CHAPTER - I

GEOGRAPHICAL FRAMEWORK
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The state of Nagaland sprawls over 16,488 sq.km. It is situated between 25.6° to 27.4° North latitude and between 93.20° to 95.13° East longitude. It accounts for 0.52 percent of the total area of the country. Nagaland has a unique geographical personality. It is surrounded by Assam on the west, Arunachal Pradesh on the north, Manipur on the south and Burma on the east.

It has magnificent mountains system that extends from the Chittagong hill tracts to the Patkai mountains as a point, where range is joined by north-eastern off-shoot of the Himalaya, it adjoins a part of the Chin Hills and Arakan Yuma system. Nagaland comprises of three mountains chins, which run irregularly parallel to one another from north to south. The Barail, the Naga range and the Patkai, rising from 2000 ft. to 13000 ft. Mount Saramati is the loftiest peak of the state (12,663 ft.) in Tuensang area of the Patkai range overlooking Burma. The Barail range enters the state at the south-west corner and transverses in a northly direction. It broadens rather
steeply out into Nagaland and western Burma (from the north-west of Manipur via north Cacher), culminating in the peak of Japvo (9890 ft.).

The other important peaks are Padna (9156 ft.) and Kypeneza (7970 ft.). These are beautiful glacial gorges with steep wooded sides, running up to the crest of Barail, which consist for the greater part a wall of grey rock. From this elevated mass transverse spurs connect other parallel ranges. At some places the distance between the ranges are wide enough to enclose fertile cultivable ravines and valleys. The Naga range forming bewildering series of more or less parallel ranges in Manipur merges in the south-west with the Mizo Hills and Sylhet. North of Kohima the main range gradually loses height. In northern part of Mokokchung district, the Japukong range attains an average of only 750 m in fact.

The relief of the state can be divided into five micro regions (see Map No. 2).

(i) The area with the height of below 400 m.

1. The classification of the state has been done according to the height of the area because:
   (i) It will be easy to understand the area of isolation, relative isolation and area of attraction within the state.
   (ii) Terrain is an important determinant in the socioeconomic development and that of insurgency in the study area.
(ii) Area between the height of 400 to 800 mts.
(iii) Area between the height of 800 to 1200 mts.
(iv) Area between the height of 1200 to 1600 mts.
(v) The area with the height of more than 1600 mts.

The western portion of the state comes in the first two category of the micro-regions. It covers the southern most Taluk H.Q. of Tenning, Juluke, Dimapur, Lotsu, Bhandari, Longchem, Naginamara and Tizit. The area between 900 to 1500 mts covers the central part of Nagaland. In other words, we can say it as a central upland zone, with the exception of some higher peak like Yapvo in the Kohima district. The south-eastern part of the state is highly rugged with deep gorges and steep mountain slopes. The highest peak of the state (Saramati) comes in this area. The topography of the area is very rugged and inaccessible. It has become more difficult due to small streams and rivers.

**Drainage:**

There are four major river systems in the Nagaland, namely, Doyang, Dikhu, Dhansiri and Tizu.

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Of these, the Dhansiri, Doyang and Dikhu river systems run towards west and flow into the Brahmaputra. The Tizu river systems on the other hand, flows towards east and south east and enters the Irrawaddy river in Burma.

Doyang, the longest river in the state originates from Japu hills i.e. south-east of Kohima near the southern boundary and flows northwardly. It runs through the Angami inhabited area and flows to the eastern edge of the Rengma's occupied area. From there, moving northward it enters the Lotha inhabited area in the Wokha district. It drains a great part of Wokha area and finally after flowing towards the south of the district debouches the hills for the Sibsagar plains. This river is joined by many small hill streams in its central and western parts.

Chubi which flows southward from Mokokchung district and joins Doyang is a supplementary system of the Doyang river. Another supplementary river system of Doyang river is Nzhu. It rises from the Nerhema area in the Kohima district and after flowing
through Miphong in the Rengma area, it joins the Doyang river in Wokha district.

Dikhu is another important river that starts from the central part of the state. It runs towards the north along the border of the two adjoining districts, namely Mokokchung and Tuensang districts. The tribal territories of Ao, Mokokchung district, Phom and Konyak, Tuensang district, are drained by this river. Towards the north it is joined by Yangyu river which is an important river in the territories of Phoms and Konyaks.

