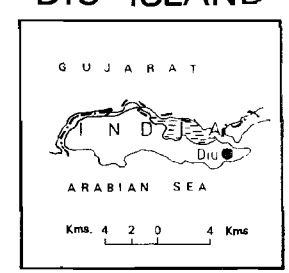
DAMAN



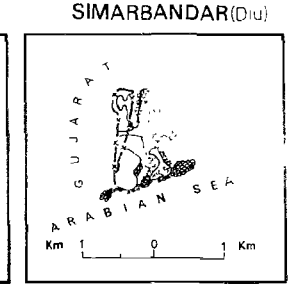
ANJADIP ISLAND(Goa)



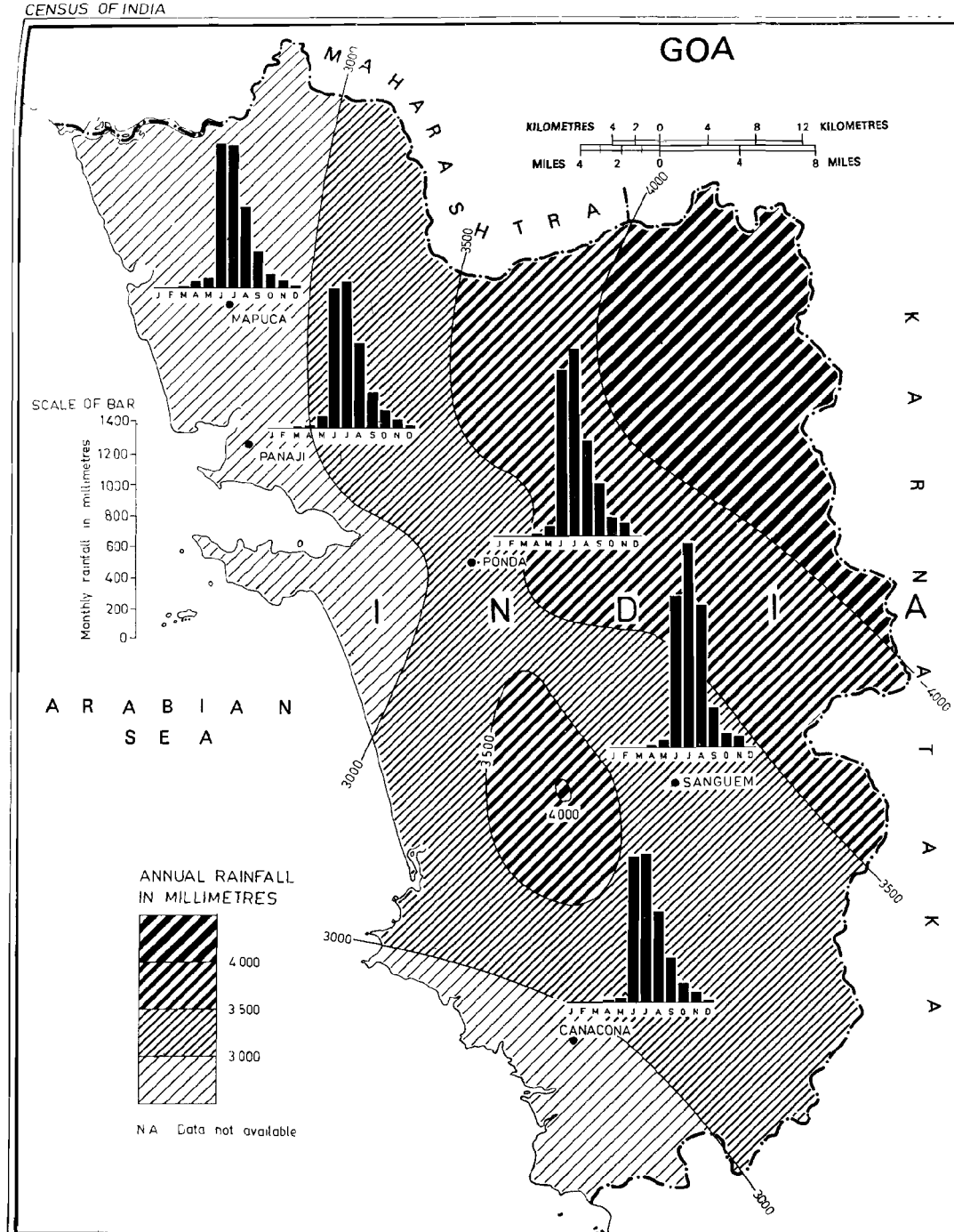
DIU ISLAND



SIMARBANDAR(Diu)



'a' Part of Canacona taluka



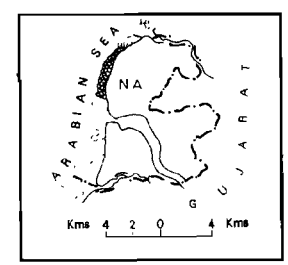
GOA, DAMAN AND DIU

NORMAL MONTHLY AND ANNUAL RAINFALL

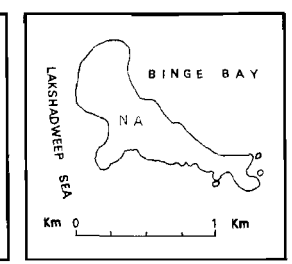
BOUNDARY, UNION TERRITORY

" UNDEMARCATED

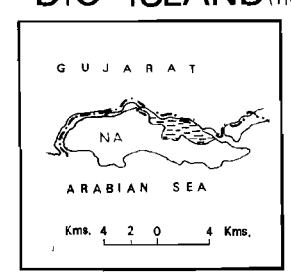
DAMAN (INDIA)

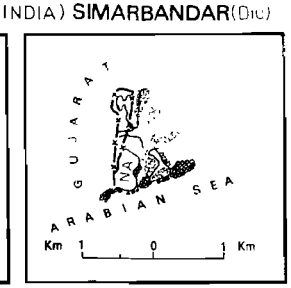


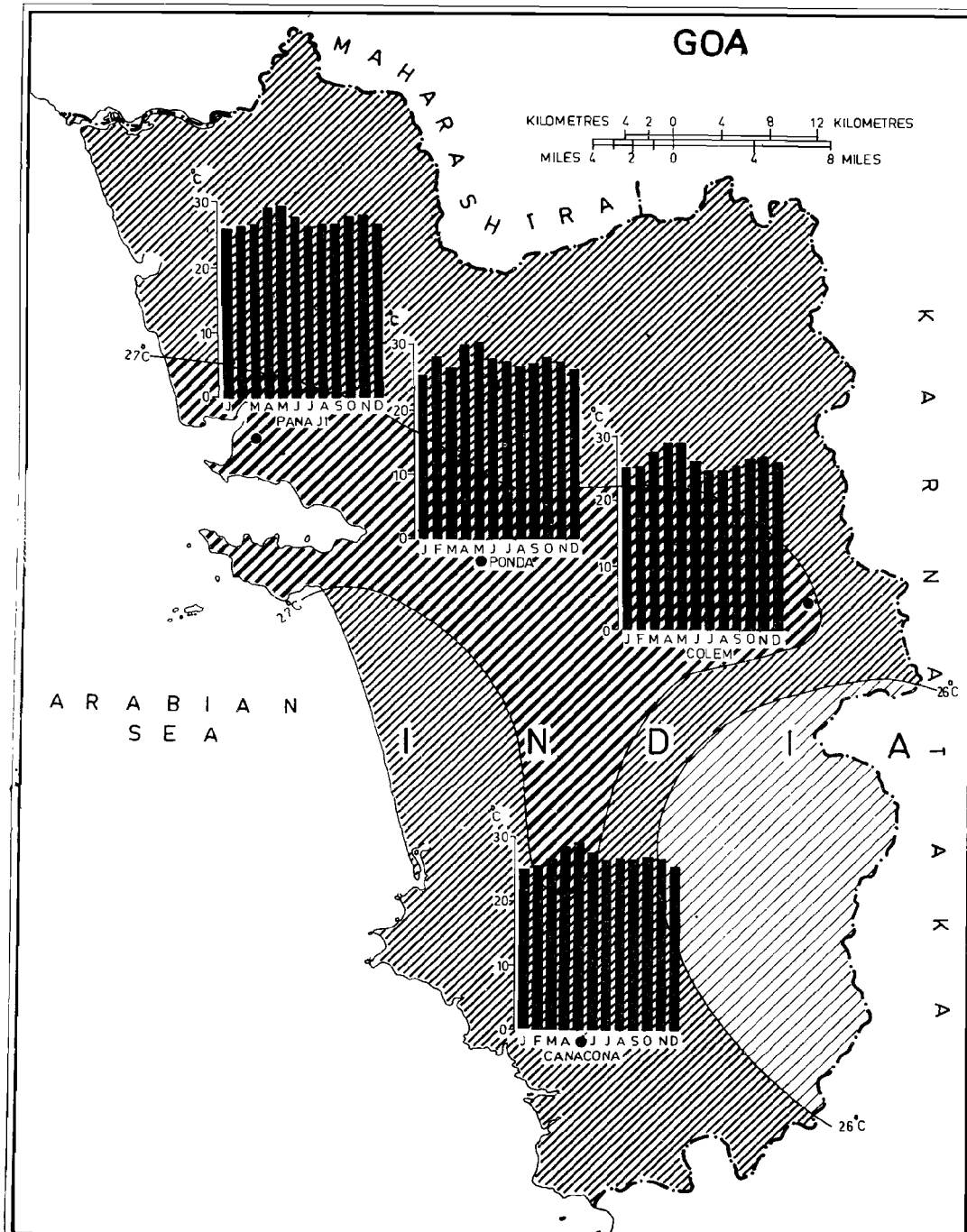
ANJADIP ISLAND (Goa)



DIU ISLAND (INDIA) SIMARBANDAR (Diu)







NORMAL MONTHLY AND ANNUAL TEMPERATURE

ANNUAL TEMPERATURE-IN °C

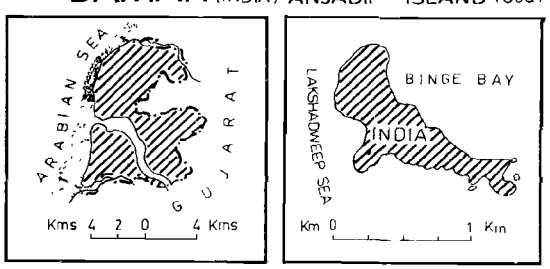
27

26

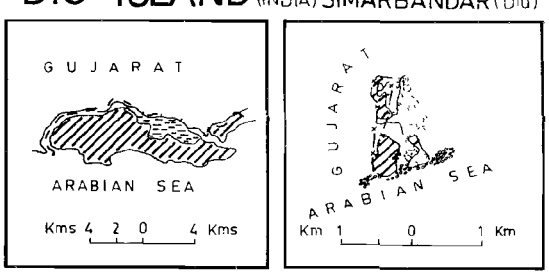
BOUNDARY, UNION TERRITORY

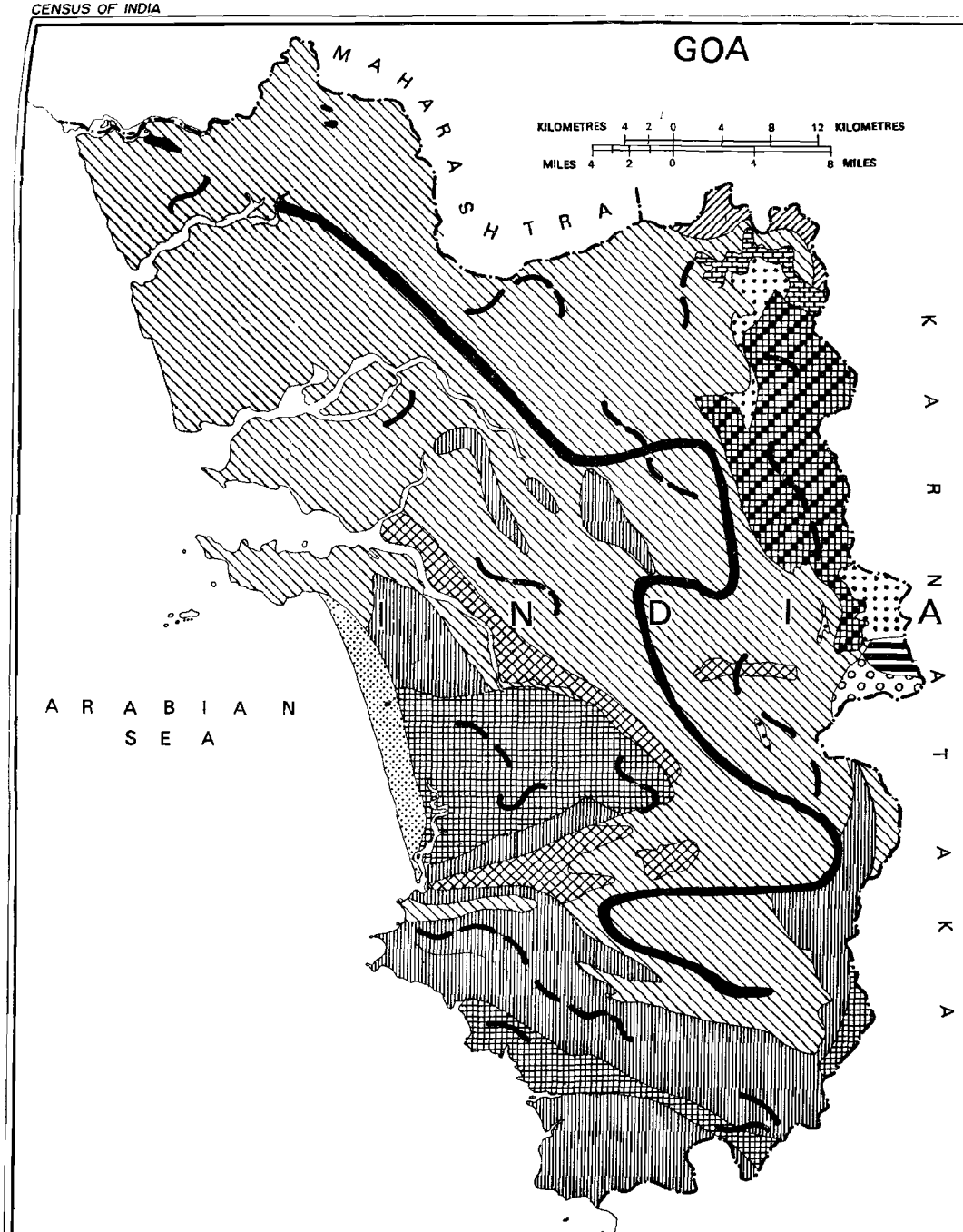
" UNDEMARCATED

DAMAN (INDIA) ANJADIP ISLAND (Goa)