Dhansiri rises in the south-west of the state. It first flows westwardly and then takes a northwardly course (forming a natural boundary with North Cachar Hills). Having debouched North Cachar, it bends eastward and flows past the Rangapahar-Dimapur plains in Kohima district. Again leaving the district it flows northward until it falls into the Brahmaputra.

Tizu river originates from Tuensang district and flows southward through Zunheboto district which is inhabited by the Semas. It further goes southward
through the Changkasang area and finally pours into Chindwin river in Burma.

An important tributary of Tizu river which rises from the extreme eastern part, in the Tuensang district is Zunki. It flows southward and mostly draining the Khumungan's territory joins Tizu river in the south. Apart from these rivers there are a large number of rainfed rivulets, the beds of which remain dry during dry season. The overall drainage pattern in the Nagaland is dendritic.

The role of physiographic characteristics and the river basins in shaping the human landscape cannot be ruled out. It is usually these rivers which form the natural territorial boundary of different tribes. It also enables us to understand that the spatial distribution of different Naga groups and clans are to some extent influenced by these natural micro regions. We find that the area below 400 mts. are occupied by the Zelinang, Kuki, western Sema, western Lotha and Ao's. The boundary between the Rengma and the western Sema is by the Rengma river. The natural boundary between the Lotha and Rengma is by the Aujong river. Between Lotha and Ao is the small
river Disai. The natural boundary between the Ao's and the tribes of Mon district is by the Yangmun river (see Map No. ).

The central portion of Nagaland, which fall in the category of 800-1200 mts. occupied by the Angami, Rengma, Sema, Lotha, Lower Konyak and Sangtam groups. These tribes are also separated from each other by the mountains and rivers. The Angamis are separated from Zelians and Kuki by the tributaries of Dhansiri river and also by Rengma river which separated them from Rengma also. Chakasang and Angami are separated from each other by Doyang river and its tributaries. Sema tribe is confined between the two main rivers of state, which separates Sema in the western from Rengma by Doyang river and in the east from Yimchungre by Tizu. Upper Konyak and lower Konyak are separates from each other by the Tukok, tributary of Doyang river.

The south-eastern part of Nagaland which is more rugged is occupied by Chakesang, Pochuri, Yimchungre, Chang and upper Konyak. The physical feature of this area had in turn also divided the same tribe/clan from each other. Upper Konyak and Chang are separated from
each other by the river Yangmun. Khemeunger, south Sangtam and Pochury are separated from each other by the river Zungui and Thervirate.

It can be inferred that the natural micro-regions had divided the Naga groups into different Clans. This had induced the tribes to develop their own language and habits. This divisions did not isolate them from extra-mural influence, but also kept alive the difference between each group. With the help of distribution of Naga tribal groups, one can identify the areas of isolation and area of attraction within the state. The tribes which are close to the plains have developed different technique in agriculture such as the case of Angami who had developed wet cultivation, whereas in other parts of the state, Jhuming practice is more prominant. The tribes of Mokokchung and Kohima districts are much more developed in comparison to the tribes of Tuensang, Mon and Phek districts, in respect of literacy etc.

3. (i) Upon this analogy, it can be argued that at the time of peopling of Nagaland by the tribes, the altitude as factor in settlements was significance.

(ii) It can also be put forth that natural features became important boundary marks dividing the tribes/clans from each other.
The central upland zone is an area of relative isolation. The district of Zunheboto and part of Phek and Tuensang districts have better accessibility in comparison to the Mon district and eastern most stretch of Phek and Tuensang districts.

Due to rugged terrain and difficult accessibility, the movement of the people (Tribe) was restricted to their village. The fear of head hunting was also the one factor which kept them isolated from each other. Although their traditional faith in their clans and chief kept them aloof from the plain people. Thus in short it could be mentioned that the river basins and physical environments have performed the role of natural ecosystem where the separate tribal groups initially settled and acquired definite and distinct characteristics for example the changing trend of Naga tribes from head hunter to a guerilla. Further they also have influenced the orientation of lines of communication, and the extent of cultivation.