DIU ISLAND (INDIA) SIMARBANDAR (Diu)

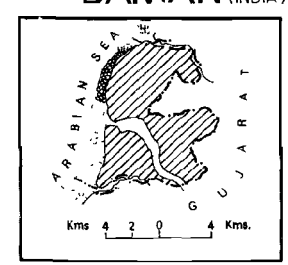




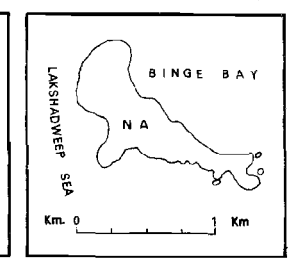
GOA, DAMAN AND DIU
GEOLOGY

ALLUVIUM			RECENT
LATERITE			PALAEOCENE TO RECENT
DECCAN TRAP (Undifferentiated Flows)			LATE CRETACEOUS TO PALAEOCENE
GRANODIORITE, AND GRANITE	CLOSEPET GRANITE (~2400-2000 m.y.)		UPPER PROTEROZOIC
ULTRAMAFIC - MAFIC COMPLEX	CHITRADURGA GROUP	DHARWAR SUPPER GROUP (~2900-2400 m.y.)	ARCHAEAN TO LOWER PROTEROZOIC
GREYWACKE - ARGILLITE			
METABASALT			
POLYMICT CONGLOMERATE			
LIMESTONE AND DOLOMITE			
QUARTZITE AND CONGLOMERATE			
MIGMATITES AND GRANODIORITIC TO TONALITIC GNEISSES		PENINSULAR GNEISS (Principal Event ~3000 m.y.)	ARCHAEAN
GRANITES (Sensu Lato)			
TREND OF DYKES SHOWN			
NA NOT AVAILABLE			
m y MILLION YEARS			
BOUNDARY, UNION TERRITORY			
,, UNDEMARCATED			

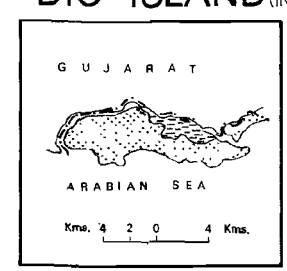
DAMAN (INDIA)



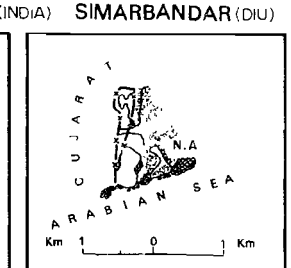
ANJADIP ISLAND (GOA)

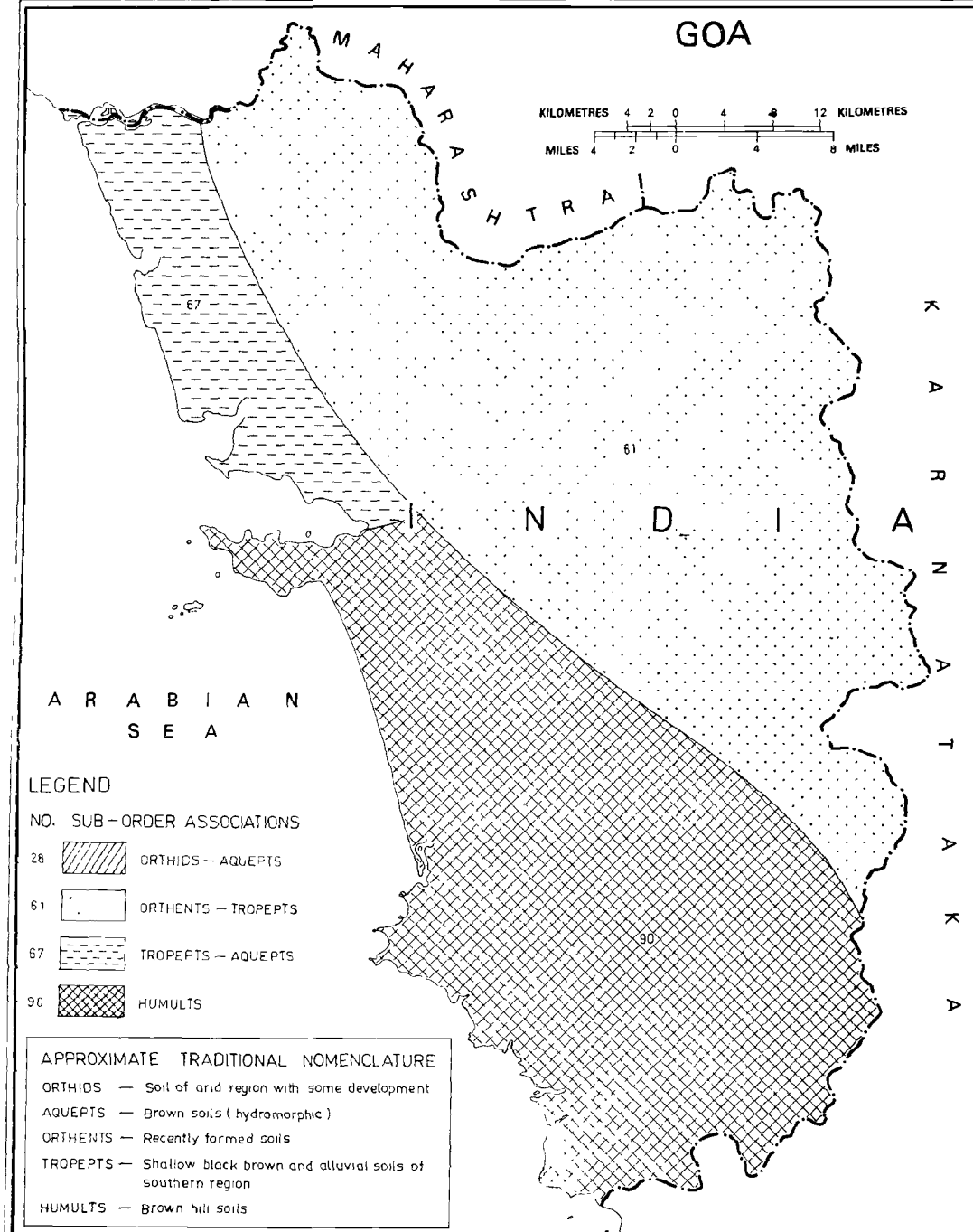


DIU ISLAND (INDIA)



SIMARBANDAR (DIU)





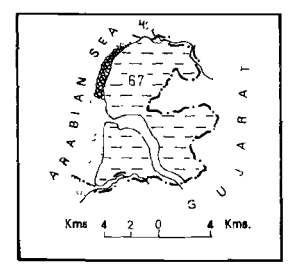
GOA, DAMAN AND DIU

SOILS

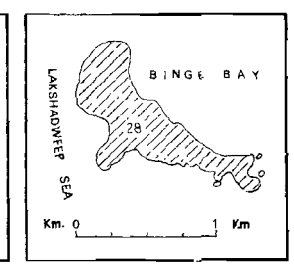
BOUNDARY, UNION TERRITORY

" UNDEMARCATED

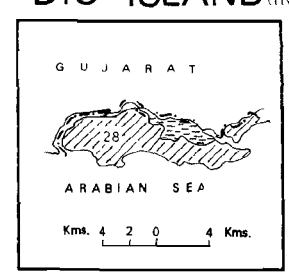
DAMAN (INDIA)

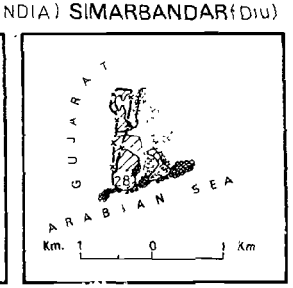


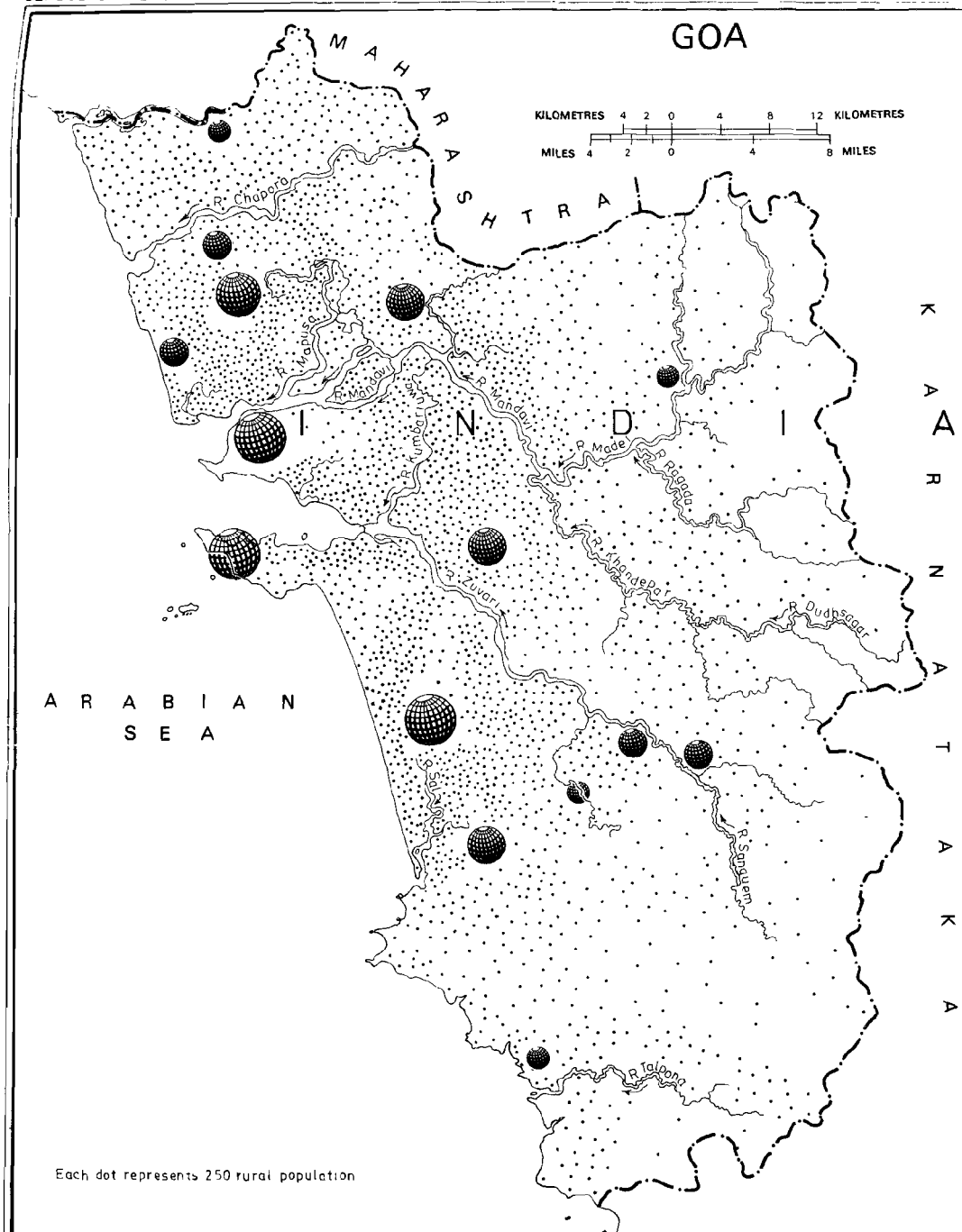
VANJADIP ISLAND (Goa)



DIU ISLAND (INDIA) SIMARBANDAR (Diu)







DISTRIBUTION OF POPULATION 1981

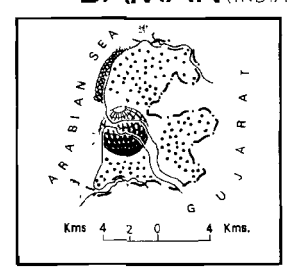
SIZE OF POPULATION OF TOWNS/ URBAN AGGLOMERATIONS

- 50 000–99 999
- 20 000–49 999
- 10 000–19 999
- 5 000 – 9 999
- BELOW 5 000

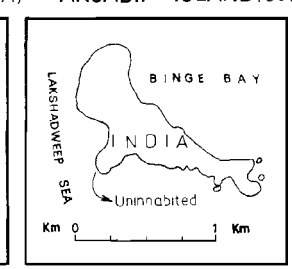
BOUNDARY, UNION TERRITORY

" UNDEMARCATED

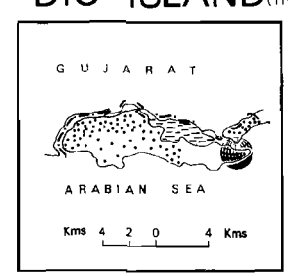
DAMAN (INDIA)



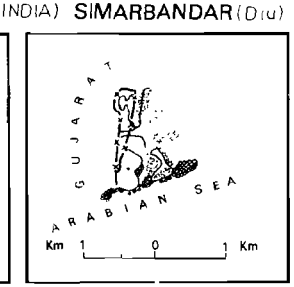
ANJADIP ISLAND (Goa)

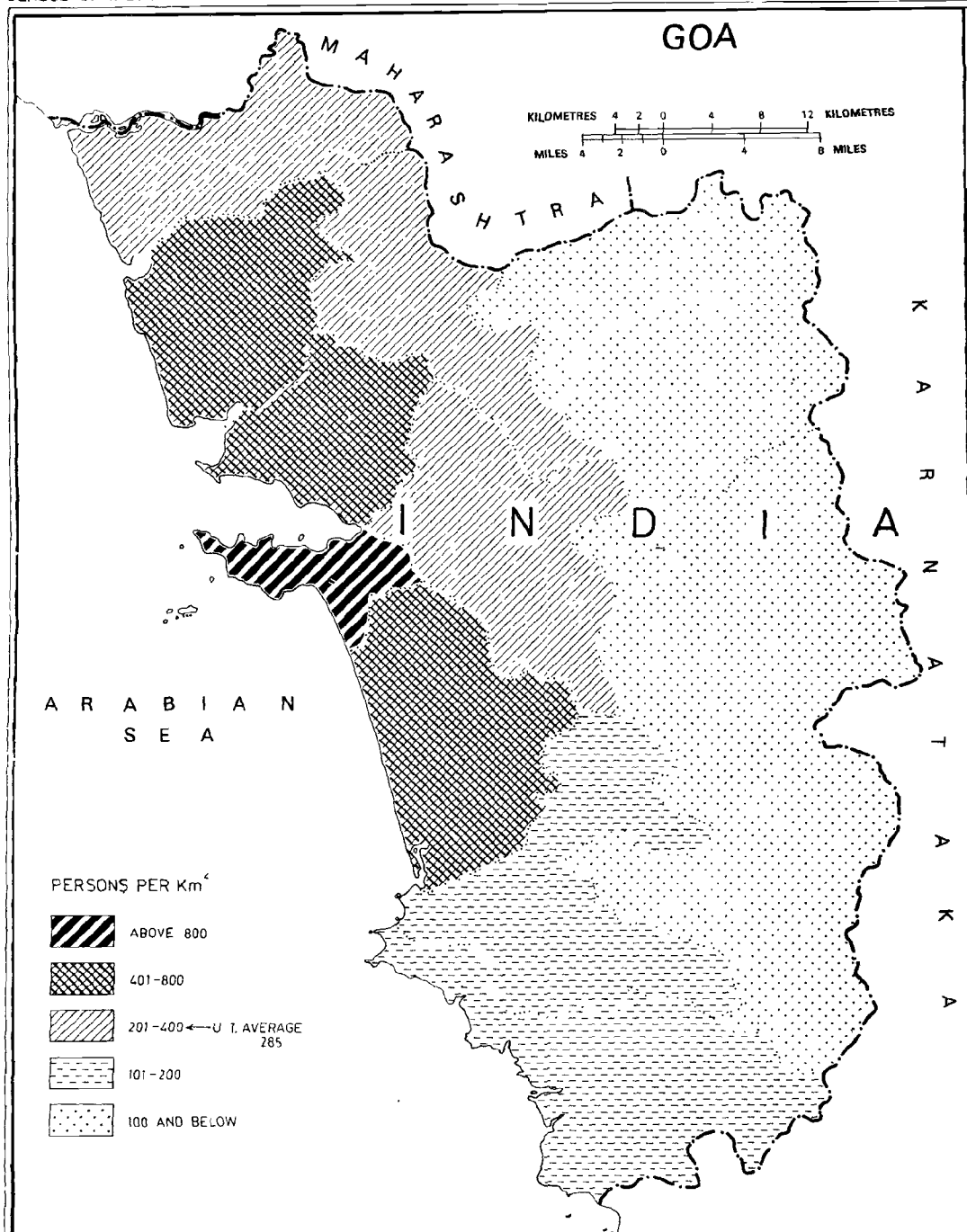


DIU ISLAND (INDIA)



SIMARBANDAR (Diu)





GOA, DAMAN AND DIU

DENSITY OF POPULATION 1981

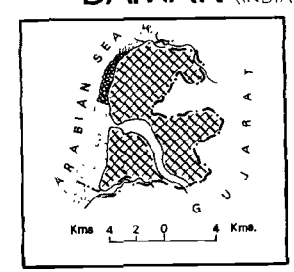
(BY TALUKAS)

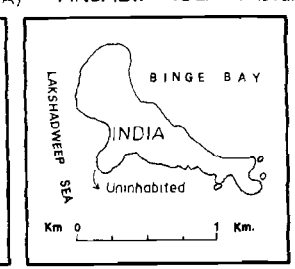
BOUNDARY, UNION TERRITORY

" UNDEMARCATED

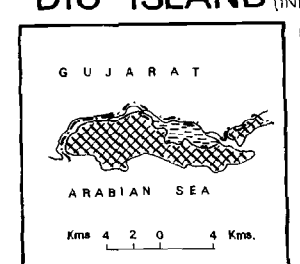
" TALUKA

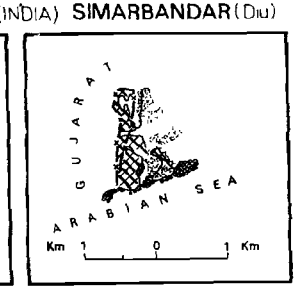
DAMAN (INDIA) ANJADIP ISLAND (Goa)

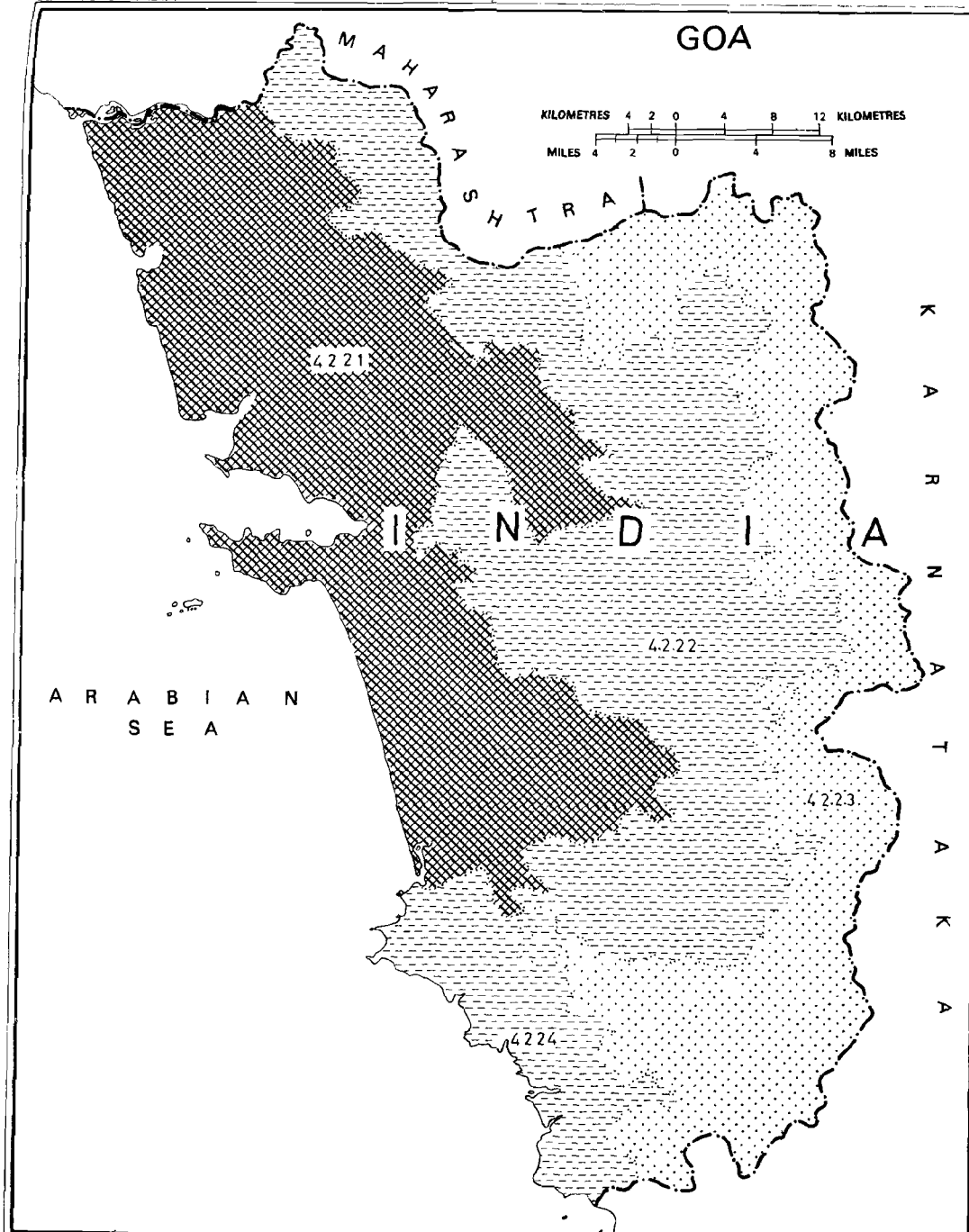




DIU ISLAND (INDIA) SIMARBANDAR (Diu)







GOA, DAMAN AND DIU

DENSITY OF POPULATION

1981

(BY SUB-MICRO REGIONS)

PERSONS PER Km^2

ABOVE 200 ← UT AVERAGE 285

101 – 200

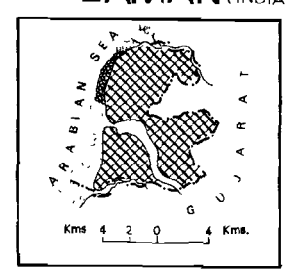
100 AND BELOW

BOUNDARY, UNION TERRITORY

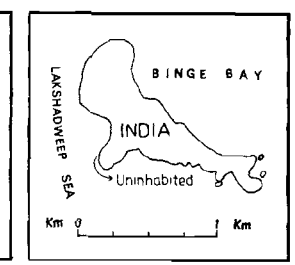
" UNDEMARCATED

" REGIONAL DIVISION (SUB-MICRO)

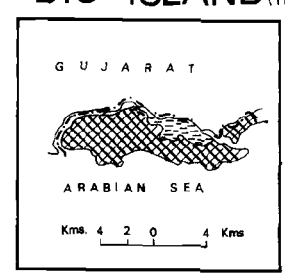
DAMAN (INDIA)

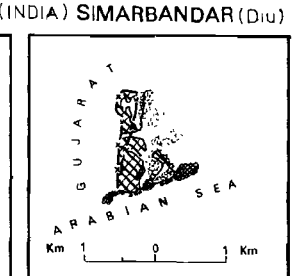


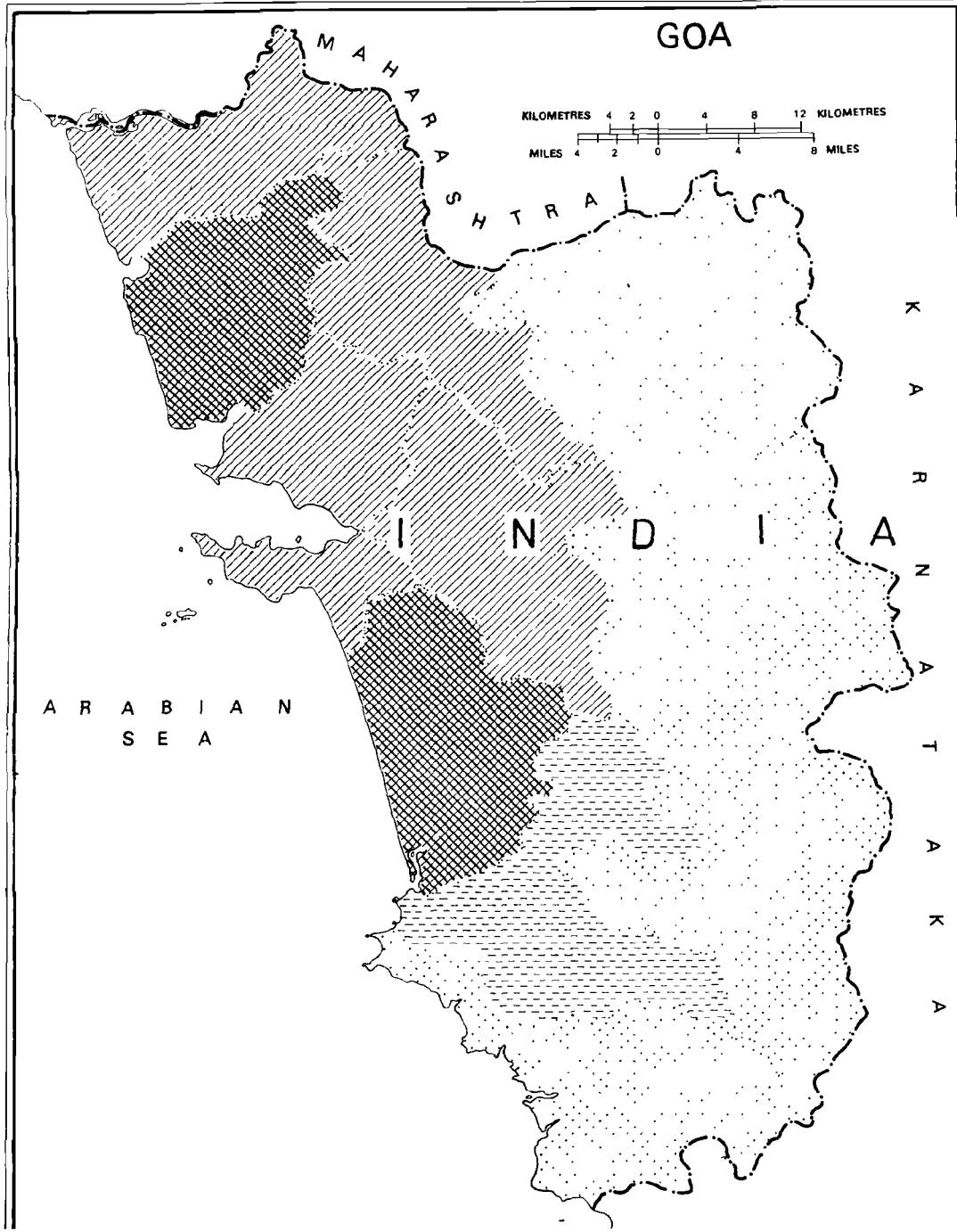
ANJADIP ISLAND (Goa)



DIU ISLAND (INDIA) **SIMARBANDAR** (Diu)







GOA, DAMAN AND DIU

RURAL DENSITY OF POPULATION

1981

(BY TALUKAS)

PERSONS PER KM^2

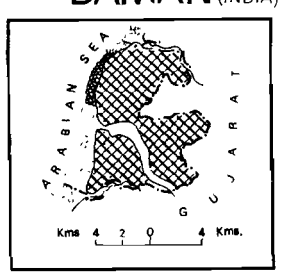
- ABOVE 400
- 201–400 ← U T AVERAGE 203
- 101–200
- 100 AND BELOW

BOUNDARY, UNION TERRITORY

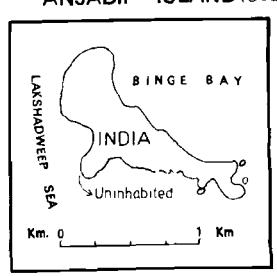
" UNDEMARCATED

" TALUKA

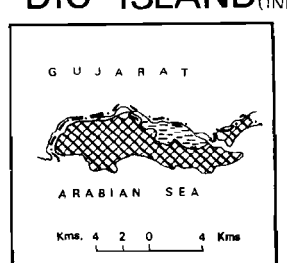
DAMAN (INDIA)