Climate:

The climate of Nagaland varies spatially. In the foothills it is warm subtropical whereas over
The hills it is cool and temperate. The rapid changes in topography result in climatic changes within short distance. The foothills, plains, shattered valleys and the ranges are marked with climatic contrasts. In Nagaland the winter are cold and the summer are warm. The beginning of winter is marked by a steep fall (almost 5°C) in temperature during the first month i.e. December. January is the coldest month of the season, when frost occurs. In the winter the winds are generally light and variable. Occurrence of dense fog during morning hours becomes a characteristic feature of river valley. Another interesting aspect of the hills and valleys is characteristic of inversion of temperature, which keeps the valleys bottoms cold at night.

The spring season is warm and humid, but the breeze though invigorating is interrupted at times by the gales. The north western (outlying) foothills areas are hot and damp as the adjacent plains. Rainfall is occasional and December is the driest month of the year. Due to the interaction of north-westerly, southerly and north-easterly airmasses,
Table 2.1

Average Monthly Rainfall and Temperature Conditions in Nagaland (1975-76)

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
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<td>29.26</td>
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<td>273.38</td>
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<td>21.80</td>
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<td>21.50</td>
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<td>486.88</td>
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Source: Soil Survey Report Nagaland (Kohima) 1975
instability develops. Due to this severe thunderstorms occur extensively, some times preceded by dust raising squall. With the advance of the season the amount and frequency of rain increase. The rainfall is generally associated with thunderstorms and squalls in the afternoon or evening. The monsoon period lasting for about five months from May to September is the dominant season of Nagaland. Rainfall is generally heavy in the whole state (see table No. 2.1) and communication between different areas becomes difficult.

During the hottest part of the year (July or Aug) the temperature on the average of 40 or 42° C. In summer and autumn sky is frequently clouded. Owing to the thick mist, which when rising up in dense columns from the glens and precipitous slopes, soon envelop the landscape.

It has its blessing indiguisce as it gives support to orchids and mushroom, which bloom uninterruptedly in the moist soil. But the vegetation which cloth the crest of hills and mountains is varied and profuse. The foothills afford a
corridor to Assam (being contiguous to the plain), and has share a tropical weather.

Towards the end of September the south western winds become feeble and following two months experience their retreat. The rain gradually stops, temperature moves downwards and the sky becomes clear. The season is a most pleasant part of the year. The amount of the total rainfall in the state varies from 200 cms. to 250 cms. During the monsoon humid and sultry weather is obtainable in the lower tracts.

Vegetation:

The entire state is bestowed with lush green vegetation and wild animals. About 20 percent of Nagaland’s area is covered by forests. Vegetation in state varies from alpine to sub-Himalayan and from tropical to sub-tropical and also to temperate. It is mainly classified as follows (See Map No. 4).

(i) Sub-Tropical Moist Deciduous forests
(ii) Temperate Evergreen forests
(iii) Sub-Tropical Evergreen forests
(iv) Coniferous (Pine)
(v) Bamboos
(vi) Degraded regrowth (Jhum)
(vii) Reserved forests
The plain belt on the north-west abounds in the wet evergreen vegetation. This zone constitutes a tropical broad leaf vegetation, some trees reaching the top canopy in gigantic height.

Subtropical wet hill vegetation thrives at altitude ranging from 1000 to 4000 ft. Rengma foothills adjoining Sibsagar plains abound in deciduous riverian canes and some time impenetrable bamboo groves. Pine trees are found over an altitude varying from 3000 to 4000 ft., but confined only to Oak and Rhododendron are also associated with it. Wet temperate forest is widespread at 5000 ft. altitude. The vegetation is assigned mostly to moist and swampy places.

Lower Hills near Kohima and along the National-Highway (Dimapur-Imphal) have been cleared off the vegetation, because of large scale deforestation in connection with cultivation. A greater part of the slopes have been reduced to permanent wet rice terraced fields. In Chakhesang and Zelangroung area, vast forests tracts are still seen clothed with a profuse vegetation.

The profuse vegetation, temperature, physiography, in association with geology and rainfall are
still major handicap for better means of communication. Thus restricting accessibility to Nagaland and this lends direct help to the insurgency. Being mountainous in the northern, eastern and southern side, it could be approached only through the plains of Assam, lying in the north-west or south-west.