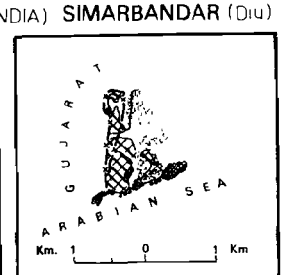


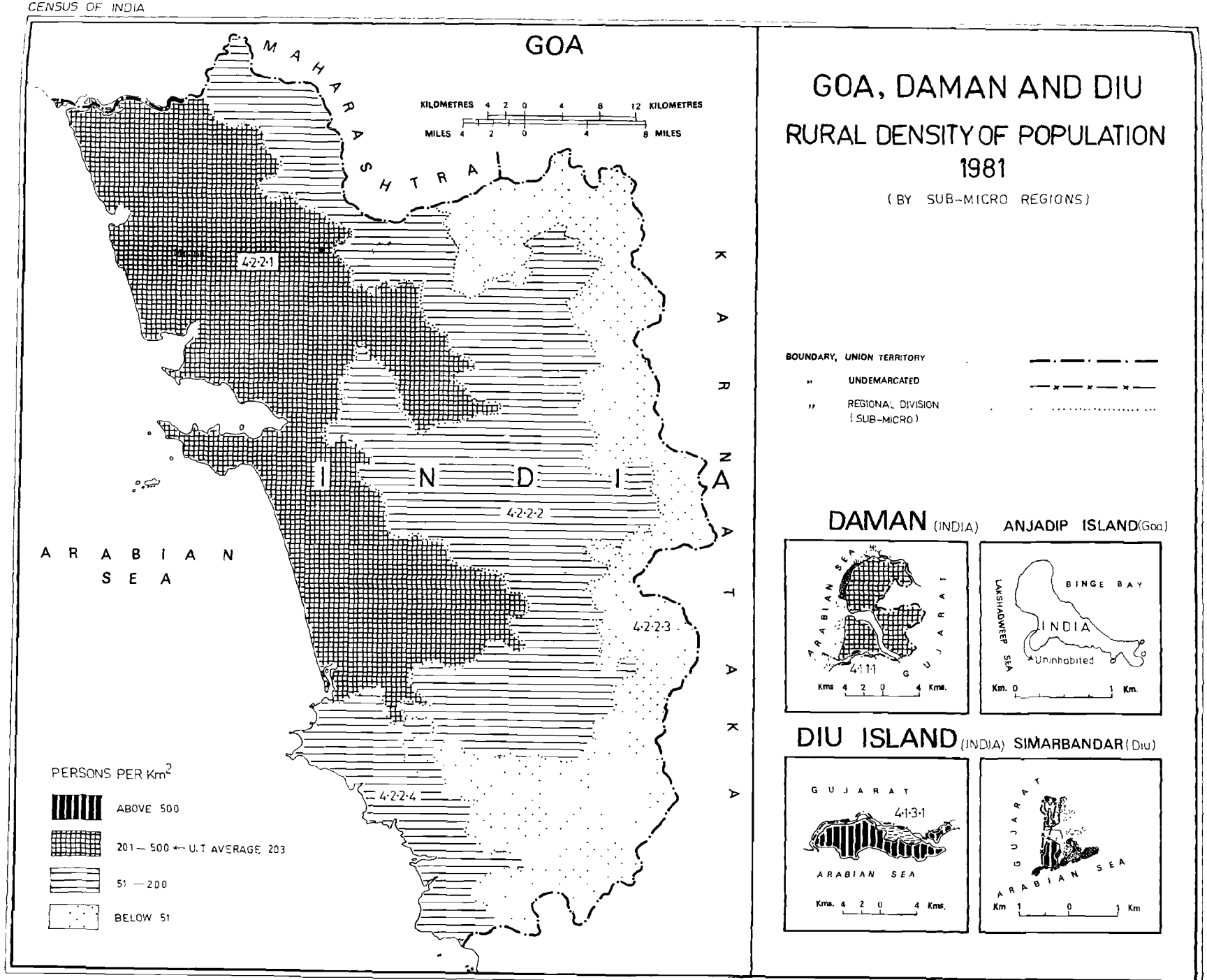
ANJADIP ISLAND (Goa)



DIU ISLAND (INDIA) **SIMARBANDAR** (Diu)







GOA, DAMAN AND DIU

RURAL DENSITY OF POPULATION 1981

(BY SUB-MICRO REGIONS)

BOUNDARY, UNION TERRITORY

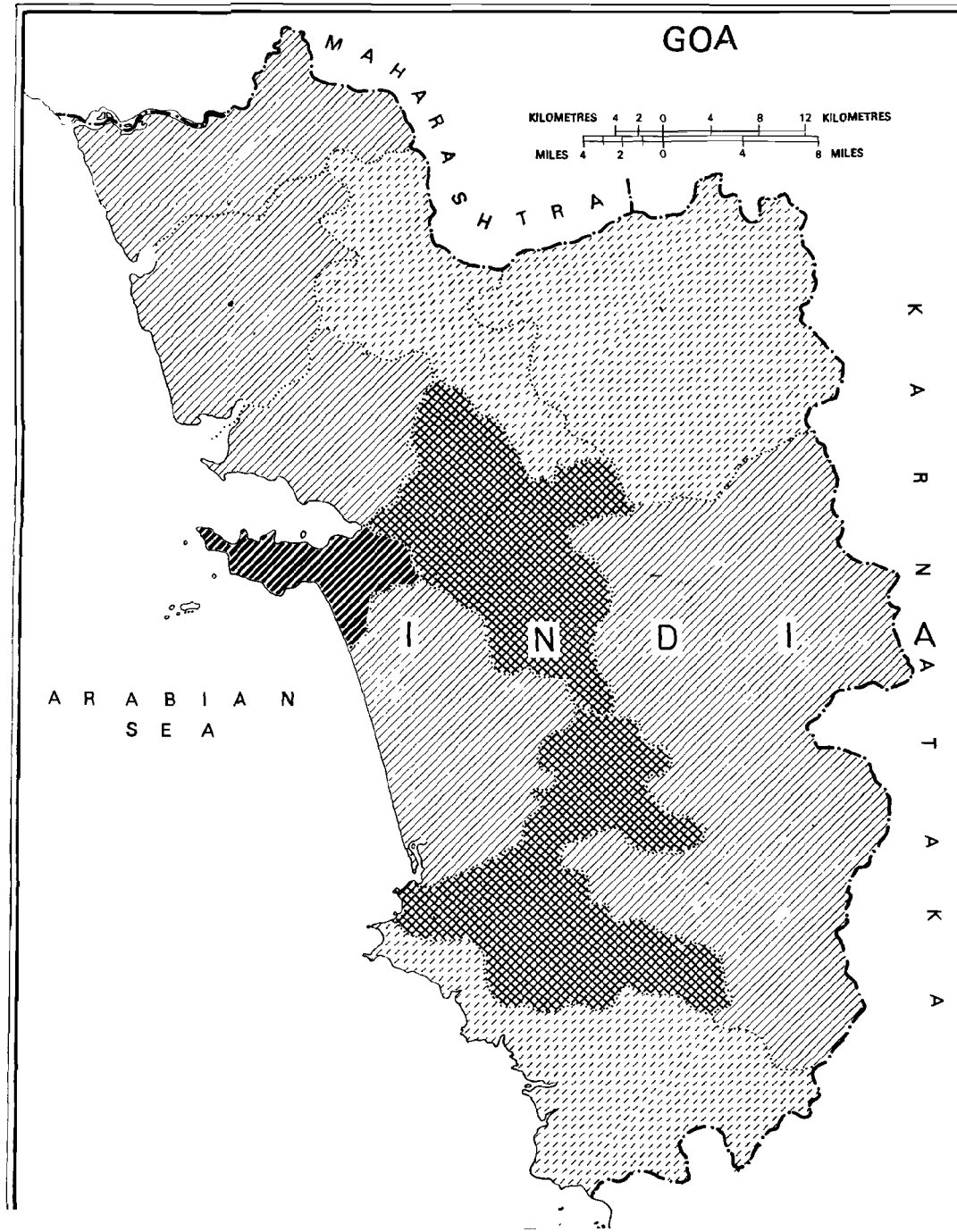
" UNDEMARCATED

" REGIONAL DIVISION (SUB-MICRO)

DAMAN (INDIA)

ANJADIP ISLAND (Goa)

DIU ISLAND (INDIA) SIMARBANDAR (Diu)



GOA, DAMAN AND DIU

URBAN DENSITY OF POPULATION 1981

(BY TALUKAS)

PERSONS PER Km^2

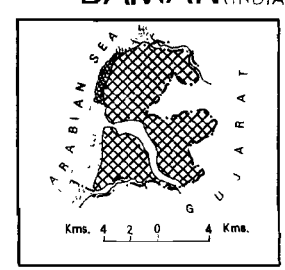
- ABOVE 4000
- 2001 – 4000
- 1001 – 2000 ← U T AVERAGE-1824
- 1000 AND BELOW

BOUNDARY, UNION TERRITORY

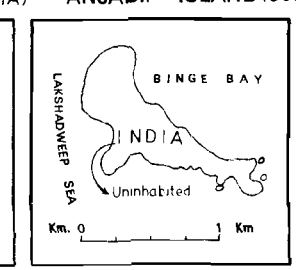
" UNDEMARCATED

" TALUKA

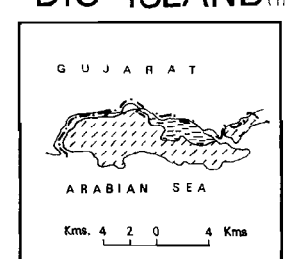
DAMAN (INDIA)

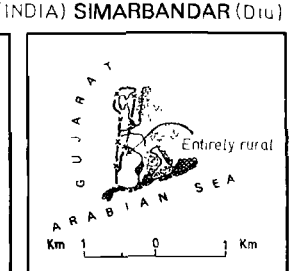


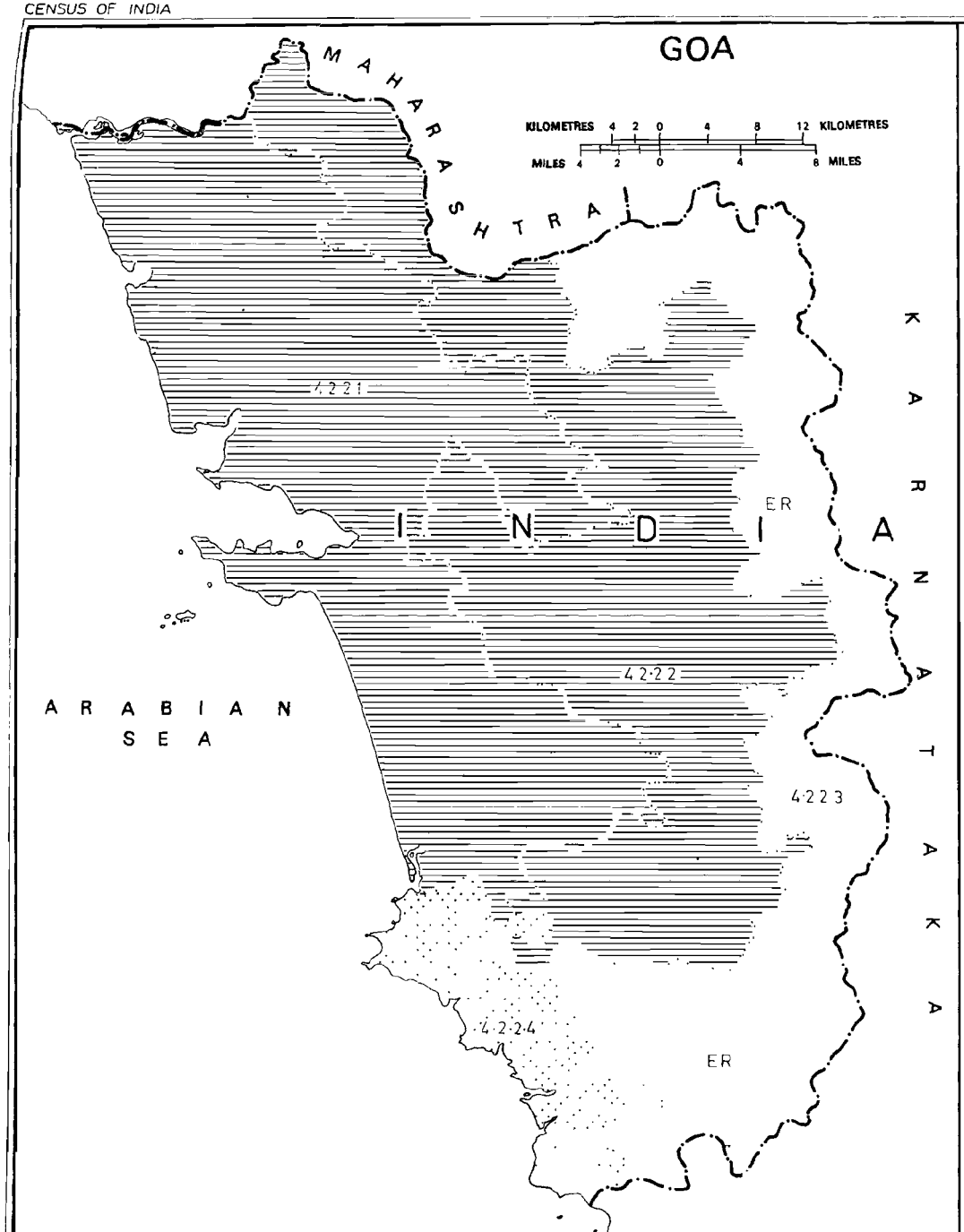
ANJADIP ISLAND (Goa)



DIU ISLAND (INDIA) SIMARBANDAR (Diu)







GOA, DAMAN AND DIU

URBAN DENSITY OF POPULATION

1981

(BY SUB-MICRO REGIONS)

PERSONS PER Km²

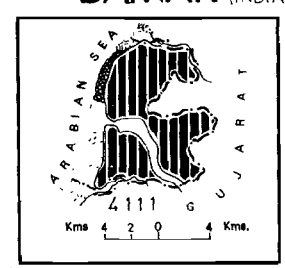
- ABOVE 2000
- 1001 – 2000 ← UT. AVERAGE 1824
- BELOW 1001
- ER — ENTIRELY RURAL

BOUNDARY, UNION TERRITORY

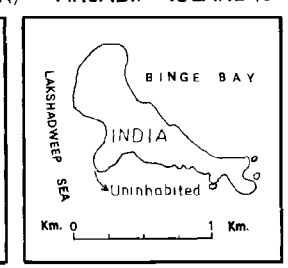
" UNDEMARCATED.

" REGIONAL DIVISION (SUB-MICRO)

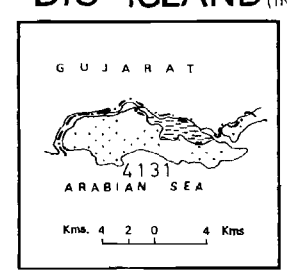
DAMAN (INDIA)



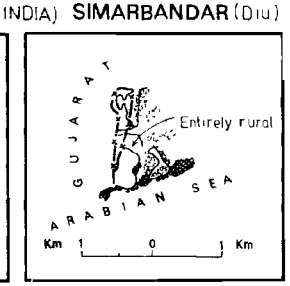
ANJADIP ISLAND (Goa)



DIU ISLAND (INDIA)



SIMARBANDAR (Diu)



PART III
REGIONAL DIVISIONS OF DISTRICTS

DISTRICT DAMAN
REGIONAL DIVISIONS

Daman is a uni-taluka district. As it is a small homogenous district by itself it is not further divided into sub-micro regions and the entire district is treated as a single sub-micro region. It forms part of Valsad Coast and is assigned Code No. 4.1.1.1.

It is located at a distance of about 750 km. from Panaji, the capital town of the union territory and spreads between 20°-27'-58" and 20°-22'-00" north latitudes and 72°-49'-42" and 72°-54'-43" east longtidues. It is bounded by Valsad district of Gujarat state on three sides, to the north, east and south, and on the west by the Arabian Sea.

The length of the district/region from north to south is 11 kms and the width from east to west is 8 kms. The altitude of the region is a mere 12 metres above the mean sea level. Damanganga is the only river flowing through the region.

The soils of the region are classified as *Tropepts—Aquepts* (67). *Tropepts* are shallow black, brown and alluvial soils of southern-region while *Aquepts* are brown soils (hydromorphic). Geologically the region is comprised of Deccan Trap.

The region includes 21 villages and one town (Daman). It has an area of 72.0 km^2. out of which 66.4 km^2 (92.22%) is rural and 5.6 km^2 (7.78%) is urban.

According to the 1981 Census, it has a population of 48,560 (24,074 males and 24,486 females) and an area of 72.0 km^2. This makes 4.47 per cent of the total population and 1.89 per cent of the total area of the union territory. It signifies that the density of population of 674 persons per km^2 is much more than the density of population for the union territory as a whole. Rural density of population is 415 persons per km^2. While urban density is 3,751 persons per km^2. This urban density is the highest in the union territory.

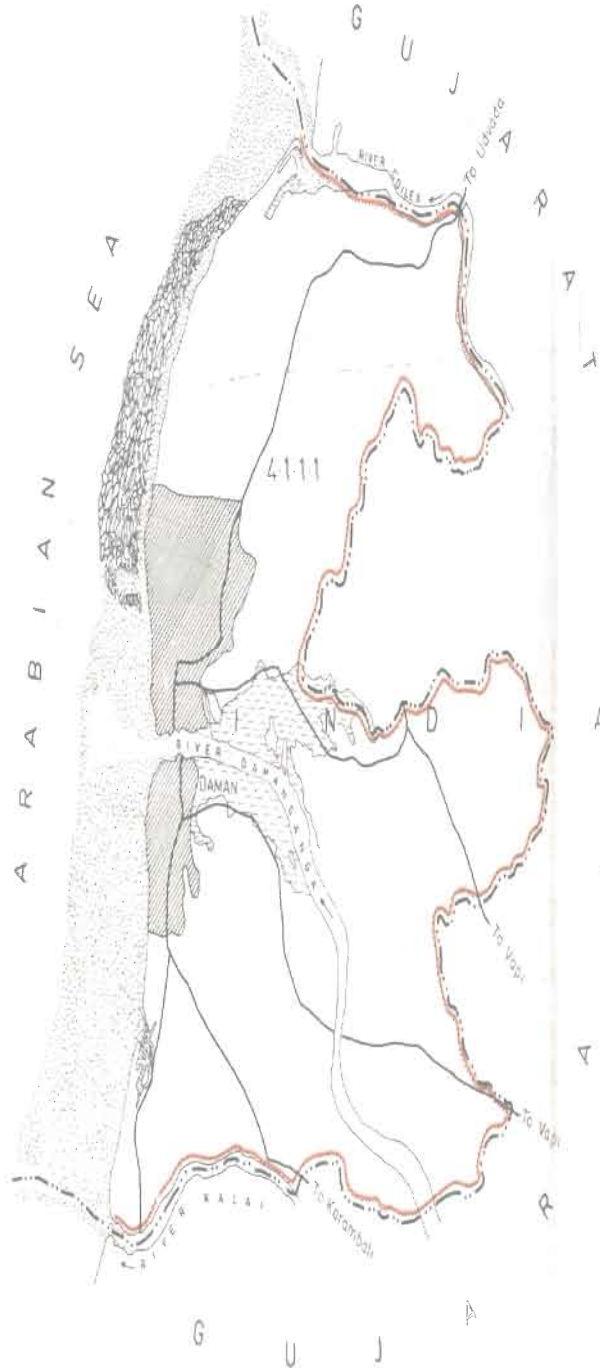
Out of 48,560 persons in the region, 27,557 (56.75%) are rural and 21,003 (43.25%) are urban by residence. A village on an average has an area of 3.16 km^2 and a population of 1,312. According to size class of population one (out of 21) village has a population of below 200; 6 are in the population range of 200-499; 9 are in the size class of 500-1, 999 and the remaining 5 villages are in the category of 2,000-4,999. In other words, one-third (33.33%) of the villages are small sized (population below 500), about two-fifth (42.86%) are medium sized (population 500-1,999) and the remaining 23.81 per cent are large sized (population 2,000-4,999) villages.

GOA, DAMAN & DIU

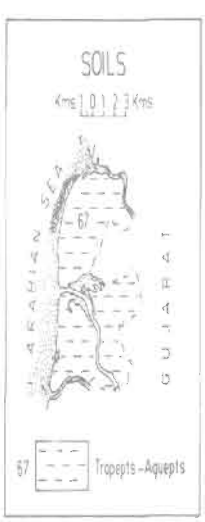
DISTRICT DAMAN

CENSUS CODE 2

REGIONAL DIVISIONS



4·1·1·1 DAMAN (VALSAD) COAST



BOUNDARY, UNION TERRITORY/STATE	
URBAN AREA	
IMPORTANT METALLED ROAD	
RIVER	
REGIONAL DIVISIONS	4·1·1·1
MACRO WITH BOUNDARY	
MESO " "	
MICRO " "	
SUB-MICRO WITH BOUNDARY	

(Read the sequence of regional divisions with reference to the all India map codes upto 3 tier)

DATA ON REGIONAL DIVISIONS

District Name : DAMAN | Census Location Code No. : 02 | Union Territory : Goa, Daman & Diu

Region No. & Name	No. of Villages in region	No. of Towns in region	Area in km^2 in region			Population in region		
			Total	Rural	Urban	Total	Rural	Urban
1	2	3	4	5	6	7	8	9
4.1.1.1 Daman (Valsad) Coast	21 Villages	1 Town, Daman (M)	72.0	66.4	5.6	48,560	27,557	21,003

REGION-WISE VILLAGE CODES, 1981

District Name : DAMAN | Census Location Code No. 02 | Union Territory : Goa, Daman & Diu

Sl. No.	Division No. and Name	Taluka	Location code No. of Census villages as per 1981	Total No. of Villages/Towns		Area of Regional Division in km²	Remarks
				In Taluka	In Division		
1	2	3	4	5	6	7	8
1.	4.1.1.1 Daman (Valsad) Coast	Daman	1 to 21	21 Villages	21 Villages + 1 Town	72.0	Entire Taluka is in this region

STATEMENT ON REGION-WISE PHYSIO-CULTURAL DETAILS

District Name : DAMAN | Census Location Code : 02 | Union Territory : Goa, Daman & Diu

Sl. No.	Region No. and Name	Name of Administrative Units	Geology	Soils	Physio-cultural characteristics
1	2	3	4	5	6
1.	Daman (Valsad) Coast 4.1.1.1	Daman Taluka/ District	Geologically, the entire region consists of Deccan Trap.	Tropepts-Aquepts (67)	It is located on the west coast of India at a distance of about 750 kms. north of Panaji, the capital town of the union territory. It includes the entire uni-taluka district of Daman. It is bounded by Valsad district of Gujarat state on three sides, to the north, east and south, and on the west by the Arabian Sea. It is a plain area having an altitude of a mere 12 metres above the mean sea level. Damanganga is the only river flowing through the region. Transport and communication system is adequate. Vapi station on the western railway lies just a few kilometres to the east. The region is densely populated. It accounts for 4.47 per cent of the total population of the union territory but only 1.89 per cent of the area. The density of population is 674 persons per km^2. which is very high as compared to 285 persons per km^2 the density of the union territory as a whole. Rural density is 415 persons per km^2. and urban density is 3,751 persons per km^2. The region has 21 villages and one town (Daman). Villages, in general, are medium to small in size.

DISTRICT DIU

REGIONAL DIVISIONS

Diu is also a uni-taluka district. As it is a small homogenous district by itself it, is not further divided into sub-micro regions and the entire district is treated as a single sub-micro region. It forms part of Junagadh Coastal Plains and is assigned Code No. 4.1.3.1.

It is located at a distance of about 1,540 kms from Panaji, the capital town of the union territory and spreads between 20°-44'-34" and 20°42'-00" north latitudes and 71°-00'-24" and 70°52'-26" east longitudes. It is a tiny island in the Arabian Sea near the port of Veraval, separated from the southern extremity of the Saurashtra peninsula by a narrow channel running through a swamp. The channel is navigable only for fishing boats and small crafts.

The length of the district/region from north to south is 4.6 kms and the width from east to west is 13.8 kms. The topography is generally plain. The hillocks attain a maximum height of about 30 metres. On the south of the island there, is a sandstone cliff washed by the sea. Close-by, the water is deep.

The soils of the region is barren. It is classified as *Orthids-Aquepts* (28). *Orthids* are soils of arid region with some development while *Aquepts* are brown soils (hydromorphic). Geologically, the region consists of Recent Alluvium

The region includes 5 villages (including simarbandar which is not in contiguity of Diu island) and one town (Diu). It has an area of 40.0 km^2. out of which 30.0 km^2. (75%) is rural and 10.0 km^2. (25%) is urban.

According to the 1981 Census, it has a population of 30,421 (14,224 males and 16,197 females) and an area of 40.0 km^2. This makes 2.80 per cent of the total population and 1.05 per cent of the total area of the union territory. It signifies that this region has a high density of population. The density of population is 761 persons per km^2. Which is the highest in the union territory. Rural density of population is 747 also the highest in the union territory but urban density of population is the lowest being only 802 persons per km^2.

Out of 30,421 persons in the region, 22,401 (73.64%) are rural and 8,020 (26.36%) are urban by residence. A village on an average has an area of 6.0 km^2 and a population of 4,480. According to the size class of population, 2 (out of 5) villages are in the population range of 200-499 and the remaining 3 villages are in the category of 5,000-9,999. In other words, two-fifth (40%) of the villages are small sized (population below 500) and the remaining three-fifth (60%) are exceptionally large sized (population 5,000-9,999).

GOA, DAMAN & DIU

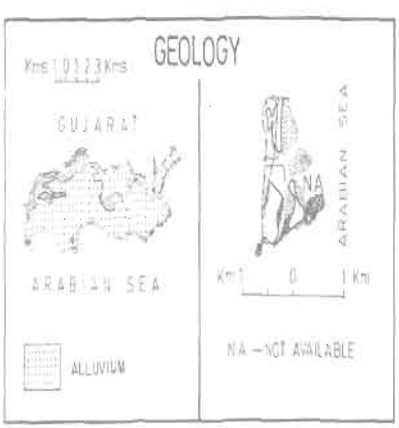
DISTRICT DIU

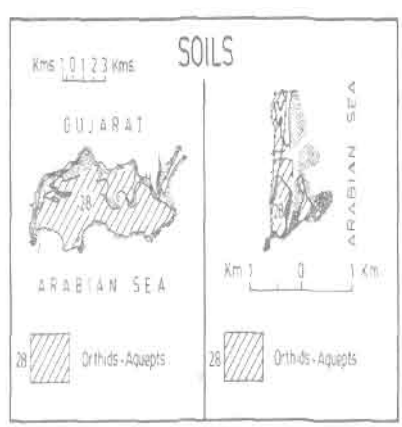
CENSUS CODE 3

REGIONAL DIVISIONS

1 0 1 2 3 Kms.

4131-DIU COAST (JUNAGADH-COASTAL PLAINS)





BOUNDARY, UNION TERRITORY/STATE	
VILLAGE HAVING 5000 AND ABOVE POPULATION	
URBAN AREA	
IMPORTANT METALLED ROAD	
RIVER	
REGIONAL DIVISIONS	4·1·3·1
MACRO WITH BOUNDARY	
MESO " "	
MICRO " "	
SUB-MICRO WITH BOUNDARY	

(Read the sequence of regional divisions with reference to the all India map codes upto 3 tier)

DATA ON REGIONAL DIVISIONS

District Name : DIU | Census Location Code No. 03 | Union Territory : Goa, Daman & Diu

Region No. & Name	No. of Villages in region	No. of Towns in region	Area in km² in region			Population in region		
			Total	Rural	Urban	Total	Rural	Urban
1	2	3	4	5	6	7	8	9
4.1.3.1 Diu Coast (Junagadh Coastal Plains)	5 Villages	1 Town, Diu (M)	40.0	30.0	10.0	30,421	22,401	8,020

REGION-WISE VILLAGE CODES, 1981

District Name : DIU | Census Location Code No. 03 | Union Territory : Goa, Daman & Diu

Sl. No.	Division No. and Name	Taluka	Location Code No. of census villages as per 1981	Total No. of Villages/Towns		Area of Regional Divison in km^2	Remarks
				In Taluka	In Division		
1	2	3	4	5	6	7	8
1.	4.1.3.1 Diu Coast (Junagadh Coastal Plains)	Diu	1 to 5	5 Villages	5 Villages + 1 Town	40.0	Entire Tahsil is in this Region

STATEMENT ON REGION-WISE PHYSIO-CULTURAL DETAILS

District Name : Diu | Census Location Code 03 | Union Territory : Goa, Daman & Diu

Sl. No.	Region No. and Name	Name of Administrative Units	Geology	Soils	Physio-cultural characteristics
1	2	3	4	5	6
	Diu Coast (Junagadh Coastal Plains) 4 1 3 1	Diu Taluka/ District	The geology of the entire region consist of Recent Alluvium.	Orthids-Aquepts (28)	The region is located on the west coast of India at a distance of about 1,540 km north of Panaji, the capital town of the union territory. It includes the entire uni-taluka district of Diu. It is a tiny island in the Arabian Sea near the port of Veraval, separated from the southern extremity of the Saurashtra peninsula by a narrow channel running through a swamp. It is a plain area. The hillocks attain a maximum height of about 30 metres. The region is the most densely populated in the union territory. It accounts for 2.80 per cent of the total population of the union territory but a mere 1.05 per cent of the area. The density of population is 761 persons per km^2. Rural density is 747 persons per km^2 and urban density is 802 persons per km^2. The region has only 5 villages and one town (Diu). Three villages are large sized (population between 5,000-9,999) and two villages are small sized (population between 200-499).