This indicates the significance of accessibility for it serves entire Nagaland. Land slides, treefall and gushing water snapping of telephone wires and the atmosphere turbulence, storms and high mountains make communication unreliable. Covered jungles and monsoon drenched mountains pose serious problem for the authorities to tackle the insurgents. Beside making movement difficult time consuming and tiring the uneven ending forests restrict the visibility severely making it as short as five meters even in the broad daylight.

Nagc insurgents had the choice of ground for their operation. They found in an area that is more rural than urban, mountains rather than plain, thickly forested rather than bare land, with bad road and communication. There are very explicit geographic criteria that have evolved from past insurgents movement
experiences. These locational features have been most explicitly stated in the Chinese, Vietnamese and Cuban revolutions. They have been and are being applied in numerous other movements in modified form (to suit the need of the area). The specific techniques or tactics of guerilla warfare related always to the specific local situation and were supremely expedient. The guerilla is above all an improviser. The nature of provisiation depends naturally, on immediate and long range objectives, the terrain, the relative strength of his forces and those of the enemy. The material means at his disposal and similar factors. These very same factors influence his procuring equipment and provisions. In fact it acts both ways i.e. it supports him, and is his own chief obstacle.

The physical conditions in Nagaland afford both natural concealment and obstacles to hinder the movement of military transport - mountains and swamps where tanks and trucks cannot go. Wood and thick brush that provide cover from aerial observation and attack, forests from which to strike quickly and safely at security forces. Highway communication in which to ambush small army units, while the railway...
upto Dimapur which is in the plains. The insurgents have sufficient mobility to manoeuvre freely along the international boundary, without the danger being caught in a closing spiral of encirclement. It thus became difficult for the security forces to flush out the insurgents. This way they increased their area of operation. To counter this the government will have to extend its security forces and disperse its lines of supply and communication.

Terrain and local conditions ultimately decide the size and organization of the guerilla band. The guerilla normally do not give battle until the terrain favours them. There efforts is always to lure the enemy in situation in which numbers are of little account, because the way is too steep and the passage to narrow for more than to proceed at a time. When fighting began, it was on the ground of the rebels own choosing, preferably from commanding heights with dense cover and limited visibility, where a few determined men can hold up an army.

Besides terrain and local situations a complex international boundary is an aid to any insurgent, (which the Naga insurgents enjoy). An International
boundary shared by the Naga insurgents provide them ideal heaven from the hot pursuit as well as potential source of continued supply. They get sanctuary in the neighbouring states in Burma i.e. Kachin, Karans and Shan. When such boundary sanctuary are suddenly denied to an insurgent movement, as happened in Greece in 1949, when Tito broke with Stalin and closed the Greek-Yugoslav border to the Greek communist, the movement rapidly disintegrated or was eliminated by government troops. The Naga insurgents also suffered in 1971 with the emergence of Bangladesh, when they stopped getting their supply from Pakistan, particularly Chittagong hill tracts now in Bangladesh.

In counter insurgency, land forms generally act to influence movement, observation and the efficient use of the equipment. Because the tactics of a large scale campaign reflects the nature of the landscape over which it takes place. The high relief in Nagaland restricts observation. The available cover and concealment from surface observation depends

directly upon the amount of irregularity of the landscape. This problem was often faced by the Indian security forces in Nagaland.

Thus the above analysis clearly demonstrates the following:

(i) Distribution of Geographical characteristics had encouraged the rapid development of various phases of insurgency in a short period. This coupled with inaccessibility enabled the insurgents to effectively coordinate their activities in such a way that security forces could adopt only a defensive posture. As a result of this, insurgency in the early phases had larger participation and sympathisers.

(ii) Corollary of above, demonstrates that with the adoption to the mountainous environment, sophisticated equipments, better accessibility and introduction of counter insurgency operations strengthened the hands of security forces. As a result, security forces switched from defensive to offensive operations. This coupled with assured supply and better communication, completely changed the situation in Nagaland. In addition, strict vigilance of the international frontier,
political stability in the state and implementation of development (socio-economic) plans further consolidated the position of Central Government. This is evident from the present day position of the insurgents who are not only restricted to definite pockets but are also ideologically divided within themselves.

In short, it can be summed up that Geography continues to be the focal point on which the human activities revolved. The relationship then can be summarised as:

On Time Scale/Insurgency Phases