DISTRICT GOA
REGIONAL DIVISIONS

District Goa forms part of Western Coastal Region (4.2). Goa coast (4.2.2) micro region is comprised of Goa district only. It spreads between 14°-54' and 15°-48' north latitudes and 73°-41' and 74°-20' east longitudes. It is flanked by district Ratnagiri (Maharashtra state) in the north, district Belgaum and Uttar Kannad (Karnataka state) in the east and south respectively. The Arabian sea makes its western boundary.

The district has a hilly terrain especially on its eastern side where lies the southern end of the Sahyadri range. These ranges after skirting a considerable portion of the north-eastern and south-eastern boundaries branch-off westwards across the territory with many spurs and ridges. The terrain is intersected by a number of rivers flowing westwards and ending into the Arabian Sea. The important rivers in the district are Mandovi, Zuvari, Tiracol, Chapora and Betul. These rivers are navigable and as such are most vital for the economy of this territory. Goa coast is full of creeks and estuaries formed by these rivers which provide a shelter for the fishing crafts. Estuaries of these rivers are rich in marine fauna. The long coastline of the district is endowed with some of the loveliest beaches in the world.

The geology of Goa is varied ranging from Recent to Archaean ages. Large area of the district had greywacke-argillite covering most part of Goa plateau and northern half of coastal Goa. There is a long strip of Ultramafic-mafic complex in the plateau region in north west to south east direction with many bends. Along the coast, west of Margao and river Sal there is an elongated stretch of the Recent alluvium. The south western part of Goa, mostly covered under dense forests, has metabasalt and polymict conglomerate of Chitradurga group and migmatites and granodioritic to tonalitic gneisses of Archaean age. In the western part, the extension of metabasalt and gneisses is found along the coast and even in plateau area and the southern part of Goa Sahyadri Hills. The geology of Sahyadri Hill area is relatively complex. Besides large patches of granites (Sensu Lato) and greywacke-argillite there are rocks of limestone and dolmite, quartzite and conglomerate in the area falling west of Valpoi town in Satari taluk. In the north western portion of Satari Taluk deposits of Deccan Trap are also observed. The hilly region from where river Dudhasagar emerges has some lateritic formation of Palaeocene to Recent ages. The dykes are frequently seen all over the district.

The soil, in general, is laterite. The agricultural lowlands especially in the coastal tract, are alluvial flats formed through sedimentation along the principal rivers. Nearly one fourth area in the district is under forest.

The climate is warm and humid. The rainfall is received from summer monsoons during June to September and the annual rainfall varies between 2,500 mm and 4,300 mm. The year-round temperature varies between 22°C and 32°C.

The district has a population of 1,007,749 as per the 1981 Census and an area of 3,702.0 km^2 according to the Survey of India. Urban population of the district is 322,785 while rural population comes to 684,964 persons. Of the total area, 177.3 km^2 belongs to 15 urban centres located in the district and rural area is 3,525.7 km^2. The density of population for the district as whole is 272 persons per km^2. The rural density of population is 194 persons per km^2 while urban density comes 1,820 persons per km^2.

Based on physiogeographic details, Goa district permitted itself to be sub-divided into four sub-micro regions i.e.4th order regions.These are:

Goa Coast	4.2.2.1
Goa Plateau	4.2.2.2
Sahyadri Hills	4.2.2.3
Chauri Forested Coast	4.2.2.4

Contours valued 100 metres and 200 metres, spot heights, the drainage pattern and the course of the rivers and the forest coverage were considered as basis for the delineation of sub-micro regions. Latter, geological maps and soil map were referred to for defining the regions in terms of topographical evaluation. It may however, be admitted that close look at the maps suggested delineation of much smaller regions. But demarcation of too small regions in a country of sub-continental size like India, may not have stood on the scale desired and thus, weakened the purpose of the study.

Goa Coast (4.2.2.1)

This region is largest and is situated in western part of the district comprising whole of Bardez, Tiswadi, Mormugao and Salcete talukas and parts of Quepem, Pernem, Bicholim and Ponda talukas. The region extends between river Terekol in the north and estuary of Sal river in the south. With the exception of few local hills, the elevation does not exceed 100 metres and the land slopes towards the west i.e. the Arabian Sea.

Terekol, Chapora, Mandovi, Zuari and Sal are the main rivers flowing in this region. These coastal plains are the infilled stretches of these rivers which have deposited the eroded material from the Sahyadris. River Terekol rises from the Sahyadries in Maharashtra and flows along the northern boundary of this region, more so the district, and merges into the Arabian Sea. Chapora and Mandovi rivers have their source in Karnataka. The Zuari and Sal rivers originate within the Goa district and merge into the Sea.

Large area in the northern half of this region consists of greywacke-argillite belonging to Chitradurga group of Archaean to Lower Proterozic age. An elongated strip of Polymict conglomerate is deposited along west of river Zuvari. In the south of river Zuvari in Salcete Taluk a large area has migmatites and graviodioritic to tonalitic gneisses of Archaean age. Along the coast, west of Margao and river Sal, there is an elongaged stretch of the Recent alluvium.

The soil, in general, is Lateritic. Soil map depicting sub-order associations is based on the soil map of India, published by the National Bureau of Soil Survey and Land use Planning (ICAR), 1983. The soil in this region can be grouped as *Tropets-Aquepts* (67), *Orthents-Tropepts* (61) and *Humults* (90). Within this region, alluvial soil in the northern half are recently formed. They are shallow black and brown in colour. The southern half, in general, has brown hill soils.

This region is almost devoid of forests and only about 2 per cent of the total area in this region is under forests.

This region includes 193 villages (out of 395) and 11 towns (out of 15) of the district. It covers and area of 1,334.78 km^2 out of which 1,179.28 km^2 (88.35%) is rural and 155.50km^2 (11.65%) is urban.

As per the 1981 Census, this region has a population of 757,743 (including 381,686 males and 376,057 females) and covers an area of 1,334.78 km^2. This makes nearly three-fourth (75.19%) of the total population of the district over little above one-third (36.06%) of its area. It signifies that the density of population in Goa coast (568) is more than double of the district (272).

The region has a rural density of 391 and an urban density of 1,903 persons per km^2. Evidently this is the most thickly populated region within the district.

Out of 757,743 persons in the region 461,789 (60.94%) live in the country side and 295,954 (39.06%) in the urban areas. It reflects that this region is more urbanised than the district as a whole where 32.03 per cent of the population is urban. The rural population in this region spreads over 192 inhabited villages (one village is uninhabited). A village on the average has a area of 6.11 km^2 and population of 3,947. This signifies that the villages in this region are comparatively smaller in area but bigger in population (in the district, village on the average has an area of 8.9 km^2 and population of 1,775). Further, out of 192 inhabited villages 9 have a population below 200; 22 are in size class 200-499; 74 are in the population range of 500-1,999; 63 are in the population size class 2,000-4,999 and 24 villages are in the range 5,000-9,999. In other words, 16 per cent of the villages in the region are small sized (population below 500), 39 per cent medium sized (500-1, 999); 33 per cent large sized (2,000-4,999) and 12 per cent are exceptionally large sized (5,000-9,999).

11 towns in the region accommodate 91.69 per cent of the total urban population in the district. Of these 11 towns, three (Panaji U.A., Mormugao and Margao (U.A.) are class II; one (Mapusa) is class III, two (Cuncolim and Bicholim) are class IV; three (Calangute, Siolim and Curchorem) are class V and two (Pernem and Quepem) are class VI.

Goa Plateau (4.2.2.2)

This plateau region broadly curves round the region Goa Coast. Goa plateau includes parts of Quepem, Pernem, Bicholim, Ponda, Satari and Sanguem talukas. In general, the elevation varies between 100 metres and 200 metres. There are, however, some local spots where the height crosses even more than 400 metres and these are the offshoots of Sahyadri hills. Further, at places these offshoots extend even upto the coast where they form headlands. All the main rivers after rising from the Sahyadris, flow through this region.

Barring a few patches, the whole of plateau region consists of greywack-argillite of Chitradurga group belonging to Archaean to Lower Proterozoic age. There is a long strip of ultramafic-mafic complex in this region stretching in a north west to south east direction with many bends. A few petches of metabasalt and polymict conglomerate also occur in the middle of the region along river Dudhsagar and in southern most parts of Quepem taluk.

The soil in this region may be grouped as *Orthents-Tropets* (61) and *Humults* (90). These are recently formed alluvial soils, shallow black and brown in colour.

This region includes 136 (out of 395) villages and 3 (out of 15) towns of the district. These 136 villages and 3 towns

extend over six talukas. All these talukas display considerable physio-geographic heterogeniety among themselves. The region covers an area of 1,180.38 km^2 out of which 1,160.36 km^2 (98.27%) is rural and 20.02 km^2 (1.75%) urban.

As per the 1981 Census, this region has a population of 185,436 persons (including 95,961 males and 89,475 females) and an area of 1,180.38 km^2. This makes less than one-fifth (18.41%) of the total population over nearly one-third (31.74%) of the total area of the district. It signifies that the region is less densely populated (density 157) than the district (density 272) as a whole. This region has a rural density of 138 and an urban density of 1,259 persons per km^2.

Out of 185,436 persons in this region, 160,234 (86.41%) live in rural and 25,202 (13.59%) in the urban areas. This exhibits that the bulk of the population in this region is rural by residence. The rural population is distributed over 134 inhabited villages. A village on the average has an area of 8.5 km^2 and a populaiton of 1,384. This signifies that the average area size of the village in this region is almost equal to that of the district (8.9 km^2) but much smaller in population size (average population size in the district 1,775 persons). Out of 134 inhabited villages, 23 have a population below 200; 30 are in the range of 200-499; 58 in the size class of 500-1,999; 18 in the population range of 2,000-4,999; 4 in the category of 5,000-9,999 and in one village the population exceeds 10,000. In other words, 39.5 per cent of the villages are small sized (below 500), 42 per cent medium sized (500-1,999), 13 per cent large sized (2,000-4,999) and 3.5 per cent are exceptionally large sized villages (5,000+).

Three towns falling in this region accommodate 7.81 per cent of the urban population in the district. Among these three towns, one each falls in the size class IV (Ponda), class V (Sanguem) and class VI (Valpoi)

Sahyadri Hills (4.2.2.3)

This region lies in the extreme east of the district and includes parts of Satari, Sanguem and Canacona talukas. A small part of Quepem taluka also fall in this region. The Sahyadri hills serve as a water-divide between the rivers flowing towards the Arabian sea in the west and those flowing towards Bay of Bengal in the east. These hills are characterised by steep slopes. The transition from the Goa Plateau (which in general, is at an elevation of 200 metres) to the Sahyadri hills is abrupt. At some places the Sahyadri hills have an elevation of more than 800 metres. The terrain is intersected by a number of rivers. With the exception of river Sal, all the rivers flowing through the district originate from the Sahyadri hills.

The geology of Sahyadri Hills is relatively complex. In the extreme northern part of the region Deccan trap occur in a small strip. The northern half of the region mainly consists of granites (Sensu Lato) of Archaean age. Limestone and dolomite and quartzite and conglomerate occur in between Deccan trap and granites. Along the western border of the region there are extensions of greywacke-argillite. In the southern part of the region in Sanguem taluk these occurs metabasalt and migmatites and conglomerate to tonalitic gneisses of Archaean age. There are also some lateritic formations seen over the central part of the region.

The soil in this region may be grouped as *Urthents-Tropets* (61) and *Humults* (90). These are recently formed lateritic soils shallow black and brown in colour.

Nearly three-fifths of the area in this region is under forests. Broadly speaking there are two types of forests-wet evergreen and moist deciduous. The wet evergreen are typical rainforests. These are found all along the hills with heavy rainfall. The moist deciduous forests or the monsoon forests from the natural cover over the Sahyadri hills. These forests are less resistant to fire and other man induced interference.

This region includes 52 out of 395 villages in the district. It covers an area of 897.40 km^2 which is all rural. These 52 villages spread over four talukas namely Quepem, Canacona, Satari and Sanguem. As per the 1981 Census, this region has a population of 25,928 (including 13,212 males and 12,716 females) and covers on area of 897.40 km^2. This makes barely 2.57 per cent of the total population but about one-fourth (24.24 per cent) of the total area of the district.

Evidenly this region with a density of 29 persons per km^2 is sparsely populated. It has the lowest density among all the regions in the district.

The population in the region (which is all rural) is distributed over 47 inhabited villages (out of 52 villages five are uninhabited). A village on an average has an area of 17.3 km^2 and a population of 552. This signifies that the average size of the village is nearly double than that of the district (8.9 km^2). However, in terms of population the average size of the village in this region (552) is not even one-third of the district (average population size 1,775).

According to size class of population, 14 (out of 47 inhabited) villages have population below 200; 17 are in the population range of 200-499; 15 are in the size class

500-1,999 and remaining 1 in the category 2,000-4,999. In other words, two-third (66%) of the villages in the region are small sized (population below 500), nearly one-third (32%) are medium sized (population 500-1,999) and the remaining one is large sized (population 2,000-4,999).

Chauri Forested Coast (4.2.2.4)

This is the smallest region in the district. It lies to the south of sal estuary in the south-western part of the district. It includes parts of Quepem and Canacona talukas. Anjadip islands of Canacona which is situated off karwar coast also forms part of the region.

In general, the region has an elevation of below 200 metres and the land slopes towards the sea. However, some local hills in this region have a much higher elevation. There is no major river which flows through this region. The small streams flowing through this region originate from the Sahyadri hills. The almost continuous line of cliffs between cape Rama and Chauri is a result of the northwest-southeast alignment of the coastline which puts it directly in the path of the dominant south-west waves.

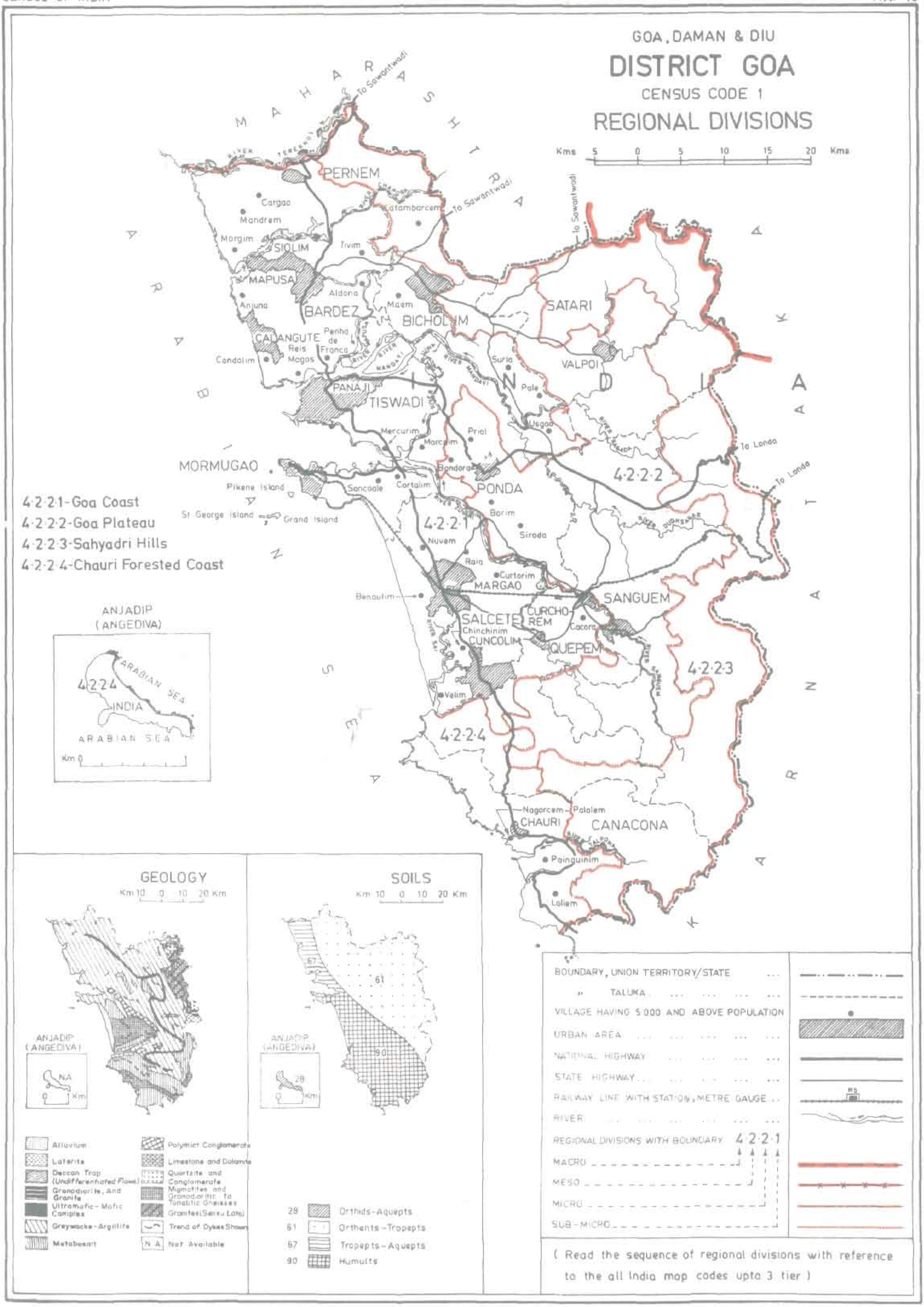
The region parimarily consists of metabasalt of Chitradurga group and migmatites and granodioritic to tonalitic gneisses of Archaean to Lower Proterozoic age.

The soils in this region may be grouped as *Humults* (90). In Anjadip island the soil is classified as *Orthods-Aquepts* (28). This region is covered with moist deciduous forests.

This region includes 14 (out of 395) villages and one town (out of 15). It covers an area of 281.66 km^2 out of which 279.89 km^2 (99.40%) is rural and 1.77 km^2 (0.60%) urban. These 14 villages and one town extend over the talukas of Quepem and Canacona.

According to the 1981 Census, the region has a population of 38,642 (including 19,293 males and 19,349 females) and an area of 281.66 km^2. As such this region constitutes 3.83 per cent of the total population and 7.61 per cent of the total area of the district. This region has a density of 137 persons per km^2 which is nearly one-half of the density of population in the district. It has a rural density of 132 persons per km^2 and urban density of 920 persons per km^2. The corresponding figures for the district Goa are: 194 and 1,820 respectively.

Out of 38,642 persons in the region, 37,013 (95.78%) are rural and 1,629 (4.22%) urban by residence. The rural population is distributed over 13 inhabited villages (out of 14, one village (Anjadip Island) is uninhabited). A village on the average has an area of 21.3 km^2 and a population of 2,847. It signifies that in this region the average size of village both in terms of area and the population, is the largest among all the regions in the district. Among the 13 inhabited villages, one is in the population range of 200-499; six are in the range of 500-1,999; three each are in the size class 2,000-4,999 and size class 5,000-9,999. In other words, one village is small sized (population below 500), six are medium sized (500-1,999), three large sized (2000-4,999) and the remaining three exceptionally large sized (5,000-9,999).


GOA, DAMAN & DIU
DISTRICT GOA
CENSUS CODE 1
REGIONAL DIVISIONS
Kms 5 0 5 10 15 20 Kms
4·2·2·1-Goa Coast
4·2·2·2-Goa Plateau
4·2·2·3-Sahyadri Hills
4·2·2·4-Chauri Forested Coast
MAHARASHTRA
KARNATAKA
ARABIAN SEA
INDIA
PERNEM
BARDEZ
BICHOLIM
SATARI
TISWADI
PONDA
MORMUGAO
SALCETE
SANGUEM
QUEPEM
CANACONA
MAPUSA
PANAJI
MARGAO
VALPOI
CHAURI
4·2·2·1
4·2·2·2
4·2·2·3
4·2·2·4
To Sawantwadi
To Londa
ANJADIP (ANGEDIVA)
GEOLOGY
Km 10 0 10 20 Km
Alluvium
Laterite
Deccan Trap (Undifferentiated Flows)
Granodiorite, And Granite
Ultramafic - Mafic Complex
Greywacke - Argillite
Metabasalt
Polymict Conglomerate
Limestone and Dolomite
Quartzite and Conglomerate
Migmatites and Granodioritic to Tonalitic Gneisses
Granites (Sanvu Lata)
Trend of Dykes Shown
NA Not Available
SOILS
Km 10 0 10 20 Km
28 Orthids-Aquepts
61 Orthents-Tropepts
67 Tropepts-Aquepts
90 Humults
BOUNDARY, UNION TERRITORY/STATE
" TALUKA
VILLAGE HAVING 5000 AND ABOVE POPULATION
URBAN AREA
NATIONAL HIGHWAY
STATE HIGHWAY
RAILWAY LINE WITH STATION, METRE GAUGE
RIVER
REGIONAL DIVISIONS WITH BOUNDARY 4·2·2·1
MACRO
MESO
MICRO
SUB-MICRO
(Read the sequence of regional divisions with reference to the all India map codes upto 3 tier)

DATA ON REGIONAL DIVISIONS

District Name : GOA | Census Location Code No. 01 | Union Territory : Goa, Daman & Diu

Sl. No.	Region No. & Name	No. of villages in region	No. of Towns in region	Area in km² in region			Population in region		
				Total	Rural	Urban	Total	Rural	Urban
1	2	3	4	5	6	7	8	9	10
1	4.2.2.1	193 Villages	11 Towns	1334.78	1179.28	155.50	757,743	461,789	295,954
	Goa Coast	17 villages of Quepem Taluka 17 villages of Pernem Taluka 14 Villages of Bicholim Taluka 16 villages of Ponda Taluka 41 villages of Brdez Taluka 28 villages of Tiswadi Taluka 14 villages of Mormugao Taluka 46 villages of Salcete Taluka	2 Towns (Quepem (M) & Curchorem of Quepem Taluka) 1 Town (Pernem of Pernem Taluka) 1 Town (Bicholim (M) of Bicholim Taluka) 3 Towns (Mapusa (M), Calangute, Siolim of Bardez Taluka) 1 Town (Panaji (M) of Tiswadi Taluka) 1 Town (Mormugao (M) of Mormugao Taluka) 2 Towns (Margao (M) and Cuncolim of Salcete Taluka)						
2.	4.2.2.2	136 villages	3 Towns	1180.38	1160 36	20.02	185,436	160.234	25,202
	Goa Plateau	10 villages of Quepem Taluka 10 villages of Pernem Taluka 14 villages of Bicholim Taluka 15 villages of Ponda Taluka 52 villages of Satari Taluka 35 villages of Sanguem Taluka	1 Town (Ponda (M) of Ponda Taluka) 1 Town (Valpoi of Satari Taluka) 1 Town (Sanguem (M) of Sanguem Taluka)						
3.	4.2.2.3 Sahyadri Hills	52 villages 5 villages of Quepem Taluka 2 villages of Canacona Taluka 28 villages of Satari Taluka 17 villages of Sanguem Taluka	Nil	897.40	897 40	—	25,928	25,928	—
4.	4.2.2.4 Chaun Forested Coast	14 villages 7 villages of Quepem Taluka 7 villages of Canacona Taluka	1 Town (Chauri (M) of Canacona Taluka)	281.66	279 89	1 77	38,642	370,13	1,629

REGION-WISE VILLAGE CODES, 1981

District Name : GOA | Census Location Code No. 01 | Union Territory : Goa, Daman & Diu

Sl. No.	Division No. and Name	Taluka	Location Code No. of census villages as per 1981	Total No. of villages//towns		Area of Regional Division in km^2.	Remarks
				In Taluka	In Division		
1	2	3	4	5	6	7	8
1.	4.2.2.1 Goa Coast	Quepem	1 to 10, 13 to 15 19, 20, 22 & 27.	17 villages			Code Nos. 16 to 18, 21, 28, 29, 30, 32, 37, 38, are in region No. 4.2.2.2 Code Nos. 35, 36, 39 to 41 are in region No. 4.2.2.3 Code Nos. 23 to 26, 31, 33 & 34 are in region No. 4.2.2.4 (Village No. 11 declared as Municipal Town and village No. 12 included in Municipal Town of. Quepem).
		Pernem	1 to 8 19 to 27	17 villages			Code Nos. 9 to 18 are in region No. 4.2.2.2
		Bicholim	6,7,12 to 16, 21, 23 to 28	14 villages			Code Nos. 1 to 5, 8 to 11, 17 to 20, 22 are in region No. 4 2.2.2
		Ponda	1 to 8, 11, 13, 14, 18, 19, 21 to 23.	16 villages			Code Nos. 9, 10, 12, 15 to 17, 20, 24 to 31 are in region No. 4.2.2.2
		Bardez	1 to 41	41 villages			Entire taluka is in this region
		Tiswadi	1 to 28	28 villages			Entire taluka is in this region
		Marmugao	1 to 14	14 villages			Entire taluka is in this region
		Salcete	1 to 46	46 villages	193 villages + 11 towns	Total area 1134.78 km^2	Entire taluka is in this region

1	2	3	4	5	6	7	8
2.	4.2.2.2 Goa Plateau	Quepem	16 to 18, 21, 28 to 30, 32, 37, 38	10 villages			Code Nos. 1 to 10, 13 to 15, 19, 20, 22, 27 are in region No. 4.2.2.1 Code Nos. 35, 36, 39 to 41 are in region No. 4.2.2.3 Code Nos. 23 to 26, 31, 33, 34 are in region No. 4.2.2.4
		Pernem	9 to 18	10 villages			Code Nos. 1 to 8, 19 to 27 are in region No. 4.2.2.1
		Bicholim	1 to 5, 8 to 11, 17 to 20, 22	14 villages			Code Nos. 6, 7, 12 to 16, 21, 23 to 28 are in region No. 4.2.2.1
		Ponda	9, 10, 12, 15 to 17, 20, 24 to 31	15 villages			Code Nos. 1 to 8, 11, 13, 14, 18, 19, 21 to 23 are in region No. 4.2.2.1
		Satari	1 to 4, 22, 23, 28 to 33, 37 to 44, 46 to 52, 56 to 58, 62 to 82.	52 villages			Code Nos. 5 to 21 24 to 27, 34 to 36, 45, 59 to 61 are in region No. 4.2.2.3
		Sanguem	1 to 4, 8 to 20, 26 to 35, 40, 42 to 48.	35 villages	Total villages 136 + 3 towns	Total area 1180.38 km^2	Code Nos. 5 to 7, 21 to 25, 36 to 39, 41, 49 to 52 are in region No. 4.2.2.3
3.	4.2.2.3 Sahyadri Hills	Quepem	35, 36, 39 to 41	5 villages			Code Nos. 1 to 10, 13 to 15, 19, 20, 22 and 27 are in region No. 4.2.2.1 Code Nos. 16 to 18, 21, 28 to 30, 32, 37, 38 are in region No. 4.2.2.2 Code Nos. 23 to 26, 31, 33, 34 are in region No. 4.2.2.4
		Canacona	7, 8	2 villages			Code Nos. 1 to 4, 6, 9, 10 are in region No. 4.2.2.4

1	2	3	4	5	6	7	8
		Satari	5 to 21, 24 to 27, 34 to 36, 45, 59 to 61	28 villages			Code Nos. 1 to 4, 22, 23, 28 to 33, 37 to 44, 46 to 53, 56 to 58, 62 to 82 are in region No. 4.2.2.2
		Sanguem	5 to 7, 21 25, 36 to 39, 41, 49 to 52.	17 villages	52 villages only.	Total Area 897.40 km^2	Code Nos. 1to 4, 8 to 20, 26 to 35, 40, 42 to 48 are in region No. 4.2.2.2
4.	4.2.2.4 Chauri Forested Coast	Quepem	23 to 26, 31 33, 34	7 villages			Code Nos. 1 to 10 13 to 15, 19, 20, 22, 27 are in region No. 4.2.2.1 Code No. 16 to 18, 21, 28, 29, 30, 32, 37, 38 are in region No. 4.2.2.2 Code Nos. 35, 36, 39 to 41 are in region 4.2.2.3
		Canacona	1 to 4, 6, 9, 10	7 villages	Total villages 14 + 1 Town	Total Area 281.66 km^2	Code Nos. 7 & 8 are in region No. 4.2.2.3 (Village No. 5 declared as Municipal Town)

STATEMENT ON REGION-WISE PHYSIO-CULTURAL DETAILS

District Name : GOA | Census Location Code 01 | Union Territory: Goa, Daman & Diu

Sl. No.	Region No. & Name	Name of Administrative Units	Geology	Soils	Physio-cultural characteristics
1.	2	3	4	5	6
1.	4.2.2.1 Goa Coast	Quepem Taluka Pernem Taluka Bicholim Taluka Ponda Taluka Bardez Taluka Tiswadi Taluka Mormugao Taluka Salcete Taluka	The geology of the region mainly consists of quartz chlorite schist, pink phyllites, schistese meta basalts, granite gneiss and sea sand.	1. Orthents-Tropepts (61) 2. Tropepts-Aquepts (67) 3. Humults (90)	Located in the western part of the district this region is elengated in a north-south direction. It is the largest region in the district and includes the whole or Bardez, Tiswadi, Mormugao and Saleete talukas and parts of Quepem, Pernem, Bicholim and Ponda talukas The region lies between the Goa Plateau (4.2.2.2) in the east and the Arabian Sea in the west. To the north it has a small boundary with Maharashtra state and to the south it has a small boundary with the Chauri Forested Coast (4.2.2.4). It is a plain area with an altitude of below 100 metres. However, a few isolated hillocks have altitudes exceeding 100 metres. Terekol, Chapora, Mandovi, Zuari and Sal are the main rivers of the region and they all flow in a general westward direction to the Arabian Sea. Transport and Communication system is well developed in the region. The National Highway (N.H. 17) from Swantwadi to Karwar runs right through the region from north to south. The National Highway (NH 4A) connecting Panaji to Londa passes through the centre of the region. Six out of eleven towns in the region are connected by National Highways. Also a metre gauge railway connecting Mormugao to Miraj passes through the region. The region also has a fine network of inland water ways. It is also connected by sea as well as air. This is the most densely populated and the most urbanised region in the district. Eleven out of fifteen towns in the district are located in the region. These are Pernem, Siolim, Mapusa, Bicholim, Calangute, Panaji, Mormugao, Margao, Curchorem, Quepem and Cuncolim. Villages, in general, are medium to large in size Twenty-four villages have population in the range of 5,000-9,999. Settlements are closely spaced and the settlement pattern, in general, is linear. Around the towns the settlements form a nucleated pattern
2	4.2.2.2 Goa Plateau	Quepem Taluka Pernem Taluka Bicholim Taluka Ponda Taluka Satari Taluka Sanguem Taluka	The geology of the region mainly consists of upper meta greywacks, pink phyllite and tilloid	1. Orthents-Tropepts (67) 2. Humults (90)	Occupying more or less the middle part of the district this plateau is the second largest region in the district It is surrounded by the Goa Coast (4 2 2 1) to the west, Maharashtra state to the north, the Sahyadri hills (4 2.2 3) to the east and south and the Chauri forested coast (4 2.2 4) to the south-west The region includes parts of Quepem, Perneam Bicholim, Ponda, Satari and Sanguem talukas In general the elevation of the plateau varies between 100 and 200 metres but some local

1	2	3	4	5	6
					hillocks rise to even more than 400 metres. The main rivers of the district after rising from the Sahyadris flow through this region on their way to the Arabian Sea. The transport and communication system is fairly well developed. The National Highway (NH 4 A) connecting Panaji to Londa passes through the centre of the region. Also the metre gauge railway connecting Mormugao to Miraj passes through the region. Three out of fifteen towns in the district are located in the region. These are Valpoi, Ponda and Sanguem. Villages, in general, are medium to small in size. However, one village, Siroda L.C. No. 30 of Ponda tahsil is exceptionally large sized having a population of over 10,000. Four other villages fall in the population range of 5,000-9,999.
3.	4.2.2.3 Sahyadri Hills	Quepem Taluka Canacona Taluka Satari Taluka Sanguem Taluka	In the north there is a narrow strip of Deccan Trap. In the extreme south there are massive meta basalts with instrusion of berriciated chert, parphyritic granite quartz and quartz sericite schist. The central part mainly consists of felspathic gneiss, quartz chlorite schist, pink phyllite and schistise meta basalts.	1. Orthents-Tropepts (67) 2. Humults (90).	The region is situated in the extreme eastern part of the district and extends in a north-south direction. It includes parts of Satari, Sanguem and Canacona talukas and a small part of Quepem taluka. It is surrounded by Maharashtra state to the north, Karnataka state to the north-east, east and south, the Chauri forested coast (4.2.2.4) to the south-west and the Goa Plateau (4.2.2.2) to the west. This region is characterised by having very steep slopes and has an elevation of above 200 metres to more than 800 metres. The transition from the Goa Plateau (4.2.2.2) to the Sahyadri hills is abrupt. The terrain in intersected by a number of rivers which flow in a general westward direction to the Arabian Sea. About three-fifth of the region is under wet evergreen and moist deciduous forest. Due to the hilly nature of the region the transport and communication system is not well developed. The National Highway (NH 4A) connecting Panaji to Londa and the metre gauge railway connecting Mormugao to Miraj pass through a small part of the region. The region is entirely rural. Villages are scattered and are medium to small in size.
4.	4 2.2.4 Chauri Forested Coast	Quepem Taluka Canacona Taluka	Geologically, this region mainly consists of schistese meta basalts, massive meta basalts and porphyritic granite.	1. Humults (90) 2 Orthids-Aquepts (28)	This is the smallest region in the district and is located in the extreme south-western part of the district. It is surrounded by the Goa Coast (4.2.2.1) to the north, the Goa Plateau (4.2.2.3) to the north-east, the Sahyadri hills (4.2.2.3) to the east, Karnataka state to the south and the Arabian Sea to the west. In general, this region has an elevation of below 200 metres through some hills have much higher elevations. The region slopes in a general westward direction and is drained by small streams flowing into the Arabian Sea.

1	2	3	4	5	6
					The general northwest-southeast alignment of the coast puts it directly in the path of the dominant south-west waves and this has resulted in erosion. This is reflected in an almost continuous line of cliffs from cape Rama in the north to Chauri. As the name suggests the region has adequate forest. This is mainly moist deciduous forest. Transport and communication system is adequate. The National Highway (NH17) is the main transport route running through the region from north to south. Chauri is the only town in the region out of fifteen towns in the district Villages are mainly medium in size. Along the coast the settlements display a linear pattern while elsewhere they are generally scattered.

APPENDIX

APPENDIX

SHOWING ADMINISTRATIVE CONSTITUENTS BY DISTRICTS WITH REFERENCE TO THE SUB-MICRO REGIONS IN GOA, DAMAN & DIU AND OTHER STATES/UTS, NAMELY, MAHARASHTRA, GUJARAT, KARNATAKA AND DADRA & NAGAR HAVELI

Macro Region with Code No & Name	Meso Region with Code No & Name	State/ Union Territory	Micro Region with Code No & Name		District	Sub-Micro Region with Code No & Name	
1	2	3	4		5	6	
			COASTAL PLAIN				
4. The Coastal Plains & Islands	4 1 Gujarat Region	Goa, Daman & Diu	4 1 1	Gujarat Plain	Daman	4 1 1 1	Daman (Valsad) Coast
		Gujarat			Valsad	4.1 1 1	Valsad Coastal Plain
					Surat	4 1 1 1	Khambhat Coast
					Surat	4 1 1 7	Chorasi-Palsana Coastal Plain
					Bharuch	4 1 1 8	Khambhat Coast
		Goa, Daman & Diu	4.1 3	Kathiawar Peninsula	Diu	4 1 3 1	Diu Coast (Junagadh Coastal Plain)
		Gujarat			Junagadh	4.1 3.1	Junagadh-Coastal Plain
					Bhavnagar	4.1 3 1	Bhavnagar Coastal Plain
					Jamnagar	4 1 3.1	Jamnagar North West Coastal Plain
					Rajkot	4.1 3 1	Maliya Coastal Plain
					Amreli	4.1.3 4	Amreli Coastal Plain
			4 1.4	Kuchchh Peninsula	Kachchh	4.1 4.7	Coastal Plain
	4 2 Western Coastal Region	Maharashtra	4 2 1	Maharashtra Littoral	Thane	4.2.1.1	Thane Coast
					Greater Bombay	4 2 1 1	Greater Bombay Coast
					Raigarh	4.2 1.1	Raigarh Coast
					Ratnagiri	4 2 1 1	Ratnagiri Coast
		Goa, Daman & Diu	4 2.2	Goa Coast	Goa	4 2 2 1	Goa Coast
					Goa	4.2.2.4	Chauri Forested Coast
		Karnataka	4 2.3	Karnataka Coast	Uttar Kannad	4.2.3 1	Karwar Honavar Coast
					Dakshin Kannad	4.2.3 1	Coondapoor-Mangalore Coast
		Kerala	4.2 4	North Kerala Coast	Cannanore	4.2.4 1	Cannanore Coast
					Kozhikode	4 2.4.1	Kozhikode Coast
		Pondicherry			Mahe	4.2 4 1	Mahe-Kollaya Coastal Region
		Kerala	4 2.5	Central Kerala Coast	Malappuram	4 2.5 1	Malappuram Coast
					Trichur	4 2 5 1	Trichur Coast
					Ernakulam	4 2 5 1	Cochin Coast
			4.2.6	South Kerala Coast	Alleppey	4 2 6 1	Alleppey Coast
					Quilon	4 2 6 1	Quilon Coast
					Trivandrum	4 2.6 1	Trivandrum Coast

1	2	3	4	5	6
			UPLAND/PLATEAU		
		Maharashtra	4.2.1 Maharashtra Littoral	Ratnagiri	4.2.1.2 Ratnagiri Plateau
		Goa, Daman & Diu	4.2.2 Goa Coast	Goa	4.2.2.2 Goa Plateau
			WESTERN GHATS/SAHYADRI HILLS		
3 The Deccan Plateau	3.7 Northern Maharashtra	Maharashtra	3.7.1 Tapti-Purna Valley	Dhule	3.7.1.4 Western Ghats
	3.8 Maharashtra Plateau		3.8.1 Eastern Plateau	Kolhapur	3.8.1.1 **Sahyadri Hills**
				Sangli	3.8.1.1 Sangli Sahyadri Hills
			3.8.2 Western Plateau with Protruded Hills	Satara	3.8.2.1 Sahyadri Hills
				Pune	3.8.2.1 Sahyadri Hills
				Ahmadnagar	3.8.2.1 Sahyadri Hills
				Nashik	3.8.2.1 Sahyadri Hills
				Nashik	3.8.2.2 Satmala Hill Range
	3.9 Karnataka Plateau	Karnataka	3.9.1 Northern Karnataka Plateau	Belgaum	3.9.1.3 Gokak-Saundatti Hills
				Belgaum	3.9.1.5 Khanapur Forests
			3.9.2 Central Karnataka Plateau	Shimoga	3.9.2.1 Sagar-Sorab-Shikarpur Rolling Humid Region
				Chikmagalur	3.9.2.1 Sringeri-Koppa Rolling Humid Tract
				Dharwad	3.9.2.2 Kalghetgi-Lakshmeshwar Residual Hills
				Chikmagalur	3.9.2.2 **Kudremukh-Bababudan** Forested Hilly Zone
				Chikmagalur	3.9.2.4 Chikmagalur-Mudigere Rolling Humid Belt
				Shimoga	3.9.2.4 **Shimoga Forested Hills**
				Dharwad	3.9.2.4 **Byadgi-Hirekerur Rocky** Knocks
				Shimoga	3.9.2.5 Tirthahalli Rolling Tract
				Shimoga	3.9.2.6 Western Ghats (Shimoga)
			3.9.3. Southern Karnataka Plateau	Kodagu	3.9.3.1 Patti-Brahmagiri Ghats
				Kodagu	3.9.3.2 Somvarpet-Virajpet Rolling Humid Region
				Kodagu	3.9.3.3 Yedavanad-Nalkeri Forested Belt
				Hassan	3.9.3.4 Manjarabad Ghats.
	3.10 Tamil Nadu Uplands	Tamil Nadu	3.10.1 Eastern Flanks of Sahyadri	Periyar	3.10.1.1 Talamalai-Burgur Forested Hills
				Coimbatore	3.10.1.1 Coimbatore Forested Hills
				Nilgiri	3.10.1.2 Mudumalai Forested Hills
				Madurai	3.10.1.2 **Kodaibanal Forested Hills**
				Nilgiri	3.10.1.3 **Sigur Forested Hills**
				Nilgiri	3.10.1.5 Kunda Forested Hills
				Coimbatore	3.10.1.5 Anaimalai Forested **Hills**
				Madurai	3.10.1.6 Cardamom-Vurushanad Forested Hills

1	2	3	4	5	6
4. The Coastal Plains &Islands	4.1 Gujarat Region	Dadra & Nagar Haveli	4.1.1 Gujarat Plain	Dadra & Nagar Haveli	4.1.1 2 Western Ghats
				Valsad	4.1.1.3 Western Ghats
				Surat	4.1.i.6 Kalakakra Hills
			4.1.2 Eastern Hilly Region	The Dangs	4.1.2.1 Lower Dangs
				The Dangs	2.1.2.2 Upper Dangs
	4.2 Western Coastal Region	Maha-rashtra	4.2.1 Maharashtra Littoral	Thane	4 2.1.2 Konkan Hills
				Greater Bombay	4.2.1.2 Kanheri Konkan Hills
				Raigarh	4.2.1.2 Konkan Forested Hills
				Raigarh	4.2.1.4 Sahyadri Hills
				Ratnagiri	4 2.1.4 Sahyadri Hills
				Thane	4.2.1.4 Sahyadri Hills
				Thane	4.2.1.8 Jayshet Hills
				Thane	4.2.1.10 Tungar Hills
				Thane	4.2.1.12 Konkan Forested Hills
		Goa, Daman & Diu	4.2.2 Goa Coast	Goa	4 2.2.3 Sahyadri Hills
		Karnataka	4.2.3 Karnataka Coast	Uttar Kannad	4.2.3.2 Western Ghats (Uttar Kannad)
				Uttar Kannad	4.2.3.3 Yellapur-Dandeli Forests
				Dakshin Kannad	4.2.3.3 Western Ghats (Dakshin Kannad)
				Dakshin Kannad	4.2.3.4 Beltangadi Dissected Zone
				Uttar Kannad	4.2.3.4 Sirsi-Siddapur Dissected Humid Tract
		Kerala	4.2.4 North Kerala Coast	Wayanad	4.2.4.1 Wayanad Forested Hills
				Kozhikode	4.2.4.3 Kozhikode Forested Hills
				Cannanore	4.2.4.5 Kannoth Forested Hills
			4.2.5 Central Kerala Coast	Idukki	4.2.5.1 Anamalai Forested Hills
				Idukki	4.2.5.2 Marayur Forested Hills
				Palghat	4.2.5.2 Mannarghat-Palghat Forested Hills
				Palghat	4.2.5.3 Palghat Gap
				Ernakulam	4.2.5.3 Malayattur Forested Hills
				Idukki	4.2.5.3 Cardamom Hills
				Kottayam	4.2.5.4 Ranni Forested Hills
				Trichur	4.2.5.4 Kodasseri Forested Hills
				Palghat	4.2.5.4 Chittur Forested Hills
				Malappuram	4.2.5.4 Nilambur Forested Hills
				Idukki	4.2.5.5 Thekkadi Forested Hills
			4.2.6 South Coast	Trivandrum	4.2.6.3 Panmudi-Agasthiar Forested Hills
				Quilon	4.2.6.4 Pamba-Kakki Forested Hills
				Quilon	4.2.6.5 Kulathupuzha Forested Hills
	4.3 Eastern Coastal Region	Tamil Nadu	4.3.1 Kanniyakumari Coast	Kanniya-kumari	4.3.1 1 Kanniyakumari Forested Hills
			4.3.2 Sandy Littoral	Tirunelveli	4.3.2.1 Tirunelveli Forested Hills
				Ramanatha-puram	4.3.2.1 Srivilliputtur Forested Hills

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